

The Impact of Perceived Risk on Online Buying Behavior

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Abstract— In this paper, we will learn about online shopping and consumer-shopping behavior related to it. We will learn how two major type of perceived risks i.e environmental and behavioral risk makes an impact upon the online behavior of a consumer. Online shopping potentially allows commercial Web providers to collect much more detailed consumer behavior information than they can from most physical shopping trips. Commercial Web providers can collect not only the same information available in most physical transactions—identity, credit history, employment status, legal status—but such additional information as electronic address, specific history of goods and services searched for and requested, other Internet sites visited, and contents of the consumer’s data storage device. Secondary use of information captured online can more easily follow individual-level behavior. Highly touted by many Internet marketers is the idea that data specifically linked to a single identifiable person can be used to customize a product or service to a potential customer, in the interest of maximizing the likelihood of consumer acceptance of the offer.

Index Terms— consumer behavior, internet marketing, online shopping, perceived risk.

I. INTRODUCTION

As the time moves we are entering into the new era of business and creativity and innovations and in particular marketing, all individuals in every business field have believed that there have been some initiatives and new ways that have great positive impacts on their business. These new ways or new trends influence mainly the financial aspect of the company, which is the core purpose of the particular business launched. Since the introduction of internet in business, the communication standards between the marketers and consumers have changed. People now know who and where to call when they are not satisfied with their desired product/service.

As discussed by (Zhou, Dai, & Zhang, ONLINE SHOPPING ACCEPTANCE MODEL, 2007) the internet marketing competition is being strengthened, online retailers have become keen to understand the previous circumstances on which the consumer accepted online shopping in the first place. The in-depth analysis of consumer factors associated with online shopping acceptance can be studied in the paper by (Zhou, Dai, & Zhang, ONLINE SHOPPING ACCEPTANCE MODEL, 2007)

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According to (Forsyth & Shi, 2003) Since the advent of internet its speedy recognition as a profitable medium for businesses has been extensively acknowledged (Forsyth & Shi, 2003) Even when internet have become the most profitable and convenient way to avail many products and services, most online consumers still prefer buying offline after using the online information as a base, they prefer to act like the “Window Shoppers” (Forsyth & Shi, 2003) While shopping traditionally, the Motivation for shopping are either hedonic or utilitarian. By hedonic we mean the experimental shoppers, the ones who shop for joy and entertainment and by utilitarian shoppers we mean the practical or goal-oriented shoppers According to (Fallon, 2012), the foundation of marketing is to stress the consumer or any potential customer to buy and spread good reference about a particular product or service. The internet marketing deals with the same however due to the increasing number of information sites on Google have made it difficult for the marketers to trap the consumers Unlike the traditional way where consumers had only specified knowledge of a product/service. The consumers now tend to behave differently and smartly. The study that is based on why the consumer buys a product, how they buy it and what use they make of it is called consumer behavior. Consumers do not really purchase products that differ from their personality or personal traits (Park, Kyung, & John, 2010). Time and complete knowledge about the desired product influences a consumer’s final purchase decision along with other important factors such as culture, social values, money, security, perceived risks etc. Consumers want products to align with their social groups, and some consumers are feeling convinced that goods will either improve or detract from their quality of life and their societal relationships (Fallon, 2012).

Consumer buying decisions are highly affected by the opinions and decisions of others. Word-of- mouth marketing is a fundamental part of the marketing process (Cheema & Kaikati, 2010), as consumers greatly rely on advice of other people when they make potential purchase decisions. Especially when the level of risk during a purchase is noticeable (Gershoff & Johar, 2006) which in the case of online shopping is very high. Consumers are motivated to expand information via word-of-mouth relations when they feel they are satisfied or unsatisfied with a product/service. The advent of the Internet has enlarged the capability of consumers, and potential future consumers to interpersonally connect with each other through blogging and other mediums, as a result creating influential means by which

