

# Moderator Trust, Subjective Norms Influence Risk And Online Shopping Behavior Of Consumers

Anam Bhatti, Dr. Shahrin Saad, Dr. Salimon Maruf Gbadebo

**Abstract:** The increasing permeation of technology in the global world is speedily encouraging online shopping. Meanwhile, advance internet communication has changed the business performance and producer's interactions with consumers. Online shopping behavior is critical in today e-environment. It is directly linked with consumer behavior and their decision in the purchasing time. The existing study determines the moderating effect of subjective norms and trust between risks (financial, convenience, privacy, product) and online shopping behavior. The results of this study reveal that moderation significant effects regarding the association of trust and subjective norms with online shopping while risks were observed negatively significant on online shopping behavior. Conclusions of the current study disclose that retailers essential to consider online shopping to increase their success through the internet. The structural Equation Modeling \_Partial Least Squares (SEM\_PLS) used for analysis

**Key Words:** financial risk, convenience risk, product risk, privacy risk, subjective norms, trust, online shopping behavior

## 1. INTRODUCTION

The rapid flow of the internet in worldwide assisted consumers and businesses to become associated than before. Online shopping is the best solution for today's busy life. Despite physical shopping, consumers feel more convenient to buy online because a massive change has been in the last decade. Moreover, online shopping saves modern people time because they are very busy and they don't have to go market and spend a lot of time for shopping [1]. Consumers can access through the internet 24/7 more conveniently than geographic shopping [2]. Mostly youngster buys online, even a large population of older also buying online but still younger are dominant in buying. Asia Pacific is leading in the fastest trend of online shopping as compared to European countries and Asia Pacific massive progress recorded from China [3]. In the present time. Organizations are considering innovative tools to hold consumers. Furthermore, they find different ways to relax, retain and happy their customers to select their desirable brand with a single click of a mouse [4]. Retailers follow numerous ways to address the behavior of the consumer. So consumer behavior comprehended extreme consideration of retailers in the market these days, and risks affect consumer's behavior. Moreover, many people moving towards online but still online shopping a big problem in the world, these risks involve financial, convenience, product, privacy risks are most important that affect online shopping behavior. Studies reveal that 18% of the whole world population buying online and remaining 82% of people buying traditionally because of insecurity and risks, but in other countries, the online ratio is much better than Pakistan, and in Pakistan, this area of study is still ignored. So it is necessary to explore this area of research because without changing trend Pakistan cannot survive with the global market. However, Pakistani people conventionally conservative in approach to buying.

Thus the main purpose of this study is to determine the behavior of Pakistani people towards online buying. Theory of planned behavior (TPB) predict consumer behavior and it is considering the best theory of behavior but TPB still have some gaps and it doesn't cover risks, fear, threat and trust that also predict consumer behavior [5, 6]. Trust also plays an important role to influence the behavior of consumer during buying online and due to lack of trust people hesitant to buy [7]. According to SET theory trust mitigate the relation between risk and online shopping by reducing uncertainty [8, 9]. Furthermore, studies suggest to using trust as a moderating variable between risks and behavior [10]. Moreover, perceived risk theory declares that consumers normally identify types of risk and avoid them unfavorably and unexpected, this theory is suitable to determine the risk influence on behavior [11]. This theory indicates that risks affect the behavior of the consumer. Hence, in present study three theories used to develop theoretical framework such as TPB, SET and perceived risk theory, all these factors can not cover by a single theory, so TPB use to determine behavior and subjective norms, SET used for the trust that is used moderator and Perceived risk theory used for risks. All these theories support each other and helpful to develop a framework.

## 2. LITERATURE REVIEW

### 2.1 Online shopping behavior

Online shopping refers to electronic commerce to purchase goods and services from the seller directly without the involvement of the third party. In our daily life business nature has changed people to replace their businesses traditional to online. People have numerous options to choose their products and services through online. Online shopping is considered a 3<sup>rd</sup> most popular activity all over the world after electronic email and web browsing [12]. The internet usage increasing rapidly and generating opportunities for the consumer to make their buying more convenient, meanwhile, this is the main reason that consumers prefer to buy online because they are busy in their daily life and do not have plenty of time. Internet facilitates organizations and consumer by providing range of variety [13]. Furthermore, it has many advantages as compared to traditional shopping but still

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considered it, risky way of shopping because the seller is absent in this type of shopping [14]. Therefore, online shopping is a big challenge for consumers [2]. Also beside, online shopping is the same process as traditional shopping like problem identify, search information, evolution, buying and post buying [15]. In present time consumer don't want to bargain so they avoid bargaining but after all these conveniences still consumers face a lot of risks during online buying such as financial risk, product risk, convenience risk, and privacy risk, so it is very important to study this area of research to explore.

## 2.2 Financial Risk

Risk is a sensitive impassive state-run that cannot measure tangibly. Financial risk is a primary risk considered in online shopping and this risk plays an important in the decision making of the consumer to buying. Financial risk denotes the possibility that a single buy online agonizes financial loss in a monetary term as he/she compensated more and merchandise has less value [16]. Any financial loss either product does not accomplish up to expectations, bad quality, fraud of credit card reduces the online shopping [17]. This risk reveals the most domineering though online shopping [18-20]. Moreover, financial risk is a premier fear in the consumer minds in money at buying time [21]. There are some studies demonstrate that financial risk does not affect in defining the online shopping behavior [10, 22]. There are inconsistent findings between financial risk and online shopping behavior. Hence, in upcoming studies need to explore this relation [2, 23-25].

H1: Financial risk has a significant negative influence on online buying behavior

H2: Subject norms moderates between financial risk and online buying behavior

H3: Trust moderates between financial risk and online buying behavior

## 2.3 Convenience risk

Convenience risk is directly associated with the buyer's mind while they go to buy something on the internet. This risk is consumer perception at the time of buying through the internet will take a long time to reach [14]. Furthermore, when consumers think to buy online and they perceive convenience risk is high then consumers reluctant to buy online. In other words, it is considered as time loss because it is time taking process to find the right product and comparing one brand's product with other brands products [26]. Meanwhile, it also involves wrong delivery, late delivery, face problem during order placing, language problem all these things make consumers irritating. In Pakistan only 1% of people who can operate computers. This risk effect behavior of consumer significantly due to lack of education and literacy rate. All these issues generate problems and threats in the consumer mind [27]. Research reveals that convenience risk influences adverse on online shopping behavior [26, 28]. Literature tells that convenience risk expressively decreases online shopping behavior [22]. Notwithstanding this, literature determines that convenience risk does not play a role in influential online shopping behavior [29].

