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AN EMPIRICAL STUDY ON FACTORS AFFECTING PURCHASE BEHAVIOR OF CUSTOMERS IN ONLINE SHOPPING

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ABSTRACT
Although electronic commerce (e-commerce) is expanding in India, online sales account for only a small percentage of the total retail sales. This fact is astonishing given that improved internet accessibility and penetration of internet worldwide has made it easier and convenient for the businesses and customers to interact on an e-commerce platform for buying and selling activities. On the basis of primary data collection, responses were collected from respondents engaging in online shopping activities. The variables extracted from the literature were reviewed and with the help of factor analysis, these were reduced to factors affecting online shopping. This research focuses on the factors that affect the customer behavior in terms of adopting online shopping or going with the traditional shopping ways. This study will help the online businesses and the e-commerce platform to gauge the preferences of the customers on the e-commerce platform and widen the horizon of expansion of the online businesses. Better understandings of the customers' perspectives will definitely provide an insight to the e-commerce based companies in capturing more market share especially in a country like India that has huge market potential.

Keywords: Online Shopping, E-Commerce, Customer preferences, online sales

I. INTRODUCTION
Online shopping provides a platform to the customers worldwide to purchase products in direct interaction with the online service provider. This trend is emerging like wild fire and has replaced a chunk of traditional shopping market. The aforesaid trend is likely to grow over the coming decade. India is the fifth country globally and the second in Asia in terms of e-commerce. Indians seem to have grasped the ability to shop merchandise through internet.

According to *IAMAI-IMRB Digital Commerce report 2015,* India was one of the fastest growing retail e-commerce markets in 2015, growing at the rate of 129.5 per cent. There are 300 million internet users in India out of which, 30% engage in digital commerce. From buying furniture, to groceries, beauty products, jewellery, apparels, e-ticketing, accessories etc. e-commerce platform has empowered the customers in an astonishing manner. According to PwC Analysis-Evolution of E-Commerce in India by ASSOCHAM, retail e-commerce in India is at an embryonic stage and has a huge potential. E-commerce is expected to acquire 4.8% of the total retail market share in India.

Online shoppers in India are present in all eight metro cities as well as in smaller cities. In a report of PwC- E-commerce in India, A Game Changer or the Economy, by CII, it is highlighted that the e-commerce giant Amazon states that majority of its customers are from the non-metro cities. This shows the penetrating power of internet shopping in India.

The review of the study carried by Monsuwe, Dellaert, and Ruyter (2004) shows that attitudes towards online shopping are affected by ease of use, consumer traits, situational factors, product characteristics, previous online shopping experiences, and trust on e-commerce platform.

1.1 E Commerce Industry in India
The estimated facts and figures reveal that there is a growth equal to six times the the e-commerce market of India. Facts like new-age technology, convenience, larger reach and less wastage of time are responsible for this. With an expected 33 percent of the global market in 2015 and over 37 percent in 2018, the Asia Pacific region is becoming the leader of the e- commerce industry. India's most favorite purchase online is the category of electronic and electrical appliances. Major players like Amazon, Flipkart and its owned Myntra and Jabong, Snapdeal etc are some of the major players in the field in India. E-commerce has given a new face to the retail industry and given the entrepreneurs new avenues for setting up their businesses. In the next four to five years, there is an exponential growth expected in this million dolar industry. The e-commerce industry started exponentiations in India with the first take over of bazee.com by ebay.com. It has not looked back since then. With the Digital India campaign started by respected PM of India, Shri Narendra Modi, India is looking forward

to a digitized economy. And E-commerce industry forms a large chunk of the Digital sector surely.

