
Influence of Age and Income on Online Shopping Adoption

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Abstract

In the recent years trend is observed wherein purchasing by 'click' is gaining ground over traditional 'brick' model. This has become international phenomenon. As online shoppers become progressively global and widespread, need arises to understand adoption of online shopping among different Indian consumers. Yet while online usage has nearly doubled in India in recent years, the adoption of online shopping has been relatively slow.

The objectives of the study include determining perception of different age and income groups towards online shopping. For this perception on determinants related to customers, vendors and transaction were taken on five-point Likert scale. The data of 120 respondents was collected from Indore. Respondents were of different age and income group. The results were showing the differences in online shopping behavior with change in age and income.

Keywords: *Online Shopping, Age and Income Groups, Customer Related Determinants, Vendor Related Determinants, Transaction Related Determinants.*

Introduction: The online-shopping revolution has been heralded and hyped since the mid-1990s, and has been advancing quickly for a decade. Online shopping has become so popular for a number of reasons, online shopping isn't just popular in just one market area but in all markets of the business world; from food shopping to clothes shopping. With the new generations being born into such a technology strong society the online shopping market is set to continue to increase.

With the increasing internet literacy, the prospect of online marketing is increasing in India. The consumers indulging in online shopping consider many factors. If companies analyze the factors affecting consumer behavior towards online shopping and the relationships between these factors and the type of online buyers, then they can devise effective marketing strategies to convert potential customers into active ones, while retaining existing online customers. This paper focuses on income and age factors influencing online shopping.

The micro perspectives involve understanding consumer for the purpose of helping a firm or organization to achieve its objectives. The people involved in this field try to understand consumers in order to be more effective at their tasks. Whereas the societal or macro perspective applies knowledge of consumers to aggregate-level faced by mass society as a whole. The behavior of consumer has significant influence on the quality and level of the standard of living.

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shoppers become progressively global and widespread, need arises to understand adoption of online shopping among different Indian consumers. Yet while online usage has nearly doubled in India in recent years, the adoption of online shopping has been relatively slow.

Most of the companies are running their on-line portals to sell their products/services on-line. Though online shopping is very common outside India, its growth in Indian Market, which is a large and strategic consumer market, is still not in line with the global market. The potential growth of on-line shopping has triggered the idea of conducting a study on on-line shopping in India.

Online Shopping in India: It is a fact that a great online shopping revolution is expected in India in the coming years. This is also getting increased day by day as the costs of computers are decreasing and net penetration action is increasing. The cost of internet usage is also getting lower, with good competition among the providers. Wi-Fi & Wimax system has also started in India. This will increase the usage as it goes more on wireless internet. Indians are proving every time that they can beat the world when it comes to figures of online shopping. More and more Indians are going to online shopping and the frequency of India's online buying is crossing the overall global averages.

Literature Review: According to Li and Zhang's (2002) taxonomy there are ten impacts of relevant factors on online consumer behaviors. These ten factors could be categorized into five independent variables (external environment, demographics, personal characteristics, vendor/service/product characteristics, and web site

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quality) and five dependent variables (attitude toward online shopping, intention to shop online, decision making, online purchasing, and consumer satisfaction). The five independent variables are identified as antecedents, which directly determine attitudes towards online shopping. In the antecedents, the vendor/ service/ product characteristics and web site quality are directly impact on consumer satisfaction. Consumer satisfaction is separated and occurs among at all possible stages depending on the consumer's involvement during the Internet shopping process, and this two ways relationship could influence each reciprocally.

Schiffman, Scherman, & Long (2003) in their study researched that individual's attitudes do not, by themselves, influence one's intention and/or behavior. Instead that intention or behavior is a result of a variety of attitudes that the consumer has about a variety of issues relevant to the situation at hand. For online buying similar expression is affected as number of factors such news related to internet fraud etc may influence his overall intention.

Sultan and Henrichs (2000) in his study concluded that the consumer's willingness to and preference for adopting the Internet as his or her shopping medium was also positively related to income, household size, and innovativeness. Vijay, Sai. T. & Balaji, M. S. (2009), revealed that Consumers, all over the world, are increasingly shifting from the crowded stores to the one-click online shopping format. However, in spite of the convenience offered, online shopping is far from being the most preferred form of shopping in India. A survey among 150 internet users, including both users and non-users of online shopping, was carried out to understand why some purchase online while others do not. The results suggested that convenience and saving of time drive Indian consumers to shop online; while security and privacy concerns dissuade them from doing so. Kim and Park (2005) **found that availability of pre-purchase information and required computer skills are main motivator for online purchase.**

Similarly Monuwe et. al (2004) found that those who are not comfortable with using the computer, will likely do their shopping at the traditional store, modern shop, or discount store because it will be faster shopping there than in the Internet shop. Goldsmith and Flynn (2004) stated that ordering by mail is convenient except that they are not able to touch and feel products before purchasing. Blanca Hernández, Julio Jiménez (2011) results show that socioeconomic variables moderate neither the influence of previous use of the internet nor the perceptions of e-commerce; in short, they do not condition the behaviour of the experienced e-shopper. A study by Chandra and Sinha (2013) revealed in the study

that demographical issues like age, education and income has effect on online shopping. They found that younger age, higher education and more income has positive effect on online shopping. Nagra and Gopal (2013) study revealed that on-line shopping in India is significantly affected by various Demographic factors like age, gender, marital status, family size and income.