H4: Convenience risk has a significant negative influence on online buying behavior

H5: Subject norms moderates between Convenience

risk and online buying behavior

H6: Trust moderates between Convenience risk and online buying behavior

## 2.4 Privacy risk

Privacy risk refers to a situation when consumers perceive that they will lose their personal information and misuse of that information without any permission. This risk is also the highest level of risk. In Pakistan, 97% of people prefer to buy cash on delivery because they don't feel secure. There are various kinds of privacy such as information, bodily, communication, and territorial privacy. Privacy risk significantly effect on online shopping behavior once consumer face risk during online buying they reluctant to buy and avoid next time [30]. Furthermore, consumer doesn't want to share their name, address, credit card number, contact number because some retailer's brows consumer's information share with other retailers and people feel insecure [31]. Online shopping depends on the security of personal information [32]. Literature demonstrates that privacy risk significantly decreases online shopping behavior [10, 17]. Meanwhile, some studies show that there is no relation between privacy risk and online shopping behavior [22, 33]. The findings are inconclusive and unclear. Therefore, still, need to study this relationship.

H7: Privacy risk has a significant negative influence on online buying behavior

H8: Subject norms moderates between Privacy risk and online buying behavior

H9: Trust moderates between Privacy risk and online buying behavior

## 2.5 Product Risk

Product risk refers to a condition where consumers are contingent on the information that retailer online and there is a coincidental to suffer the defeat low-quality product [6]. Product risk is an insufficient potential loss to examine the product because in online shopping people cannot examine the exact quality of the product, cannot touch product physically, and sometimes product looks good in pictures more than actual, so due to these issues people avoid to buy online [34]. In other words, product risk indicates that the product fails to perform the expected performance [35]. Researchers show that product risk is the utmost imperative risk and cited the main reason to hesitate online buying. Furthermore, this risk directly linked with the decision making of consumers but not directly communicate with retailers only online communication made for transactions [36]. Also beside, research reveals that product risk significantly influences on online shopping behavior [37]. In other words, the adverse influence of risk on online shopping behavior [17, 26, 38]. In contrast, no influence of risk [2]. The results are inconclusive and need to explore.

H10: Product risk has a significant negative influence on online buying behavior

H11: Subject norms moderates between Product risk and online buying behavior

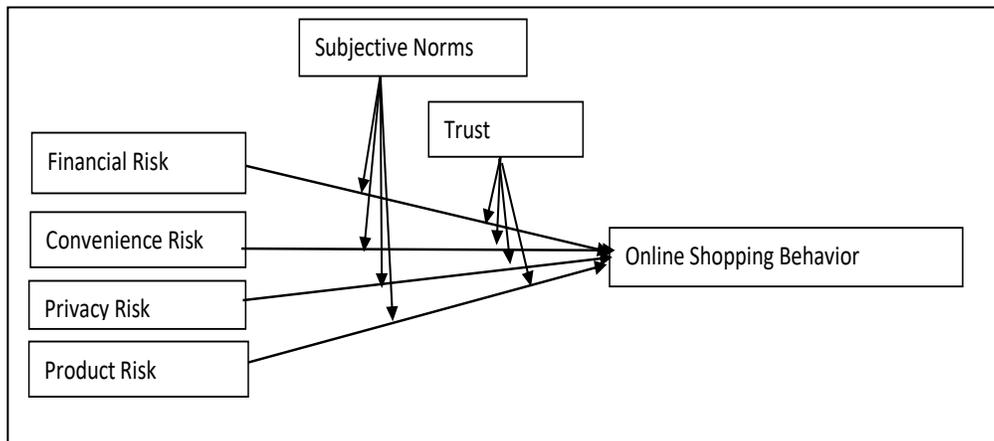
H12: Trust moderates between Product risk and online buying behavior

## 2.6 Trust

Trust refers to the perception of consumers about online retailers trustworthy [39]. In other words, trust in the online

buying situation is customer's alacritous to trust in retailers and take a decision in conditions where these movements make the customer susceptible to the retailer [40]. Meanwhile, it' buyer beliefs at another party. Trust is a mainly a serious factor in online situation and customer does not have a direct control over the activities of the retail. Furthermore, traditional shopping is quite different than the online buying hesitation and uncertainty committed. Lack of trust is a big hurdle for consumers to online and retailers to attract and retain consumers as well [41].

### 3 THEORETICAL FRAMEWORK



H13: There is a significant and positive relationship between trust and OSB

#### 2.7 Subjective Norms

Subjective norms refer to those factors that relate to relatives, family, and friends in buying products and services [43]. In other words, subjective norms determine the perceived stress enforced by others like friends, family, neighbors, peers, etc who influence your behavior indirectly or directly. The rationale for subjective norms is that people can choose a certain thing and perform certain behavior if one or more than one important reference thing they should do. Moreover, it is documented in the vital social and people prefer to review others' views and experience about particular products or services and highest views products they want to buy [44]. The presence of a supportive environment including friends, family, neighbors, peers increases the likeliness of buying. if the particular product is useful then they also suggest to others and they also cogitate that product [45]. Subjective norms play a significant role in the decision making of consumers and influence consumer behavior, so we cannot ignore it in determining behavior [46].

H14: There is a significant and positive relationship between subjective norms and OSB

Moreover, buyer feeling is very important to consider their intentions to buy. Hence, trust is significantly predicting consumer behavior. Trust plays an important role in online buying because it gives confidence to customers on retailers [42]. In addition, trust reduces uncertainty and enhance self-reliance. Literature reveals that trust establishes a crucial psychosomatic constriction on online shopping and trust becomes imperative with esteem to online shopping

### 4. RESEARCH DESIGN AND METHODOLOGY

The researcher gives much attention to the methodology portion in any type of research. It considers an essential part of examining the objectives. An appropriate method used to solve the practical and theoretical problem. In the present study, to solve the research problem, research objectives, and research nature, we used a quantitative method and questionnaire survey, furthermore, the study was cross-sectional, and

deductive. After data collection uses Smart PLS 3.2.8 to test the proposed hypothesis

#### 4.1.1 Data Collection Method

In this study data collected by a questionnaire survey technique from students that are studying in Universities in Punjab, Pakistan. 9 universities were selected for survey who had students more than 15 thousand. The questionnaire spread only to those students who have the experience to shop online.