II. REVIEW OF LITERATURE

EAR	AUTHOR	FINDINGS
1989	Davis et al.	This study focused on the steps of the buying process and the potential role of marketing in each stage, how consumers are likely to adopt innovation and how to predict the result of the customer vendor interaction.
1997	Jarvenpaa and Todd	The studies carried out by these authors studied the service attributes of the online servicescape. The study entails the customer attitudes and intentions to shop online, perceptions of customers, the shopping experience and customer service. The studies conducted by these authors
1998	Lohse Spiller and	The studies conducted by these authors classified the existence of online servicescape into four dimensions namely, products, convenience, security and customer service.
1999	Donthu And Garcia	Proposed that risk aversion, innovativeness, brand consciousness, price consciousness, importance of convenience, variety-seeking propensity, impulsiveness, attitude toward adverting, attitude towards shopping, and attitude toward direct marketing would influence online shopping behavior.
2000	Bhatnagar, Misra and Rao	Measured the affect and impact of demographics, vendor, service, and product characteristics, and website quality influence on the customers, effect on attitude towards online shopping and consequent online buying behavior.
2000	Elliot and Fowell	The study carried out by these authors highlighted that the customers are hesitant in sharing their private and personal information on the online platform. They find it risky to share their financial information like bank accounts, credit/debit cards, passwords showing lack of credibility of the online systems.
2000	Rowley	Observed that financial risk is the main reason to obstruct internet shopping and security had become a major concern in the e- commerce industry.
2001	Heijden, Verhagen, and Creemers	Online purchase intention, security and trust form the base of the e- commerce platform. These studies also suggest that the aforesaid factors are the major affecting ones on customer intent to purchase and online buying behavior.
2002	Lee	Internet meltdown at the end of the 1990s and plenty of more recent anecdotal and empirical evidence indicate that many online firms still do not completely understand the needs and behavior of the online consumer while many of them "...continue to struggle with how effectively to market and sell products online".
2002	Lee & Johnson	Intention will predict actual behavior is somewhat suspect based on the large numbers of dropouts or those who note they are only browsing while online.
2003	Park and Kim	Information affects information satisfaction and relational benefit that, in turn, are significantly related to each consumer's site commitment and actual purchase behavior.
2005	Lim and Dubinsky	Attitude toward online shopping is reinforced to the extent to which consumers think their relevant others support their online purchase behavior.

2005	MK Chang, W Cheung, VS Lai	Identified total of 45 relevant articles from the studies and chalked out variables that have an impact, either positive or negative on the adoption of online shopping. These were perceived risk, advantages of online shopping, customer experience, service quality, website and product characteristics, shopping orientations of customers, psychological variables, social variables, demographic factors and product characteristics.
2006	Schlosser, White, and Lloyd	Trusting issues and belief are most strongly related to online purchase intentions.
2009	Suki and Suki	The study showed that there should be more focus of the marketers on the promotion of online platform so as to win the trust and attention of customers.
2011	Yulihasri, Ku Amir, K.D., Md. Aminul, I	In their study titled Factors that influence Customers' Buying Intention on Shopping Online, the authors concluded that the ease of use and usefulness are the major factors that influence the buying intention of customers on the e-platform.
2014	Matic M, Vojvodic K	The authors of this study highlighted the importance of privacy and security issues that affect the online purchase intent that determine the attitude and intentions of customers in online purchasing.
2016	Yi Jin Lim et. al	They highlighted in their recent study that purchase intention has a significant and a positive impact on online shopping intent. Perceived usefulness has an important and a significant role in online shopping behavior and intent.

III. OBJECTIVES OF STUDY The Objectives of Study are as follows:-

(1) To explore the factors influencing online purchase behavior of customers.
(2) To examine the effect of demographic factors on the online purchase behavior of customers.

IV. RESEARCH DESIGN

The research design is exploratory in nature. 7- point Likert's scale from strongly agree to strongly disagree is used in the study to record the responses. A total of 31 variables are identified from the literature and factor analysis is applied to identify the factors affecting the adoption of online shopping and customer behavior. The responses obtained from the respondents are analyzed using the Regression analysis. The significance is tested with the help of t – test and ANOVA. This study is restricted to respondents who use online platform for shopping and reside in Delhi and NCR. This study tries to focus upon the identification of the major factors that affect the online purchase behavior and this information is vital for the e-commerce companies to get an insight into the customer preferences. This is quintessential to attract more customers towards the e-commerce platform for shopping.

4.1 Sources of Data

Primary as well as secondary data has been used in order to carry out this study. A self constructed questionnaire was used to collect primary data on the basis of variables obtained from the literature review. Secondary data was obtained from journals, reports and authenticated websites.

4.2 Data Collection Technique

Primary data has been collected from respondents who use online platform for shopping and reside in Delhi and NCR. 200 questionnaires were sent to respondents out of which, 149 completely filled responses were obtained. The responses of the respondents are measured on Likert's seven point scale (ranging from strongly disagree to strongly agree). Croanbach's alpha is also calculated to measure the reliability of the questionnaire.

