



Impact on E-Commerce towards Online Shopping and Customer Buying Behavior

K. Selvaraju*; Dr. P. Karthikeyan**

*Assistant Professor,

Department of Business Administration,

K. S. R. College of Engineering,

Tiruchengode, Tamilnadu, India.

**Assistant Professor,

School of Management Studies,

Kongu Engineering College,

Perundurai, Erode, Tamilnadu, India.

Abstract

E-commerce has initiated new way of distribution channel and online shopping tendency to increase the needs and wants of customer. Due to change in information technology, e commerce is emerged and played in industry arena by the way of selling the product and services. Ecommerce is the trading the product and services using the network and internet tools. Technology supports the new initiative and attitude of customer buying behavior. Various studies have been initiated to understand the attitude and behavior of customer by using online shopping. They found that online shopping support towards ease accessibility, timeless, perceived risk, product features and attribute have more impact in buying intention. Through this article, we analyzed how these variables support with one another and how it persuades buyer behavior with small group of respondents. Primary data are collected through questionnaire using G3 software to validate the respondent. Visual PLSS software is implementing to modeling the cause and effect link between the construct and intra construct. Factor analysis and chi-square are used to determine the relationship between the variables. We covered managerial and implication also provided to online retailer about the various attribute that influences the buyer intention.

Keywords: Internet, Ecommerce, Online shopping, Buyer behavior, Intention.

1. Introduction

In current scenario, internet plays a significant role in daily life of human beings. The invention of internet brings many benefits to individual as well as company in daily activity (Guo and Noor, 2011), with the invention of this internet we can use to communicate, learn, process, entertained, buy a goods and services without moving some where places. Internet collects all competitors, product, services and customer in one place. It highlight new traffic lane to promote, advertise, market the products and services in globalised form (Barry Silverstein, 2002).

The Electronic commerce technology boomed during the twenty century with the development of internet usage. This invention of technology mainly support by the way of transfer of funds in particular area. Later the introduction of electronic data interchanges (EDI) spread to its producers by retailing or promoting the product and services through online market. This concept is name as “online shopping or Ecommerce”. Online shopping attitude refers to consumer’s psychological state in terms of making purchases on the internet (Li and Zhang, 2002).its use keep dispersion in various sectors such as stock market, travel agency, online purchasing, etc. E-commerce is benefiting from numerous positive trends, counting the constant rollout of broadband, rising the user sophist shopping online and the reject of certain brick-and-mortar retailers. (Imran Khan, 2011)

Consumer behavior is the process of individuals, group and organization to select, organize and purchase the products and services experiences, or ideas to satisfy needs and wants the impacts of these processes have on the consumer and society. (Kuester, 2012), Consumer behavior is differ from other depending on buying decision which is influenced by buying opinion and habit that are twist tampered by psychological and social forces that affect purchase decision making.

Online shopping consumer behavior not bounded towards online shopping. They also utilize the internet for identifying and comparing the prices of product, services and news so on. The recession has so much impact on online consumer behavior. Behavior of online shopping customer determined on various elements such as shopping purpose, personality, knowledge of ecommerce, motives, incentives and experience. According to McKinsey study 2012, E-commerce in India is estimated to reach \$3 billion in sales by 2018. It is projected that India will have 38 million active online shoppers by then. In 2011, investors pumped \$305 million in e-commerce in India. Today many companies have reached this online space to tap its massive potential opportunity such players are like flipkart, Amazon, e-Bay, shopclous are very active in this space. These companies are very aggressive in positioning their brand to young population by offering convenience, variety, better pricing and speed of disposing the product (Upasna, 2012).

2. Review of Literature

Mamaghani (2009) has studied the attitude of customers is often changing due to availability of ecommerce swap agency in few moment if they are not happy with them. Customers anticipated the same kind of service and also same treatment as provided by travel companies through their retail or through the websites. Various customers having the experience with different approach of surfing internet as per their rate of internet skills and knowledge by approaching well user friendly website and rich contents. Customer these days are far more difficult and want convenience, speed and a seamless buying experience. Author final conclude that creating awareness among customer about product and make them more loyal through friendly website.

