

E-Shopping: Outlining the Impact of Explanatory Variables

Indrajit Ghosal, Pragma Singh



Abstract: India has taken a step in online shopping through the expansion of information and communication technology (ICT). In this digital era huge opportunities are coming in the online industry due to rapid changes in ingesting pattern, customer preferences and product needs. E-commerce has been crated a booming passageway in the world. It has been very easier to get the products just a mouse click. Adequately number of e-companies has come up with customized products with easier transaction facilities. Though Internet shopping provides various benefits like flexibility of shopping time, wide variety of choices, but then again a large section of Indian population is still reluctant to adopt it relative to foreign nations. The reason behind these can be attributed to socio economic texture. This study is focused in North 24 parganas district under the state West Bengal (India) where most of the community residing in outskirts of the city. In the current research an effort has been made to analyze the unobserved factors manifested through the perceived behaviour towards ecommerce. The study has extracted explanatory factors affecting the perception consumer towards virtual buying behaviour. For this study 100 samples were collected and statistical tool Factor Analysis, ANOVA (Analysis of Variance) have been applied. These implied findings of the study will help the marketing analyst as well as strategist to forecast and assume the online buying behavioural standards across different geographic platforms in the country and consolidate the resource allocation accordingly.

Keywords: Influencing factors, Consumer mindset, Demographic Contour, Exploratory Factor Analysis (EFA), ANOVA, Scope of Employment, DSS

I. INTRODUCTION

Nowadays, the Internet is widely used in our daily life. Internet brought many advantages to individuals' daily lives for their existence. Using internet and social media people can communicate to each other, learn anything, and entertain by online game, chatting with friends and buy different products and get services quickly. Of course the some disadvantages of it that long been discussed; like virus threat, hack of personal information theft, spamming etc. E- Shopping is the part of e-business which under the global commerce e-commerce where any customer who knows the system of online buying

can purchase the product directly from the sellers in actual time without the help of arbitrator and their amenities.

Hypothetically it is more suitable to buy products with net due to its stretchy environment, but adaptation of new technology is the major problem in Indian community. Reason behind, most of the people are living in outskirts of the city. The financial status of the country is changing with various nation and extreme discrepancies. For knowing the prototype of the buying decision model, skill is required of the customer for dealing with merchant/seller when it originates to e-shopping the condition is even obscenest. For this reason the acceptance of e-products via net considerably enlarged in the last time. It is seen that in most of the countries the implementation is not properly verified by the online infiltration growth, again it discloses the changeable nature of consumer actions in online market. In India most of the merchandise/distributor doing their business with online and that is still growing whereas many problems occur to sustain the business regarding uncertain nature.

Online shopping in Kolkata metro city under the state of Bengal is fast popular and called popular e-shopping market in West Bengal. Some of the e-portals are doing their business and they have already made their shopping store for fast delivery. Like Amazon, Flipkart, Paytm they made their franchise in Kolkata market and nearest district of Kolkata like North 24 parganas, Nadia, Midnapore and Howrah also. Kolkata is the capital of West Bengal where shopping market is flying. Online shopping in North 24 parganas district is also booming as there are no coming up in lines or in transportation, everybody can purchase from the convenience of their home, mediator to do assessment shopping, deductions and obtaining every time without hesitation. The city has a flourishing cheap and that replicates fit in the purchasing elegance of the North 24 parganas district. Apart from the regular shops and superior malls, it's circumstance that, online shopping is growing stage in North 24 parganas district as popularity, convenience and product delivery services as much more faster that others district of West Bengal today. A literature have been used in the next section helps us to establish about the investigation which have been done in this area.

II. THEORETICAL FRAMEWORK

According to (Parasuraman et al., 2004) service is transported by web sites and his research is executed by two scales model i.e. E-S-QUAL and E-RecS-QUAL. On the basis of these two models few factors was momentous the effect on the customer's global evaluation of website like responsiveness, efficiency and different dimension.