4.3 Sampling Technique

Non-probability convenience sampling is used to collect data.

4.4 Statistical Tools Used

IBM SPSS 20 is used for data analysis and for hypothesis testing regression analysis is carried out. For the identification of factors, the factor analysis is done using Rotated component matrix; for the reliability, the Cronbach's Alpha was calculated; and sample adequacy was tested with the help of KMO and Bartlett's Test.

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V. DATA ANALYSIS AND INTERPRETATION

5.1 Reliability Analysis

For checking the reliability of the questionnaire, the Cronbach's Alpha test was applied (Refer Table 2). The value of Cronbach's alpha is found to be 0.880. As the value of Cronbach's Alpha is more than 0.6, the questionnaire is found to be reliable for further study.

Table 2: Reliability Statistics

Reliability Statistics

Cronbach's Alpha	N of Items
.880	31

5.2 Validity Analysis

From Table 3, it is observed that the value for KMO Measure of Sampling Adequacy is more than 0.5 i.e. 503. Also Bartlett's Test of Sphericity is significant and has a value less than 0.05 at 5 % level of significance i.e. .000. Therefore, factor analysis was conducted successfully for data reduction.

Table 3: KMO and Barlett's test of Sphericity

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.503
Bartlett's Test of Sphericity	Approx. Chi-Square	6.401E3
	Df	465
	Sig.	.000

5.3 Factor Analysis

The results of statistical assumption tests revealed that the data set was appropriate for factor analysis. Thus, principal component factor analysis was conducted on all items that were identified from the literature review. Rotated Component Matrix is given in Table 4.

Table 4: Factor Analysis by using Rotated Component Matrix

Rotated Component Matrix

	Component							
	1	2	3	4	5	6	7	8
Contact Detail and Information Kept Secret by Retailers	.109	.004	.044	.898	.065	.087	.057	.029
Online Purchases are of Low Risk	.140	.787	-.319	-.340	-.180	-.031	.181	.097
Bank Card Detail and Online Payment Detail Safe	.085	.105	.127	.110	.033	.901	.067	-.073
Detail Secrecy make me confident	.045	.798	-.117	.025	.393	.038	-.200	.199
In terms of Security Online Shopping is Comparable with Traditional	-.158	.824	.132	.204	.081	-.023	-.009	.121
Regular and Continuous access to Internet	.628	-.188	.545	.223	.030	.083	.193	.247
Regular and Continuous Access to Computer	.658	-.185	.530	.223	.011	.096	.241	.283
Skill Level in Using Internet	.908	.019	.181	.056	.184	.070	.122	.085
Awareness about process of making online purchases	.594	-.204	.216	.253	.010	.458	.307	.202
Design of Website of Retailer is Attractive	.268	.033	.814	-.036	.060	.242	-.049	.177
Easy to Access and Transaction Through Retailer Website	.043	.040	.707	-.121	.106	.281	.367	.219
Flexible Links are Available on Website of Retailer	.070	.119	.234	.032	.170	-.254	.735	.266
Navigation of Retailer Website is easy	.311	.158	.302	-.122	.651	.177	.214	.198
Website contain indepthi information to solve customer queries	.124	.224	-.221	-.029	.833	-.116	.009	-.104
Online Purchases reduce Transportation Cost	.259	.260	.479	-.074	.507	.091	.323	-.134
Helps to Buy Similar Products at Cheaper Prices	.309	.176	.120	.191	-.053	-.073	.141	.847
Online Purchases is Better Value for Money	.024	.016	.288	.567	-.068	.300	.457	.054
Internet Provide Low Prices than Traditional Retailers	.029	.296	.150	-.054	-.116	-.052	.027	.860
Online Retailers Encourages for Feedback and Suggestions	-.034	-.172	.004	.179	.399	.124	.611	.393
Online Retailers Understand the Needs of Customers	.238	-.181	.124	.141	.031	.191	.622	-.192
After Sales Services are easily provided by online retailers	.125	-.069	.117	.256	.785	.285	.133	-.184

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 9 iterations.

