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BASIC COMPUTATIONAL
TECHNIQUES FOR
DATA ANALYSIS

A PROJECT REPORT
On
ANALYSIS OF CONSUMER
BUYING BEHAVIOUR
TOWARDS ONLINE
SHOPPING

STUDENT DECLARATION

I, MS PRABHLEEN KAUR BINDRA hereby declare that this project is the record of authentic work carried out by me during the academic year 2019-2020 and has not been submitted to any other university or institute towards the award of any degree.

CERTIFICATE FROM THE INSTITUTE GUIDE

This is to certify that Ms Prabhleen Kaur Birdra of Mata Sundri College has successfully completed the project work in partial fulfilment of requirement for the award of Bachelor of Arts prescribed by Mata Sundri College Delhi University.

This Project is the record of authentic work carried out during the academic year 2019-2020

MS. SAKSHI JINDAL

Project Guide

ACKNOWLEDGEMENT

"Knowledge is an experience gained in life, it is the choicest possession. This should not be shelved but should be happily shared with others. It is the supreme art of the teacher to awaken joy in creative expression and knowledge". The success of any project is the result of hard work and endeavour of not one but many people and this project is no different. I take this as a prospect to a vow that it was an achievement to have succeeded in my final project. This would not have been possible without the guidance of Ms SAKSHI JINDAL

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ABSTRACT

The present paper is focus on consumer buying behaviour towards online shopping. In today scenario there is various method to purchase any product from any shop. But according to requirements people use various online shopping sites to purchase and product. So based on its requirements I covered all the market in which I analysed about various factor which are used in online shopping purpose.

Specifically, we examine how emotional and cognitive responses to purchase and product for the first time can influence online customer intention to return and their likelihood to make unplanned purchase.

The instrumentation shows reasonable good measurement properties and the constructs are validate as a nomological network.

INTRODUCTION

Online shopping refers to the process of purchasing products or services via the internet via the internet. The process consist of five steps similar to those associated with traditional shopping behaviour. In the typical online shopping process, when potential consumer recognize a need for some merchandise or service, they go to the internet and search for need related information. However rather than searching actively, at times potential consumer are attracted by information about products or services associated with the felt need.

They evaluate alternatives and choosed the one that best fits their criteria for meeting the felt need. Finally, a transaction is conducted and post sales services provided. online shopping attitude refers to consumer's psychological state in terms of

making purchases on the Internet.

Chang M.K., Cheung W, Lai, V.S (2005)

No doubt that the Internet has been influencing our lives deeply in which it plays an important, indispensable and irreplaceable role. Online shopping has become a popular and easy way for customer. This new innovative type of shopping brings a great number and also wide range of merchandise to consumer. It also offers a huge market and numerous business opportunities, online consumer behaviour become a contemporary research area with an increasing number of research.

The internet has brought a sweeping revolution in the way we shop or buy product today. With the advent of internet online shopping becomes popular and most preferred by certain segment of consumer for product like travel, books, music, gadgets etc.

It is estimated that India will have 38 million active online shoppers by then.

Today companies have entered this online space to tap its enormous potential. Players like Flipkart, Amazon, Snapdeal, eBay to name a few are very active in this space.

On the demand side, consumers are time pressed. With more and more consumers becoming increasingly familiar with internet and its benefit, online shopping is gaining popularity and preference among the set of consumers who seek better value proposition when compared to offline shopping in terms of information convenience cost and choice.

Online retail revenue saw an 11 percent year-over-year growth rate for the first quarter of 2014, with online orders up 13 percent compared to the same quarter last year. Seventy two percent of Millennial research and shop their options online before going to a store or the E-commerce Facts.

A questionnaire-based empirical study is used to test this nomological network. Results confirm the identity of the online consumer as a shopper and a computer user because both shopping enjoyment and perceived usefulness of the site strongly predict intention to return. Our results on unplanned purchases are not conclusive.

We also test some individual and web site factors that can affect the consumer emotional cognitive responses. Product involvement.

The study provides a more rounded view of the online consumer and is a significant step towards a better understanding of consumer behaviour on the web. The validated metrics should be of use to researchers and practitioners alike.

REVIEW OF LITERATURE

Guo Jun and NORA Ismawati Saqfar (2011) conducted a study on consumer's attitude towards online shopping. Marketing mix and reputation were the factors found to have significant positive influence over the consumer's attitude towards online shopping. The local culture and reality determines the attitude and behavior of the local people towards online shopping was concluded from the study.