Kim (2004) projected various barriers affecting ecommerce in the market place. Such as limited skill in using technology, lack of awareness, high cost of investment, lack of assurance and confidence in using the ecommerce, cost of maintenance systems, lack of human skills resources and lack of change of ecommerce, insufficient infrastructure of ecommerce and small space of ecommerce market are highest barriers factors that not able to popularize the ecommerce market.

Luarn and Lin (2003), the highest development of the Internet usage offered a great number of viability by the user of consumers in E-marketers. Whether the marketers can identify and change their prospective customers into actual ones and retain them by depends to a highest extent on their service offered to satisfaction of potential consumers.

Childers et al. (2001) analysis find out that comfortable and navigations were reliable and acceptable predictors for using the ecommerce site, give shopping experience and enthusiasm.

Besides experience and enthusiasm is a strong and consistent identifiable of attitude in mode of interactive shopping.

Miyazaki and Fernandez (2001) perceived risk mostly impacted on consumer online buying behavior negatively. They also find that Internet experience is unrelated to the existence of worry according to the privacy and security of online buying power and the perceived risks of scheduling online purchases.

Donthu and Garcia (1999) suggest that risk identification, innovativeness, brand awareness, price realization, significance of convenience, various propensity, impulsiveness, behavior toward advertising, behavior toward shopping and behavior toward direct marketing would influence online buying behavior and found that most among them are categorized of age, income, significance of convenience, advertising were factors influencing online buying behavior. Online shopping intention can be defined as an environment where a consumer interest and intends to make online transactions. In addition that willingness of Purchase can also be suggested as a consumer's intention to make an online link and have dealing with a website and retailer. (Pavlou, 2003). Gefen et al. (2003) suggest that build online trust in circumstance that unaware of typical human interface that mainly leads to believe in other situation advances the understanding of these patterns and their relationship with human buying behavior.

Mauldin and Arunachalam (2002) is revealed that certain variable like long time dispatch, usage of the internet, more surfing time for a specific items, no bargaining are closed related variables to create an intention to purchase the things through online shopping. Customer believe as the important variables for customer commitment and loyalty. In along with customer satisfaction and identification is value of increasing the explanatory variables implemented in this research, the results shows that customer behaviour and commitment towards online purchase is supported towards the loyalty of ecommerce firm. (Reichheld and Scheffer., 2000)

Swaminathan et al. (1999) acknowledge that the believe in supplier is likely to have more impact towards the customer intention of supplier reliability and compare to that the identified as an antecedent of an electronic commerce of product exchange. Rengasamy Natarajan Balamurugan et al (2013) identified that there are more than 20 attributes are importance factors which influence the purchasing power of online buyers, these variables are time saving, travel time is less, customer experience, easy to reach, less transport cost, quick delivery, high variety of product, internet speed, preferences, no of ecommerce sites, all time accessibility 24x7, easy payment, attractive offers, less cost, product customize, no negotiation, purchase anywhere, access to global brand.

3. Methodology

3.1. Rationale for the Study

Ecommerce occupy important role in selling and buying the articles. Researcher and corporate should understand the important variables that influence the motives behind online buyers needs and wants. This will support in recognize variables that play a vital role in determining customers intention to purchase the product by helping them in determining adequate strategies which makes customer to prefer online shopping. For examples, if an online seller understands that apparent risks are high in certain elements that influence customer intention to buy, retailers can design strategies to reduce the risks and motive the customers to buy through online.

Previous studies mainly concentration their attention towards the role of internet penetration, usage of internet and consumer involvement in ecommerce. For instance, Vellido et al. (2000) identify nine factors linked with buyer perception of online shopping. Along with these factors, risk perception of buyer was more highlighted to be the main differentiated between people buying online and people not buying online. Other perceptive variable are control process and

suitability of the shopping methods affordability of merchandise, buyers service and comfort ability of the shopping site.

Jarvenpaa and Todd (1997) introduced a model of buying behaviour towards Internet shopping in general. The model proposed four major categories of variables such as risk perception, experience, product features, quality of services provided by websites of internet retail shopping. Customer attitude towards online shopping affects their buying behavior decision

However these articles pay little attention in particular area where internet penetration usage is very low and customer are not yet involved in this arena. Therefore the need and importance is identified by the research to look behind these variables and their relevant in India buyers, how much it determined and influenced the online shopping intention to buy the product using internet.