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Rotated Component Matrix

	Component							
	1	2	3	4	5	6	7	8
Indian Retailers Provide Customer Services to Retailers	.191	-.272	-.012	-.513	.228	.478	.074	-.011
Less Time and Effort in Making Online Purchases	.166	-.005	.043	.876	.101	.162	.116	.082
Online Purchases Saves Time	.125	.769	-.331	-.381	-.118	-.097	.172	.075
Online Purchases are more convenient	.075	.037	.147	.172	.121	.903	-.045	-.036
Product Received on Delivery is Similar as Committed	.006	.791	-.017	.047	.351	.162	-.193	.180
Product Guarantee is Honoured by Online Retailers	-.206	.785	.300	.196	-.034	.014	-.056	-.047
Delivery time is as per promised time	.486	-.061	.676	.267	-.114	-.010	.118	-.022
Wide Variety of Products are Available with Online Retailers	.427	-.108	.696	.290	-.034	-.051	.123	-.034
Purchase Type of Product I want from Internet	.895	.069	.217	.110	.160	.074	.091	.004
Buy Products that are not available with retailers	-.750	.021	-.072	.337	-.252	-.054	.349	-.045

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

Table 5: Table showing the Total Variance Explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.582	27.682	27.682	8.582	27.682	27.682	4.407
2	4.791	15.455	43.138	4.791	15.455	43.138	4.333
3	3.036	9.793	52.930	3.036	9.793	52.930	3.760
4	2.797	9.022	61.952	2.797	9.022	61.952	3.187
5	1.970	6.354	68.306	1.970	6.354	68.306	2.769
6	1.838	5.930	74.236	1.838	5.930	74.236	2.655
7	1.500	4.839	79.075	1.500	4.839	79.075	2.372
8	1.184	3.821	82.896	1.184	3.821	82.896	2.215
9	.978	3.156	86.052				
10	.909	2.933	88.986				
11	.734	2.369	91.354				
12	.464	1.496	92.850				
13	.407	1.312	94.162				
14	.298	.960	95.122				
15	.269	.869	95.991				
16	.203	.655	96.646				
17	.190	.614	97.260				
18	.157	.508	97.767				
19	.144	.464	98.232				
20	.114	.367	98.599				
21	.088	.285	98.884				
22	.080	.259	99.143				
23	.059	.192	99.335				
24	.056	.180	99.515				
25	.050	.161	99.676				
26	.036	.116	99.791				
27	.029	.092	99.883				
28	.017	.054	99.937				
29	.012	.037	99.975				
30	.006	.021	99.995				
31	.001	.005	100.000				

Extraction Method: Principal Component Analysis.

From the Table 4 and 5, the 31 variables are condensed to eightfactors viz.
Factor 1: This factor explains the first component and is designated as ***"Technology availability"*** **(TA).**
Factor 2: This factor explains the second component and is designated as ***"Financial Risk"*** **(FR).**
Factor 3: This factor explains the third component and is designated as ***"Ease of use"*** **(EU). Factor 4:** This factor explains the fourth component and is designated as ***"Variety of Products"*** **(VP).**
Factor 5: This factor explains the Fifth component and is designated as ***"Information on Website"*** **(IW).**
Factor 6: This factor explains the Sixth component and is designated as ***"Web Security & Privacy"*** **(WS).**
Factor 7: This factor explains the Seventh component and is designated as ***"Service Quality"*** **(SQ).**
Factor 8: This factor explains the Eighth component and is designated as ***"Guarantee & Warranty".*** **(GW)**

5.4 Hypotheses of Study

The following Hypotheses were formulated:-
Here $\mathbf{H_0}$ represents Null Hypothesis and $\mathbf{H_A}$ represents Alternative Hypothesis.

Hypothesis 1:-
H_{01}: There is no significant relationship between technology availability and purchase behavior of customers in online shopping.
H_{A1}: There is a significant relationship between technology availability and purchase behavior of customers in online shopping.

Hypothesis 2:-
H_{02}: There is no significant relationship between financial risk and purchase behavior of customers in online shopping.
H_{A2}: There is a significant relationship between financial risk and purchase behavior of customers in online shopping.

Hypothesis 3:-
H_{03}: There is no significant relationship between ease of use and purchase behavior of customers in online shopping.
H_{A3}: There is a significant relationship between ease of use and purchase behavior of customers in online shopping.

Hypothesis 4:-
H_{04}: There is no significant relationship between variety of products and purchase behavior of customers in online shopping.
H_{A4}: There is a significant relationship between variety of products and purchase behavior of customers in online shopping.