Zuhoni Md Jusoh and Goh Hai Ling (2012) analyzed the factors influencing the consumer's attitude towards e-commerce purchases through online shopping. The study revealed that e-commerce experience, product perception and customer service had significant relationship with the consumer's attitude towards e-commerce purchase.

Mohammed Hossein Moshki Javadi (2012) studied the various factors affecting the online shopping behaviour of consumers in the online stores of Iran. The findings witnessed was the financial and non-delivery risk affected the consumer attitude. The study concluded that website must be made safer and assure customers regarding the delivery of the products.

Ruchi Nayyar and Gupta (2011) examined different demographic, psychographic factors and the interest of the consumer in online purchases. Gender, age and income are the demographic, PEOU influence the online buying behaviour of the consumers. The study exposed that the Indians viewed marketing as an hedonic

PROBLEM OF STUDY

There are millions of people online and each of them is a potential customer for a company providing online sales. Due to rapid development of technologies surrounding the Internet, a company that is interested in selling products from its web site will constantly have to search for an edge in the fierce competition. Since there are so many potential customers, the importance of analysing and identifying factors that influence the consumer when he or she decides to purchase on the Internet is vital. The Internet is a new medium for there have been new demands set by the consumer. That is why it is crucial for the online retailers to know what influences the online customer. Since online retailing is a new retailing medium and online consumer behaviour is diverse from traditional consumer behaviour, one must identify what influences the online consumer. These factors need to be identified and taken into account by online retailers in order to satisfy consumer demand and compete in the online market.

OBJECTIVES OF THE STUDY

1. To Study the consumer's attitude towards online shopping based on consumer's behaviour, beliefs and opinions.
2. To identify the factors influencing consumer attitude to buy online.
3. To study the consumer's level of satisfaction with regard to online shopping.
4. To determine in which product categories people intend to spend more in case of online shopping.
5. To identify the things (quality, price, availability) which attract consumer to buy online.
6. To study the problem faced by the consumer towards online shopping.
7. To study the impact of online shopping on stores.

RESEARCH DESIGN

Research design forays the blueprint of a research study which prefigures that what research will do from hypothesis formulation to analysis of data. A research design presents research problem, hypothesis, methods for data collection and a statistical analysis to be used in a manner that aim to combine relevance to research purpose. This research work is exploratory, descriptive and empirical in nature. Empirical research is which knowledge is gained based on experiment and observation. In it a working hypothesis is tested using observation and experiment. This work is exploratory as it attempt to explore the online buying behaviour of customer based on knowledge acquired. It is descriptive in the sense that it has used descriptive statistics to explain the various parameters of online shoppers. The study is exploratory in the nature as some of the hypothesis are stated relating to online buying behaviour which are tested by using different statistical tools.

METHODOLOGY

The present research is in the nature of empirical research. The research is in the nature of sample study. In this research, depending upon the nature of work to be carried out it is decided to use quota sampling technique to collect data. Various different methods like observations have been used for collecting information related to research to online shopping between different age group of people and different areas and types of groups etc. The design which is chosen as the only enormous public and professionally. Sources of Data Collection. Data are the base for each result, without data any any research cannot be started.

Primary data Primary data is collected through self administered questionnaire supported by personal interview.

Secondary data apart from these main techniques, data study obtained. Research studies, books, journals etc. Statistical tool for analysing data.

Relevant statistical tool will be used for analysing data like mean, standard deviation etc.

HYPOTHESIS

Hypothesis 1 - The Risk of losing money and financial details will have negative effect on attitude towards online shopping.

Hypothesis 2 - The Product Risk will have negative effect on attitude towards online shopping.

Hypothesis 3 - Having a friendly website and good service to better help the customer for shopping will have positive influence on attitude towards online shopping.

Hypothesis 4 - Fear of non-delivery of orders will have negative influence on attitude towards shopping online.

Hypothesis 5 - Family members, friends and peers online experience and suggestions will positively influence behaviour.

Hypothesis 6 - Lack of facility to shop online will have negative effect on online shopping behaviour.

Hypothesis 7 - Satisfaction level with quality and availability.

JDs

DATA ANALYSES

CORRELATION

REGRESSION

GRAPHS

DATA ANALYSES

Table 1 - Reasons for doing online shopping according to the age groups.

