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An Empirical Study to Customer Satisfaction level for E-tailing using ASCI's Model

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Abstract: E-Tailing has become extremely popular over the last decade. Today is the Era of Globalization and the consumer is not bound within a particular place to access products available anywhere in the world. Now he can go beyond the boundaries of any market area where he lives, to access the things of his interest. This virtual connectivity known as “E-Tailing or E-Tailing” is really a challenge for Indian customers to be associated with; they face some real time problems related to trust and quality. The Indian shopping trends have shown some rigid behavior towards E-Tailing. The consumers do not trust this shopping style as they can see and choose a product virtually without any kind of physical touch. But in the last 2-3 years trends in E-Tailing have changed at least in metros and big cities. This paper aims to measure the customer satisfaction level using ACSI (American Customer's Satisfaction Index), which gives a deep insight of the market potential available in Indore city for E-Tailing.

Keywords: E-Tailing, Customer's satisfaction level, E-tailing, ACSI Model.

I. INTRODUCTION

When there was no existence of internet shopping sites people used to buy from traditional medium, but with the invention of internet has created a paradigm shift of the traditional way people shop. A consumer is no longer bound to a place for shopping he can go to any corner of world for shopping virtually with the help of Internet. Internet is relatively new medium for communication and information exchange that has become a part of everyday life. The numbers of Internet users are constantly increasing and also the online purchasers. This rapid increase is explained by the growth in the use of broad band technology combined with a change in consumer behavior.

Internet is considered a mass medium that provides the consumer with purchase characteristics as no other medium. Certain characteristics are making it more convenient for consumer, compared to the traditional way of shopping, such as the ability to view and purchase the product 24 X 7, visualize their needs with products, and discuss products with other consumers. Oppenheim and ward (2006) explained that the current primary reason people shop over internet is the convenience. They also recognize that the previous primary reason for shopping online was price, which has now much changed to convenience.

E-Tailing is the process consumers go through when they decide to shop on Internet. The Internet has developed into “new” distribution channel and the evolution of this channel, e-commerce, has been identified by Smith and Rupp (2003) to be the most significant contribution of information revolution. Using the internet to shop online has become one of the primary reasons to use internet, combined with searching for products and information about them. Smith and Rupp (2003) also pointed out that the consumers have never had access to so many suppliers and products/service opinions therefore Internet has developed a highly competitive market.

II. ABOUT ASCI

The American Customer Satisfaction Index (ACSI) is an independent national benchmark of customer Satisfaction with the quality of products and services available to household consumers in the United States. Each year, 70,000 customers are surveyed about the products and services they use the most. The data serve as inputs to an econometric model that benchmarks customer satisfaction with more than 230 companies, 43 industries and 10 economic sectors, as well as over 100 services, programs, and websites of federal government agencies.

The ACSI's time-tested, scientific model provides key insights across the entire customer experience. ACSI results are strongly related to a number of essential indicators of micro and macroeconomic performance. At the micro level, companies with high levels of customer satisfaction tend to have higher earnings and stock returns relative to competitors. At the macro level, customer satisfaction has been shown to be predictive of both consumer spending and GDP growth.



Figure 1: Factors Influencing Customer's Satisfaction



Figure-2 American Customer Satisfaction Index, Model

III. LITERATURE REVIEW

Literature reviews is an account of what has been published in connection with this research. The main purpose is to gain knowledge and ideas based on the previous establishment and get to know what their strength and weakness are in order to further enhance and upgrade the integration. Many studies have been done in the areas of customer attitude towards E-Tailing, customer online buying behavior, customer satisfaction measurement and many more.

- Hassanein, K., & Head, M. (2007), explore how human warmth and sociability can be integrated through the web interface to positively impact consumer attitudes towards E-Tailing. This study investigates the impact of various levels of socially rich text and picture design elements on the perception of online social presence and its subsequent effect on antecedents of attitudes towards websites. Higher levels of perceived social presence are shown to positively impact the perceived usefulness, trust and enjoyment of shopping websites, leading to more favourable consumer attitudes. Implications of these finding for practitioners and future research are outlined.

- Lin, W. S., et.al. (2010) says that the growth of e-commerce has caused problems with personalized recommendations. Although several attempts have made to improve or automate the retrieval and filtering of such information, no generic framework links the semantic context of E-Tailing with shoppers' purchases in order to improve the efficiency of E-Tailing support. These papers empirically investigate and establish the relationship between e-marketing terms and shoppers' buying behavior.
- Gwo-Guang Lee, Hsiu-Fen Lin, (2005) suggests that to enhance customer purchase intentions, online stores should develop marketing strategies to better address the trustworthiness, reliability, and responsiveness of web-based services. Online stores can devote valuable corporate resources to the important e-service quality attributes identified by this study.
- Shih, H. P. (2004), develops an extended model to predict consumer acceptance of electronic-shopping (e-shopping) based on the theory of reasoned action (TRA) and the technology acceptance model (TAM). This model was tested using multiple regression and the results shows that individual attitudes toward e-shopping are strongly and positively correlated with user acceptance. The proposed model could be used to predict consumer willingness to shop on the Web.
- Riccardo Di Nisio et al. (2010) explained the application of structural equations in customer satisfaction and customer loyalty measurement i.e. in ACSI and ECSI models. This study was a great help in designing the Indian adaptation of ACSI model, as it explores the antecedents of customer satisfaction and customer's loyalty.