Hypothesis 5:-
H_{05}: T here is no significant relationship between information on website and purchase behavior of customers in online shopping.
H_{A5}: There is a significant relationship between information on website and purchase behavior of customers in online shopping.

Hypothesis 6:-
H_{06}: There is no significant relationship between web security & privacy and purchase behavior of customers in online shopping.
H_{A6}: There is a significant relationship between web security & privacy and purchase behavior of customers in online shopping.

Hypothesis 7:-
H_{07}: There is no significant relationship between service quality and purchase behavior of customers in online shopping.
H_{A7}: There is a significant relationship between service quality and purchase behavior of customers in online shopping.

Hypothesis 8:-
H_{08}: There is no significant relationship between guarantee & warranty and purchase behavior of customers in online shopping.
H_{A8}: There is a significant relationship between guarantee & warranty and purchase behavior of customers in online shopping.

Hypothesis 9:-
H_{09}: There is no significant relationship between demographic factors (Gender, Age, Marital Status, Education level) and purchase behavior of customers in online shopping.
H_{A9}: There is a significant relationship between demographic factors (Gender, Age, Marital Status, Education level) and purchase behavior of customers in online shopping.

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Table 6: Correlation matrix of Factors

Correlations

		Satisfaction Level of Respondents	WS	EU	IW	FR	SQ	TA	GW	VP
Pearson Correlation	Satisfaction Level of Respondents	1.000	.165	-.059	-.387	-.555	-.073	-.392	-.455	.018
	WS	.165	1.000	.291	.330	-.037	.088	.299	-.100	.136
	EU	-.059	.291	1.000	.354	-.084	.273	.695	.299	.351
	IW	-.387	.330	.354	1.000	.223	.354	.409	.023	.197
	FR	-.555	-.037	-.084	.223	1.000	-.067	-.102	.317	-.065
	SQ	-.073	.088	.273	.354	-.067	1.000	.296	.257	.411
	TA	-.392	.299	.695	.409	-.102	.296	1.000	.330	.394
	GW	-.455	-.100	.299	.023	.317	.257	.330	1.000	.190
	VP	.018	.136	.351	.197	-.065	.411	.394	.190	1.000
Sig. (1-tailed)	Satisfaction Level of Respondents	.	.022	.236	.000	.000	.189	.000	.000	.411
	WS	.022	.	.000	.000	.327	.142	.000	.113	.049
	EU	.236	.000	.	.000	.153	.000	.000	.000	.000
	IW	.000	.000	.000	.	.003	.000	.000	.390	.008
	FR	.000	.327	.153	.003	.	.210	.107	.000	.216
	SQ	.189	.142	.000	.000	.210	.	.000	.001	.000
	TA	.000	.000	.000	.000	.107	.000	.	.000	.000
	GW	.000	.113	.000	.390	.000	.001	.000	.	.010
	VP	.411	.049	.000	.008	.216	.000	.000	.010	.
N	Satisfaction Level of Respondents	149	149	149	149	149	149	149	149	149
	WS	149	149	149	149	149	149	149	149	149
	EU	149	149	149	149	149	149	149	149	149
	IW	149	149	149	149	149	149	149	149	149
	FR	149	149	149	149	149	149	149	149	149
	SQ	149	149	149	149	149	149	149	149	149
	TA	149	149	149	149	149	149	149	149	149
	GW	149	149	149	149	149	149	149	149	149
	VP	149	149	149	149	149	149	149	149	149

5.5 Hypothesis Testing

For carrying out the hypothesis testing, multiple regression analysis was conducted. The following outputs were obtained:

Table 7: Determinants and Online Shopping Adoption

Model Summary[h]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.555[a]	.308	.303	.67114	.308	65.323	1	147	.000
2	.715[b]	.511	.504	.56588	.204	60.779	1	146	.000
3	.772[c]	.596	.588	.51593	.085	30.638	1	145	.000
4	.812[d]	.660	.651	.47521	.064	26.913	1	144	.000
5	.832[e]	.692	.681	.45383	.032	14.885	1	143	.000
6	.846[f]	.715	.703	.43814	.023	11.426	1	142	.001
7	.861[g]	.740	.728	.41956	.026	13.855	1	141	.000