Age of Respondent	Time saving	Door to Door service	No issue of going to shop	Availability of product	Total
Up to 18 years	2	4	3	3	12
18-25	29	23	19	32	103
25-35	6	3	5	8	22
35 and above	3	3	2	5	13

The survey conducted on 150 customers of different age group about the factors that attracts them to prefer online shopping. Out of 12 customer up to age 18 years said its time for savings. 4 gave reason as door to door service, 3 don't need to go outside to shop. The 22 customer aging between 25 and 35, 6 said its time for saving, 3 gave the reason as door to door service.

As we observed that Age group upto 18 years highly prefer door to door service. 18-25 year age group prefer Availability of product. 25-35 year age group prefer the same. Availability of product is the most they want.

[CLASSTIME]

TABLE: Reason for doing online shopping according to age group

Age of the respondent	Time saving	door to door service	No issue of going to shop	Availability of product	Total no. of respondent
upto 18 years	2	4	3	3	12
18-25 years	29	23	19	32	103
25-35 years	6	3	5	8	22
35 and above	3	3	2	5	13

CORRELATION COEFFICIENT

Between time saving and door to door service= 0.985564
 Between time saving and no issue of going to shop 0.996325
 Between time saving and availability 0.999531

SUMMARY OUTPUT

Regression Statistics	
Multiple R	1
R Square	1
Adjusted R Square	65535
Standard Error	0
Observations	4

ANOVA

	df	SS	MS	F	Significance F
Regression	3	490	163.3333333	#NUM!	#NUM!
Residual	0	0	65535		
Total	3	490			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-1.4	0	65535	#NUM!	-1.4	-1.4
X Variable 1	0.1	0	65535	#NUM!	0.1	0.1
X Variable 2	0.3	0	65535	#NUM!	0.3	0.3
X Variable 3	0.7	0	65535	#NUM!	0.7	0.7

RESIDUAL OUTPUT

Observation	Predicted Y	Residuals
1	2	8.88178E-16
2	29	-7.10543E-15
3	6	0
4	3	8.88178E-16