#### 4.1.2 Questionnaire development

A theoretical model of present the study involves seven variables measured by using items that were adapted from previous studies. The questionnaire divided into two parts, the first part consists of respondents' demographics and the second part is consisting of four risks, subjective norms, trust, and online shopping behavior. Meanwhile to measure this part five-Likert scale used that range agree to strongly disagree (5-1). In this study financial risk, product risk measured by 7 items, items adapted from [27]. Convenience risk computes by 9 items, that adapted from [27, 47]. privacy risk 6 items adapted from [48]. subject norms measured by 6 items [49]. trust 5 items adapted from [50] and online shopping behavior 17 items [27, 47, 51, 52] adapted from previous studies. These 17 items cover in the study of [47, 51, 52].

#### 4.1.3 Population and sampling

The **population is considering** the whole collection of things, entities, and events that they want to examine. In this study, population comprises universities students of Punjab Pakistan. Simple random sampling practice used because it gives generalized results.

#### 4.1.4 Sample Size

In the current study 600 sample sizes. According to research 30% sample size cogitate excellent for study, furthermore, sample size 5 to 10 times should greater than variables. Meanwhile, sample size should be greater than 30.

#### 4.1.5 Demographics profile

As mentioned in Table 1. The overall sum of respondents was 550, in which 257 (46.7%) were female and 293 (53.3%) were male. In education respect 10 (1.8) were Diploma, 224 (40.7) were Bachelor degree, 280 (50.9) were Master's degree, 24 (4.4) were Ph.D. and 12 (2.2) were

others. In perspective of credit/ debit card 38 (6.9) people had cards but other 512 (93.1) without card. In marital status 508 (93.1) were single, 39 (7.1) married and 3 (.5) were divorced. In self-supportive cases 54 (9.8) were self-supportive and 496 (90.2) were dependent to others. In the case of age 190 (34.5) students were 16-20 years, 327(59.5) were 21-25 years, 9 (1.6) were 26-30 years, and 24(4.4) students were more than 31 years. In income section 470(85.5) had no income, 18(3.3) had 1-5000, 16(2.9) students had 5001 – 10000, 16 (2.9) students had 10001 – 15000 and 38(6.9) had more than 15000.

Demographic Characteristics of the Respondents (N=550)  
Table 1.

Construct	Category	Frequency	Percentage
Online Shopping Experience	Yes	550	100
	No	0	0
Gender	Male	293	53.3
	Female	257	46.7
Education	Diploma	10	1.8
	Bachelor Degree	224	40.7
	Master Degree	280	50.9
	PhD	24	4.4
	Others	12	2.2
Credit/ Debit Card	Yes	38	6.9
	No	512	93.1
Marital Status	Single	508	92.4
	Married	39	7.1
	Divorced	3	.5
Self-Supported	Yes	54	9.8
	No	496	90.2
Age	16 – 20 Years	190	34.5
	21 – 25 Years	327	59.5
	26 - 30 Years	9	1.6
	More than 31 Years	24	4.4
Average Monthly Income	No income	470	85.5
	1 – 5000	18	3.3
	5001 – 10000	8	1.5
	10001 – 15000	16	2.9
	More than 15000	38	6.9

#### 4.2 Data Analysis

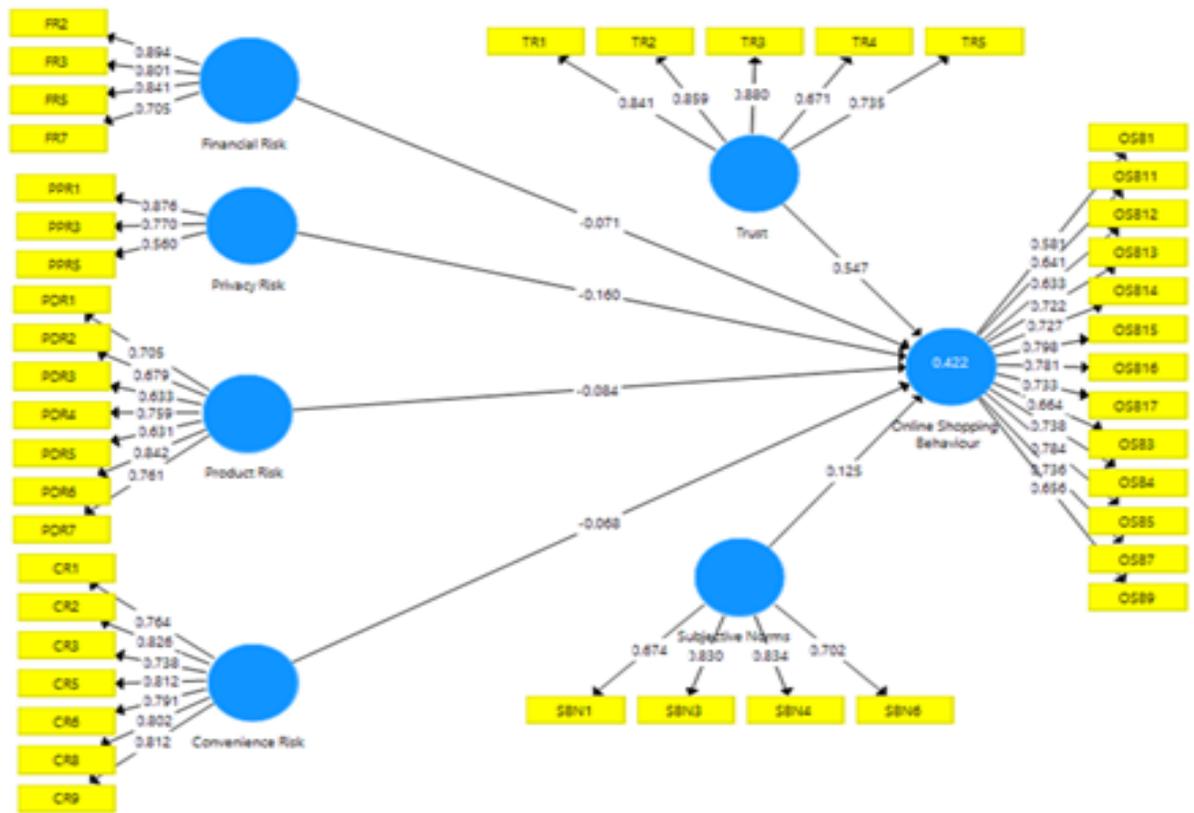
In this paper, SmartPLS 3.2.8 to examining the theoretical framework because it is developing second-generation technique [53]. According to Hair, Hair Jr, Sarstedt [54], bootstrapping is a method to develop path coefficients and factor loadings, and to get significant standards must to run bootstrapping 5000 subsamples. SmartPLS is considered best due to some benefits over other tools, like no normality issue and multicollinearity test and can use for simple and complex models. Moreover, the literature reveals that SmartPLS is nest to calculating results and establish validities of variables ad compared to covariance-based structural equation modeling (CB-SEM) [53]. There are two methods to examine the research model such as measurement model and structural model

