

# IMPACT OF PERCEIVED RISK AND TRUST ON ONLINE SHOPPING BEHAVIOUR: A STUDY FROM INDIAN PERSPECTIVE

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## ABSTRACT

*E-commerce has been quite a popular and most talked about thing in these days, especially during Covid times in India. Consumers have got equipped and are now familiar on buying products online across different age groups given the current circumstances where staying home is the way to be protected against corona virus. This change in consumer behaviour is supported in a report published by Statista Research Department, in 2020, there were roughly 160 million online customers every year, contrasted with around 135 million online customers in 2019 in India. According to the previous studies, Perceived Risk and Trust are the two major variables that affect consumers' behaviour while shopping online in addition to the other variables. The objective and purpose of this paper is to understand and evaluate the impact of perceived risk and trust on the online buying behaviour from Indian perspective. This paper is based on the outcome of a primary online survey and Structural equation modelling technique was applied to test the hypothesis. As per the analysis, it could be concluded that Perceived Risk has a negative influence on Trust and Online Shopping Behaviour. Also, Trust has a positive influence on Online Shopping Behaviour.*

**Key words:** Online Shopping Behaviour, Perceived Risk, Trust, Buying Behaviour, E-commerce, Covid Impact

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## 1. INTRODUCTION

With more than 560 million web Users, in the world India is the second biggest online market, positioned after China. It was assessed that by 2023, there would be more than 650 million web Users across the nation. Notwithstanding the huge base of web Users, the web penetration rate in the nation remained at around 50% in 2020. This implied that around half of the 1.37 billion Indians had access to the web that year. There has been a steady expansion in internet accessibility contrasted with only five years prior, when the web penetration rate was around 27 percent.

According to report published by Statista Research Department, In 2020, there were roughly 160 million online customers every year, contrasted with around 135 million online customers in 2019 in India. This expansion can be credited to the development of the online business industry in India and to the (COVID-19) pandemic, which prompted an adjustment in the shopping conduct of the customers.

In retail area, one of the significant variables which impacts shopper online conduct is the demographics factors (Park and Jun, 2003). Fathima (2015) examined that most of the customers bought online in India because of ease of procurement, wide range of cost, brand expansion alongside the rebate advantage. El-Ansary (2013) clarified that trust, e-administration quality, attitude towards internet shopping and shoppers' demographic are the factors which influence web based shopping behaviour of customers.

E-commerce in Indian markets is growing up at a really fast speed. Frequently recognized in those examinations, and specifically noteworthy to our research, is the impact of customers' view of risk and trust when thinking about buying on the web and online. Studies keep on distinguishing that risk and trust factors are significant and should be tended to (Wu et al., 2010; McCole et al., 2010).

Today these fundamental drivers of internet business remain and incorporate the thought of building trust while dealing with the perceived risk of procurement (Bolton et al., 2008; Biswas and Burman, 2009; Schlosser et al., 2006; Bu'ttner and Go'ritz, 2008).

As per the literature on online purchase behaviour, risk perceived is seen as very significant, however the examination and studies has been restricted to a couple of item classifications, making speculations and generalizations about its effect hard to decide (Miyazaki and Fernandez, 2000). These examinations recommend that the higher the risk the more uncertain items and less items are to be bought on the web (Doolin et al., 2005; Jarvenpaa et al., 1999). By and large, it tends to be seen that perceived risk has been widely utilized in investigations taking a look at both offline and online buying behaviour and in an assortment of item classes. In light of the above examples, the paper considers perceived risk as an adaptable construct that is material to numerous zones.

Bilgihan (2016) uncovered this reality in his examination and study that there is the imperative effect of trust in client's dedication and loyalty in web based or online shopping. Trust is the main precursor of e-loyalty for youthful clients. They stay faithful to the brands that they trust. The consequences of Kim et al. (2012) uncovered that perceived trust applied a preferred impact over perceived price on buying aims intentions for both potential and repeated clients of an online store. Metropolitan et al. (2009) gave a general design of how online trust functions. The site influences trust which thus alters client purchasing behaviour that lead to retailer's deals and benefit achievement. Clients gain from their purchasing experience and item use.