product information can be speedily circulated and products become easily adoptable by the mass or potential market (Trusov, Bucklin, & Pauwels, 2009). Marketers can use these interpersonal connections and online communities to sponsor their products/ services.. WOM referrals have also noticeably increased new customer achievement and possessed much longer adjourned effects than traditional marketing actions as well as higher response is now flexible (Trusov, Bucklin, & Pauwels, 2009). Person to person communication destinations consider viral showcasing and word-of- mouth advancement t o be in the same way that compelling - whether not All the more compelling - over accepted networking crazy gives due to those large amounts of shopper engagement connected with these exchange manifestations of Web-based networking. Assessment authority need the capacity to extraordinarily impact those beliefs, behaviors, What's more qualities from claiming consumers, and they have the capacity will successfully scope Massenet about people through blogs. Furthermore social networks (Acar & Polonsky, 2007) Social networking sites have provided marketers with new and efficient ways of reaching deeply into their target market to communicate their message (Trusov, Bucklin, & Pauwels, 2009)

II. PROBLEM STATEMENT

The problem statement of this research is to identify the impact of perceived risk on online consumer shopping behavior. These days a huge number of online web-vendors are engaged in serious effort to define and integrate the level of risk associated with their consumers' online behavior. Consumer behavior is very important to study in the aspect of risk because consumer these days are very much concerned about their personal selves and level of security.

III. SIGNIFICANCE OF STUDY:

Perceived risk directly affects online consumer behavior and their intention to purchase. When consumer perceived risk is high, the consumer intention to purchase online is low and when consumer perceived risk is low, the consumer intention to purchase online is high. risk can be real and as long as risk is real, it will affect online consumer behavior. The study is significant to be studied to know the extent of risk associated with online consumer behavior.

iii) OBJECTIVE OF STUDY

The following research objective have been developed

- To find out the relationship between financial risk and online consumer buying behavior.
- To find out the relationship between security risk and online consumer buying behavior.
- To find out the relationship between time & convenience risk and online consumer buying behavior.
- To find out the relationship between psychological risk and online consumer buying behavior

IV. LITERATURE REVIEW

The concept of consumer perceived risk in the marketing was first introduced by (Bauer, 1960); the topic has now extended itself into a broad discussion and led to numerous inclusive definition. As discussed by (Huang, Schrank, & Dubinsky)

Researchers repeatedly define fundamentals of perceived risk with respect to improbability and consequence.

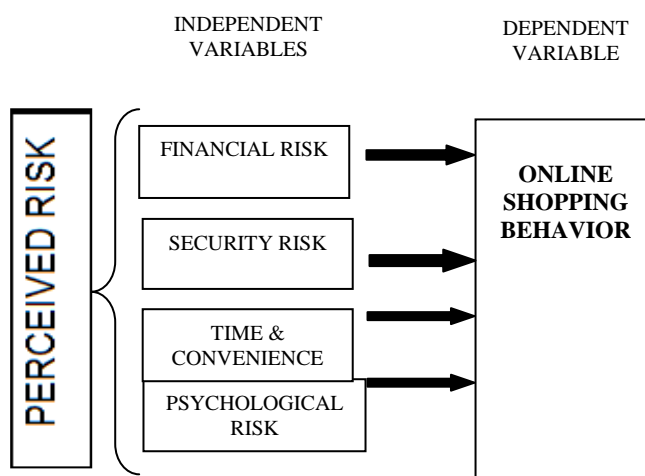
In the online shopping background, the level of perceived risk may be exaggerated due to limited physical access to products and sales personnel (Forsyth & Shi, 2003).

Human perceptions are main deal behind the way any person behaves. Their choices, intentions and behavior are triggered by their perceptions. to study about the consumer behavior it is necessary to identify the perception of consumers. this way it will be a lot easier for vendors to satisfy and study the consumer insides.

Perceived risk can be identified into two major types (Park, Kyung, & John, 2010) which are being discussed in our paper.

- i) Behavioral risk arises from online retailers who behave in such a manner by taking benefit of the reserve and remote nature of internet marketing techniques to monitor all dealings effectively. Product risks also known as time and convenience risk, and psychological risks are included in this.
- ii) Environmental risk is the result of impulsive nature of the purchasing standard— in our case the Internet, which is far away from the control of online retailers and consumers. It includes financial risks and security risks

V. FRAME WORK



VI. VARIABLE DESCRIPTION

Following are the variables description which is related to the above conceptual framework.

