

Potentiality of Online Sales and Customer Relationships

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Abstract—Today Internet is not only a networking media, but also as a means of transaction for consumers at global market. Internet usage has grown rapidly over the past years and it has become common means for delivering and trading information, services and goods. Indeed, the Internet has not only provides new ways for consumers to learn about and acquire products and services online but has also reshape consumer buying patterns. The present study was carried out in Chennai, India and the data and information were collected from 200 respondents during the year 2010-2011. The analysis indicated that gender and family income had significant relationship with overall attitude towards online shopping and environment characteristics and there is no any significant relationship between internet access and overall attitudes towards online shopping, but weekly internet use having in e-shopping and willingness to more shopping online have significant relationship with overall attitudes online shopping. It means internet access rate is high among people but few percentages have intention for e-shopping. In addition, results of this study investigated significant differences between human senses in e-purchasing process. The result also proved that there is a significant difference between human senses in online decision making process. For online retailers need to ensure that online shopping process through their website is designed and made as easy, simple, and convenient as possible. The web site should also be designed in such way not to confuse potential buyers; they should ensure that they provide an efficient delivery service to their customers. The leading telecommunication and internet service providers in Chennai need to provide cheaper internet access in order to encourage more consumers to become internet users.

Index Terms—Online sales, ANOVA, chisquare, fishbein's behavioral model.

I. INTRODUCTION

New information and communication technologies are constantly emerging, altering business methods, and particularly, the relationship an organisation establishes with its customers. Technological innovations ensure that, as soon as consumer behaviour in any field is on the verge of stability and explainability, new products and services are introduced to destabilise the consumer behaviour model so as to create competitive openings for challengers, niche players, and other contenders [1].

The popularity of interactive media such as the World Wide Web (WWW) has been growing at a very rapid pace. From a marketing perspective, this has manifested itself

primarily in two ways: (1) a drastic increase in the number of companies that seek to use the WWW to communicate with (potential) customers, and (2) the rapid adoption of the WWW by broad consumer segments for a variety of purposes, including pre purchase information search and online shopping [2]. The combination of these two developments provides a basis for substantial growth in the commercial use of interactive media.

Today Internet is not only a networking media, but also as a means of transaction for consumers at global market. Internet usage has grown rapidly over the past years and it has become common means for delivering and trading information, services and goods [3], [4]. Considering that Internet shopping, is still at the early stage of development, little is known about consumers' attitudes towards adopting this new shopping channel and factors that influence their attitude toward [5]. The consumers' attitude towards online shopping is known as the main factor that affects e-shopping potential [6]. That means that, through motivation and perception, attitudes are formed and consumers make decisions. Thus, attitudes directly influence decision making.

The proliferation of online shopping has stimulated widespread research aimed at attracting and retaining consumers from either a consumer or a technology-oriented view. The two views do not contradict but rather reinforce each other. Because the success of an electronic market largely depends on consumers' willingness to accept it. The consumer-oriented view focuses on consumers' attitude about online shopping. The potential benefits of online shopping for consumers include convenience, various selection, low price, original services, personal attention and easy access to information, among others.

A unique characteristic of online shopping environments is that they allow for the implementation of very high degrees of interactivity. It is a multidimensional construct, the key facets of which include reciprocity in the exchange of information, availability of information on demand, response contingency, customization of content, and real-time feedback [7], [8]. In the context of computer-mediated communication, a distinction has been made between person interactivity and machine interactivity [9], [10]. While the former describes the ability to communicate with other individuals, the latter refers to the ability to interactively access information in an online database [11].

Indeed, the Internet has not only provides new ways for consumers to learn about and acquire products and services online but has also reshape consumer buying patterns. With this background, the general objective of the research paper is to explore factors that affect potential of online sales of a specific product and to investigate the consumer online behaviour, potential of online sales to identify those factors

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that influence online potential sales of a specific product.