IV. OBJECTIVES

The objective of the study includes:

- i. To measure customer's satisfaction level for E-Tailing.
- ii. To analyze factors affecting customer's satisfaction level of online shoppers.

For the measurement of customer satisfaction index we have used American Customer Satisfaction Index Model which we is modified accordance with perception of an Indian customer.

V. RESEARCH METHODOLOGY

Our research is descriptive research regarding measurement of customer satisfaction in case of E-Tailing.

In order to meet the objectives of the study, primary data is collected using the questionnaire method. The questionnaire which consisted of two parts: Part – I consisted of the questions related Demographics and awareness about internet and E-Tailing,

Parts II of the questionnaire consisted of three manifest variables i.e. Customer's Expectations, Perceived Values and Overall Quality, which were further divided into 25 variables which are directly related to factor affecting customer's satisfaction level. These have been measured with 5 pointer Likert scale.

The sample size taken for the study constituted of 200 respondents. Convenience sampling technique has been used for data collection wherein the sample is chosen from the population in random proportion of the various age groups present in the population.

VI. QUESTIONNAIRE DESIGN

The questionnaire was carefully designed to meet the requirements of the research. The questions were taken from previous literature on Consumer's attitudes towards E-Tailing and from some satisfaction measurement, with a view to validate the research more and some of the questions were self structured to cover the diversity of research problems. The questionnaire consisted of two main parts and one sub part, first part is mainly focused on questions pertaining to online shoppers in terms of

demography and second part for rating the factors that influence consumers' satisfaction towards shopping online. The subpart contains the Net promoter scale which gave us the loyalty rating of the online shoppers.

Part A: Demographic

This section includes questions pertaining to Gender, Age, Income, Awareness level of the respondents, And also the question regarding the type of purchase made by the respondent.

Part B: Factors influencing consumer's satisfaction towards E-Tailing

Second part of the questionnaire covered the questions relating to factors influencing consumer's satisfaction in case of E-Tailing, these factors are Customer Expectation, Perceived Values and Over-all Quality .All these three factors were divided into 8-9 sub-factors which were easily understandable by respondents. There were total of twenty five questions pertaining to the factors influencing the satisfaction of an individual towards E-Tailing. All questions in this section were constructed with a newly developed 5 pointers scale: 1= "highly dissatisfied", 2 = "dissatisfied" 3 "neutral", 4 "satisfied", 5 = "highly satisfied".

VII. FINDING AND DISCUSSION

The data is collected from 200 respondents. Out of 200 the response rate was 95.5 percent. The incomplete/inappropriate responses are rejected to get higher precision value in results. After collection of the data, the reliability of the research instrument is tested by using Cronbach's alpha and factor analysis, are applied using SPSS 20 version in order to achieve the objectives of the study.

VIII. RELIABILITY TEST

The observed value shows that the value of Cronbach's alpha is 0.945 for 25 items taken in the present study. As this value is more than 0.70 hence it is interpreted that the research instrument is reliable to undergo further data analysis.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.945	.946	25

Then we carried out the analysis in two steps:

1. Calculation of Customer Satisfaction Index
2. Detailed analysis of all the sub-factors under three manifest variables i.e. Customer's Expectation, Perceived Values and Over-all Quality. Which affects more?

Customer Satisfaction Index:

From the past literature we found out various models of customer satisfaction index models we chose the American Customer Satisfaction Index model, we modified it according to the perception of an Indian customer, and based on its variables data collection was done which we have used for analysis.

Formula for the calculation of ACSI is,

$$((X1-1)*W1 + (X2-1)*W2 + (X3-1)*W3)/9*100$$

Where,

X1 =Mean of the mean ratings of all the variables considered under first manifest variable i.e. Customer's expectation

X2 = Mean of the mean ratings of all the variables considered under second manifest variable i.e. perceived quality

X3 = Mean of the mean ratings of all the variables considered under third manifest variable i.e. Over-all Quality

And,

W1, W2, W3 are the standardized and normalized partial least squares factor loading (or weight) for each question as calculated within the ACSI structural equation model.