3.2. Objectives of Study

1. To know the variable that influence customer intention to purchase through online.
2. To know the highest influence variable through online buying behavior
3. Understand the relationship between the demographical variables that influence online shopping.
4. Understand the customer satisfaction level towards online shopping.

3.3. Research Methodology

This research paper follow exploratory research design in nature and data has been collected through structured questionnaire. The respondents were identified from different educational institutions and company in and around Erode and Namakkal City. The sample size is 200 was selected by using G3 software and valid respondents were selected only 186 due to missing samples. A pilot study was carried down from 35 respondents and necessary steps to take correction have been place based on the feedback from the pilot study respondent. Convenience sampling techniques was followed to collect respondents form online Shoppers list. Visual PLSS is a software used for evaluate structural equation modeling to hypothecate cause and effect link between the latent variables (constructs), intra construct relationship (between indicator variables).

Based on the objective the following four research hypothesis were outlined

1. H1: Ease of use attributes lead to online buying behavior
2. H2: Usefulness attributes contribute to online purchase intention
3. H3: Product features and attribute to online purchase intention
4. H4: Perceived Risk attributes to online purchase intention

The researcher has followed Factor Analysis,chi-square and one way ANOVA techniques to analyze the data and interpret. The trustworthiness and validity of the models have also been investigated. The preliminary results show convergent validity and discriminate validity of the model.

4. Results and Discussion

4.1. Demographical Data of the Respondents

The study has been conducted in Erode and Namakkal City among 200 respondents selected based on G3 software and valid respondents only 186. Demographical data of respondents obtained including the following: gender, age, Education, occupation, earning, no. of person in the family.

The majority of the respondents are between the age group of 20 and 25 (85%) which can be used to determine that many of the online buyers belong to this age of 20 to 25. While taking gender into consideration, 55 % of respondents are male while 45% belongs to female category. As this study was conducted only through college students and corporate demographic characteristics, the percentage of respondents is selected in these groups, i.e., 50% and 40% respectively. Most of the respondents fall under income group of less than Rs.25, 000 -15,000 per month (47%)

4.2. Hypothesis Analysis

H1: Ease of use Attributes Lead to Online Buying Behavior

Factor analysis should be used to know the relationship between latent variables (constructs) ease of use attribute in online should link with intra construct (between indicator variables) such as Satisfaction level, Frequency of online purchase, and experience of online purchase .

4.2.1 Satisfactory Level in Online Purchase

Various satisfaction level is compared with ease of use attributes. This research shows 65% of respondents have strongly agreed that they are highly satisfied with the ease use of online purchase towards the product and easy usage of online through their experienced. More than 20% of respondents say that they are satisfied towards online purchase. 15% of respondents have voted neutral and dissatisfied. This satisfactory analysis depicts the level of ease and satisfaction that is enjoyed in online services.

4.2.2. Frequency of Online Purchase

Number of times using online purchase is compared with ease use attributes. The maximum of the online buying happen once in a month. More than 51% of users do online shopping once in a month. 33% respondents say that they purchase once in two month. It clearly shows that customers are comfortable and anticipated more in online purchase, which will increase in future over the traditional produce purchase. 6% of customers buy products through online every week. 10% of respondent feel that they are interested to buy more than three months or occasional due to ease of online purchase transaction and if needed.

4.2.3. Experience of Using Internet

From this research identified that the maximum of respondent 45% having an experience of more than 5 years, 20% of respondent have an experience of 3 years only 12% respondents have of less than a month

H2: Usefulness Attributes Contribute to Online Purchase Intention

Distribution according usefulness attributes of online purchase is compared with search of product, Amount spent, Save time.

4.2.4. Search for Product Comparison and Information

Purpose of using the internet has been revealed for a particular period of time. Out of 186, majority of respondent 123 (55%) are using the internet very often to buy and search a product features and information. 14 % of respondent used to buy the product online. It clearly evidence show that internet are mainly used to search and buy the product online.