II. METHODOLOGY

A. Conceptual Foundation and Framework

The present research study concentrates on conceptual framework of consumer online behavior and e-shopping. This framework emphasizes the decision variables, which affect potentiality of online sales to specific product. The research framework and conceptualization of the relationship between potential of online sales and affective

factors are constructed in the Figure- 1. This particular framework shows that potential of online sales is influenced by three factors including consumer attitudes, product type and familiarity of consumer to the product. In addition, demographic characteristics and environmental characteristics influence consumer attitude towards online shopping and entered into the model as controlling factors. Product type is affected by human sensory attributes. Moreover, familiarity and confidence to the product is influenced by brand name, shopping experience and satisfaction.

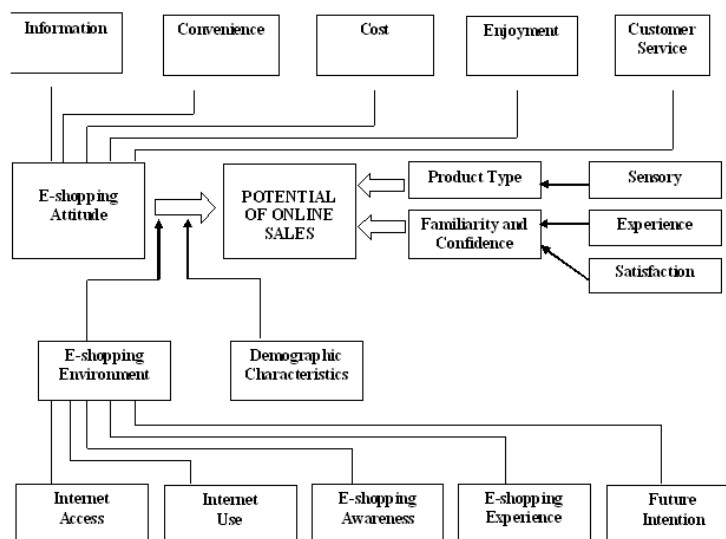


Fig. 1. Research framework.

B. Hypotheses

H1: The consumer attitude towards online shopping is not statistically significantly different based on consumer demographic characteristics.

H2: The consumer attitude towards online shopping is not statistically significantly different based on e-shopping environment.

H3: There is no significant difference between influences of human senses in online shopping.

H4: There is no significant relationship between shopping experience and familiarity and confidence in online shopping.

H5: There is no significant relationship between satisfaction and familiarity and confidence in online shopping.

H6: There is no significant relationship between customers' attitude towards online shopping and potential of online sales.

H7: There is no significant relationship between product type and potential of online sales.

H8: There is no significant relationship between familiarity and confidence and potential of online sales.

C. Data Collection

A structure questionnaire was used to collect the necessary data which served as primary data to answer the research questions and objective regarding identified potentiality online shopping in Chennai, Tamilnadu in India. The data and information were collected from 200

questionnaires during the year 2010-2011.

D. Statistical Techniques

The descriptive statistics, Analysis of Variance (ANOVA), Friedman Test, Chi-Square test and correlation measures were the statistical techniques which were used to analyze the data and information.

For hypothesis testing, overall consumer attitude towards online was measured by Fishbein's behavioural model.

E. Fishbein's Behavioral Model

Measuring attitude in survey studies are widely used in different researches today. Fishbein's behavioural model is one of the most influential and widely researched models about attitude [12]. According to the Fishbein's model, attitudes of people are formed toward a specific object based on their beliefs (perceptions and knowledge) about these objects. Fishbein's model was constructed to measure person's overall attitude toward some object and could be derived from his beliefs and feelings about various attitudes about the object. This model can thus be used as a multi attribute attitude measurement model.

In this study five attributes namely, convenience, information, speed, enjoyment, and customer service were chosen to measure consumer overall attitude towards online shopping.

