

An empirical study of key parameters that impact purchase decisions of consumers who use e-commerce websites for online shopping in India

Un estudio empírico de los parámetros que influyen en la compra de los consumidores que utilizan el comercio electrónico en India

Gurmukh S. Popli¹, Gaurav Sarin²

¹ Delhi School of Business, India

g.s.popli@dsb.edu.in , gaurav.sarin@dsb.edu.in

ABSTRACT. Electronic Commerce has experienced rapid growth during the last few years. It is a business technique by which consumers buy and sell goods and services online. It has not only helped in increasing speed of service delivery but also helped in reducing cost factors. Leading e-commerce Companies such as Snapdeal, Jabong, and Flipkart are aiding in growth and development of this concept. As per IMAI, domestic digital commerce market is expected to register much higher growth in coming years because of better internet penetration, increase in trust level and pricing advantage. Hence, it became important for stakeholders to know more about the e-attitude of the consumers and triggered an idea to conduct study on e-commerce shopping in India. Using the Multiple Regression Model, Means Comparison Analysis and Demographic Details, the study gave decent business insights into the Indian consumer's cognitive decision behavior when choosing products online.

KEYWORDS: E-Commerce, Internet, Consumer Behavior, Consumer Perspective, Product, Consumer Purchase Decisions.

1. Introduction

E-Commerce is the process by which businesses and consumers buy and sell goods and services through an electronic media. This concept is different from the traditional method of commerce i.e. the buyers visiting the seller's brick and mortar shops to obtain goods and services. In e-commerce, business is carried out electronically and there is no need of immediate availability of physical goods or hard-cash to carry out the business deal. E-commerce has emerged as a very powerful source of shopping across the entire globe. The credit goes to the business strategy adopted by the world's leading e-commerce companies such as Amazon, Ebay, Alibaba, Flipkart, Snapdeal, Jabong, etc. for doing on-line business. More and more Consumers are now switching over to online shopping as these companies are offering attractive discounts along with making provisions of delivery of products on the doorsteps of the buyers.

As per the observations of Internet and Mobile Association of India, the digital commerce market is expected to register a higher growth in the next few years because of better internet penetration, increase in trust level and pricing strategy adopted by e-commerce companies. E-commerce provides a secure 24x7 shopping system, convenient delivery along with significant discount offers. Although, the trend of e-commerce has been making rounds for the last fifteen years or so, the appropriate eco-system has now started to fall in place with this business showing excellent growth of 50% during the last five years. As per a survey report, the number of users making on-line transactions in India is expected to grow from 11 Million in 2011 to 38 Million by the end of 2015, showing a tremendous increase of more than three times. According to Forrester, the e-commerce market in India is set to grow the fastest within the Asia-Pacific Region, i.e. at a compounded growth rate of over 57% between 2012 and 2016.

2. Research Methodology

This research paper has been bifurcated in four sections. Section I cover Literature Review, defining of the problem and need for study, research methodology and its objectives. Section II is based upon the secondary study of the subject and section III has been devoted to the primary research on 170 consumers chosen on the basis of convenience sampling. The suggestions, managerial implications and limitations have been presented in Section IV of this research paper.

(a) Data Collection

(i) Primary Data:

The primary data for this study has been collected from 170 Consumers/respondents from different parts of India. But after thorough analysis of the response sheets, only 158 responses were considered good for this study. We have structured a questionnaire which was pilot tested on 30 respondents to collect the first hand information. The issues were identified and preliminary framework of the study was developed after extensive review of literature and personal discussion with the consumers and the sellers. After that, the questionnaire was restructured to cover all the relevant factors thought necessary for this study.

(ii) Secondary Data:

The Secondary data has been collected from various journals, Research Papers, Study Group Reports, Newspapers, Official Web-sites, Books, and other relevant internet sources.

(b) Sample Design:

We have used the method of "Random Sampling" for collecting data from 170 respondents covered in this research.