A. FINANCIAL RISK

Perceived financial risk is one of the most common risks associated with the online shopping experience. The feeling or future thought of accumulated online fraud, identity theft, manipulation of credit card information, fear of online blackmailing or leaking of personal information by the vendors and other cyber criminal activities are the causes of why most online customers only act as window shoppers and prefer to the good in the traditional way. A financial risk

represents the fear of monetary loss arising from online shopping (Jacoby & Kaplan, 1972)

This risk is associated with the belief that consumers are scared that their credit card number will be stolen, their bank accounts will be hacked, and their personal account will be traumatized etc .

B. SECURITY RISK

Perceived security risk is the possibility that online businesses collect data about individuals and use them incorrectly and without authorization. It is negatively associated with the purchase behavior as it causes shopping desires or intentions to backfire.

(Dai, Forsythe, & kwon) have defined privacy and security risk as the possibility of having private information disclosed because of online dealings. Despite the increase in online buyers this risk still stays as the highest feared risk while shopping online.. However, (Forsyth & Shi, 2003) find that even though security concern was a repeatedly cited reason for not buying online, it does not drastically affect the occurrence of online purchases. Accordingly, the effect of perceived security risk on buying intention remains quite uncertain.

C. TIME AND CONVENIENCE RISK

Time and convenience risk also known as product risk, is categorized as the behavioral risk. This risk is associated with how consumer perceives the delay in delivery time, the quality delivered, the after sale services and the relationship with the online vendors. It mostly depends upon the quality on online service or e-service provided.

In the paper by (Lee & Lin, Customer Perceptions Of E-Service Quality In Online Shopping, 2005) e-service is defined as the complete evaluation and judgment of a consumer in regards with the quality of the service provided, the service and its quality influences the purchase decisions of consumers regardless of the traditional or online setting.

Online consumers tend to purchase the products that have a high convenience and quality level. Traditional shopping setting differs from an online setting, in a traditional setting consumers are likely to encounter the product, they judge the product on its tangibility and market availability. However, the case with the online shopping setting is a little complicated, the consumers cannot touch, feel or relate with the product. They can only search for it or compare it with the other products with only the information provided to them online or through online feedback. The only relation consumers' form with the product is when they actually receive it. The first step to receive the product is its delivery. The timely delivery, the e-service provided, the ease of use of product and the quality and quantity delivered causes the consumers to trust the vendors and relate with them, this can result in the positive feedback and word of mouth for the brand. As consumers, tend to be loyal to the brands with high service quality.

D. PSYCHOLOGICAL RISK

According to (Bhatnagar & Ghose, 2004) Perceived risk can be affected or moderated by a variety of factors, including consumer demographics, Internet experience, product characteristics, and attributes of a Web site, among others. The perceived product risk varies with the age and Internet experience of consumers.

Age, gender, work-orientation however do have some impacts on the online shoppers. Mainly the work oriented people and older people use internet for work purposes or for communication with their relatives abroad. Most females are observed using internet in the search for cooking recipe or for the comparison in fashion brands. Teens and young adults are found to use internet for their studies or entertainment purposes. these perception difference of internet also effects greatly on the online shopping behavior.

As discussed by (Zhou, Dai, & Zhang, ONLINE SHOPPING ACCEPTANCE MODEL, 2007)) Women tend to shop more than the male population in traditional way. however the internet shopping showed a slight difference in this gender pattern as male population too started to shop more as online shopping provided them convenience and ease. Women found the purpose of online shopping as a weak social activity compared with shopping in traditional stores. This is due to the lack of face-to-face interaction with sales associates online. Women did not find online shopping as convenient as compared to the male population (Rodgers & M., 2003)

(Slyke, 2002) argued that Women did not shop online because they could not find product that were convenient for them. Women prefer interactions and fashion, clothing, food and beverages seemed to interest them which were not available online with such an ease. as for men who showed interest in electronic goods showed a positive turn towards online shopping as these products were easily available online. (Slyke, 2002) also identified that the products available at early stage of internet shopping were male oriented. However, we during our research have observed a different trend in the past years. Especially In 2015 we have observed more clothing, food and other fashion oriented brands being the active participants of the online market, showing a wide population of women being the active consumers of such brands.

(Stafford, Turan, & Raisinghani, 2004) identified that there is positive relation between the chances of consumer to buy a product and the age of the consumer.