Objectives:

- Two fold objectives were set for conducting the research
- To study the differences in perception of different age groups regarding online shopping
- To study the differences in perception of different income groups regarding online shopping

Research Methodology: Sampling Technique and size: The sample of 120 respondents was chosen from Indore city using judgmental sampling method. Respondents profile is given as:

Variable	Frequency	Percent
Age Groups16-30	36	30.0
31-45	45	37.5
above 45	39	32.5
Total	120	100.0
Income Groups less than 20,000	38	31.7
21000 to 40,000	42	35.0
above 40,000	40	33.3
Total	120	100.0

Table 1: Respondent's Profile

Tools of Data Collection: The respondents were asked about their perception on online shopping on three important determinants on five point likert scale. For this self developed instrument was used (Table 2).These determinants of online shopping were based on literature available on online shopping? The first determinant was related to online transactions (item 6.7 and 8), Second determinant was related to vendor (4 and 5) and third was related to customer (1,2 and 3) . The instrument developed was as:

Research Instrument:

Age: 16-30; 31-45; above 45

Income: less than 20,000; 21,000 to 40,000; above 40,000

ANOVA followed by Post-Hoc Tukey method was used to test following hypotheses.

Hypothesis:

18 hypotheses were framed and tested to understand the

S. No.	Particulars	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I shop online because of convenience					
2	I shop online as large variety is available					
3	I shop online as good deal is available online					
4	I shop online if website is trustworthy					
5	I avoid online shopping because returning of product is difficult					
6	I shop online because of convenient payment mode					
7	I believe that online transactions are secure					
8	I shop online because it gives me delivery at door step					

Table 2: Research Instrument

differences in perception of various age groups and income groups. Details are in result section.

Results: One way ANOVA was used to test the hypotheses. Age and income were considered as independent variable and Transaction, vendor and customer related determinants were taken as dependent variables. Post-hoc Tukey method was used to further explore the data. The first 9 hypotheses in following section is related age-groups perception of online shopping (Table 3). Hypotheses 9 to 18 are about perception of income groups on online section (Table 4).

H₀₁: There is no significant difference in perception

regarding Customer related determinants between age group of 16-30 and 31-45

Hypothesis is not rejected and two age groups are same in their perception

H₀₂: There is no significant difference in perception regarding Customer related determinants between age group of 31-45 and above 45

Hypothesis stands rejected at 0.000 levels. Respondents of lower age group were more online shopping savvy.

H₀₃: There is no significant difference in perception regarding Customer related determinants between age

Multiple Comparisons							
Tukey HSD							
Dependent Variable	(I) AGE	(J) AGE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
TRD	16-30	31-45	.81111*	.24145	.003	.2379	1.3843
		above 45	1.94444*	.24957	.000	1.3520	2.5369
	31-45	16-30	-.81111*	.24145	.003	-1.3843	-.2379
		above 45	1.13333*	.23624	.000	.5725	1.6941
	above 45	16-30	-1.94444*	.24957	.000	-2.5369	-1.3520
		31-45	-1.13333*	.23624	.000	-1.6941	-.5725
VRD	16-30	31-45	.40556	.23286	.194	-.1472	.9583
		above 45	1.69444*	.24069	.000	1.1231	2.2658
	31-45	16-30	-.40556	.23286	.194	-.9583	.1472
		above 45	1.28889*	.22783	.000	.7480	1.8297
	above 45	16-30	-1.69444*	.24069	.000	-2.2658	-1.1231
		31-45	-1.28889*	.22783	.000	-1.8297	-.7480
CRDS	16-30	31-45	.28333	.20566	.356	-.2049	.7716
		above 45	1.43376*	.21258	.000	.9291	1.9384
	31-45	16-30	-.28333	.20566	.356	-.7716	.2049
		above 45	1.15043*	.20122	.000	.6727	1.6281
	above 45	16-30	-1.43376*	.21258	.000	-1.9384	-.9291
		31-45	-1.15043*	.20122	.000	-1.6281	-.6727

*. The mean difference is significant at the 0.05 level.

Table 3: ANOVA with POST-Hoc for various age groups

(TRD =transaction related determinants, VRD=vendor related determinants, CRDs=Customer related determinants)

group of 16-30 and above 45

Hypothesis stands rejected at 0.000 levels. Respondents of lower age group were more online shopping savvy.

H₀₄: There is no significant difference in perception regarding Transaction related determinants between age group of 16-30 and 31-45

Hypothesis stands rejected at 0.003 levels. Respondents of lower age group were more comfortable with online shopping transactions.