##### 4.2.1 Measurement model

The main purpose of the measurement model is to regulate how well all the measure/ items of the constructs laden theoretically and associated with particular constructs [55]. To examine the generated hypothesis, the investigators use Partial least squares structural equation modeling (PLS-SEM). In PLS-SEM, usually two approaches used the first

measurement model and the second is the structural model. In the measurement model (outer model) factor analysis executed to establish model fitness. There are two methods to assess the soundness of the theoretical models, such as reliability and validity [53]. To computing the reliability needs to establish first internal consistency reliability and it can be assessed by composite reliability (CR) of every construct, furthermore values of CR should be more than 0.6 of each construct, and then evaluate the individual internal reliability by computing outer loading of individual items of constructs and remove all those items whose factor loading is below 0.40 to improve the value of AVE and CR. Second establish construct validity in analyzing convergent validity and discriminant validity [56]. Meanwhile, convergent validity states that measures positively connect with other measures of the same variable [53]. Furthermore, it can be computed by AVE that value should be 0.50 at least. On the hand discriminant validity based on empirical values to which specific construct of the model is different from other construct of the model [53]. Meanwhile, discriminant validity measured by ensuring that squared AVE should be greater than other constructs as shown in

table2



Measurement Model fig.2

Table 2  
Convergent Validity

Variables	Items	Factor loading	AVE	CR	R <sup>2</sup>
Convenience Risk	CR1	0.764	0.628	0.922	
	CR2	0.826			
	CR3	0.738			
	CR5	0.812			
	CR6	0.791			
	CR8	0.802			
Financial Risk	CR9	0.812	0.661	0.886	
	FR2	0.894			
	FR3	0.801			
	FR5	0.841			
	FR7	0.705			
Online Shopping Behavior	OSB1	0.581	0.504	0.929	0.422
	OSB11	0.641			
	OSB12	0.633			
	OSB13	0.722			
	OSB14	0.727			
	OSB15	0.798			
	OSB16	0.781			
	OSB17	0.733			
	OSB3	0.664			
	OSB4	0.738			
	OSB5	0.784			
	OSB7	0.736			
	OSB9	0.656			
	Privacy Risk	PRR1			
PRR3		0.770			
PRR5		0.560			
Product Risk	PDR1	0.705	0.517	0.881	
	PDR2	0.679			
	PDR3	0.633			
	PDR4	0.759			
	PDR5	0.631			
	PDR6	0.842			
	PDR7	0.761			
Subjective Norms	SBN1	0.674	0.583	0.847	
	SBN3	0.830			
	SBN4	0.834			
	SBN6	0.702			
Trust	TR1	0.841	0.642	0.899	
	TR2	0.859			
	TR3	0.880			
	TR4	0.671			
	TR5	0.735			

Table 2 shows that CR value should be greater than 0.60 and it is in the present study, and AVE higher than 0.50 as recommended [53]. Rho\_A values confirmed each item of constructs reliable.

#### 4.2.2 Discriminant validity

Discriminant validity denotes a position where each construct of model different from other constructs. Moreover, this validity

certifies that items of the particular constructs are different from other construct items and only relate with their perspective [53]. Furthermore, the diagonal coefficient needs to greater than other all value in the same rows and columns that are shown in Table 3.

Table 3.  
4.2.3 Discriminant validity

Variables	CR	FR	OSB	PPR	PDR	SBN	TR
Convenience risk	0.793						
Financial risk	-0.019	0.813					
Online shopping behavior	-0.165	-0.079	0.710				
Privacy risk	0.132	-0.002	-0.267	0.747			
Product risk	-0.039	-0.017	-0.060	0.036	0.719		
Subjective norms	-0.147	-0.032	0.244	-0.087	-0.002	0.763	
Trust	-0.114	-0.014	0.598	-0.154	0.048	0.170	0.801

Table 3 reveals that we meet the standards for discriminant validity as the value of a particular construct should be different from others suggested by [57].