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In their model they explained that Internet marketing, Affiliate marketing giving some attractive offers on e-portal site to consumers for buy their required product with online in short span of time from anywhere. (Okumus B., et al., 2018) predicted that consumers get influenced psychologically while ordering food through diet apps. (Cain et al., 2018) lectured, it is usually believed there is an impact of age component which is on cyber hygiene behaviors. (Bhattacharjee et al., 2012) found that relationship between globalization, ecommerce adoption or acceptance that prime to business performance and effectiveness. According to (Ranganathan & Ganapathy., 2002) several key dimensions to B2C websites includes Design functionality, Security, Privacy and Information quality. (Tinne, 2010) investigates four characteristics in spontaneity buying; like: firstly it is unplanned purchase. Secondly is exposure to the stimulus, thirdly characteristics of impulse buying is the immediate nature of the behaviour and lastly consumer experiences emotional and cognitive reactions. According to (Kiang et al., 2011) extensive range of products and amenities marketed via online where none of the marketing products refers to online. Through privacy and security policies, developers are doing their best to put an end to this unethical practice. That will pay the way for its success. (Bashir et al., 2013) found that gender is an important variable where role of the social ethics and life style of customers are significantly different and five factors are more important like time, area of residence, personality, economic condition and ethnic factors where impulsive buying is more affected. (Indrajit, 2015) have examined a demographic contour and buying behaviour on spontaneous buyer with prefers the city of joy Kolkata from the customer view. A perceptual investigation about online shopping on customer's from Kolkata have been done by (Indrajit & Debasish., 2016). (Gamal S. A. Khalifa et al., 2017) they measured the e-service quality from the Egyptian travel agencies perspective and to observe the discrepancies in service quality dimensions between customers' expectations and perceptions regarding the online services. (Kalia P & Arora R., 2018) explained that influence of Demographic on Apparent Service Quality in the Online Retail industry.

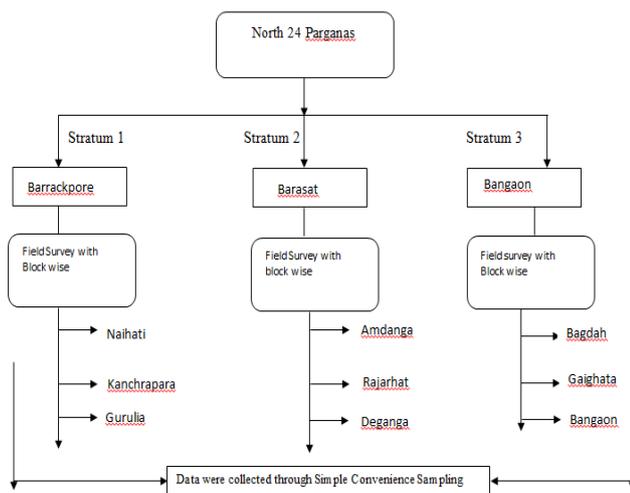


Figure 1: Model for sampling

III. SIGNIFICANCE OF STUDY

1. Justify those factors which influence the respondents to change their perception from traditional shopping to online shopping around North 24 parganas District, W.B.
2. Validate the association among factors with demographic variables where marketer can understand and justify the actual preferences of the consumer for online buying.

IV. RESEARCH OBJECTIVE

To investigate the customer preferences towards online buying attitude with reference to their demographic contour.

V. PROPOSED METHODOLOGY

A. Study Settings and Designs:

This investigation is empirical in nature. The data for this investigation has been collected from online buyer of various areas of North 24 parganas district under the state, West Bengal. The buyers who used online product and buy the product through online are taken as the respondents. The size of the sample was determined according to the size of proportionality. The respondents are chosen from the random number generated from the excel sheet. The method of simple convenience sampling has been followed.

Population: Customers who use internet across all demographic appearance.

B. Questionnaire Development and Pilot testing:

The study has explored secondary sources of data in order to explore the online buying system followed by the marketer. Besides these, a qualitative investigation has been conducted with the audio recordings, Video recordings, and as well as face to face interviews. The questionnaire was formulated on the summated rating scale. The Five point Likert Scales have been used with 29 questions where 1 referred to as strongly agree and 5 referred to as strongly disagree. The outputs of the interview are coded; transcribed and common word roots have been derived. The whole output have been an effective instrument to design questionnaire. Again the questionnaire was assessed to the experts and pilot tested to confirm its construct validity. The Questionnaire framed was translated to Bengali and again translated back to English in order to achieve semantic consistency. The method of Self-administered questionnaire have been used which defines that the respondent's take the responsibility of reading and answering the question. This method has been considered deemed as better mode as it reduces the bias and improves the quality of response. Questionnaire contains two parts: a) The demographic details of the respondents b) Reflective statements to find out the positive factors influences to consumer in relation with demographic contour to change their buying pattern.