(c) Data Analysis and Interpretation:

SPSS and MS Excel 2013 Computer Software have been used to analyze the primary data. To analyze the collected data, the following information has been used –



Dependent Variable: Consumer Buy Decision Likelihood Independent Variables: Product and Information Quality, Product Online Discounts, Product Return Ease, Product Checkout Ease, Product Multiple Bundling Options, Product Reviews, Product Visual Search and Prospective Buyer Internet Experience Confidence Level: 95% Alpha Value: 5%

3. Section I:

LITERATURE REVIEW

(Vesterby and Chabert, 2001) has observed that, "The Internet can make it easier for businesses to have information on their products and services available to their potential Consumers". Vijay Sai and Balaji (2009), revealed that consumers all over the world, are increasingly shifting from the crowded stores to the one-click online shopping format. Baty and Lee (1995) concluded that in order to respond to the Consumer's desire for central and convenient shopping experience, businesses design an efficient system to enable consumers to find easily what they need, learn more about the products and services quickly make a purchase decision M. Solomon (1998) in his study, "Consumer behavior is the study of the processes involved when an individual selects, purchases, uses or disposes of products, services, ideas or experiences to satisfy needs and desires". It is imperative to understand the consumer's mind-set, intention and conduct in light of the on-line buying practice. The attitudes of the consumers seem to have a significant influence on their decision.

Sultan and Henrichs (2000) concluded that the consumer's willingness to and preference for adopting the internet as shopping medium was also positively related to income, household size and innovativeness. Akerlof (1970), observed that the information asymmetries between purchasers and sellers can result in market failure Brassington and Pettitt (2003) confirmed that the price which is a part of the marketing mix, a factor to stimulate the consumers and a competitive weapon used to communicate and negotiate. The purchasers are only willing to pay the expected value of the products offered for sale to them. Nelson (1970) made the distinction between search and experience. The quality of goods is verifiable on inspection, whereas an experience good's quality is difficult to judge on inspection. Therefore, only on the purchase and usage of an experience goods can its true quality can be revealed.

Kim and Park (2005) has conducted a study in U.S and observed that the positive attitudes of the consumers and their willingness to search for pre-purchase information leads to a strong likelihood that they will buy online.

Goldsmith and Flynn (2004) suggested that the home catalog is another traditional selling channel where people can shop at home because of the varieties of products offered in the catalog. The consumers can order through the phone or by mail. It is convenient except that they are not able to touch and feel products before purchasing. Thong, Hong and Tam (2006) suggested that enjoyment has a significant effect on shopping. As compared with off line shopping, online shopping can be equally enjoyable and can carry the positive effects.

DEFINING THE PROBLEM AND NEED FOR STUDY

As per a report published by Forrester, the E-Commerce market in India is all set to grow at a fastest rate within the Asia-Pacific region i.e. over 57% (compounded annual growth rate) between 2012 and 2016. The main reason for this shift in shopping pattern is due to the ease with which the consumers can find products through internet. The product information available on-line and the variety of choices offered by the e-commerce companies motivate the present day shoppers to switch over their preferences for shopping. In addition to this, this system provides much ease to vendors in setting up their establishments. However, with the proliferation of online retailers, the e-commerce distributors are facing more difficulties now in distinguishing their products and services from their competitors in the market. Then the consumers generally try to gather information from the advertisements of these branded companies.

The main factors in favor of e-commerce business are as under:

- Availability of increased broadband internet users in the market
- Growth of smart-phone users, necessary for online shopping
- Increase use of on-line classified sites by the buyers
- Availability of wider range of products for sale on-line
- Attractive offers of competitive prices by sellers for on-line shoppers
- Delivery of products at the door steps of the buyers
- Convenient way of shopping

Further, Ernst & Young conducted a study on the sources of information for the prospective buyers. They had observed that 69% of those surveyed conveyed that brand name plays a significant role in their decisions of shopping through internet. They concluded that marketing through established brands may be required to use internet, even though the consumers cost of information collecting appears to be quite low. There is a debate going on in the marketing world that advertising by branded companies is more helpful in the buying decisions of the shoppers or the use of internet by the modern day consumers and whether the brand names succeed in conveying the complete information in comparison to the source of own information gathered through internet. E-commerce shopping is increasing at a very fast rate, hence, a modest effort has been made to address all these relevant issues through this study.

KEY RESEARCH OBJECTIVES

- To find out the relationship between parameters related to buying and consumer buy decision likelihood
- To study the relationship between internet experience and consumer buy decision likelihood
- To understand the demographics of Indian online buyers.