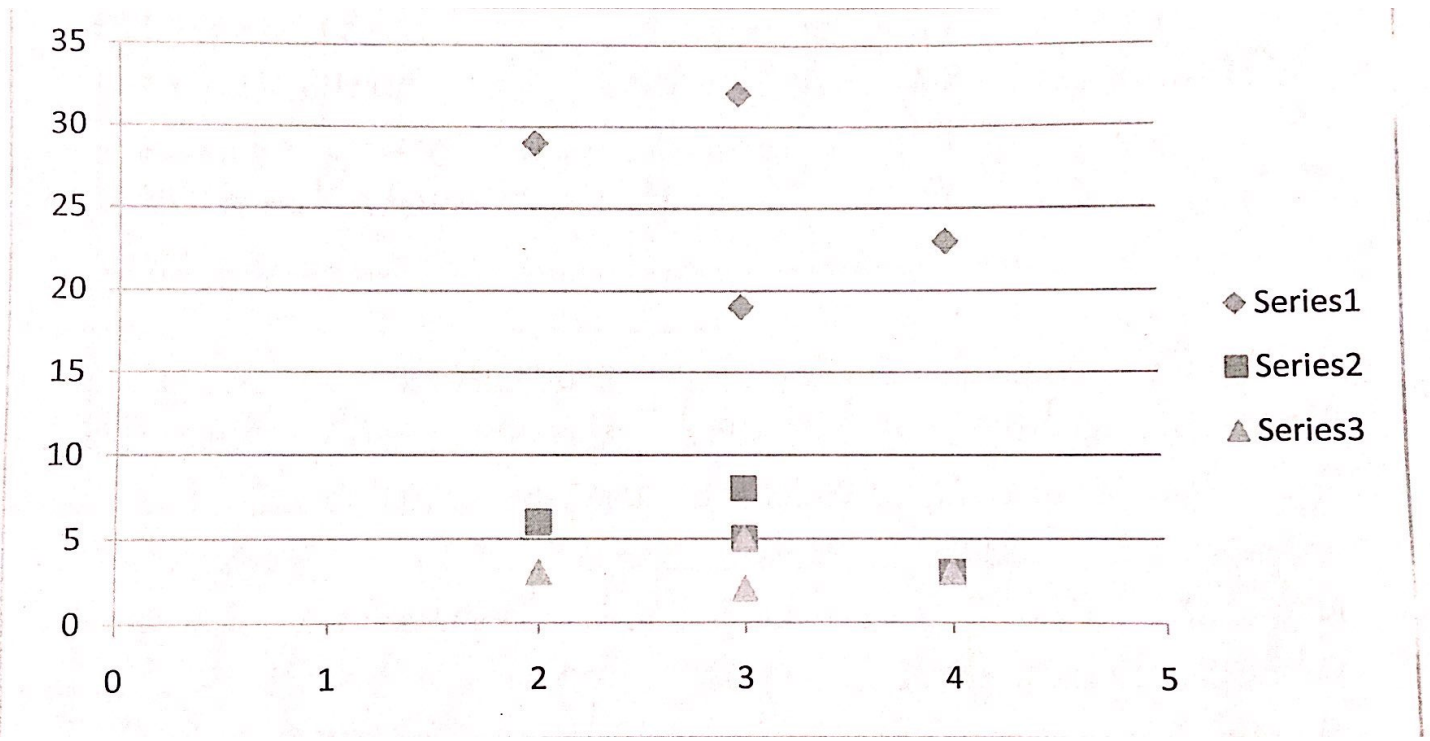


Table 2- Preference of the Respondent to buy product when the price of the product is equal in online sites and traditional market.

Age of the Respondent	Internet	Shop	Total
Up to 18	4	8	12
18-25 years	35	68	103
25-35 years	5	17	22
35 and above	4	9	13

Out of 12 customers up to age group 18 years, 4 opted for internet while 8 prefer shops. The 103 customer aging between 18 and 25 opted for internet 68 prefer shop. The 22 customer aging between 25 and 35, 5 opted for internet 17 preferred shop. According to this age group of 18-25 years mostly prefer shops over internet. There can be so many reasons why customer still prefer shops over online sites. People still believe that offline shops are better than online sites.

TABLE: PREFERENCE OF RESPONDENT TO BUY PRODUCT WHEN THE PRICE OF PRODUCT IN ONLINE SITE AND TRADITIONAL MARKET IS AS FOLLOWS

CORR COEFFICIENT 0.993881754

Age of the respondent	Internet	Shop	Total
upto 18	4	8	12
18-25	35	68	103
25-35	5	17	22
35 and above	4	9	13

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.995306866
R Square	0.990635758
Adjusted R Square	0.981271516
Standard Error	2.410824111
Observations	3

ANOVA

	df	SS	MS	F	Significance F
Regression	1	614.8545938	614.8545938	105.7892	0.061701622
Residual	1	5.812072893	5.812072893		
Total	2	620.6666667			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-2.498861048	2.17316908	-1.149869594	0.455692	-30.11159231	25.11387021	-30.11159231	25.11387021
8	0.547835991	0.053263521	10.28538813	0.061702	-0.128941217	1.224613199	-0.128941217	1.224613199

RESIDUAL OUTPUT

Observation	Predicted 4	Residuals
1	34.75398633	0.246013667
2	6.814350797	-1.814350797
3	2.43166287	1.56833713