For the purpose of this study, we take into consideration three constructs i.e. Trust, Perceived Risk and Online Shopping Behaviour and evaluated their effect on each other from Indian perspective especially during the Covid times. The objective of this study is to

understand and 1) Examine how Perceived Risk influence Trust 2) To examine how Indian customers' risk perception and trust impact online shopping behaviour.

## 2. LITERATURE REVIEW

### 2.1. Trust

Trust is as often recognized as "confidence" in another person or institute (Venkatesan, 1968; Shimp and Bearden, 1980). Trust is viewed as one of the central points of problems the purchaser thinks about when settling on a choice to buy. Trust, as risk perceived, can be viewed as an adaptable variable relevant in different controls and disciplines (Morgan and Hunt, 1994). Trust is characterized as the essential assumption an individual has on the unwavering quality of the co-exchanger's guarantees (Rotter, 1967). Likewise, trust can be deciphered as the result of the integrity and reliability of the merchant, like quality assessment measures like trustworthiness and obligation (Dwyer and Lagace, 1986). Morgan and Hunt (1994) verify this point of view by conceptualizing trust as the structure of faith in the integrity and reliability of the merchant. In doing as such, Doney and Cannon (1997) considered trust as the space of a strong validity between the purchaser and the merchant, and the dependability of the merchant's guarantees. This view was likewise upheld by Gao et al. (2002) who deciphered trust as the unwavering quality and trustworthiness perceived by the co-exchangers. Trust is considered as the fundamental essential component in web based exchanging (Gao et al., 2002). Brannigan and De Jager (2003) characterized trust in online exchanges as the mix of trust in online exchange and trust in the online dealer. It very well may be contended that by concentrating on the buying viewpoint, these two sorts of trust address one basic topic; the trust to buy on the web (Ba, 2001). Also, trust in web based buying is frequently deciphered as the guarantee and confirmation of online venders to convey excellent items or administrations to online purchasers (Cowcher, 2001). It very well may be considered from these examples that the confirmations of online venders is a fundamental component to a purchaser's trust to buy on the web.

Buyers would possibly take part in any online business in the event that they could communicate some degree of trust in the deal and the merchant or dealer. Rempel et al. (1985, p.96) characterized trust as the sensations of certainty and security in the mindful reaction of the other party. Sohaib & Kang (2015) called this trust in their work as iTrust (relational Trust), that is the certainty one gathering hosts in the other get-together. In web based business, the parties included are online purchaser furthermore, the online seller (Tan and Sutherland, 2004). Johnson and Grayson (2005) isolated trust into affect-base and cognitive. **Cognitive based trust** radiates from arrangement of reasonable reasoning, and accordingly shows the customer's certainty that an online retailer is straightforward, exact and reliable and also, keeps guarantees (Punyatoya, 2019; Brengman and Karimov, 2012; Johnson and Grayson, 2005). **Affect-based trust**, otherwise called enthusiastic and emotional trust radiates from customer's instinct, senses, or sentiments concerning whether an individual, gathering or association is reliable (Brengman and Karimov, 2012; Johnson and Grayson, 2005; Kramer, 1999). Kramer (1999) is of the view that trust is an unpredictable state that comes from person's deficient information about the thought processes of the other party in a relationship. On account of web based business, trust isn't just about the trader, however even the online platform as well (Bianchi and Andrews, 2012; Harridge-March, 2006).

### 2.2. Perceived Risk

While purchasers will in general see some risk in buying offline, they are probably going to perceive more risk with web-based buying online (Doolin et al., 2005). It is proposed that this risk in an online exchange may result from a purchaser's failure to review and look at an item's

quality for themselves (Tan, 1999), and from giving and bargaining individual data (Doolin et al., 2005; Liebermann and Stashevsky, 2002). Perceived risk related with web-based buying got less consideration in early internet buying literature (Jarvenpaa and Todd, 1997). A few researchers (Pires et al., 2004) noticed that risk perceived towards internet buying has been dismissed in purchaser conduct research. This is maybe in light of the fact that the significance of perceived risk to online buying was not clear around then. To date it is clear that a purchaser's perceived risk is one of the significant obstructions to the development of online trade (Awad, 2004; Culnan, 1999; FTC, 2000; United Nations, 2001, 2005), there have been various examinations tending to this issue.