HYPOTHESIS

Following hypothesis were framed for the study –

Hypothesis # 1: A relationship exists between Product and Information Quality and Consumer Buy Decision

Hypothesis # 2: A relationship exists between Online Discounts and Consumer Buy Decision

Hypothesis # 3: A relationship exists between Internet Experience and Consumer Buy Decision

Hypothesis # 4: A relationship exists between Checkout Ease and Consumer Buy Decision

Hypothesis # 5: A relationship exists between Return Ease and Consumer Buy Decision

Hypothesis # 6: A relationship exists between Multiple Bundling Options and Consumer Buy Decision

Hypothesis # 7: A relationship exists between Product Reviews and Consumer Buy Decision

Hypothesis # 8: A relationship exists between Visual Search and Consumer Buy Decision

4. Section II: Secondary data:

EVOLUTION OF E-COMMERCE:

The evolution of e-commerce can be attributed to a combination of regulatory reforms and technological innovations. Though the appearance of internet in the late 1960s, has also played a very important role in the evolution of e-commerce, but in fact the business took off with the arrival of the World Wide Web and browsers in the early 1990s. The liberalization of the telecommunication sector and innovations such as optic fibers, DSL (Digital Subscriber Line) have also helped in a big way in the process of its rapid growth. As a result, the barriers prevailing in entering and engaging in e-commerce business have fallen rapidly. A brief



.....

timeline of evolution is as follows –

- 1969: Internet/Arpanet
- 1989: WWW HTML invented at CERN (Conseil European pour la Recherche Nucleaire) - European Organization for Nuclear Research
- 1991: NSF (National Science Foundation) lifts restrictions on commercial use of the Internet
- 1993: Mosaic browser invented at the University of Illinois, Urbana Champagne, is related to public
- 1994: Netscape releases Navigator browser
- 1995: Dell, Cisco, Amazon etc. began aggressively to use the Internet for commercial transactions

DRIVING FORCES BEHIND E-COMMERCE

- Global Consumers
- Global Products
- Global Operations
- Global Resources
- Global Collaborations

ADVANTAGES OF E-COMMERCE BUSINESS

- Increased Profits
- Improved Consumer Service and Loyalty
- Global Accessibility and Sales Reach
- Shorter time-to-market
- Supply Chain Integration
- Capturing Valuable Market Information from Consumers
- No Working-hour Restrictions
- Low-cost Advertising
- Low Barriers to Entries

ADVANTAGES TO CONSUMERS

- Reduced Prices
- Global Market Place
- 24-hour Access
- More Choices
- Quicker Delivery
- Fast Information
- Enables Participation in Virtual Auctions

ADVANTAGES TO SOCIETY

- It Enables people in third world countries and especially in rural areas to enjoy products and services which would otherwise not have been available to them.
- It allows more individuals to work from home, and travel less for shopping, resulting in less traffic on the roads and lower air pollution.
 - It facilitates delivery of public services at a reduced cost, increases effectiveness and improves quality.
 - It allows some merchandise to be sold at lower prices since the organization may not need physical space and a full inventory of goods.

E-COMMERCE AND MARKETING STRATEGY

The e-commerce is forcing companies to rethink the existing ways of doing the target marketing i.e. isolating and focusing on a segment of the population, relationship marketing i.e. building and sustaining a long-term relationship with existing and potential Consumers, and even event marketing i.e. setting up a virtual both where interest people can come and visit. Just consider the case of conventional direct marketers, who devote some 25 percent of their revenues to such costs and printing and postage for catalogues. The reliance on interactive marketing can cut such expenses and may even deliver better results.

Interactive marketing is accomplished in electronic markets via interactive multimedia catalogues that give the same look and feel as a shopping channel. Users find moving images more appealing than still images and listening more appealing than reading text on the screen. These are two powerful reasons why every text-based and still-picture based interactive experimental based service has never generated anywhere near the volume of retail merchandise orders that televised shopping channels have achieved. The maximum public acceptance will require that interactive catalogue services have a more entertaining visual appearance than traditional text-intensive catalogues have had. Ideally interactive shopping program should produce full-motion demonstrations of selected products, but such a practical and economical technology has yet to be developed.

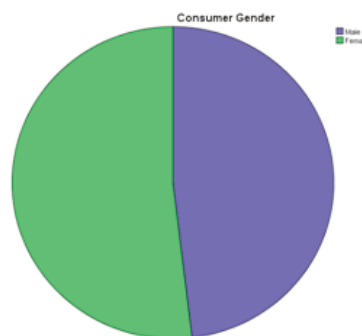
5. Section III

DATA ANALYSIS AND RESULTS:

The primary data considered good for this study was 158 respondents and analyzed using SPSS and Excel 2013. Demographics details of Indian online buyers were captured and analyzed. Moreover, Multiple Regression Model and Means Comparison Analysis were applied to test the developed hypothesis and arrive at the managerial implications and suggestions.