4.2.5.Amount Spent for Online Purchase in a Year

Money utilized for online buying is been taken into consideration for one year. More than 76% of respondents (142) spend less than Rs.10, 000 in a year through online purchase of product and services. This is due to the money related risk and lack of transaction procedure involved in every transaction through online purchase. Though risk aversion and risk taking capability only 20.7% respondent spend more than Rs.40, 000 in a year to purchase the product through online.

4.2.6.Saving Time

From the survey find that 80% of respondents have agreed that online shopping saves time and provide information about the product features with different dimension. Thus the maximum of the respondent agreed with the online purchase will support for time saving.

4.2.7.Price of the Product

Analysis shows that price of product display in website, majority of respondent 132 (65%) are satisfied with the price of product display and it valid to purchase. 12 % of respondent are dissatisfied about the price of product is too high and expenses. It clearly evidence show that online shopping are useful to know the price range of product.

H3: Product Features and Attribute to Online Purchase Intention

Distribution according to product features attributes of online purchase is compared with product preferred, Significance of company and Brand identify,

4.2.8.Products preferred through Online Shopping

Online purchased is carried over for many product types varying from books, music to tickets. It has been observed that customer prefer buying the books through online is high (27 %), 20% of respondents prefer to use online ticket, It clearly observed that many of the respondent used to preferred to order software, gifts and electronic through online. The least online purchase items come under the category of toys occupy 2%.

4.2.9.Significance of Company Name and Brand Identify

Company profile and brand identity have more significant in market during online shopping. This variable will bring the brand loyalty towards the customer involved in online shopping. 54% of respondent have strongly agreed that the company name and brand identification have more important in online purchase, 38% of respondent are agree that company name and brand identification are necessary to purchase, 7% of respondents are neutral to have more important in online purchase.

4.2.10.Customer Services

43% of the respondents are strongly agreed that they have good customer services provided by online shopping company. 36% of respondents are agree customer services is good, minimum of 2% of the respondents are feel that customer services is poor.

4.2.11. Trust in the Internet retailer

Trust worthiness of internet retailer supplier was estimated that 54% of the respondents are strongly agreed that they trusted in customer services provided by online shopping company. 16% of respondents are agree in trusting the retailer of online shopping, minimum of 4% of the respondents are feel that retailer are not trusted because of delivery of wrong and damaged product.

H4: Perceived Risk Attributes to Online Purchase Intention

Distribution according to risk attributes to online purchase is compared with mode of payment, Security of payment, Cost of delivery and Speed of delivery.

4.2.12. Mode of Payment for Online Shopping

The payment mode for online shopping included Cash on delivery, credit card, cheque, bank transfer and various coupon method, The Maximum of respondent utilize 61% of cash on delivery option which fellow the bank transfer system occupy 25%, payment mode such as credit card occupied 10% and coupon method occupied least place of 4%

4.2.13. Online Shopping Payment is Secure

This is a important factor for which the people may have various opinion and aspect towards on line shopping. 80% of the respondents feel that online shopping is more secure for their payment and it will give clear detail about the history of payment. 20% of respondent are not happy to have online transaction secure payment system.

4.2.14. Cost of Delivery

Impact of cost of delivery will affect the buying behavior decision, 40% of respondent are strongly agree the cost of delivery is minimum, 32% of respondent are agree that cost of delivery is minimum, 3% of respondent are agree with cost of delivery is high.

4.2.15. Speed of Delivery

Speed of delivery have great significant in online shopping, 49% of the respondent are strongly agree that product will reach very soon, 31% of the respondent are agree that the product will delivery on the time, only 6% respondents were disagreed . From the research revealed that respondents buying behavior will affect the speed of delivery.