C. Empirical Design:

The collected data from the questionnaire was coded in the table form in SPSS 23 software. The exploratory factor analysis has been used in order to obtain the purpose of data redundancy. The Principal Component Method was used to extract the dimensions. Through the Principal Component Analysis, the data have been projected into the principal subspace.

The principal have been spanned by the eigenvectors of the covariance matrix. The adequacy of the sample was verified through Kaiser, Meyer and Olkin test (KMO) and Bartlett’s test. The factors affecting for online buying system have been extracted through – variables through data redundancy techniques and Factor analysis with Rotated Component Matrix. Analysis of variance (ANOVA) has been used to check the association among factors (Independent variables) with demographic profiles (Dependent variable).

D. Types of data used:

Primary data have been collected from the Questionnaire after investigation either coded qualitatively and quantitatively. Secondary sources through books, magazines, journals, reports, research studies, internet sources, case studies and name of online users is taken from local ISP (Internet Service provider).

VI. HYPOTHESIS FORMULATION

- 1) **H0₁**: There is no significant association between ‘Gender’ and ‘Online Buying behaviour’ with respect to factors.
- 2) **H0₂**: There is no significant association between ‘Income’ and ‘Online Buying behaviour’ with respect to factors.
- 3) **H0₃**: There is no significant association between ‘Age’ and ‘Online Buying behaviour’ with respect to factors.
- 4) **H0₄**: There is no significant association between ‘Education’ and ‘Online Buying behaviour’ with respect to factors.
- 5) **H0₅**: There is no significant association between ‘Occupation’ and ‘Online Buying behaviour’ with respect to factors.
- 6) **H0₆**: There is no significant association between ‘Area of locality’ and ‘Online Buying behaviour’ with respect to factors.

VII. RESULT ANALYSIS

For this investigation data have been taken from the review will be exposed to data cleansing in order to classify the missing value, sample characteristics and meet the prospects of normality. After this, the Descriptive statistics is used to summarize the respondents’ demography. The researcher will certify that all the items regarding the research which accept of limit level.

Reliability test on those 7 components which had been taken through EFA technique use of Factor analysis and these seven components actually indicates 29 variables that already defined in researcher questionnaire.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.784	.803	7

Reliability statistics shows that the Cronbach's Alpha for the analysis tool applied is .784 (greater than .7) and hence accepted for the current analysis.

ANOVA

Analysis of variance defines whether there is any significant association between the means of three or more independent

(dissimilar) groups. For this research researcher have been used ANOVA tool to check the significant association in between online buying behavior and demographic variables with respect to their explanatory factors which are got from the EFA technique through Factor Analysis. If the relation is exist in between Buying behavior and demographic variables whereas researcher have been applied this ANOVA tool that what factors in behind the relation which is more influencing to the consumer to buy the product through online.

Major Findings in Tabulated form

From the above analysis on the demographic variables it has been observed that Education and Area have shown the positive association with factors viz. *Company Reputation* and *Accessibility* respectively.

Table Summary			
Sl. No	Study Factors	Variable Name	P-Value
1	Gender	Nil	-
2	Income	Nil	-
3	Age	Nil	-
4	Education	Company Reputation	.019
5	Occupation	Nil	-
6	Area of locality	Accessibility	.026

VIII. CONCLUSION

From the above study, it has been detected that there is no relation in between online buying behaviour with variables Gender and Age. This may be due to the fact that Gender and Age-differential are neutral to technological application and adoption.

Likewise, there is no relation between online buying behavior and income study factor because there is some option in the online process which starts from 0 to sky limit.

Whereas education has a significant association with the online process, which deals with Companies reputation or its brand equity. Here brand equity means a series of steps which start from the planning of the products to after sales reputations. In addition to that in case of Online buying process, the equity also depends on the online portals and educated people are aware of it.

In the same way, it has been observed that there is no relation in between online buying behavior and occupation study factor because the changing scenario of the technology and use of Smartphone is one of the common across different occupational groups.

Lastly, it has been observed that there is a strong relation between Area of locality of the products and Online buying behavior with respect to accessibility. Online buying system restricts external motivators (sales intermediaries or sales representative) those who may have some influence for choosing of alternatives or influence to choose alternatives. This is why the accessibility is one of the most considerable ingredients to online buying behavior.

The study will help in adding value to the existing literature that can pave the way for online portals to increase their



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market penetration in North 24 parganas district (W.B).