Though if we talk about today's time we may see the younger population, especially teenagers are active consumers of online products, especially the products that are marketed on social media sites such as facebook. A number of teenagers were observed to be actively taking part in the online purchase of mobile covers, animated shoes and t-shirts, gadgets, music, books and other stuff that is not available in their local markets.

VII. RESEARCH QUESTIONS

The following research questions have been developed based on the above literature review:

- What is the impact of financial risk on online consumer buying behavior?
- What is the impact of security risk on online consumer buying behavior?
- What is the impact of time & convenience risk on online consumer buying behavior?
- What is the impact of psychological risk on online consumer buying behavior?

VIII. METHODOLOGY

This research was inspired from the old but still developing concept of online shopping and consumers’ perceptions and reactions relating to it. The hypothesis was formed on the four main categories of perceived risks i.e. Financial Risk, Security Risk, Time and Convenience Risk and Psychological risk.

A. DATA COLLECTION

The data collection tool is questionnaire which is designed on the basis of likert 5 point scale, which was filled by 100 respondents. This is the primary source of data and also called quantitative technique and structured questionnaire.

The secondary data for the variables was collected through articles from journals, websites and internet. Our target audience for the primary data was the hedonic and utilitarian online buyers from Karachi, Pakistan. Ranging from teenagers to Adults.

The research provides a little inside view on the consumer’s perception of online shopping here in the Karachi city, this is a exploratory research and our sample size was squeezed to only 100 respondents.

B. STATISTICAL TECHNIQUES

The statistical techniques used in this research are regression and correlation method, by this technique the relationship between independent and dependant variables.

IX. HYPOTHESES

The following are the hypothesis have been developed:

- H1: The financial risk has an impact on online consumer buying behavior
- H2: The Security risk has an impact on online consumer buying behavior
- H3: The Time and convenience risk has an impact on online consumer buying behavior
- H4: The psychological risk has an impact on online consumer buying behavior

X. RESULT

HYPOTHESIS 1 The financial risk has an impact on online consumer buying behavior

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.175 ^a	.031	.021	.70694

a. Predictors: (Constant), Financial risk total

The above table shows the R-value which represents the correlation between the observed values and predicted values of dependent variables. R-square is called the coefficient of determination and it gives the adequacy of the model. Here the value of R-square is **0.031** that means the independent variable in the model can predict **3.1%** of the variance in dependent variable.

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.551	1	1.551	3.104	.081 ^b
Residual	48.976	98	.500		
Total	50.527	99			

a. Dependent Variable: consumer behavior total

b. Predictors: (Constant), Financial risk total

The above table gives the test result for the analysis of one-way Anova. The results are given in three rows. The first row labeled Regression gives the Variability in the model due to known results The second row labeled Residual gives the variability due to random error or unknown reasons. F-value in this case is **3.104** and the p-value is given by **0.081** which is greater than **0.05** , so we reject our hypothesis 1.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.907	.253		7.537	.000
1 Financial risk total	.234	.133	.175	1.762	.081

a. Dependent Variable: consumer behavior total

The above table gives the regression constant and coefficient and their significance. We find that p-value for regression coefficient of financial risk is given by **0.081** , which is greater than **0.05**, so we can reject our hypothesis 1.

HYPOTHESIS 2 The security risk has an impact on online consumer buying behavior.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.098 ^a	.010	-.001	.71462

a. Predictors: (Constant), Security risk total

The above table shows the R-value which represents the correlation between the observed values and predicted values of dependent variables. R-square is called the coefficient of determination and it gives the adequacy of the model. Here the value of R-square is **0.010** that means the independent variable in the model can predict **1.0%** of the variance in dependent variable.

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.481	1	.481	.942	.334 ^b
Residual	50.047	98	.511		
Total	50.527	99			

a. Dependent Variable: consumer behavior total
c. Predictors: (Constant), Security risk total

The above table gives the test result for the analysis of one-way Anova. The results are given in three rows. The first row labeled Regression gives the Variability in the model due to known results The second row labeled Residual gives the variability due to random error or unknown reasons. F-value in this case is **0.942** and the p-value is given by **0.334** which is greater than **0.05**, so we reject our hypothesis 2.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.594	.277		9.382	.000
Security risk total	-.124	.127	-.098	-.970	.334

a. Dependent Variable: consumer behavior total

The above table gives the regression constant and coefficient and their significance. We find that p-value for regression coefficient of security risk is given by **0.334**, which is greater than 0.05, so we can reject our hypothesis 2.