Miyazaki and Fernandez (2001) characterized online risk perceived as the risks identified with shopper's online experience, and buyer's stress over the security and privacy issues when managing on the web exchanges. Risk perceived is viewed as a crucial idea in shopper conduct examination, the target of such investigation is frequently to distinguish intends to decrease the risk. Characterizing and clarifying the perceived risk is fundamental for comprehension of how a specific buy choice is taken, giving promoting experts the data expected to encourage the culmination of the exchange. Literatures related to Marketing states that risk perceived can be investigated as far as vulnerability and anticipated outcomes (Cox 1967, Jacoby and Kaplan 1972). The examination of the normal results was centered around the possibility of "misfortune or loss" (Cox 1967), yet subsequent investigations have prompted the coordinated idea that alludes to the likelihood of risk and its significance.

The literature available on Marketing provides different dimensions of risk perceived as below:

**Table1: Types of Perceived Risk in context of Online Shopping**

Sr. No.	Risks	Researchers & Years
1	Financial Risk	Kaplan (1974), Szybillo and Jacoby (1993), Michel Laroche (2004)
2	Performance Risk	Kaplan (1974), Fatma A. Mohamed (2011), Szybillo and Jacoby (1993), Michel Laroche (2004)
3	Physical Risk	Kaplan (1974), Szybillo and Jacoby (1993), Michel Laroche (2004)
4	Social Risk	Kaplan (1974), Fatma A. Mohamed (2011), Szybillo and Jacoby (1993), Michel Laroche (2004)
5	Convenience/ time Risk	Kaplan (1974), Roselius 1971, Fatma A. Mohamed (2011), Michel Laroche (2004)
6	Psychological Risk	Kaplan (1974), Szybillo and Jacoby (1993), Mitchell and Greatedorex (1993), Fatma A. Mohamed (2011), Michel Laroche (2004)
7	Source credibility Risk	Kaplan (1974), McKorkle (1990), Fatma A. Mohamed (2011)
8	Privacy Risk	Kaplan (1974)

Literature available on Marketing considers two different ways for examining the risk perceived: one in which risk perceived is for sure a multidimensional variable, and the second, wherein each kind of risk is evaluated separately, with its particular significance. Notwithstanding, the commitment of every part in gathering the risk variable changes for every person and from one purchasing interaction to another (Pope et al., 1999).

As per specialists in the field, perceived risk in web-based shopping is one of the components that impact customers' choice to get involved or not the in online business. Thus, the accomplishment of an online shop is in exacting connection with how it figures out that

how to make in the psyche of the buyer the impression of lower risk. A specific level of risk is found in any purchasing interaction, regardless of whether it happens on the web or offline. Online shopping is viewed as more unsafe than customary purchasing, and furthermore an online buy includes more serious risk than an offline exchange.

### **2.3. Online Shopping Behaviour**

Customer behaviour is characterized by Walters (1974, p.7) as the cycle whereby people choose whether, where, how, what, when, where, how, and from whom to buy products and services. Schiffman and Kanuk (1997, p.648) additionally characterized shopper's behaviour as the conduct that customers show in looking for, buying, utilizing, assessing, and discarding items, services, and thoughts. Client's (individual or corporate) attitude towards the buy, use and assessment of online shipper, online platform, products and enterprises, when making exchange utilizing web and internet.

Online shopping behaviour (known as online purchase behaviour and Internet shopping/purchasing behaviour) alludes to the way items and services are bought items via the Internet. Online shopping behaviour refer to the process of buying items or products and services online (Li and Zhang, 2002).

Risks related to online purchase and the impact on online shoppers behaviour have been generally explored and researched (D'Alessandro et al., 2012; Mousavizadeh et al., 2016; Pappas, 2016; Doolin et al., 2005). It fundamentally includes the environment required for shoppers to be certain about the innovation and technology or stage utilized looking out, buying and making installments on the web (Bianchi and Andrews, 2012; McCole et al., 2010). An ordinary internet business may require client's data like location, telephone number, email, or potentially monetary details, and these may introduce some risk perceived with respect to the client (Tsiamas and Siomkos, 2003; Chen et al., 2017; Liebermann and Stashevsky, 2002; Doolin et al., 2005). Harridge-March (2006) introduced that web based shopping puts purchasers helpless before an obscure exchanging and trading partner, who has the chance to misuse the client for parochial interest. This makes buyers careful about the validity of the business data put on the web, deals recommendation and item quality (Chaudhuri and Holbrook, 2001). Since shoppers can't make practical evaluation of item quality before buy, new items brands are related with high perceived online risk (Tan, 1999; Mitchell, 1998).