This strategy can even be generalized and conceptualized for other parts of demography. The study will help online portals and entrepreneurs in overcoming the socio economic hurdles and assessing complex texture and consumer psychology and impact of demographic variations on them. Thus the study will be of great value for entrepreneurs, academicians, marketing strategist, marketing analyst and online portals to increase their coverage across Indian demography.

Limitations & Scope of future research

The study was confined in the district North 24 parganas which adjacent to Kolkata. Future researchers can extend the area of study to other districts or even states. Research objectives may be switched to identifying significant factors in relation to specific online market having different socio-cultural-economic-technological environment.

APPENDIX

The Following ANOVA tables show the relation between the Extracted factors and demographic variables:

		Table 1 (ANOVA test between Online buying behaviour and Gender)				
		Sum of Squares	Df	Mean Square	F	Sig.
Accessibility	Between Groups	5.756	1	5.756	2.219	0.14
	Within Groups	254.244	98	2.594		
	Total	260	99			
Delivery Time	Between Groups	0.423	1	0.423	0.696	0.406
	Within Groups	59.577	98	0.608		
	Total	60	99			
Security and Safety	Between Groups	0.638	1	0.638	0.057	0.812
	Within Groups	1099.072	98	11.215		
	Total	1099.71	99			
Services	Between Groups	4.867	1	4.867	1.956	0.165
	Within Groups	243.883	98	2.489		
	Total	248.75	99			
Delivery process	Between Groups	3.129	1	3.129	1.764	0.187
	Within Groups	173.871	98	1.774		
	Total	177	99			
Transport Time	Between Groups	0.423	1	0.423	0.696	0.406
	Within Groups	59.577	98	0.608		
	Total	60	99			
Company Reputation	Between Groups	9.957	1	9.957	0.808	0.371
	Within Groups	1208.203	98	12.329		
	Total	1218.16	99			

The table shows there is no significant association between online buying behaviour and demographic variable Gender. All the significant value is $>.05$, so Null hypothesis is strongly accepted.

Table 2(ANOVA test between Online buying behaviour and Income)

		Sum of Squares	Df	Mean Square	F	Sig.
Accessibility	Between Groups	5.371	4	1.343	0.501	0.735
	Within Groups	254.629	95	2.68		
	Total	260	99			
Delivery Time	Between Groups	3.064	4	0.766	1.278	0.284
	Within Groups	56.936	95	0.599		
	Total	60	99			
Security and Safety	Between Groups	41.502	4	10.376	0.931	0.449
	Within Groups	1058.208	95	11.139		
	Total	1099.71	99			
Services	Between Groups	8.413	4	2.103	0.831	0.509
	Within Groups	240.337	95	2.53		
	Total	248.75	99			
Delivery process	Between Groups	5.756	4	1.439	0.798	0.529
	Within Groups	171.244	95	1.803		
	Total	177	99			
Transport Time	Between Groups	3.064	4	0.766	1.278	0.284
	Within Groups	56.936	95	0.599		
	Total	60	99			
Company Reputation	Between Groups	17.83	4	4.458	0.353	0.842
	Within Groups	1200.33	95	12.635		
	Total	1218.16	99			

The table shows that there is no significant association between online buying behaviour and demographic variable Income. All the significant value is $>.05$, so Null hypothesis is strongly accepted.

Table 3 (ANOVA test between Online buying behaviour and Age)

	Sum of Squares	Df	Mean Square	F	Sig.	
Accessibility	Between Groups	0.026	1	0.026	0.01	0.921
	Within Groups	259.974	98	2.653		
	Total	260	99			
Delivery Time	Between Groups	1.118	1	1.118	1.86	0.176
	Within Groups	58.882	98	0.601		
	Total	60	99			
Security and Safety	Between Groups	0.154	1	0.154	0.014	0.907
	Within Groups	1099.556	98	11.22		
	Total	1099.71	99			
Services	Between Groups	0.055	1	0.055	0.022	0.884
	Within Groups	248.695	98	2.538		
	Total	248.75	99			
Delivery process	Between Groups	1.161	1	1.161	0.647	0.423
	Within Groups	175.839	98	1.794		
	Total	177	99			
Transport Time	Between Groups	1.118	1	1.118	1.86	0.176
	Within Groups	58.882	98	0.601		
	Total	60	99			
Company Reputation	Between Groups	22.869	1	22.869	1.875	0.174
	Within Groups	1195.291	98	12.197		
	Total	1218.16	99			

The table shows that there is no significant association between online buying behavior and demographic variable Age. All the significant value is $>.05$, so Null hypothesis is strongly accepted.