4.3. Primary Factors analysis

By identify the relationship of all attributes of the latent variables and intra construct variables at what factors/ attributes are positive opinion and attitude from respondents are indicate as the Primary factors analysis

Primary factors	Frequency	Percentage	t-test
Ease of Use	62	51.2	7.25
Usefulness	49	27.7	3.25
Product features	44	21.1	3.12
Perceived risk	45	21.4	3.07
Total	200	100	16.69

We found that majority of respondent (51.2) had the most positive attitudes towards the important attributes of ease of using the internet help to focus on online purchasing. The attributes such as usefulness, product features and risk are equal distribution of 27.7, 21.1 and 21.4

4.4. Chi-Square Analysis

Null Hypothesis (H_0): There is no significant relationship between Income and Amount spent on online shopping

Salary	Amount Spent (Per year)				
	Below 1000	1001-10000	10001-40000	Above 40,001	Total
Rs 5000-15000	02	21	07	1	31
Rs 15,001-25000	05	53	09	6	73
Rs 25,001-35,000	02	38	1	7	49
Above Rs 35,001	02	30	0	15	47

Level of Significance = 5%

Degrees of Freedom = 4

Table Value = 7.815

Calculated Value = 10.3279

The calculated value is higher than the table value, the null hypothesis is rejected. So there is significant relationship between Income and Amount spent on online shopping

Null Hypothesis (H_0): There is no significant relationship between attributes and satisfaction level of online shopping

Salary	Amount Spent (Per year)				
	Highly satisfied	Satisfied	Netural	Dissatisfied	Total
Ease of Use	63	16	4	3	86
Usefulness	22	12	5	2	41
Product Feature	19	13	4	1	37
Perceived Risk	18	10	5	3	36
Total	122	51	18	09	200

Level of Significance = 5%

Degrees of Freedom = 4

Table Value = 5.236

Calculated Value = 9.189

The calculated value is higher than the table value, the null hypothesis is rejected. So there is a significant relationship between attributes and satisfaction level of online shopping

4.5. One way ANOVA

In order to show the significance of the variables we used a one way Analysis of Variances, also known called as One way ANOVA, which used to investigate and identify difference among two or more independent variable. Here we analysis the primary factors with reference variables. The significance value is presented as the last column in the table that if the value is less than 5% (0.05) the variable is considered to be significant.

Independent Variables		Mean square	F	Sig.
Frequency of online purchase	Between Groups	5.236	1.256	.000
	Within Groups	1.356		
Experience of Using Internet	Between Groups	123.265	2.365	.000
	Within Groups	13.256		
Amount spent for online purchase	Between Groups	18.236	11.256	.046
	Within Groups	4.256		
Saving Time	Between Groups	16.325	10.256	.032
	Within Groups	11.325		
Products preferred through online shopping	Between Groups	2.563	1.256	.000
	Within Groups	.256		
Trust in the Internet retailer	Between Groups	17.326	11.258	0.317
	Within Groups	9.236		
Online shopping payment is secure	Between Groups	2.365	1.236	.000
	Within Groups	279		
Cost of Delivery	Between Groups	11.587	8.269	0.123
	Within Groups	8.256		
Speed of Delivery	Between Groups	35.569	16.237	0.429
	Within Groups	21.235		

5. Conclusion and Implication of Study

This research is exploratory in nature and it has made an attempt to understand the various dimensions of buying behavior of Indian customers through online shopping. Statistical significance tests are used to analyze the various parameters to examine the relationship. It clearly indicates that the majority of respondents visited frequently the online websites. The easy access and convenience provided by these websites for 24 hours and seven days make the customer feel more comfortable.

The present study revealed that risk, product features also have a major impact on customer intention to take the buying decision. Online retailers want to try to minimize the risk of transaction among the customers. This can be reduced by implementing a money-back guarantee and easy exchange of the product, quality merchandise, protection of online transactions and effective customer services. Credit rating from the customer side would also reduce risk and improve their company brand image. The online retailer should concentrate on quality packaging that can minimize the product damage and tampering.

Online retailers should focus on delivery of the right product to the customer point to prevent undelivered merchandise ordered and high cost of delivery for the online purchase. Online buyers will find the easy and understandable navigation of websites. Retailers should give adequate information about the product, facility to compare the product on various views such as price, quality, dimension, etc. would help the customer in making the better choice.

Provide better customer service by the way of quick response to customer questions, rapid handling of customer queries and complaints would improve the brand image of the online retailer. In this research, an effort has been made only to study customer variables. In future research, there is a scope for researchers to study retailer's features and its influence variables on buying behavior decision. Hence the scope is large. It is benefited to incorporate in various perspectives of analysis.

that make entire of depth understanding of various links among the more variables and its influence on buyer intention.