Table 4  
Cross Loadings

Variables	Items	CR	FR	OSB	PDR	PRR	SBN	TR	
Convenience risk	CR1	0.764	0.034	-0.095	-0.051	0.097	-0.097	-0.059	
	CR2	0.826	-0.018	-0.125	-0.058	0.077	-0.051	-0.094	
	CR3	0.738	0.016	-0.064	-0.068	0.108	-0.128	0.002	
	CR5	0.812	-0.021	-0.141	-0.014	0.074	-0.170	-0.070	
	CR6	0.791	-0.056	-0.116	-0.059	0.145	-0.152	-0.067	
	CR8	0.802	-0.038	-0.117	-0.002	0.162	-0.109	-0.103	
	CR9	0.812	-0.005	-0.191	-0.005	0.092	-0.115	-0.161	
	Financial risk	FR2	0.003	0.894	-0.081	-0.055	-0.021	-0.014	-0.013
		FR3	0.010	0.801	-0.021	0.010	-0.056	-0.003	-0.024
FR5		-0.016	0.841	-0.067	0.066	0.052	-0.050	-0.002	
FR7		-0.051	0.705	-0.057	-0.061	-0.016	-0.024	-0.016	
Online shopping behavior	OSB1	-0.111	-0.143	0.581	-0.080	-0.178	0.159	0.257	
	OSB11	-0.118	-0.132	0.641	-0.071	-0.129	0.215	0.302	
	OSB12	-0.100	-0.117	0.633	-0.097	-0.150	0.188	0.292	
	OSB13	-0.139	-0.090	0.722	-0.112	-0.123	0.199	0.376	
	OSB14	-0.162	0.053	0.727	-0.008	-0.194	0.152	0.426	
	OSB15	-0.167	0.019	0.798	0.003	-0.167	0.202	0.526	
	OSB16	-0.140	-0.022	0.781	0.004	-0.212	0.203	0.503	
	OSB17	-0.145	-0.026	0.733	0.001	-0.172	0.217	0.403	
	OSB3	-0.164	-0.054	0.664	-0.098	-0.172	0.166	0.395	
OSB4	-0.117	-0.054	0.738	-0.064	-0.259	0.139	0.459		
OSB5	-0.101	-0.033	0.784	-0.053	-0.223	0.151	0.505		
OSB7	-0.057	-0.111	0.736	-0.027	-0.237	0.140	0.523		
OSB9	-0.017	-0.093	0.656	-0.005	-0.218	0.158	0.425		
Product risk	PDR1	0.020	0.001	-0.024	0.705	0.065	-0.015	0.062	
	PDR2	-0.054	0.006	-0.001	0.679	0.012	0.004	0.114	
	PDR3	-0.028	0.038	-0.015	0.633	0.051	0.052	0.071	
	PDR4	-0.055	0.003	-0.043	0.759	0.025	0.024	0.049	
	PDR5	0.016	-0.026	-0.009	0.631	0.005	-0.017	0.088	
	PDR6	-0.016	-0.011	-0.069	0.842	0.041	-0.024	0.018	
	PDR7	-0.062	-0.055	-0.045	0.761	-0.013	0.003	0.018	
Privacy risk	PRR1	0.134	-0.019	-0.259	0.035	0.876	-0.045	-0.162	
	PRR3	0.106	0.012	-0.193	0.025	0.770	-0.067	-0.073	
	PRR5	0.026	0.015	-0.116	0.017	0.560	-0.104	-0.103	
Subjective norms	SBN1	-0.081	-0.119	0.175	0.067	0.073	0.674	0.084	
	SBN3	-0.120	-0.006	0.178	-0.029	-0.124	0.830	0.128	
	SBN4	-0.102	0.011	0.154	0.008	-0.114	0.834	0.092	
	SBN6	-0.135	0.012	0.218	-0.040	-0.096	0.702	0.189	
Trust	TR1	-0.103	-0.045	0.505	0.063	-0.134	0.122	0.841	
	TR2	-0.055	0.022	0.579	0.045	-0.131	0.161	0.859	
	TR3	-0.070	-0.037	0.563	0.068	-0.171	0.129	0.880	
	TR4	-0.149	0.014	0.317	-0.020	-0.067	0.136	0.671	
	TR5	-0.130	0.001	0.344	0.002	-0.085	0.144	0.735	

Table 4 determines the cross-loadings and meets the criteria as suggested by [53].

#### 4.2.4 Coefficient of determination R<sup>2</sup> Table 5.

Latent variables	R- Square	Results
Exogenous variable OSB ( without moderator)	0.102	Weak
Exogenous variable OSB ( with moderator)	0.442	Moderate

The coefficient of determination R<sup>2</sup> is used to examine the accuracy of the model that is calculated as the squared association of the analytical values and certain dependent construct [58]. R<sup>2</sup> value shows all exogenous constructs how much effect endogenous construct collectively [58]. R<sup>2</sup> at least should 10%, in this study without moderator all exogenous constructs effect OSB 0.102 that is weak R<sup>2</sup> and with moderator 0.442 that is moderate

#### 4.11 Effect size F<sup>2</sup>

the effect size of the variable measured by excluding one

exogenous construct and run, again excludes another variable and run similarly run until the last exogenous construct excluded. Effect size calculated by the PLS algorithm technique

**Table 6 Effect size  $F^2$** 

Exogenous variable	Total effect
Connivance risk	0.008
Financial risk	0.009
Privacy risk	0.043
Product risk	0.012
Subjective norms	0.026
Trust	0.489

Table 6 shows that some exogenous constructs have a weak effect on endogenous contrast and some have a strong effect on endogenous contrast.

#### 4.3 Structural Model

In this segment, we argued the direct hypotheses between dependent and independent constructs. According to Hair Jr, Hult [53] by performing 5000 subsamples bootstrap to examine the significant values of loading and path coefficient.

#### 4.3.1 Predictive relevance model $Q^2$

Researcher subtracts  $R^2$  and cross-validated redundancy model to compute predictive relevance of model  $Q^2$ .  $R^2$  value examines the level of variance that exogenous constructs explain endogenous construct. In this study, 10.2% of online shopping behavior explained by financial risk, privacy risk, product risk, and convenience risk. Meanwhile, 44.2% explained by all exogenous constructs with moderators.

**Table 7**

#### 4.3.2 Predictive relevance model $Q^2$

Constructs	$R^2$	Cross validated redundancy $Q^2$
OSB ( without moderator)	0.102	0.047
OSB ( with moderator)	0.442	0.195

cross-validated redundancy value calculates to know the quality of the model, and it is computed by blindfolding technique (PLS-SEM). According to Fornell and Cha [59] value of cross-validated redundancy greater than zero (0).