F. Logistic Model

In order to investigate relationships in potential of online sales, a Logistic model was developed. As the potential of

online sales it is probability in nature and changing between zero and one, so it appropriately treated as a binary or two choices variable the following Logistic equation was estimated.

$$L_{ij} = \beta_{ij1} + \beta_{ij2} \cdot PC_{ij} + \beta_{ij3} \cdot CA_{ij} + \beta_{ij4} \cdot FC_{ij}$$

Where, PC refers to product type, CA refers to consumer overall attitude towards online shopping and FC refers to familiarity and confidence.

III. RESULTS AND DISCUSSION

The age distribution of respondents showed that mean age was 32 years old while minimum age was 17 and maximum age was 45. The gender distribution of the respondents was 75 per cent males and 25 per cent females. Also nearly 55 per cent of respondents were married and the rest of 45 per cent were unmarried. Regarding to the respondents' job, the largest group belong to businessmen in IT fields (32.50 per cent), followed by private sector professionals (26.40 per cent), businessmen in non IT fields (20.70 per cent), government servant (9.80 per cent) and others (10.60 per cent). In the term of the family income, families with Rs. 15000 to Rs. 20000 per month were the largest group among the respondents (34 per cent) then families with more than Rs 20000 (18.50 per cent). Also 7.5 per cent of respondents reported that they earn less than Rs. 10000 per month. Furthermore, 93 per cent of respondents had access to the Internet, 76 per cent were aware of e-shopping but 68 per cent have not had any experience in e-shopping. Along with this, 35 per cent said they will purchase online in next six months.

A. Demographic Characteristics

The relationships between overall consumer attitudes towards online shopping and consumer demographic characteristics were analyzed by using ANOVA and the results are presented in Table I. The results indicated that two factors of gender and family income have significant relationship with overall attitude towards online shopping at 95 per cent of confidence level ($P \leq 0.05$).

TABLE I: ANALYSIS OF VARIANCE FOR CUSTOMER DEMOGRAPHICS

Demographic Features	F	Sig
Age	3.245	0.096
Gender	9.002**	0.012
Education	0.765	0.746
Marital Status	0.000	1.102
Job	0.260	0.986
Family Income	3.462**	0.026

Note: ** indicates significant at 5 per cent level.

TABLE II: ANALYSIS OF VARIANCE FOR ENVIRONMENTAL CHARACTERISTICS

Demographic Features	F	Sig
Internet Access	0.068	0.764
Internet Use	4.385**	0.003
E-shopping Awareness	0.026	0.899
E-shopping Experience	3.472**	0.002
Future Purchase	6.024**	0.003

Note: ** indicates significant at 5 per cent level.

B. Shopping Environment

The relationships between overall attitudes towards online shopping and experiences were analyzed and the results are presented in Table II. The results showed that three factors viz., internet use, e-shopping experience and willing to e-shopping in future have significant relationship with overall consumer attitude towards online shopping ($P \leq 0.05$).

C. Product Type

The significant difference between the applicability of human senses and online shopping was analyzed and the result is presented in Table III. The human senses were categorized then based on the virtual online space. The Friedman Test was used to test significantly differences of ranking human senses. The results showed with 95 per cent confidence, there is significant difference in human senses in online shopping.

TABLE III: FRIEDMAN TEST OF RANKING HUMAN SENSES IN ONLINE SHOPPING

Statistic	Value
Sample Size	200
Chi-Square	467.802
Asymp.Sig	0.000

Table IV shows ranking result of effectiveness of human senses. From the table, products which need sense of sight to be chosen online are more likely to be sold online followed by sense of sound, sense of smell, sense of taste and sense of touch.

TABLE IV: ONLINE SHOPPING VIRTUAL RANKING OF HUMAN SENSES

Human Sense	Mean Rank
Sense of Sight	1.54
Sense of Sound	2.32
Sense of Smell	3.16
Sense of Taste	3.98
Sense of Touch	4.35

D. Familiarity and Confidence

Where consumers already know the product brand name and have purchased it before and been satisfied with their experiences, familiarity and confidence for e-shopping is higher. The respondents were asked to report their familiarity with Indian Railways and their previous shopping and satisfaction. Chi-Square test and Spearman correlation were used to investigation significantly of relationships between these variables and the results are presented in Table V and Table VI.

