A Comparative study of e-Commerce and Commerce with Reference to Customer’s Trust

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Abstract— In the past few years the globe has experienced significant changes. Placing ‘e’ in front of any process or function seems to be the magical prescription for never ending story of success. This massive change makes existence of e-Commerce. It is the internet based commerce system that offers electronic buying and selling. It is the most important application of the technology. It reduces the transaction costs allied with purchasing. It enhances the global market. It also reduces the time spend on shopping. Commerce means mere buying and selling without using any technical aid. In spite of all the above qualities of e-Commerce, the traditional commerce in India does not loosen its roots in the market. Customers use both the type of commerce according to their convenience. But a question arises in the mind that between both the methods of purchasing which one is more trusted by majority of customers. So, for knowing customer’s trust in both the type of commerce, this research i.e. “A Comparative study of e-Commerce and Commerce with reference to Customer’s Trust” helps and delivers the information of current market scenario about the same.

I. INTRODUCTION

Now days, internet is used as a basic need of an individual and an organization. Up to a large extent almost every sector in an economy has equipped itself into digital power. We are in the era of digital technology in which a banking business transformed itself to e-banking, education into e-education and so on. The sale and purchase of goods & service i.e. commerce has also turned into e-commerce with use of computer and network technology.

e-Commerce has reached to doorstep of a common individual in India in very less time. It is the future of all commercial activities almost. It has broken all the technological, geographical and many others barriers over the years and has achieved huge amount of success and still it has to go long way ahead in India.

It opens the huge global market to the customers, it helps the customer by providing large number of options while buying a single product or a service, the online searching and comparing facilities enables customers to select right and exactly what they want, the major advantage in all the among is that it is 24*7 available to all the customers, a customer can shop almost anything within his/her comfort zone just by sitting at home, office, during travel or almost from any place at any time. It has tremendously reduced the transaction costs allied of purchase, sales operating, holding and financial cost. It provides a lot of ease to them who did not have enough time to spend on shopping and choosing the product.

“E-commerce is the trading of services and products with the help of internet. E-commerce introduced in the end of 70s and become popular during the 90s in western countries like USA and UK.E-commerce introduced new possibilities in trading and attracted attention of many traders.”

Now days, modern marketing has changed its main motive from customer’s satisfaction to customer’s delight i.e. providing beyond the satisfaction level of customer. Customer’s satisfaction means, the product has adequate level of need fulfilling power according to the sacrifice made by him for acquiring the product. Providing the same standard quality of product or service in continuation brings replication of customer’s satisfaction which leads to customer’s trust finally.

This research is trying to answer the question whether e-commerce has any impact on customer’s trust as compared to commerce in traditional approach?

II. RESEARCH PROBLEM

The study intends to achieve the following objectives:

1. To clearly understand and define the customer’s trust with respect to commerce
2. To differentiate the e-commerce and commerce on the basis of customer’s trust
3. To find the challenges in achieving high customer’s trust
4. To understand the measures for sustaining customer’s trust in commerce

III. LITERATURE REVIEW

Literature has been revised to understand the various terms used in the study and the findings of previous research work in the same direction.

3.1 Commerce

Commerce is a traditional approach of buying and selling of goods and services. James Stephenson has defined commerce as “an organized system for the exchange of commodities and distribution of finished productions.” According to Evelyn Thomas, “Commercial occupations deal with the buying and selling of goods, the exchange of commodities and distribution of the finished goods.” “Exchange of goods and services for money or in kind, usually on a scale large enough to require transportation from place to place or across city, state, or national boundaries.” According to Merriam Webster simple definition of commerce is the “activities that relate to the buying and selling of goods and services.” Another definition states as “trading and movement of goods between two or more states.” Investopedia defines as “Commerce is the conduct of trade amongst economic agents. Generally, commerce refers to the exchange of goods,
services or something of value, between businesses or entities.

3.2 e-Commerce

Different people use different terminology for e-commerce such as 'electronic trading', 'electronic procurement', 'electronic purchasing', 'electronic marketing' and many more. E-Commerce in simple terms means sales and purchase of goods and services using network and computer technology. Roger Clarke defines the term "e-commerce is the conduct of commerce in goods and services, with the assistance of telecommunication and telecommunication tools." In the same direction ecommerce has defined by Mr. Margaret Rouse as "e-commerce is the buying and selling of goods and services, or the transmitting of funds and data, over an electronic network, primarily the internet." From the above definitions we can conclude that electronic commerce is often used in a much broader sense. In other words e-commerce includes purchases of goods, services and other financial transaction in which the interactive process is mediated by information or digital technology.