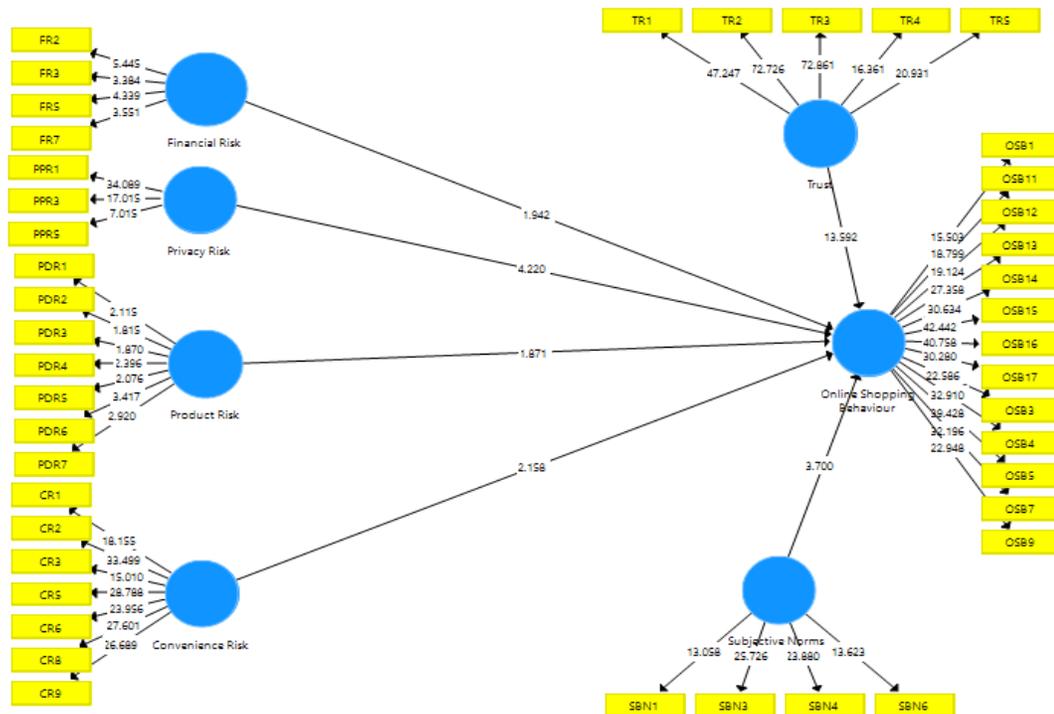
#### 4.3.3 Model Fit

Researchers should be wary to use model fit in PLS-SEM [53]. The standardized root means square residual (SRMR) is based

on the predicted and covariance matrix transforming of both into correlation matrices. SRMR value should be below 0.08 or 0.10 [60]. Normed fit index (NFI) calculates the Chi2 value of the suggested model and matches this value with standard [53].

Model Fit Table 8

	Structured Model	Estimated Model
SRMR	0.068	0.068
Chi-square	5640,895	5640,895
NFI	0.625	0.625



Structural Model direct relationship Fig 3

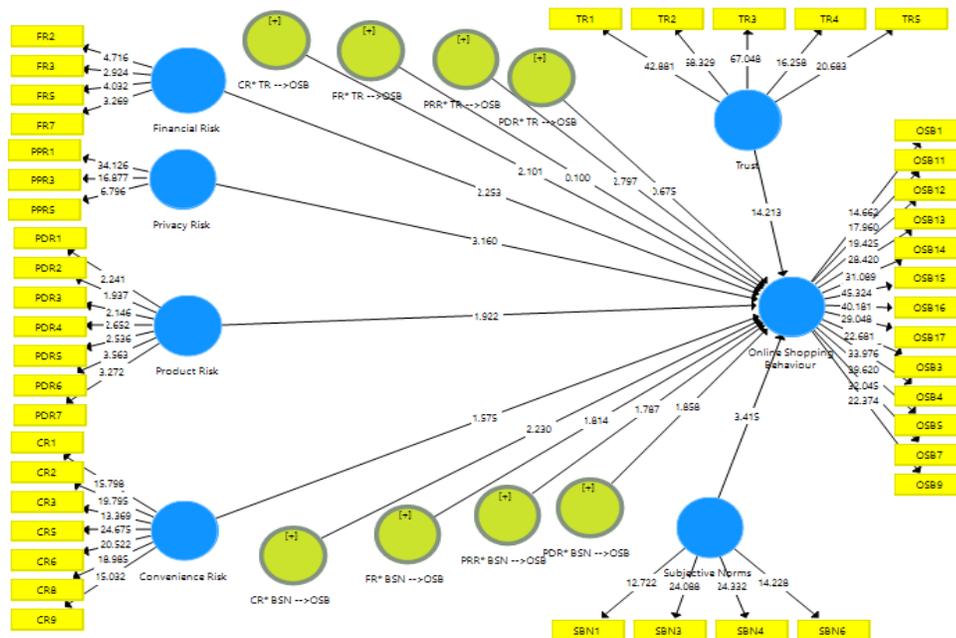
4.3.4 Hypotheses testing Direct Table 9

Hypotheses	Hypotheses Paths	Beta value	Sample Mean	Std. Dev.	T-values	P-values	Results
H <sub>1</sub>	CR --> OSB	-0.068	-0.072	0.031	2.158	0.016	Significant
H <sub>2</sub>	FR --> OSB	-0.071	-0.076	0.036	1.942	0.026	Significant
H <sub>3</sub>	PRR --> OSB	-0.160	-0.164	0.038	4.220	0.000	Significant
H <sub>4</sub>	PDR --> OSB	-0.084	-0.083	0.045	1.871	0.031	Significant
H <sub>5</sub>	SBN-> OSB	0.125	0.125	0.034	3.700	0.000	Significant
H <sub>6</sub>	TR --> OSB	0.547	0.541	0.040	13.592	0.000	Significant

There are six direct hypotheses and all hypotheses are accepted. Table 9 validate that convenience risk (CR) important predictor of online shopping behavior ( $\beta = -0.068$ ,  $t = 2.158$ ,  $p < 0.016$ ) and hypothesis H<sub>1</sub> supported. Similarly, financial risk affects online shopping behavior ( $\beta = -0.071$ ,  $t = 1.942$ ,  $p < 0.026$ ) H<sub>2</sub> is also supported. Privacy risk has a significant negative effect on online shopping behavior H<sub>3</sub> supported ( $\beta = -0.160$ ,  $t = 4.220$ ,  $p < 0.00$ ). Furthermore, H<sub>4</sub>

also supported that product risk affects online shopping behavior ( $\beta = -0.084$ ,  $t = 1.871$ ,  $p < 0.031$ ). In addition, subjective norms have a positive and significant effect on online shopping behavior and H<sub>5</sub> supported ( $\beta = 0.125$ ,  $t = 3.700$ ,  $p < 0.000$ ). H<sub>6</sub> also supported in the sense that trust also has a positive significant effect on online shopping behavior ( $\beta = 0.547$ ,  $t = 13.592$ ,  $p < 0.000$ ).