HYPOTHESIS: 3

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.236 ^a	.056	.046	.69769

a. Predictors: (Constant), Time and convenience risk total

The above table shows the R-value which represents the correlation between the observed values and predicted values of dependent variables. R-square is called the coefficient of determination and it gives the adequacy of the model. Here the value of R-square is **0.046** that means the independent variable in the model can predict **4.6%** of the variance in dependent variable

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.824	1	2.824	5.801	.018 ^b
Residual	47.704	98	.487		
Total	50.527	99			

a. Dependent Variable: consumer behavior total
b. Predictors: (Constant), Time and convenience risk total

The above table gives the test result for the analysis of one-way Anova. The results are given in three rows. The first row labeled Regression gives the Variability in the model due to known results The second row labeled Residual gives the variability due to random error or unknown reasons. F-value in this case is **5.801** and the p-value is given by **0.018** which is less than **0.05**, so we accept our hypothesis 3

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.794	.235		7.622	.000
Time and convenience risk total	.263	.109	.236	2.409	.018

a. Dependent Variable: consumer behavior total

The above table gives the regression constant and coefficient and their significance. We find that p-value for regression coefficient of time and convenience risk is given by **0.018**, which is less than 0.05, so we can accept our hypothesis 3.

HYPOTHESIS: 4

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.161 ^a	.026	.016	.70869

a. Predictors: (Constant), Psychological risk total

The above table shows the R-value which represents the correlation between the observed values and predicted values of dependent variables. R-square is called the coefficient of determination and it gives the adequacy of the model. Here the value of R-square is **0.016** that means the independent variable in the model can predict **1.6%** of the variance in dependent variable.

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1.308	1	1.308	2.604	.110 ^b
Residual	49.220	98	.502		
Total	50.527	99			

a. Dependent Variable: consumer behavior total
 b. Predictors: (Constant), Psychological risk total

The above table gives the test result for the analysis of one-way Anova. The results are given in three rows. The first row labeled Regression gives the Variability in the model due to known results The second row labeled Residual gives the variability due to random error or unknown reasons. F-value in this case is 2.604 and the p-value is given by **0.110** which is greater than 0.05 , so we reject our hypothesis 4

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.969	.238		8.281	.000
¹ Psychological risk total	.193	.120	.161	1.614	.110

a. Dependent Variable: consumer behavior total

The above table gives the regression constant and coefficient and their significance. We find that p-value for regression coefficient of psychological risk is given by **0.110** , which is greater than 0.05, so we can reject our hypothesis 4.

XI. CONCLUSION:

The internet represents fundamentally different environment for online shopping than do traditional shopping. This study contributes to the understanding behavior in online shopping by providing preliminary information regarding types of risk perceived by online buyers and the relationship between those risk and online buying behavior. This study examined online buying behavior based on the construct of perceived risk as a predictor of online buying behavior. Through this research I get to know various aspect of risk that impacts directly or indirectly on online consumer buying behavior.^[13] The findings indicates that perceived risk is positively related to online consumer buying behavior.

Perceived risk is an important factor for online buyers and it is necessary to be studied to know the decision making criteria of buyers.

Security risk and financial risk goes to the relationship online consumer buying behavior and these relationships indicates that security risk and financial risk must be low in order to get a high and positive online buying behavior.

Time and convenience risk goes to the relationship that indicates that lesser the risk greater the positive buying response expected from online buyers. Whereas , psychological risk indicates that greater the internet experience greater positive response is expected from online buyers.^[14]

we conclude that with lower perceived risk directly link to the positive online buying behavior and there is positive relation between perceived risk and online buying behavior. Moreover, online buying behavior impacts website’s decision making and processes throughout the media sites and these sites usually include e-business ethics and buyers’ right while online shopping.

Through this research it proves that there is positive relationship between perceived risk and online buying behavior and it is statistically significant.

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