3.3 Customer's trust

"By Rotter, trust refers to expectations of the counterparty's behavior and, more specifically, to the certainty that the counterparty will keep his promises." So finally, it is concluded that customers trust is the direct relationship between firm and final consumer that how much a customer rely on the firm from where he/she is purchasing the product or taking a service. Trust has thus been defined only with reference to the dimension of "reliability", considered as, more or less, that the expectations of performance – typically from a firm – are followed by actual performance lined up with the expectations.

3.4 Parameters of Customer’s Trust

It is important to understand the various parameters that define the customer’s trust. The literatures have been studied and the same is given in next few paragraphs. Geoffrey James and Marjorie Adams have given some most important parameters of trust.

(i) Great Service: “Earning a customer’s trust starts with giving great service. How would you want to be treated if you were a customer? The reality is that service should come naturally, instead of being strategically planned.”

(ii) Consistency: “Consistency goes hand in hand with providing great services. Internal expectations lead to external results.”

(iii) Transparency: “Transparency is another competency that should come naturally.”

In the same lines Geoffrey James have also given some parameters for establishing customer’s trust.

(i) Friendly Behavior: “rather than acting or sounding like a salesperson, simply act way like when meeting a colleague”

(ii) Build Customer Relationship: “If you want people around you to having a relationship with you, you must truly believe that relationship building is important.”

(iii) Being Curious about people: “People are drawn to those who show true interest in them.”

(iv) Consistent and persistent Behavior: “A customer’s ability to trust you is dependent upon showing the customer that your behavior is consistent and persistent over time.”

(v) Truthfulness: “Never be afraid to point out that your product or company may not be right fit.”

(vi) Open Minded: “Be open to the idea that the customer might be better served elsewhere.”

(vii) Healthy Conversation: “Every meeting should be a conversation, not a sales pitch. Spend at least half of every customer meeting listening. And make certain the conversation is substantive and about real business issues, not just patter or sports chit-chat.”

(viii) Be Professional in Approach: “Take the time every day to learn more about your customers.”

(ix) Show real Integrity: “Never promise what you can’t deliver.”

Ten parameters of customer’s trust given by Walter Roger are summarized in the following table:

| 1. Avoid selling a solution that isn’t in the customer’s best interest |
| 2. Never misrepresent the features, advantage and benefits of a product or service |
| 3. Don’t promise anything you can’t deliver |
| 4. Accepting or offering bribes or gifts is always unethical |
| 5. Keeping pricing consistent to all departments within the same company |
| 6. When problems develop after the sale, don’t make excuses and don’t place blame |
| 7. Don’t withhold bad news |
| 8. If and when you must speak of the competition, be respectful at all times |
| 9. Honor the relationships |
| 10. Make promise and keep them |

Exhibit 1: Parameters of customer’s trust given by Walter Roger

Important parameters for building Customer’s Trust: On the basis of above discussion on the parameters of customer’s trust, the followings have been considered significant for the purpose of this research:-
IV. RESEARCH METHODOLOGY

Research methodology includes the research design and the methods used during the course of study. For the purpose of this study the research methodology is summarized in the following paragraphs:

4.1 Type of Research: This research is Qualitative in nature. Qualitative analysis of data has been done to understand the difference between the e-commerce and traditional commerce with reference to customer’s trust.

4.2 Type of Data: Primary data have been used for the comparison of e-commerce and commerce on the basis of customer’s trust.

4.3 Research Design: The design of the research includes the sampling and analytical tools used for the purpose of this study; which is given in the following paragraphs.

4.4 Population: All items in any field of inquiry constitute a ‘Universe’ or ‘Population. In this research population comprised of all the customers who are doing both traditional and internet shopping in Allahabad. The population has been understood as divided into two groups one using the e-commerce and others depending upon the traditions commerce practices.

4.5 Sampling Decisions:

Sampling Technique: Since the population is infinite and there is time constraint, the convenient sampling has been used for the purpose data collection.

Sample Size: A total of 63 samples from the population using e-commerce and 60 from the population using traditional commerce system have been collected.

4.6 Data Collection Tool: The questionnaire with 10 questions has been used for the purpose of data collection. 100 questionnaires have been given to the respondents who are using the e-commerce and 100 to those depending upon the traditional commerce.

4.7 Research Hypothesis: The following hypotheses have been tested in order to assist in meeting the research objectives:

- H0: There is no significant difference in customer’s trust while using e-commerce in place of traditional Commerce System
- H1: There is significant difference in customer’s trust while using e-commerce in place of traditional Commerce System.

4.8 Data Analysis & Hypothesis testing Tools: The excel table and charts have used for the purpose of data presentation and interpretation. Since the data is non-parametric in nature, the Chi Square test is used in this research for testing the hypothesis. The current study is a comparative study where two populations are compared on the basis of trust.