4.3.5 Testing Moderation Effects



Structural Model (Indirect Relationship) Figure 4

4.3.6 Hypothesis Testing for Moderating Relationships Table 10

Hypotheses	Hypotheses Paths	Beta value	Sample Mean	Std. Dev.	T-values	P-values	Results
H <sub>7</sub>	CR*SBN --> OSB	-0.102	-0.095	0.046	2.230	0.013	Significant
H <sub>8</sub>	CR*TR --> OSB	0.102	0.108	0.049	2.101	0.018	Significant
H <sub>9</sub>	FR*SBN --> OSB	-0.068	-0.061	0.038	1.814	0.035	Significant
H <sub>10</sub>	FR*TR --> OSB	0.005	0.015	0.045	0.100	0.460	Not Sig
H <sub>11</sub>	PDR*SBN --> OSB	-0.065	-0.048	0.035	1.858	0.032	Significant
H <sub>12</sub>	PDR*TR --> OSB	0.038	0.032	0.056	0.675	0.250	Not Sig
H <sub>13</sub>	PPR*SBN --> OSB	-0.067	-0.063	0.037	1.787	0.037	Significant
H <sub>14</sub>	PPR*TR --> OSB	-0.139	-0.128	0.050	2.797	0.003	Significant

Table 10 shows Findings shows that trust reduces the negative relationship between convenience risk and online shopping behavior.

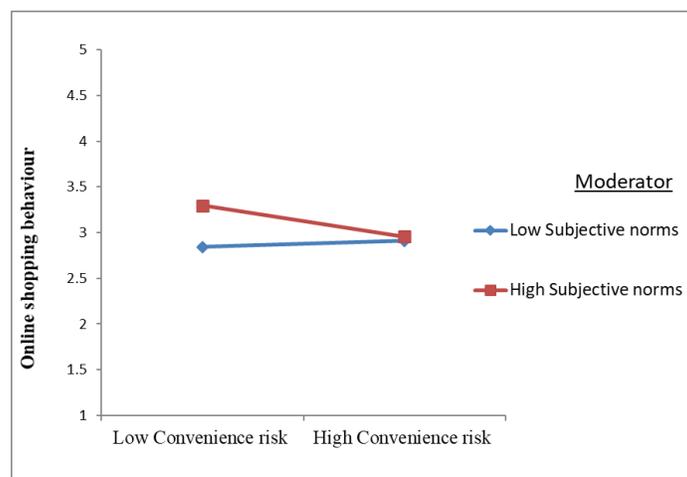
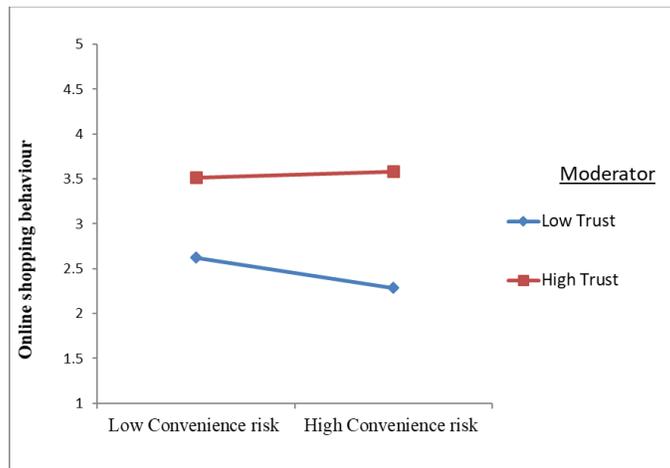


Figure 5 The moderating effect of subjective norms on convenience risk-->OSB

Figure 5 shows the convenience risk and online shopping behavior (CR\*SBN towards OSB). Subjective norms mitigate

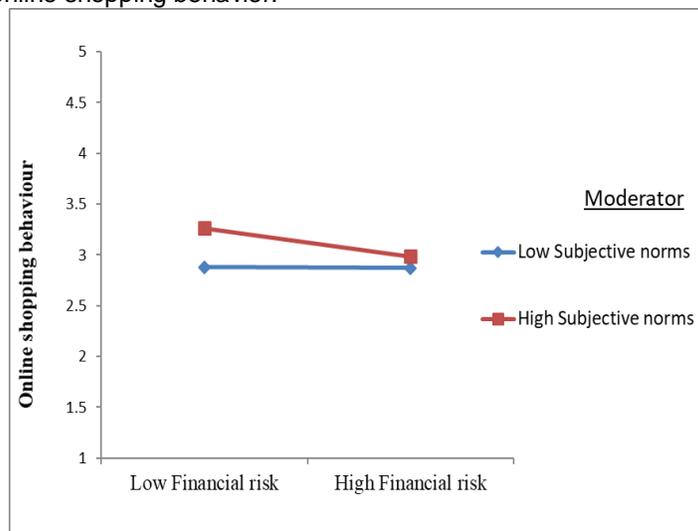
the negative relationship between convenience risk and online shopping behavior. Hypothesis H<sub>7</sub> Supported



**Figure 6** The moderating effect of subjective norms on convenience risk-->OSB

that convenience risk and online shopping behavior (CR\*TR towards OSB). Findings demonstrate that trust moderates between convenience risk and online shopping behavior.

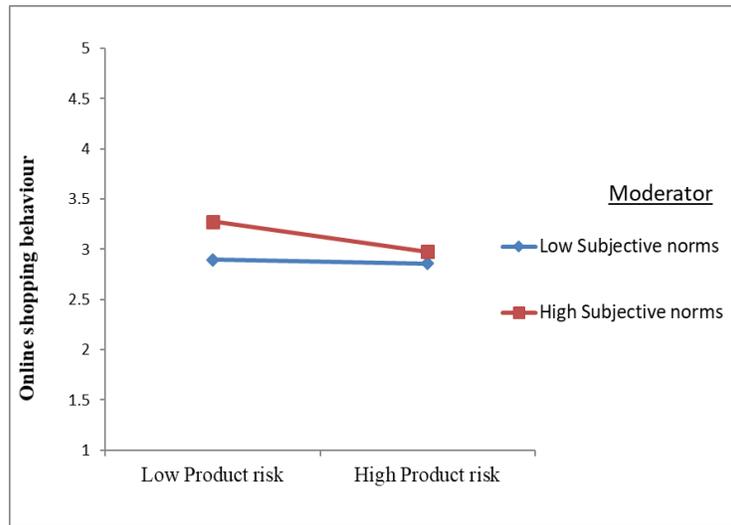
Hypothesis H<sub>8</sub> supported.