a. Predictors: (Constant), FR

b. Predictors: (Constant), FR, TA

c. Predictors: (Constant), FR, TA, WS

d. Predictors: (Constant), FR, TA, WS, EU

e. Predictors: (Constant), FR, TA, WS, EU, IW

f. Predictors: (Constant), FR, TA, WS, EU, IW, GW

g. Predictors: (Constant), FR, TA, WS, EU, IW, GW, VP

h. Dependent Variable: Satisfaction Level of Respondents

ANOVA[h]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.424	1	29.424	65.323	.000[a]
	Residual	66.214	147	.450		
	Total	95.638	148			
2	Regression	48.886	2	24.443	76.333	.000[b]
	Residual	46.752	146	.320		
	Total	95.638	148			
3	Regression	57.041	3	19.014	71.432	.000[c]
	Residual	38.596	145	.266		
	Total	95.638	148			
4	Regression	63.119	4	15.780	69.877	.000[d]
	Residual	32.519	144	.226		
	Total	95.638	148			
5	Regression	66.185	5	13.237	64.268	.000[e]
	Residual	29.453	143	.206		
	Total	95.638	148			
6	Regression	68.378	6	11.396	59.366	.000[f]
	Residual	27.259	142	.192		
	Total	95.638	148			
7	Regression	70.817	7	10.117	57.471	.000[g]
	Residual	24.820	141	.176		
	Total	95.638	148			

a. Predictors: (Constant), FR
b. Predictors: (Constant), FR, TA
c. Predictors: (Constant), FR, TA, WS
d. Predictors: (Constant), FR, TA, WS, EU
e. Predictors: (Constant), FR, TA, WS, EU, IW
f. Predictors: (Constant), FR, TA, WS, EU, IW, GW
g. Predictors: (Constant), FR, TA, WS, EU, IW, GW, VP
h. Dependent Variable: Satisfaction Level of Respondents

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	8.429	.354		23.822	.000	7.730	9.128
	FR	-.095	.012	-.555	-8.082	.000	-.118	-.071
2	(Constant)	10.655	.413		25.802	.000	9.839	11.471
	FR	-.102	.010	-.601	-10.333	.000	-.122	-.083
	TA	-.074	.009	-.453	-7.796	.000	-.093	-.055
3	(Constant)	9.793	.407		24.032	.000	8.987	10.598
	FR	-.102	.009	-.599	-11.296	.000	-.120	-.084
	TA	-.089	.009	-.545	-9.809	.000	-.107	-.071
	WS	.091	.016	.306	5.535	.000	.059	.124
4	(Constant)	9.359	.385		24.341	.000	8.599	10.119
	FR	-.101	.008	-.595	-12.170	.000	-.118	-.085
	TA	-.127	.011	-.780	-11.409	.000	-.149	-.105
	WS	.081	.015	.274	5.340	.000	.051	.112
	EU	.074	.014	.353	5.188	.000	.046	.103
5	(Constant)	9.541	.370		25.771	.000	8.809	10.272
	FR	-.091	.008	-.537	-10.959	.000	-.108	-.075
	TA	-.117	.011	-.717	-10.650	.000	-.139	-.095
	WS	.095	.015	.321	6.356	.000	.066	.125
	EU	.079	.014	.376	5.758	.000	.052	.106
	IW	-.050	.013	-.213	-3.858	.000	-.076	-.024
6	(Constant)	9.782	.364		26.839	.000	9.062	10.502
	FR	-.078	.009	-.459	-8.719	.000	-.096	-.060
	TA	-.105	.011	-.646	-9.462	.000	-.127	-.083
	WS	.086	.015	.288	5.788	.000	.056	.115
	EU	.087	.013	.414	6.467	.000	.061	.114
	IW	-.061	.013	-.258	-4.694	.000	-.086	-.035
	GW	-.071	.021	-.185	-3.380	.001	-.112	-.029
7	(Constant)	9.430	.362		26.076	.000	8.716	10.145
	FR	-.076	.009	-.445	-8.816	.000	-.093	-.059
	TA	-.112	.011	-.688	-10.366	.000	-.134	-.091
	WS	.085	.014	.285	5.990	.000	.057	.113
	EU	.083	.013	.393	6.375	.000	.057	.108
	IW	-.063	.012	-.269	-5.118	.000	-.088	-.039
	GW	-.077	.020	-.203	-3.849	.000	-.117	-.038
	VP	.048	.013	.176	3.722	.000	.023	.074