V. ANALYSIS AND INTERPRETATIONS

After the data has been collected it has been presented in excel table and charts for the purpose of analysis and interpretation. Then hypothesis has been tested using chi square test. There are 10 questions based on the parameters selected for the purpose of analyzing the customer’s trust. The questionnaire has been separately distributed for those using the e-commerce and traditional commerce.

Presentation of Data for analysis: The presentation of collected data from two populations has been given below for comparison:

1: Rating the services provided by the company:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Average</th>
<th>Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>8</td>
<td>25</td>
<td>28</td>
<td>2</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>4</td>
<td>28</td>
<td>28</td>
<td>0</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 3: Overall Rating on Services

Exhibit 4: Overall Rating on Services Chart

From the above data it is clear that in terms of services provided by the e-commerce companies and traditional commerce shops there is no significant difference.

2: Satisfaction level from after sales service providing by company:

<table>
<thead>
<tr>
<th>scale</th>
<th>Excellent</th>
<th>Good</th>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>5</td>
<td>28</td>
<td>30</td>
<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>2</td>
<td>24</td>
<td>32</td>
<td>2</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 5: Satisfaction level on after-sales-services

Exhibit 6: Satisfaction level on after-sales-services Chart
A Comparative study of e-Commerce and Commerce with Reference to Customer’s Trust

There is similar opinion in terms of after-sales services for both the systems.

3: Service provided by the company is of standard quality:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Always</th>
<th>Most of the times</th>
<th>Sometimes</th>
<th>Never</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>0</td>
<td>43</td>
<td>20</td>
<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>10</td>
<td>36</td>
<td>14</td>
<td>0</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 7: Quality of services

From the above data, it is clear that the satisfaction from quality of services is better in traditional commerce system.

4: Quality of product is maintained by company:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Fully</th>
<th>Partial</th>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>12</td>
<td>35</td>
<td>16</td>
<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>6</td>
<td>40</td>
<td>14</td>
<td>0</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 8: Quality of services Chart

Exhibit 9: Quality of Product

On quality of product too, the traditional commerce system have been considered slightly better but it is seen that large number of customers are getting satisfaction from the quality of e-commerce system.

5: Loop holes of the product have been clarified properly:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Always</th>
<th>Most of the times</th>
<th>Sometimes</th>
<th>Never</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>10</td>
<td>25</td>
<td>24</td>
<td>4</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>12</td>
<td>24</td>
<td>18</td>
<td>6</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 10: Quality of Product Chart

Exhibit 11: Clarification of Loopholes

It is clear from the above data that people have better perception on traditional commerce shops in terms of value given by them.

7: Company makes customers feel valuable for them:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>56</td>
<td>7</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>60</td>
<td>0</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 12: Clarification of Loop holes Chart

Exhibit 13: Satisfaction from terms and conditions

Data reveals similar opinion for both the commerce systems.

6: Satisfaction level from the terms and conditions applied by the company:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Fully</th>
<th>Partial</th>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>12</td>
<td>35</td>
<td>16</td>
<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>6</td>
<td>40</td>
<td>14</td>
<td>0</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 14: Satisfaction from terms and conditions chart

Exhibit 15: Valuable Customer

Exhibit 16: Valuable Customer Chart

8: Rating for maintaining a relation with customer:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Average</th>
<th>Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>15</td>
<td>30</td>
<td>18</td>
<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>10</td>
<td>34</td>
<td>16</td>
<td>0</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 17: Rating on Relation
Exhibit 18: Rating on Relation Chart
It is clear from the above data that customers have similar opinion in terms of relationship.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>20</td>
<td>43</td>
<td>63</td>
</tr>
<tr>
<td>Commerce</td>
<td>26</td>
<td>34</td>
<td>60</td>
</tr>
</tbody>
</table>

Exhibit 19: Cheat on Customer

Exhibit 20: Cheat on Customer Chart
Data reveals that in terms of feeling of being cheated customers have similar opinion for both the systems.

10: Rating of customer’s trust on company:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>1</td>
<td>12</td>
<td>32</td>
<td>45</td>
</tr>
<tr>
<td>Commerce</td>
<td>2</td>
<td>24</td>
<td>24</td>
<td>50</td>
</tr>
</tbody>
</table>

Exhibit 21: Overall Rating

Exhibit 22: Overall rating chart
Data on this question has been generated as overall response towards the use of e-commerce and commerce with respect to the customer’s trust. Data reveals that the respondents still prefer traditional commerce system over the e-commerce and they feel it trustworthy.

Testing of Hypothesis and Findings
Customer’s trust has been tested based on the primary data through testing the following hypothesis:

- **H₀**: There is no significant difference in customer’s trust while using e-commerce in place of traditional Commerce System
- **H₁**: There is significant difference in customer’s trust while using e-commerce in place of traditional Commerce System.