**Figure 7** The moderating effect of subjective norms on financial risk-->OSB

Figure 7 reveals that subjective norms play a significant role between financial risk and online shopping behavior, H<sub>9</sub> supported. Alternatively, trust has no significant moderating effect between product risk and online shopping behavior

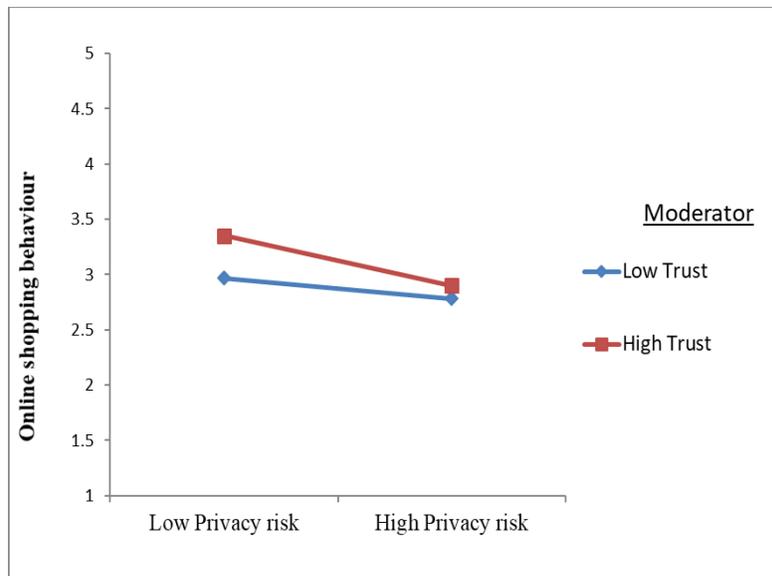
(β=0.005, t=0.100, p>0.460) and hypotheses H<sub>10</sub> not supported.



**Figure 8** The moderating effect of subjective norms on product risk-->OSB

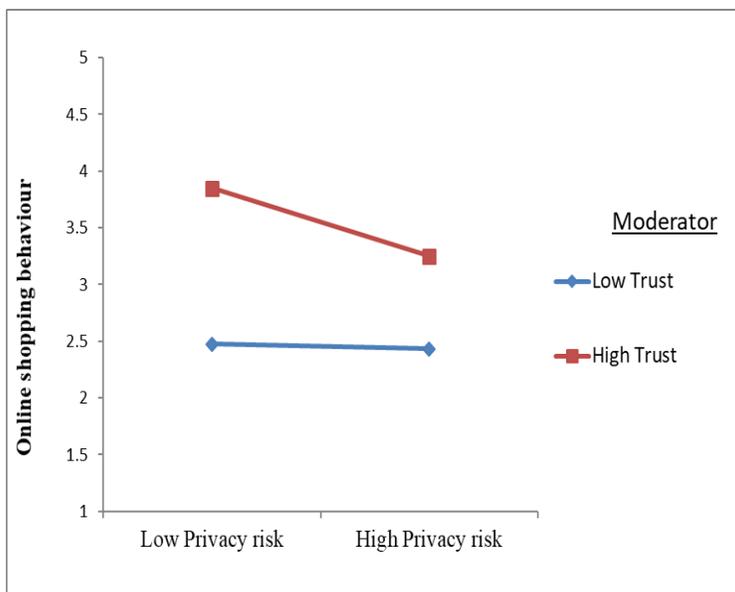
Figure 8 reveals that subjective norms play a significant role between product risk and online shopping behavior, H<sub>11</sub> supported. Alternatively, trust has no significant moderating

effect between product risk and online shopping behavior ( $\beta=0.038$ ,  $t=0.675$ ,  $p>0.250$ ) and hypotheses H<sub>12</sub> not supported.



**Figure 9** The moderating effect of subjective norms on privacy risk-->OSB

Figure 9 demonstrates that subjective norms play a significant role between privacy risk and online shopping behavior, H<sub>13</sub> supported and it decreases the negative effect of privacy risk on online shopping behavior.



**Figure 10** The moderating effect of trust on privacy risk-->OSB

Figure 10 shows that trust significant moderating effect between privacy risk and online shopping behavior and hypotheses H<sub>14</sub> supported.

#### 4 DISCUSSION AND CONCLUSION

In the present time transition into global, a network for information delivering and sharing has changed, the internet emerged as a useful tool for domestic and international business. The internet becomes a calm solution for hectic life and this study contributing to knowledge by an understanding of this topic. In this study the deductive approach used and the nature of the study were quantitative. The main purpose of the current study is to determine the effect of financial risk, product risk, privacy risk trust, subjective norms on online shopping behavior. Findings reveal that financial risk has a negative effect on online shopping behavior and finding relate to [17, 61], due to financial risk people avoid online shopping. Furthermore, convenience risk has a significant negative effect on online shopping behavior and finding of current study similar to [2, 10, 61, 62]. Also beside, product risk also has a significant negative effect on online shopping behavior and results of my study match with [24, 61], meanwhile due to product risk reduce online shopping because product does not reach on time. Privacy risk has a negative influence on online shopping [17, 24]. Because of all these risks in Pakistan, people avoid buying.

#### 5 THEORETICAL IMPLICATION

Financial, product, privacy, convenience risks, trust, subjective norms, and online shopping behavior are the variables of this study. There are many studies on behavior but with different contexts and dissimilar factors but all the factors of existing study commonly were unnoticed and ignored.

This study reflects a situation for the future researchers who interested in this area. Previously, these factors used with different theories and different topics. In this study, three

theories used to combine to explain the theoretical model.

#### 6 PRACTICAL IMPLICATION

There are different practical inferences that can be initiative from an existing study by considering the consequences of this study. This study assists the govt. to make better policies, plan makers to improve their plans, suppliers, dealers, and people. Focus on these risks and building trust with subjective norms can enhance online shopping. The vendors can enhance buying by reducing risks. The practical suggestion of components on the behavior of customers. It is important for retailers, facility providers to protect and safe. retailer's motivation on these elements and secure network that can make shopping enjoyable and high excellence of associates and benefits purchasing.

#### 7 LIMITATIONS AND FUTURE DIRECTIONS

The researchers place her best dynamisms to contribute to online shopping behavior, but still some limitations in this study. This study focus on only online users, students and ignore non-users. Future studies should focus on users and non-users and consider other factors also except these because these factors explain 44.2%, so consider other factors and increase sample size so that generalized results can get. Future researchers should study the same topic in different countries and can focus on industries and check the objectives and outcomes. In this study use moderator, future studies can consider mediator

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