Table 4 (ANOVA test between Online buying behaviour and Education)

	Sum of Squares	Df	Mean Square	F	Sig.	
Accessibility	Between Groups	6.22	4	1.555	0.582	0.676
	Within Groups	253.78	95	2.671		
	Total	260	99			
Delivery Time	Between Groups	0.95	4	0.237	0.382	0.821
	Within Groups	59.05	95	0.622		
	Total	60	99			
Security and Safety	Between Groups	60.137	4	15.034	1.374	0.249
	Within Groups	1039.573	95	10.943		
	Total	1099.71	99			
Services	Between Groups	5.111	4	1.278	0.498	0.737
	Within Groups	243.639	95	2.565		
	Total	248.75	99			
Delivery process	Between Groups	5.176	4	1.294	0.715	0.583
	Within Groups	171.824	95	1.809		
	Total	177	99			
Transport Time	Between Groups	0.95	4	0.237	0.382	0.821
	Within Groups	59.05	95	0.622		
	Total	60	99			
Company Reputation	Between Groups	140.461	4	35.115	3.095	0.019
	Within Groups	1077.699	95	11.344		
	Total	1218.16	99			

The above table shows a significant difference between online buying behavior and Education with respect to significant factor "Company Reputation" and table shows that the p-value is $<.05$ that is .019 so, it is proved alternate hypothesis accepted.

Table 5(ANOVA test between Online buying behaviour and Occupation)

	Sum of Squares	Df	Mean Square	F	Sig.	
Accessibility	Between Groups	5.515	2	2.757	1.051	0.354
	Within Groups	254.485	97	2.624		
	Total	260	99			
Delivery Time	Between Groups	2.641	2	1.32	2.233	0.113
	Within Groups	57.359	97	0.591		
	Total	60	99			
Security and Safety	Between Groups	1.89	2	0.945	0.084	0.92
	Within Groups	1097.82	97	11.318		
	Total	1099.71	99			
Services	Between Groups	4.8	2	2.4	0.954	0.389
	Within Groups	243.95	97	2.515		
	Total	248.75	99			
Delivery process	Between Groups	3.09	2	1.545	0.862	0.426
	Within Groups	173.91	97	1.793		
	Total	177	99			
Transport Time	Between Groups	2.641	2	1.32	2.233	0.113
	Within Groups	57.359	97	0.591		
	Total	60	99			
Company Reputation	Between Groups	14.926	2	7.463	0.602	0.55
	Within Groups	1203.234	97	12.404		
	Total	1218.16	99			

The table shows that there is no significant association between online buying behavior and demographic variable Occupation. All the significant value is $>.05$, so Null hypothesis is strongly accepted.

Table 6(ANOVA test between Online buying behaviour and Area of Locality)

	Sum of Squares	Df	Mean Square	F	Sig.	
Accessibility	Between Groups	16	2	8	3.18	0.026
	Within Groups	244	97	2.515		
	Total	260	99			
Delivery Time	Between Groups	0.017	2	0.008	0.014	0.986
	Within Groups	59.983	97	0.618		
	Total	60	99			
Security and Safety	Between Groups	14.227	2	7.113	0.636	0.532
	Within Groups	1085.483	97	11.191		
	Total	1099.71	99			
Services	Between Groups	14.825	2	7.413	3.074	0.051
	Within Groups	233.925	97	2.412		
	Total	248.75	99			
Delivery process	Between Groups	8.274	2	4.137	2.378	0.098
	Within Groups	168.726	97	1.739		
	Total	177	99			
Transport Time	Between Groups	0.017	2	0.008	0.014	0.986
	Within Groups	59.983	97	0.618		
	Total	60	99			
Company Reputation	Between Groups	54.644	2	27.322	2.278	0.108
	Within Groups	1163.516	97	11.995		
	Total	1218.16	99			

From the above analysis it is clear that there is an association between online buying behavior and variable Area of locality with respect to the significant factor **Accessibility**. The p-value is $<.05$ that is .026. So, it is proved alternate hypothesis is accepted for Area of Locality.

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areas of interest are Online Marketing, Digital Marketing, Service marketing, Handicraft industry, Entrepreneurship.



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