We have designed certain steps to carry out the whole procedure fluently

1. Calculation of X1, X2 and X3 using SPSS.
2. Calculation of W1, W2 and W3 by conducting factor analysis which is also available in the SPSS.
3. Putting all the values together and carry out necessary calculation.

Calculation of X1, X2 and X3

We have analyzed the whole data which contains the responses of 191 respondents against 3 variables customer's expectation, perceived values and over-all quality which contained 8, 9 and 8 sub-factors under them respectively for which rating on a 10 pointers scale was collected by us. Table 1, contains the Means of ratings of all 25 variables, in their respective groups.

Table 1

Customer's Expectation	Perceived Values	Over-all Quality
6.942408377	7.884816754	7.157068063
6.978947368	8.12565445	7.544502618
7.586387435	6	6.352631579
7.115789474	7.455497382	6.057894737
7.231578947	7.252631579	6.142105263
7.476190476	7.109947644	5.991525424
8.167539267	7.366492147	6.989528796
6.921465969	7.215789474	7.593220339
	7.204188482	
X1= 7.328097731	X2=7.549701479	X3=6.646339671

Calculation of W1, W2 and W3,

We used factor analysis for this as it is the most appropriate method for calculation of factor's loading. Under factor analysis we applied rotated component method Table 2, shows the Results.

Table 2 Rotated Component Matrixes

Variables	Component		
	1	2	3
<i>Payment Security</i>	.339	.407	.364
<i>Low Price</i>	.430	.551	.259
<i>Brands Options</i>	.166	.293	.705
<i>Review About Product</i>	.311	.287	.578
<i>On Time Delivery</i>	.489	.231	.338
<i>One Stop Shop</i>	.300	.127	.684
<i>24X7</i>	.067	.393	.583
<i>Personal Info. Privacy</i>	.350	.638	.093
<i>Global Reach</i>	.127	.146	.774
<i>Time Saving</i>	.022	.543	.396
<i>Convenience While Shopping</i>	.164	.739	.330
<i>Ease</i>	.140	.833	.194
<i>Product Comparison</i>	.207	.408	.527

<i>Discounted High Priced Product</i>	<i>.481</i>	<i>.467</i>	<i>.341</i>
<i>Brand Image of The Website</i>	<i>.314</i>	<i>.566</i>	<i>.375</i>
<i>While Shopping</i>	<i>.494</i>	<i>.345</i>	<i>.347</i>
<i>Detailed Info. of Product</i>	<i>.406</i>	<i>.392</i>	<i>.458</i>
<i>Quality Product</i>	<i>.473</i>	<i>.355</i>	<i>.409</i>
<i>After Sales Services</i>	<i>.683</i>	<i>.344</i>	<i>.118</i>
<i>Return Policy</i>	<i>.837</i>	<i>.163</i>	<i>-.016</i>
<i>Guarantee</i>	<i>.817</i>	<i>.091</i>	<i>.172</i>
<i>Warrantee</i>	<i>.794</i>	<i>.112</i>	<i>.260</i>
<i>Insurance of Goods</i>	<i>.683</i>	<i>.206</i>	<i>.314</i>
<i>Physical Appearance</i>	<i>.238</i>	<i>.406</i>	<i>.446</i>
<i>Packaging Style</i>	<i>.319</i>	<i>.503</i>	<i>.321</i>

We take out all the useful information and divided in three tables for further calculation, Table 3 contains all the information.

Tables 3A, Customer's Expectations

Sub-Factors	Factor Loadings
Payment Security (E1)	0.407
Low Price (E2)	0.551
Brands Options (E3)	0.705
Review About Product (E4)	0.578
On Time Delivery (E5)	0.489
One Stop Shop (E6)	0.684
24X7 (E7)	0.583
Personal Info. Privacy (E8)	0.638
W1	0.579375

Table 3B, Perceived Values

Sub-Factors	Factor Loadings
Global Reach (V1)	0.774
Time Saving (V2)	0.543
Convenience While Shopping (V3)	0.739
Ease (V4)	0.739
Product Comparison (V5)	0.833
Discounted High Priced Product (V6)	0.408
Brand Image of The Website (V7)	0.481
While Shopping (V8)	0.566
Detailed Info. of Product (V9)	0.458
W2	0.60025

Table 3C, Over-all Quality

Sub-Factors	Factor Loadings
Quality Product (Q1)	0.473
After Sales Services(Q2)	0.683
Return Policy (Q3)	0.837
Guarantee (Q4)	0.817
Warrantee (Q5)	0.794
Insurance of Goods (Q6)	0.683
Physical Appearance (Q7)	0.446
Packaging Style (Q8)	0.503
W3	0.6545

Calculating Customer Satisfaction Index

We have the formula, $CSI = ((X1-1)*W1 + (X2-1)*W2 + (X3-1)*W3)/9*100$

After putting all the values we get, $= [(7.3281-1)* 0.5794 + (7.5497-1)* 0.6002+ (6.6463-1)*6545$

This gives the final answer, that is CSI= 84.37%

Discussion: According to the result, means the customer satisfaction index for E-Tailing is 84.37 %. On the basis of which we can conclude that approximately 85 % customers are satisfied after shopping online which is a great number. This is a good sign for marketers that this many people are satisfied from E-Tailing so that the firms who have already invested in this market can invest more and increase the chances of growth as the trend of shopping is changing, and the firms who have not yet entered in this dimension should move forward because potential and growth aspects are more.