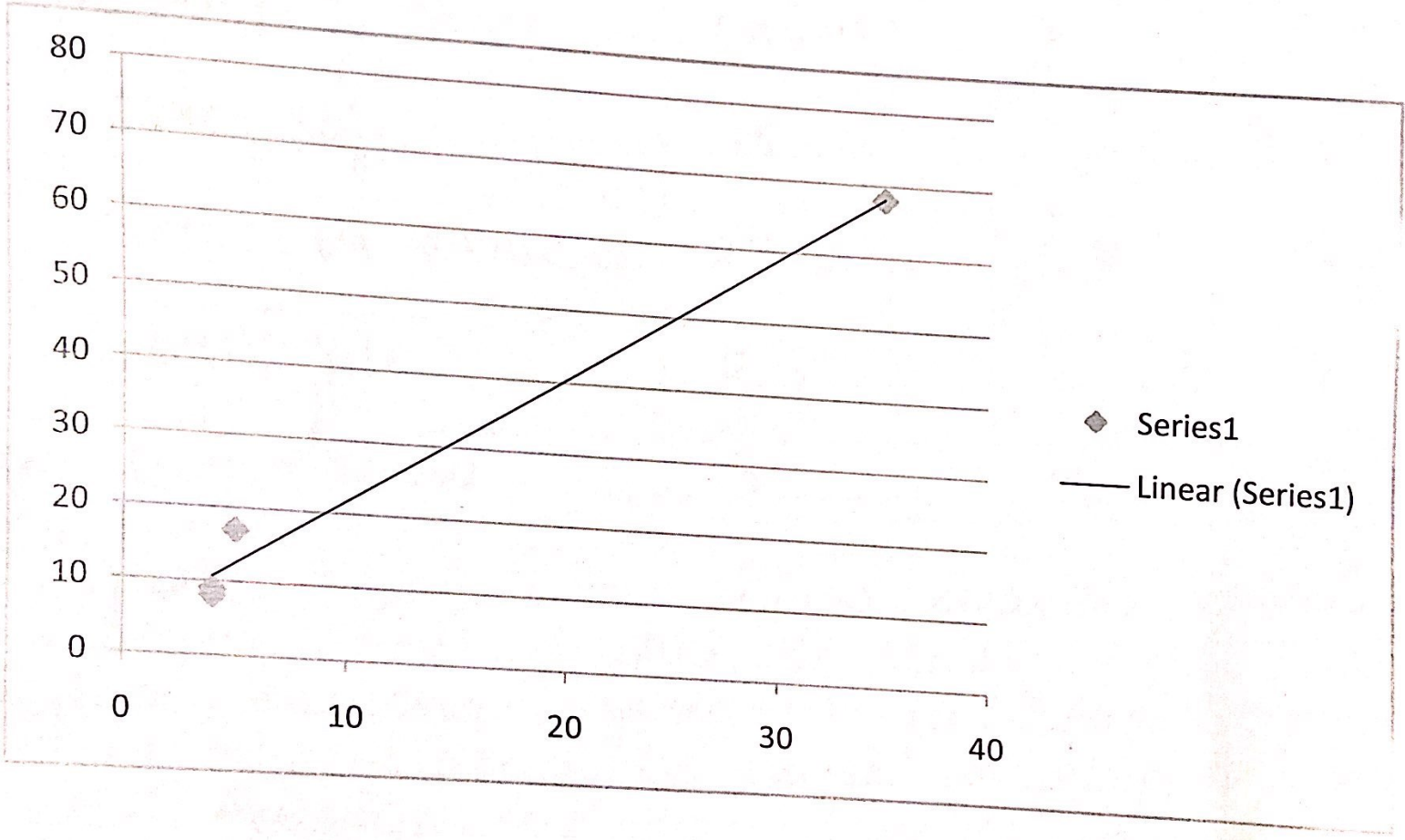


Table 3- Opinion on gender basis about shopping in a Retail Store v/s Shopping online.

Shopping from Retail Store v/s shopping Online	No. of Females (n=45)	Males (n=55)	Total % (n=100)
More Safe	15	15	30
About the same	23	33	56
Less Safe	2	3	5
Don't Know	5	4	9

Opinion of the online buyers regarding shopping online versus shopping in retail store it was seen that 56% respondents felt that shopping in store is about the same as shopping online whereas 30% felt that shopping in store was safer. According to the study we found that consumers do not have the opportunity to physically inspect goods purchased over the internet prior to purchasing them. The concept of risk is important for understanding how internet consumers make choices.

shopping from retail store v/s shopping online				
	more safe	about the same	less safe	don't know
females	15	23	2	5
males	15	33	3	4
total	30%	56%	5%	9%

Female w.r.t Male

Regression Statistics	
Multiple R	0.974247712
R Square	0.949158605
Adjusted R Square	-2
Standard Error	2.652391003
Observations	1

ANOVA					
	df	SS	MS	F	Significance F
Regression	4	262.6796439	65.66991098	37.33802366	#NUM!
Residual	2	14.07035607	7.035178035		
Total	6	276.75			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							-4.0839	4.0839
X Variable 1							1E-306	1E-306
X Variable 2							0	0
X Variable 3	2.018447018	2.010280676	1.00406229	0.421089328	-6.631092618	10.668	-6.63109	10.668
X Variable 4	0.671385671	0.109874372	6.110484732	0.025752288	0.198634406	1.14414	0.19863	1.14414

Female w.r.t Total

Regression Statistics	
Multiple R	0.990937061
R Square	0.981956259
Adjusted R Square	-2
Standard Error	1.580127425
Observations	1