### **2.4. Online Shopping Behaviour and Risk**

The environment online implies absence of control by the customer that is compelled to cooperate with mysterious and unknown speakers who may exploit him. In this way, it may be said that, on account of internet shopping, the risks are higher and they are explicit to the environment - like the risk of misrepresentation and fraud through burglary and theft of individual information. The particular attributes of perceived risk in web based shopping come from the highlights that the Internet has another innovation and technology. Accordingly, perceived risk is in very close relationship with the buyer's impression of the Internet as a shopping channel (Bhatnagar et al., 2000). For instance, buyers frequently accept that in the event that they complete the request form on the Internet their card details are presented to extortion and fraud (Bhatnagar et al., 2000, Jarvenpaa and Todd, 1997). Hence, it will be interesting to evaluate this relationship from Indian perspective.

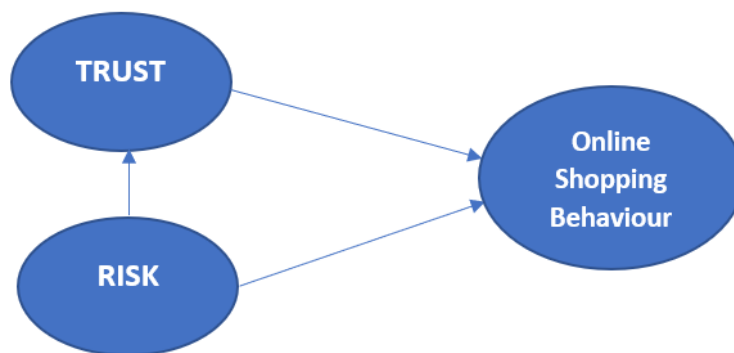
### **2.5. Online Shopping Behaviour and Trust**

Studying trust without risk consideration is viewed as incomplete and deficient (Lee and Turban, 2001). Viklund (2003) for instance discovered trust to strongly affect risk perceived. That is, more elevated and igher level of trust decreases the impact risk perceived has on

customer behaviour like online buys. Studies like Eastlick et al. (2006) have additionally introduced a negative connection between risk perceived and trust. Along these lines, decreased perceived risk builds trust and great attitude towards web based shopping (Black, 2005; Van der Heijden et al., 2003). The correct harmony between risk perceived and trust is important for the success of web based business (Grabner-Krauter and Kaluscha, 2003).

## 2.6. Proposed Model & Hypothesis:

For the purpose of this study, the model proposed below forms the basis of the research. The objective of the study is to find out the influence and impact of two variables, Trust and Risk, on Online Shopping Behaviour in India (Delhi NCR Region)



**Fig 1:** Proposed Model for understanding the impact of Risk & Trust on Online Shopping Behaviour

Risk Perceived and trust have impact on one another and on online buys. Trust is negatively impacted with perceived risk (Kimery and McCord, 2002; Eastlick et al., 2006). Higher trust probably diminishes risk perceived. For instance, Jarvenpaa et al. (1999) propose that greater trust in the online dealers reduces risk perceived, and this decreased risk perceived expands the purchaser's readiness to buy on the web. Essentially, van der Heijden et al. (2003) report that decreased risk perceived builds trust and has positive outcome on web based buying i.e. Online Shopping

Meaningful discoveries propose that risk perceptions about utilizing the Web for buying can exceed a shopper's insights about the advantages and at the same time is considered as an essential hindrance to doing so (Kuhlmeier and Knight, 2005; Bhatnagar and Ghose, 2004; Yang and Jun, 2002; Andrews and Boyle, 2008). In addition, in any event, when people do buy on the web, they are as yet careful about the risk engaged with the Online environment (Forsythe et al., 2006, Andrews and Boyle, 2008). Hence, the first hypothesis proposed is as below:

### ***H1: Perceived risk has a negative impact on trust***

The likelihood or purchase intention is negatively influenced by the Perceived risk online (Yeung and Morris, 2006; Vijayasarathy and Jones, 2000). Online buying decision is also affected by it as well as the quantity of web-based purchase (Dillon and Reif, 2004; Miyazaki and Fernandez, 2001; Doolin et al., 2005). Consistently, it's been identified that perceived risk have a negative impact on online purchase behaviour (Kim et al., 2008). Hence, the second proposed hypothesis is:

## ***H2: Perceived risk has a negative impact on the online shopping behaviour***

Trust has positive impact and influence on online purchase behaviour (Ha and Stoel, 2009; Pavlou and Fyngenson, 2006; McCole et al., 2010).