Analysis of all the sub-factors under three manifest variables:

The table 4, shows the detailed analysis of the all the sub-factors which plays essential role in the satisfaction levels of the customer. The following table is developed on the basis of response recorded from the online shoppers. The responses were taken on a 10 pointers scale in which 5-6 were the neutral points & 1's are quitters and 10's are delighted customers. All these readings are in percentage form.

One can clearly see in the table (Highlighted cells) that most of the variable are showing readings in satisfied customers, means that if services are improved then the levels can be increased further. (Table 4)

TABLE 4, Readings of customer's Satisfaction levels (in percentage)

No. of Variable	Quitter	Highly Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Highly Satisfied	Delighted
Payment Security	1.92	3.66	1.57	7.85	28	7.12	27.4	13.13	6.28
Low Price	1.04	5.76	1.04	10.47	23	15.18	18.45	14.66	9
Brand Options	0.5	2.09	0.5	4.72	22.51	11.52	28.8	18.32	11
Reviews	0.5	2.09	0.5	8.9	28.8	13.09	25.65	13.61	6.28
On Time Delivery	1.04	1.57	0.5	6.28	31	15.71	23.03	14.66	5.23
one stop shop	0.52	4.1	0.5	5.23	21	13.61	23.03	8.9	22.5
[24X 7 Availability	1.57	2.61	0.5	3.14	13	5.23	24.08	17.8	31.4
Personal Info. Privacy	0	2.61	1.57	12.04	25.77	26.17	13.61	12.04	4.71
Global Brands reach	0	2.61	1.04	2.61	16.5	10.47	28.27	23.56	13.6
Time Saving	0.52	1.57	0.5	3.66	13.6	10.1	26.18	33	10
Convenience	1.57	1.04	0	4.18	27	6.28	30.9	22	7.58
Shopping & Payment System	0	2.61	1.04	4.71	24	7.32	29.84	20	7.85
Product Comparison	1.04	1.57	2.1	9.94	15	9.24	32.98	18	6.28
Discounts	0.52	2.61	1.04	7.32	25	7.5	34.03	13.08	6.28
Brand Image of Website	0.52	2.09	1.04	2.1	28	9.42	32.46	14.66	8.37
Privacy in Shopping	1.57	1.04	0.5	5.23	29	7.32	36.12	12.56	5.76
Product Info.	0.52	3.66	1.04	7.32	22.6	4.71	33.5	16.75	7.33
Quality Product	1.57	2.09	0.5	7.85	24.6	7.32	35.07	11.52	9.45
Customer Care	0	4.188	2.1	19.13	27.37	7.32	23.03	9.24	3.67
Easy Return Policy	1.47	5.23	1.05	25.13	27.32	6.8	18.85	8.9	2.61
Guarantee	0	7.85	1.57	17.27	35.17	6.28	19.37	7.85	2.1
Warrantee	1.04	5.23	3.66	15.27	30.04	6.8	19.37	10	2.1
Insurance in Transit	3.14	6.28	2.66	14.66	34.03	5.76	20.41	4.2	8.9
Physical Appearance	3.66	3.14	0	11	19.9	4.7	33.5	16.2	6.8
Packaging Style	0.52	2.09	0.5	5.23	18.32	6.8	36.12	24.1	5.8

Discussion:

In the Table-4, after a keen observation a conclusion was drawn out that most of the customer lies in the area of “satisfied customers”, which is initially a very good thing but it cannot be run on one time purchase. Revenue cycle should work properly in the long run and this requires repeated purchase, and this does not happen till the customer is highly “satisfied” or “delighted”, so now the online vendor are required to create some delightful offers so that customers get delighted and this will give their businesses a essential growth.

IX. CONCLUSION

During the whole study we came across the fact that in Indore the online shoppers are satisfied by their respective service providers and online vendors.

Customer satisfaction index for E-Tailing is 84.37 %, which is really a very good score. This is a really good thing for business and has to be capitalized quickly as possible. It means the customers are really happy while purchasing online and they would love to in future.

So we conclude that the present online vendors and all those vendors who are going to enter in this field should prepare their strategies accordingly. They should not only invest in online marketing to satisfy but should also invest in bringing customer loyalty to generate revenues in long run through E-Tailing.

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