ANOVA					
	df	SS	MS	F	Significance F
Regression	4	271.7563946	67.93909866	108.8417586	#NUM!
Residual	2	4.993605359	2.49680268		
Total	6	276.75			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							2E-186	2E-186
X Variable 1							1E-171	1E-171
X Variable 2							1E-171	1E-171
X Variable 3	1.079476248	1.254817556	0.860265497	0.480299987	-4.319567933	6.47852	-4.31957	6.47852
X Variable 4	40.68209501	3.899468956	10.43227537	0.009062939	23.90403166	57.4602	23.904	57.4602

Male w.r.t Total

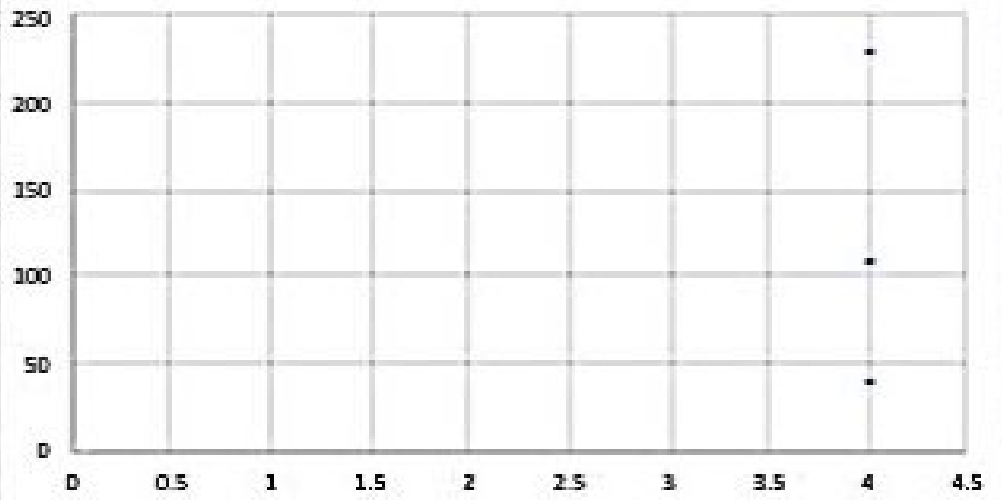
Regression Statistics	
Multiple R	0.995706264
R Square	0.991430965
Adjusted R Square	-2
Standard Error	1.580127425
Observations	1

ANOVA					
	df	SS	MS	F	Significance F
Regression	4	577.7563946	144.4390987	231.3984999	#NUM!
Residual	2	4.993605359	2.49680268		
Total	6	582.75			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							-1E+262	1E+262
X Variable 1							0	0
X Variable 2							0	0
X Variable 3	-1.079476248	1.254817556	-0.860265497	0.480299987	-6.47852043	4.31957	-6.47852	4.31957
X Variable 4	59.31790499	3.899468956	15.21178819	0.004293736	42.53984165	76.096	42.5398	76.096

		D.F	SS	MSS	F
(i)	Regression	4	262.6796439	65.66991098	37.33802366
(ii)	Regression	4	271.7563946	67.93909866	108.8417586
(iii)	Regression	4	577.7563946	144.4390987	231.3984999

REGRESSION ANALYSIS



CONCLUSION

In this study we examined some factors affecting on online shopping behaviour of consumer. A conceptual model was used in order to assess the effects of variables on each other using regression and correlation. Results of hypothesis testing indicated that financial risk and non delivery risk has negative effect on attitude towards online shopping behaviour. That is e-retailers should make their website safer and assure customers for delivery of their products. It has positive effect towards online shopping behaviour of consumers. This means the more people suggest e-buying to each other, the more this method will be popular among people.

The finding and analysis shows that the consumers who are between the age group of 18-25 are more comfortable for online shopping than rest of the group. The group who are under the age of 35 and above are not much aware of the so many shopping sites. They are not technically advanced to do online shopping they fear whether they are ordering will come genuine or not they less do online shopping rather traditional market.

RECOMMENDATION

Research of longitudinal type is required to study the frequency at which the repeat online shoppers buy goods and services online and the amount spent over a period of time. This is because as per the research problem, the growth rate of online shopping is predicted to be low. The relationships between impersonal influence and subjective norm should be explored. Moreover, further research is also required to understand why the respondents have low confidence levels in shopping online as shown by the study's result. Mobile payment was the second most preferred payment option for online shoppers. Online Retailer should also ensure there is a smooth payment process and if they can include money-back guarantees can go a long way to increase the confidence of first time online shopping to actually do it. Online retailers should put measure in place to guarantee the standards of their merchandise.

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