Chi Square test has been used for the comparison of data collected on customer’s trust. The Chi Square test is used because the collected data is non-parametric in nature and interest is in testing the homogeneity of the two samples. The Chi-square test is used mainly for three purposes:

- As a test of Goodness of Fit
- As a test of Independence
- As a test of homogeneity

Test Statistic for Chi-square ($\chi^2$) = $\sum (O - E)^2 / E$
Where $O =$ observed frequencies and $E =$ Expected frequencies

The expected frequencies are calculated as:
$E = RT \times CT / N$
Where,
$RT$= Row total for the row containing the cell
$CT$= Column total for the column containing the cell
$N$= Total number of observations

Since observed frequencies are less than 10 in some cells and therefore, the cells have merged into 3 instead of 5 as followings:

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample 1</td>
<td>13</td>
<td>32</td>
<td>18</td>
<td>63</td>
</tr>
<tr>
<td>Sample 2</td>
<td>26</td>
<td>24</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>56</td>
<td>28</td>
<td>123</td>
</tr>
</tbody>
</table>

Exhibit 23: Observed Frequencies

Exhibit 24: Expected Frequencies

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Average</th>
<th>Satisfactory</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample 1</td>
<td>13</td>
<td>28</td>
<td>62134</td>
<td>63</td>
</tr>
<tr>
<td>Sample 2</td>
<td>26</td>
<td>24</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>56</td>
<td>28</td>
<td>123</td>
</tr>
</tbody>
</table>

Exhibit 25: Calculation of $\chi^2$ Statistic value
Degrees of Freedom: $(c-1) \times (r-1) = (2-1) \times (3-1) = 2$
Significance level = 5%
The table value at 5% significance level for 2 degrees of freedom=5.991

The calculated value is greater than the table value hence the null hypothesis is rejected and alternate is accepted i.e. $H₁$: there is significant difference in customer’s trust while using e-commerce in place of traditional Commerce System. It can be inferred that customers have still better trust in using traditional commerce system.
**Findings and Suggestions**

On the basis of data analysis hypothesis testing the study has important findings as mentioned below:

1. Sales Services provided by both systems are similar: After analysis of data it is clear that customer from both system have similar opinion on the services provided by them.

2. Similar After-sales-service: Data reveals that e-commerce companies are gaining momentum though the customers have similar opinion on both the systems in terms of after sales service.

3. Better quality of service by the Traditional Commerce System: From the analysis of data, it is clear that the satisfaction from quality of services is better in traditional commerce system.

4. Satisfaction from the Quality of Product: It is clear from the data that satisfaction is similar from both systems but there are people who believe that quality is never maintained in e-commerce system where as there is no respondent who have such feelings in case of quality of products from traditional system. Thus it can be concluded that customers still trust the traditional commerce on quality of products.

5. Clarification of Loop holes of the product: Data on this issue reveals that customers have similar view for both the systems and opinion is mixed which means in both the systems some customers feel that all information is not provided.

6. Better Relation by the Shops in comparison to e-commerce companies: Data reveals that customers feel better related with the shops in comparison to e-commerce companies.

7. Overall Rating of the systems: The testing of hypothesis and data analysis reveals that the customers still have better trust in traditional commerce system in comparison to e-commerce companies.

**Suggestions**

On the basis of analysis and above findings the following suggestions are given:

1. For sustaining in the market with profitability companies of e-Commerce have to ensure the quality of product.

2. Both the e-Commerce and traditional commerce have to create a sense of trust in customers mind that they have not been cheated by them.

3. E-Commerce companies have to develop their strategies in such a way that customers trust on them as in traditional commerce.

4. Traditional commerce has to maintain its pace in the market and try to develop it selves more as the e-Commerce.

5. There is need to develop better customer relationship in e-commerce as it lacks face to face interaction.

**CONCLUSION:**

It is very interesting to know from the finding of this research that it is intervening period where customers are using e-commerce with care and curiosity. Most of the customers are in dilemma in choosing between the commerce systems. As the analysis and interpretation of the research concluded that there is significant difference in customer’s trust while using e-commerce in place of traditional Commerce System. The sales service provided by both the system is same and there is no significant difference regarding the service provided by them. The after-sales-service is similar in both the commerce systems. The quality of service is better in traditional commerce which is observed by the customers. There is similar satisfaction level in both the commerce providing the quality of product. Customers have similar view on both in clarifying the loop holes of the product purchased by the customer. The shopkeepers of traditional commerce have more effective relation with their customers than companies of e-Commerce. Finally, based on the testing of hypothesis it can be concluded that people still prefer the traditional commerce in India in comparison to e-commerce with respect to customer’s trust.

**REFERENCES**


11. 15.Ibid


17. 21. Ibid