a. Dependent Variable: Satisfaction Level of Respondents

Table 7 indicates that the multiple regression analysis identifies that online shopping adoption is positively affected by all the factors obtained from the factor analysis except the factor i.e. Service Quality. It is clear

that these factors contribute to the online shopping. Since the positive relationship is found between both the variables. Since p – value is less than 0.05 that means it is significant at 5% level of significance so the alternative hypothesis is supported that is there is significant relationship between these factors with that of the online shopping adoption. Since in the case of Service Quality the p – value is found to be more than that of 0.05, so in case of Service Quality the null hypothesis is accepted which means there is no significant relationship between Service Quality with that of online shopping adoption.

5.6 Summary of Hypothesis Testing from 1-8:

Table 7: Summary of Hypotheses testing

HYPOTHESES	NULL HYPOTHESIS	ALTERNATIVE HYPOTHESIS
Hypothesis 1	REJECTED	**ACCEPTED**
Hypothesis 2	REJECTED	**ACCEPTED**
Hypothesis 3	REJECTED	**ACCEPTED**
Hypothesis 4	REJECTED	**ACCEPTED**
Hypothesis 5	REJECTED	**ACCEPTED**
Hypothesis 6	REJECTED	**ACCEPTED**
Hypothesis 7	**ACCEPTED**	REJECTED
Hypothesis 8	REJECTED	**ACCEPTED**

5.7 Hypothesis Testing for Demographic Factors

Table 8: T – test: Purchase behavior in Online Shopping and Gender (Sample Size – 149)

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction Level of Respondents	149	5.6040	.80387	.06586
Gender of Respondents	149	1.4027	.49209	.04031

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Satisfaction Level of Respondents	85.096	148	.000	5.60403	5.4739	5.7342
Gender of Respondents	34.794	148	.000	1.40268	1.3230	1.4823

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.849[a]	.721	.705	.26711

a. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.850	8	3.231	45.288	.000[b]
	Residual	9.989	140	.071		
	Total	35.839	148			

a. Dependent Variable: Gender of Respondents

b. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.425	.272		-5.239	.000
	WS	.103	.009	.567	11.436	.000
	EU	.042	.008	.325	5.071	.000
	IW	.042	.008	.290	4.931	.000
	FR	.012	.006	.117	2.153	.033
	SQ	-.029	.011	-.151	-2.776	.006
	TA	-.021	.007	-.208	-3.002	.003
	GW	.091	.013	.390	6.827	.000
	VP	-.034	.009	-.204	-3.937	.000

a. Dependent Variable: Gender of Respondents

From Table 8, the Adjusted R square is found to be 0.705 which indicates that 70.5% of the impact of gender is there on purchase behavior in online shopping.

The significant value is found to be 0.000 which is below than 0.05, thus it is significant at 5% level of significance. Thus, null hypothesis is rejected and alternative hypothesis is accepted. So, there is significant impact of gender is on purchase behavior in online shopping.

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Table 9: ANOVA – F test: Online Shopping Adoption and Age (Sample Size – 149)

Table 9: F – Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831[a]	.691	.673	.68918

a. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148.739	8	18.592	39.145	.000[b]
	Residual	66.496	140	.475		
	Total	215.235	148			

a. Dependent Variable: Age of Respondents

b. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.149	.702		-.213	.832
	WS	.293	.023	.657	12.606	.000
	EU	-.112	.021	-.355	-5.267	.000
	IW	-.087	.022	-.246	-3.976	.000
	FR	.017	.015	.065	1.137	.258
	SQ	.069	.027	.145	2.532	.012
	TA	.135	.018	.551	7.566	.000
	GW	.044	.034	.077	1.286	.201
	VP	-.226	.022	-.550	-10.074	.000

a. Dependent Variable: Age of Respondents

From Table 9, the Adjusted R square is found to be 0.673 which indicates that 67.3% of the impact of age is there on purchase behavior in online shopping.
The significant value is found to be 0.000 which is below than 0.05, thus it is significant at 5% level of significance. Thus, null hypothesis is rejected and alternative hypothesis is accepted. So, there is significant impact of age on purchase behavior in online shopping.