TABLE V: CORRELATION AMONG FAMILIARITY, CONFIDENCE AND SATISFACTORY

Test	Statistics	Sig
Chi-Square	102.458	0.000
Spearman Rank Correlation	0.286	0.019

TABLE VI: CORRELATION AMONG FAMILIARITY, CONFIDENCE AND EXPERIENCE

Test	Statistics	Sig
Chi-Square	115.290	0.000
Spearman Rank Correlation	-0.469	0.000

The results proved that where consumer purchased a product and especially if he/she satisfied of previous purchase, familiarity and confidence of consumers to purchase the product online is increased.

E. Potential of Online Sales

In order to identify factors affecting potential of online sales of a specific product, the logistic model was developed and the results are presented in Table VII. The dependent variable was the potential of online sales that takes 1 when product has bought online and 0 when product has bought offline. According to the results with 95 per cent confidence, all coefficients were significant. It is mean that potential of online sales has significant relationship with the variables. The constant coefficient of the equation also was significant in same confidence level. The negative value of the variable PC (Products type) indicates that when the dependency of choosing a product to human senses increases, potential of online is decreased.

Using analysis of variance and overall attitude mean with 95 per cent confidence and result showed that only two factors, gender and family income had significant relationship with overall attitude towards online shopping ($P \leq .05$). It reveals that overall attitudes of families with higher income are higher than others. In addition, men have stronger attitudes to online shopping compared with women.

TABLE VII: ESTIMATION OF COEFFICIENT OF LOGISTIC REGRESSION

Variables	B	Wald	df	Sig
Constant	-3.964**	5.102	1	0.035
CA	0.086**	5.987	1	0.010
FC	0.925**	6.846	1	0.034
PC	-1.432**	7.142	1	0.026

Note: ** indicates significant at 5 per cent level.

The estimation of logistic model shows with 95 per cent confidence all coefficients were significant. It means that potential of online sales has significant relationship with overall attitude towards online shopping, product type and familiarity and confidence. The negative value of the variable PC (Products type) indicated that in online shopping when consumer has to apply physical human senses such as touch and taste, potential of online sales will be reduced.

IV. CONCLUSION AND IMPLICATIONS

The forgoing analysis indicated that gender and family income had significant relationship with overall attitude towards online shopping and environment characteristics and there is no any significant relationship between internet access and overall attitudes towards online shopping, but weekly internet use having in e-shopping and willingness to more shopping online have significant relationship with overall attitudes online shopping. It means internet access rate is high among people but few percentages have intention for e-shopping. In addition, results of this study investigated significant differences between human senses in e-purchasing process. The result also proves that there is a significant difference between human senses in online decision making process.

Moreover, results concluded from Logistic model and showed strong relationship among the three independent variables with dependent variable which belong to brand familiarity, product types and consumer attitudes for online shopping. These results are significantly different from the electronic shopping test in which attitudes towards online shopping have the strongest influence on e-shopping possibility. Also depart from estimation of the Logistic model and verified that companies present physical product online but need to gain the advantages of famous brand name and sales experience are likely to be successful than those companies offer virtual products without familiar brand name and are new in the market.

For online retailers need to ensure that online shopping process through their website is designed and made as easy, simple, and convenient as possible. The web site should also be designed in such way not to confuse potential buyers; they should ensure that they provide an efficient delivery service to their customers. The leading telecommunication and internet service providers in Chennai need to provide cheaper internet access in order to encourage more consumers to become internet users.

Introduce more affordable high-speed internet access to cater online customers who require high bandwidth in the delivery of digitized products such as computer software, music, videos and games through the internet, which are presently popular and frequently purchased by users of internet shopping. In fact, the potential of e-shopping will get significant privilege when customers will show less traditional culture and shopping behaviour attitude.

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