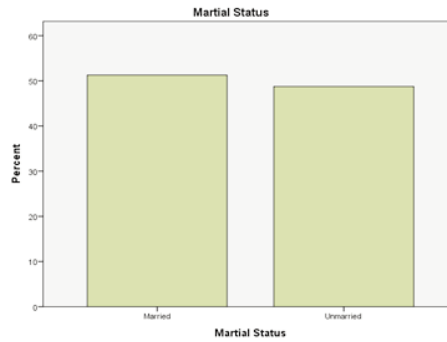
(a) Demographic Details –

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------|-----------|---------|---------------|--------------------|
| Valid Male | 76 | 48.1 | 48.1 | 48.1 |
| Female | 82 | 51.9 | 51.9 | 100.0 |
| Total | 158 | 100.0 | 100.0 | |

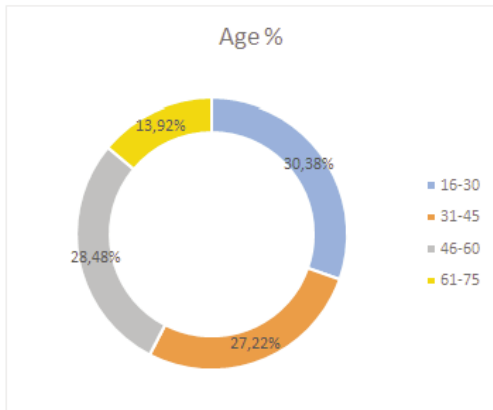
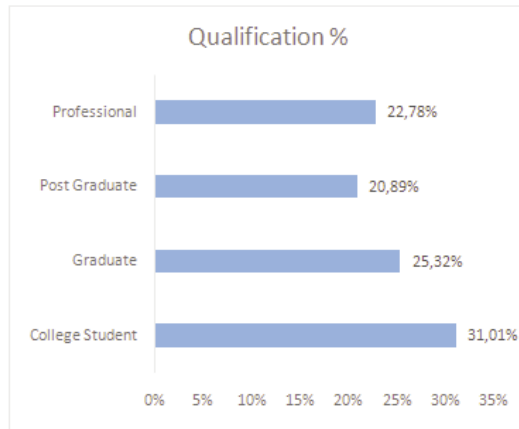


Consumer Gender

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------|-----------|---------|---------------|--------------------|
| Valid Married | 81 | 51.3 | 51.3 | 51.3 |
| Valid Unmarried | 77 | 48.7 | 48.7 | 100.0 |
| Total | 158 | 100.0 | 100.0 | |



Marital Status



(b) Multiple Regression Model –

| Pearson R Co-efficient | Pearson R Co-efficient Square | Sig. |
|------------------------|-------------------------------|-------|
| .840 | .706 | 0.000 |

The above model shows that independent variables explain 71% of the impact on the dependent variable.

(c) Means Comparison Analysis –

Consumer Likely To Buy * Product and Information Quality ANOVA Table

| | | Sig. |
|--|---------------------------|------|
| Consumer Likely To Buy * Product and Information Quality | Between Groups (Combined) | .000 |
| | Within Groups | |
| | Total | |

Measures of Association

| | Eta | Eta Squared |
|--|------|-------------|
| Consumer Likely To Buy * Product and Information Quality | .716 | .513 |

Consumer Likely To Buy * Online Discounts ANOVA Table

| | Sig. |
|---|------|
| Consumer Likely To Buy * Online Discounts | .000 |

Measures of Association

| | Eta | Eta Squared |
|---|------|-------------|
| Consumer Likely To Buy * Online Discounts | .517 | .268 |

Consumer Likely To Buy * Return Ease ANOVA Table

| | Sig. |
|--------------------------------------|------|
| Consumer Likely To Buy * Return Ease | .000 |

Measures of Association

| | Eta | Eta Squared |
|--------------------------------------|------|-------------|
| Consumer Likely To Buy * Return Ease | .409 | .167 |

Consumer Likely To Buy * Checkout Ease ANOVA Table

| | Sig. |
|--|------|
| Consumer Likely To Buy * Checkout Ease | .000 |

Measures of Association

| | Eta | Eta Squared |
|--|------|-------------|
| Consumer Likely To Buy * Checkout Ease | .387 | .150 |

Consumer Likely To Buy * Multiple Product Bundling Options ANOVA Table

| | Sig. |
|--|------|
| Consumer Likely To Buy * Multiple Product Bundling Options | .000 |

Measures of Association

| | Eta | Eta Squared |
|--|------|-------------|
| Consumer Likely To Buy * Multiple Product Bundling Options | .442 | .196 |

Consumer Likely To Buy * Consumer Reviews ANOVA Table

| | Sig. |
|---|------|
| Consumer Likely To Buy * Consumer Reviews | .000 |

Measures of Association

| | Eta | Eta Squared |
|---|------|-------------|
| Consumer Likely To Buy * Consumer Reviews | .641 | .411 |