References

- Bellmen, S. Lohse, G.L. & Johnson, E.J. (1999), "Predictors of online buying behavior", *Communication of the ACM*, Vol. 42, No. 12, pp. 32-38.
- Childers, T.L. Carr, C.L. Peck, J. & Carson, S. (2001), "Hedonic and utilitarian motivations for online retail shopping behaviour", *Journal of Retailing*, Vol. No. 77(4), pp. 511-535.
- Davis, F. D. (1986), "A Technology Acceptance Model for Empirically Testing New End- User Information Systems: Theory and Results", *Doctoral Dissertation Thesis- MIT*.
- Davis, F. D. (1989), "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology", *MIS Quarterly*. Vol. 13(3), pp. 319-340.
- Donthu, N.; Garcia,(1999) A., "The Internet shopper", *Journal of Advertising Research*, Vol. 39, No. 3, pp. 52-58.
- Dowling&Stalin, R. (1994), "A model of perceived risk and intended risk-handling activity", *Journal of Consumer Research*, Vol. No. 21, pp. 119-134.
- Fishbein, M. (1967), *Attitude and Prediction of Behavior: Readings in Attitude Theory and Measurement*, John Wiley, New York.
- Folkes, V.S. (1988), "Recent Attribution Research in Consumer Behavior: A Review and New Directions", *Journal of Consumer Research*, Vol.No.14, pp. 548-565.
- Gefen, D. Karahanna, E. & Straub, D. W. (2003), "Trust and TAM in online shopping: An integrated model", *MIS Quarterly*, Vol. 27, No.1, pp. 51-90.
- Hoffman, D. L. & Novak, T. P. (1996), "Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations", *Journal of Marketing*, Vol. No.60, pp. 50-68.
- Jarvenpaa, S.L. & Todd, P.A. (1997), "Consumer Reactions to Electronic Shopping on the World Wide Web", *Journal of Electronic Commerce*, Vol. 1, No.2, pp. 59-88.
- Kim, D.J., Donald L.F. and Raghav (2008), "A trust based consumer decision making model in electronic commerce: A role of trust, perceived risk, and their antecedents", *Decision Support System*, Vol.44, No.22, pp.544-564.
- Luarn, P., & Lin, H.H. (2003), "Customer loyalty model for e-service context", *Journal of Electronic Commerce*, Vol. 4, No. 4, pp. 156-167.
- Maignan, I.; Lukas, B.(1997)"The nature and social uses of the Internet: a qualitative investigation", *Journal of Consumer Affairs*, Vol. 31, No. 2, pp. 346-371.
- Mauldin, E. & Arunachalam, V. (2002), "An Experimental Examination of Alternative Forms of Web Assurance for Business-To-Consumer E-Commerce", *Journal of Information Systems*, Vol. 16, No. 1, pp. 33-55.
- McKnight, D.H.V., Choudury, & Kacmar, C. (2002), "Developing and Validating Trust Measures for E-Commerce: An Integrative Typology," *Information Systems Research*, Vol.13, No. 3, pp. 334-359.

- Miyazaki, A.D.; Fernandez(2001) A.,“Consumer perceptions of privacy and security risks for online shopping”, *The Journal of Consumer Affairs*, Vol. 35, No. 1, pp. 27-44.
- Novak, T.P., Hoffman, D.L., and Peralta, M. (2000), “Building consumer trust online”, *Communication of the ACM*”, Vol. 42, No. 4, pp.80-85.
- Pavlou, P. A. (2003), “Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model”, *International Journal of Electronic Commerce*, Vol.7, No.3, pp. 101-134.
- Swaminathan, V., Lepkowska-White, E., & Rao, B.P. (1999), “Browsers or Buyers in Cyberspace? An Investigation of Factors Influencing Electronic Exchange”, *Journal of Computer-Mediated Communication*, Vol. 5, No.2.
- Upasna K. (2012), “E Commerce in India; Early birds, expensive worms”, *Consumer and Shopper Insights*, McKinsey Report, July 2012, P.1