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ANOVA – F test: Online Shopping Adoption and Marital Status (Sample Size – 149)

Table 10: F – Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836[a]	.698	.681	.17054

a. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.418	8	1.177	40.476	.000[b]
	Residual	4.072	140	.029		
	Total	13.490	148			

a. Dependent Variable: Marital Status of Respondents

b. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.098	.174		12.076	.000
	WS	-.025	.006	-.225	-4.372	.000
	EU	.030	.005	.380	5.694	.000
	IW	.073	.005	.823	13.461	.000
	FR	.002	.004	.029	.508	.612
	SQ	-.048	.007	-.404	-7.145	.000
	TA	-.046	.004	-.743	-10.317	.000
	GW	.017	.009	.122	2.056	.042
	VP	.002	.006	.017	.322	.748

a. Dependent Variable: Marital Status of Respondents

From Table 10, the Adjusted R square is found to be 0.681 which indicates that 68.1% of the impact of marital status is there on purchase behavior in online shopping.
The significant value is found to be 0.000 which is below than 0.05, thus it is significant at 5% level of significance. Thus, null hypothesis is rejected and alternative hypothesis is accepted. So, there is significant impact of marital status on purchase behavior in online shopping.

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ANOVA – F test: Online Shopping Adoption and Education Level (Sample Size – 150)
Table 11: F – Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831[a]	.691	.673	.68918

a. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148.739	8	18.592	39.145	.000[b]
	Residual	66.496	140	.475		
	Total	215.235	148			

a. Dependent Variable: Qualification of Respondents

b. Predictors: (Constant), VP, FR, WS, GW, IW, SQ, EU, TA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.149	.702		-.213	.832
	WS	.293	.023	.657	12.606	.000
	EU	-.112	.021	-.355	-5.267	.000
	IW	-.087	.022	-.246	-3.976	.000
	FR	.017	.015	.065	1.137	.258
	SQ	.069	.027	.145	2.532	.012
	TA	.135	.018	.551	7.566	.000
	GW	.044	.034	.077	1.286	.201
	VP	-.226	.022	-.550	-10.074	.000

a. Dependent Variable: Qualification of Respondents

From Table 11, the Adjusted R square is found to be 0.673 which indicates that 67.3% of the impact of education level is there on purchase behavior in online shopping.

The significant value is found to be 0.000 which is below than 0.05, thus it is significant at 5% level of significance. Thus, null hypothesis is rejected and alternative hypothesis is accepted. So, there is significant impact of education level on purchase behavior in online shopping.

On the basis of the Table 8, 9, 10 and 11 of ANOVA, the summary of hypothesis 9 testing is given below: (Here A is Accepted and R is Rejected)

Table 12: Summary of hypothesis 9 Testing

Factors	GENDER		AGE		MARITAL STATUS		EDUCATION LEVEL	
	NULL	ALT.	NULL	ALT.	NULL	ALT.	NULL	ALT.
TA	R	**A**	R	**A**	R	**A**	R	**A**
FR	R	**A**	**A**	R	**A**	R	**A**	R
EU	R	**A**	R	**A**	R	**A**	R	**A**
VP	R	**A**	R	**A**	**A**	R	R	**A**
IW	R	**A**	R	**A**	R	**A**	R	**A**
WS	R	**A**	R	**A**	R	**A**	R	**A**
SQ	R	**A**	R	**A**	R	**A**	R	**A**
GW	R	**A**	**A**	R	R	**A**	**A**	R

VI. CONCLUSION

It is clearly evident from the study that there is significant relationship between website security, ease of use, information on website, financial risk, guarantee and warranty, variety of products and technology availability with that of the purchase behavior of customers in online shopping platform. Service quality does not have a relationship with that of the purchase behavior of customers.

This study is quintessential for the audience who is on the seller side in the e-commerce industry interface. Knowing the factors that affect the purchase behavior of the customers can be the key to unlock the huge market potent that remains untapped in the Indian retail sector. Further, the demographics study also shows the relationships of the identified factors with the demographics like age, marital status, gender and education level. These results may help the strategists to chalk out the segmentation and targeting strategy for the e-commerce platform in order to tap the best potential from the Indian retail sector.

VII. RESEARCH LIMITATIONS & SCOPE FOR FURTHER STUDY

The foremost limitation of this study is that its domain is limited to the respondents who are involved in online shopping in Delhi NCR region only. The results may vary region wise. Secondly, there may be more variables that may relate to this study that may have been skipped or missed by the researchers.

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