**Consumer Likely To Buy * Visual Search
ANOVA Table**

| | Sig. |
|--|------|
| Consumer Likely To Buy * Visual Search | .801 |

Measures of Association

| | Eta | Eta Squared |
|--|------|-------------|
| Consumer Likely To Buy * Visual Search | .020 | .000 |

**Consumer Likely To Buy * Consumer Internet Experience
ANOVA Table**

| | Sig. |
|---|------|
| Consumer Likely To Buy * Consumer Internet Experience | .000 |

Measures of Association

| | Eta | Eta Squared |
|---|------|-------------|
| Consumer Likely To Buy * Consumer Internet Experience | .647 | .418 |

The above results show that p-value for all the variables except Visual Search is less than the alpha value. Hence, these variables impact Consumer Buy Decision to a level measured by the degree of association.

6. Managerial implications/conclusions

Using Multiple Regression Model and Means Comparison Analysis, we conclude that variables Product and Information Quality, Product Online Discounts, Product Checkout Ease, Product Return Ease, Product Multiple Bundling Options, Product Reviews, and Prospective Buyer Internet Experience have statistically significant impact on Consumer Buy Decision Likelihood since the p-values are less than the alpha value. Moreover, R^2 {Co-efficient of determination} = 0.706, signifying that model explains majority of the impact on the Consumer Key Buy Decision Likelihood. This is clearly evident by looking at the Measures of Association table for each of the independent variable. However, Product Visual Search does not hold a statistically significant relationship with Consumer Buy Decision Likelihood since the p-value is more than the alpha value.

In India, consumers with significant internet experience are a large segment of people who prefer to buy goods and service online. Using demographic details, we conclude that younger age groups and those with high incomes specifically professionals and post graduates prefer online shopping in the Indian sub-continent. These segments want quick product delivery and have less time to purchase items than to visit brick and mortar shops to fetch goods.

The on-line shopping organizations can apply the relevant variables and factors identified in this study to create strategies and tactics to increase sale of their products.

7. Suggestions

By incorporating the results of this empirical study, the e-commerce companies operating in India can focus on the parameters important for consumer buy decision. Moreover, the companies can target the relevant products that cater to the relevant demographic segments to increase their sales and subsequently their profits. The companies will be equipped with better business strategies to increase their market share and improve their overall brand value. The companies can host only high selling branded products, which consumers are looking for. The top and senior management teams can apply appropriate strategic and tactical goals to execute their business plans, which will position them positively in the competitive Indian online marketplace.

Cómo citar este artículo / How to cite this paper

Popli, G. S.; Sarin, G. (2016). An empirical study of key parameters that impact purchase decisions of consumers who use e-commerce websites for online shopping in India. *International Journal of Information Systems and Software Engineering for Big Companies (IJSEBC)*, 3(1), 84-93. (www.ijsebc.com)

References

- Akerlof, G. (1970). The Market for Lemons: Qualitative Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84.
- Baty, J. B.; Lee, R. M. (1995). InterShop: enhancing the vendor/customer dialectic in electronic shopping. *Journal of Management Information Systems*, 11(4), 9-31.
- Brassington, F.; Pettitt, S. (2003). *Principles of marketing*. Prentice Hall, Harlow (UK).
- Goldsmith, R. E.; Flynn, L. R. (2004). Psychological and behavioral drivers of online clothing purchase. *Journal of Fashion Marketing and Management: An International Journal*, 8(1), 84-95.
- Kim, S. I.; Park, S. O. (2005). Oscillatory behavior of supersonic impinging jet flows. *Shock Waves*, 14(4), 259-272.
- Nelson, P. (1970). Information and consumer behavior. *Journal of Political Economy*, 78(2), 311-329.
- Solomon, M. R. (1998). *Consumer Behavior: Buying, Having and Being*.
- Sultan, F.; Henrichs, R. B. (2000). Consumer preferences for Internet services over time: initial explorations. *Journal of Consumer Marketing*, 17(5), 386-402.
- Thong, J. Y. L.; Hong, S. J.; Tam, K. Y. (2006). The effects of post adoption beliefs on the expectation – confirmation model for information continuance. *International Journal of Human Computer Studies*, 64(9).
- Vesterby, T.; Chabert, M. (2001). E-marketing. *Viby J, Jyllands-Posten Erhvervsbogklubb*.
- Vijay, S. T.; Balaji, M. S. (2009). Online Shopping in India: Findings from a Consumer Research. *Marketing Mastermind*, 5.