H₀₅: There is no significant difference in perception regarding Transaction related determinants between age group of 31-45 and above 45

Hypothesis stands rejected at 0.000 levels. Respondents of lower age group were more comfortable with online shopping transactions

H₀₆: There is no significant difference in perception regarding Transaction related determinants between age group of 16-30 and above 45

Hypothesis stands rejected at 0.000 levels. Respondents of lower age group were more comfortable with online shopping transactions

H₀₇: There is no significant difference in perception regarding Vendor related determinants between age group of 16-30 and 31-45

Hypothesis stands rejected at 0.194 levels. Respondents of lower age group were more confident about vendors while shopping online.

H₀₈: There is no significant difference in perception regarding Vendor related determinants between age group of 31-45 and above 45

Hypothesis stands rejected at 0.000 levels. Respondents of lower age group were more confident about vendors while shopping online.

H₀₉: There is no significant difference in perception regarding Vendor related determinants between age group of 16-30 and above 45

Hypothesis stands rejected at 0.000 levels. Respondents of lower age group were more confident about vendors while shopping online.

H₀₁₀: There is no significant difference in perception regarding Customer related determinants between income group of less than 20,000 and 21,000 to 40,000

Post Hoc Tests

Multiple Comparisons							
Tukey HSD							
Dependent Variable	(I) INCOME	(J) INCOME	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
TRD	less than 20,000	21000 to 40,000	.02005	.29864	.998	-.6889	.7290
		above 40,000	.08553	.30216	.957	-.6318	.8028
	21000 to 40,000	less than 20,000	-.02005	.29864	.998	-.7290	.6889
		above 40,000	-.06548	.29469	.973	-.6341	.7650
	above 40,000	less than 20,000	-.08553	.30216	.957	-.8028	.6318
		21000 to 40,000	-.06548	.29469	.973	-.7650	.6341
VRD	less than 20,000	21000 to 40,000	-.26942	.28102	.604	-.9366	.3977
		above 40,000	.07105	.28434	.966	-.6040	.7461
	21000 to 40,000	less than 20,000	.26942	.28102	.604	-.3977	.9366
		above 40,000	.34048	.27731	.439	-.3178	.9988
	above 40,000	less than 20,000	-.07105	.28434	.966	-.7461	.6040
		21000 to 40,000	-.34048	.27731	.439	-.9988	.3178
CRDS	less than 20,000	21000 to 40,000	-.80201	.23560	.003	-1.3613	-.2427
		above 40,000	-.62105	.23839	.026	-1.1870	-.0551
	21000 to 40,000	less than 20,000	.80201	.23560	.003	.2427	1.3613
		above 40,000	.18095	.23249	.717	-.3710	.7329
	above 40,000	less than 20,000	.62105	.23839	.026	.0551	1.1870
		21000 to 40,000	-.18095	.23249	.717	-.7329	.3710

*. The mean difference is significant at the 0.05 level.

Table 3: ANOVA with POST-Hoc for various income groups

(TRD =transaction related determinants, VRD=vendor related determinants, CRDs=Customer related determinants)

Hypothesis stands rejected at 0.003 levels. Respondents of higher group were more online shopping savvy.

H_{o11}: There is no significant difference in perception regarding Customer related determinants between income group of less than 20,000 and above 40,000

Hypothesis stands rejected at 0.028 levels. Respondents of higher income group were more online shopping savvy.

H_{o12}: There is no significant difference in perception regarding Customer related determinants between income group of 21,000-40,000 and above 40,000

Hypothesis was not rejected at .717 levels.

H_{o13}: There is no significant difference in perception regarding Transaction related determinants between income group of less than 20,000 and 21,000 to 40,000

Hypothesis was not rejected at .998 levels.

H_{o14}: There is no significant difference in perception regarding Transaction related determinants between income group of 20,000 and above 40,000

Hypothesis was not rejected at .957 levels.

H_{o15}: There is no significant difference in perception regarding Transaction related determinants between income group of 21,000-40,000 and above 40,000

Hypothesis was not rejected at .973 levels.

H_{o16}: There is no significant difference in perception regarding Vendor related determinants between income group of less than 20,000 and 21,000 to 40,000

Hypothesis was not rejected at .604 levels.

H_{o17}: There is no significant difference in perception regarding Vendor related determinants between income group of 20,000 and above 40,000

Hypothesis was not rejected at .966 levels.

H_{o18}: There is no significant difference in perception regarding Vendor related determinants between income group of 21,000-40,000 and above 40,000

Hypothesis was not rejected at .439 levels.

Discussion and Conclusion: From the above results it could be observed that internet shopping adoption is more common with lower age groups. The results hold same for all three determinants i.e. customer related, vendor related and transaction related. It is evident from data that people below age of 45 are more comfortable and are getting adopted with online shopping. They were confident about websites inviting for transaction, and were not apprehensive about vendors. People of age groups above 45 were not found confident. This indicates

that age is important variable influencing the choice of online shopping.

Income was not found to be the significant determinant of online shopping. Respondents of different income groups were not significantly different on three determinants of online shopping. Although with more income customers were found to be more comfortable with online shopping. Thus income is not important parameter in selecting online shopping.

Study of Nagra and Gopal (2013) and Chandra and Sinha (2013) could be seen which is in line with above results.

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