There also exists a positive relationship between online purchase intention and trust as per the studies on trust (Koufaris and Hampton-Sosa, 2002; Eastlick et al., 2006; Shim et al., 2004; Gefen, 2000).

Online buys and purchased are positively influenced by Trust (Punyatoya, 2019; Li et al., 2014; Pappas, 2016; Urban et al., 2009; McCole et al., 2010). Thus, the final hypothesis:

## ***H3: Trust has a positive impact on the online buying behaviour***

**Table 2:** Items in the survey

Scale	Item	References
Trust	The online retailers are trustworthy.	Pavlou -2003
	The online retailers keep their promises and commitments.	
	The online retailers keep their customer's best interests in mind	
	Products sold by the online retailers are in accordance with the reviews written online	
Risk	Shopping online is risky.	Schlosser et al. 2006
	Providing credit card information online is risky.	
	Providing personal information (i.e., social security number and mother's maiden name) online is risky.	
	Purchasing items online is risky.	
	Providing my and phone number online is risky.	
	Registering online is risky.	
	It is riskier to shop online for a product than to shop offline for it.	
Online Shopping Behaviour	I make purchases online through from internet websites	Lim (2001) , Abdullah Osman (2015)
	I use online websites or applications to make purchases	
	I buy different products online	
	I have made purchases online in the past	

## **3. METHODOLOGY**

**Survey Details:** The **questionnaire** was developed from the adaptation of the scales presented in various studies and was floated online. The survey is divided into the **3 sections**: Demographic Details, General Purchase Preferences, and Specific Questions for all variables in the last section.

A **filtering question** was used to find out if each respondent uses internet for making purchases online

Three variables were used in this research study that were perceived risk, trust and online shopping behaviour. The items were adapted from different scales and supported by existing studies. Perceived risk is measured by 7 items that were adapted from Schlosser et al. (2006), Trust is measured by 4 items adapted from Pavlou (2003), and Online Shopping is measured by 4 variables adapted from Yi Jin Lim, Abdullah Osman (2015). All items were measured on likert scales of 7 points (1 = Strongly disagree; 7 = Strongly agree) which were extensively used on previous studies on making purchases online.

**Survey Participants and Sampling:** For the purpose of this study, the population is considered as any person aged between 16-75 years of age, who has access to the web or internet and uses that for making any buy or purchases online. Also, the individual should be residing in India's Tier 1 cities mainly in Delhi NCR Region.

**Sampling:** Convenience sampling technique is used for data collection. Also, collected data should be a minimum of 10 multiplied by measurement variables numbers (statements in your survey) based on the rule of thumb for sample size where SEM is used for analyzing data. Thus, a minimum of 150 sample size is determined. However, since SEM will be applied using AMOS, a minimum of 200 of sample is required.



**Analysis Tools:** For descriptive analysis and calculating Cronbach alpha, SPSS was used. For validating measurement model and evaluating structural model, AMOS was used.

A total of 225 responses were received out of which 15 respondents responded that they do not shop online and were removed from the data collected. Further, a total of 210 responses were considered for analysis

### 3.1. Analysis

#### *Descriptive Analysis*

The total no. of respondents whose responses are considered are 210 responses. Below are some of the response distribution:

#### **Distribution by demographics:**

##### **By Gender:**

Options	Percentage
Male	36%
Female	64%
Others	0%

##### **By Age:**

Options	Percentage
10 – 20 Years	19%
20 – 30 Years	50%
30 – 40 Years	14%
40 – 50 Years	7%
Above 50 Years	10%

##### **By Occupation:**

Options	Percentage
Employed	54%
Self-employed	12%
Unemployed	4%
Student	23%
Retired	6%

##### **By Income:**

Options	Percentage
Up to 5 lakhs p.a.	36%
5 lakhs – 10 lakhs p.a.	22%
10 lakhs – 15 lakhs p.a.	20%
15 lakhs – 20 lakhs p.a.	10%
Above 20 lakhs p.a.	12%

#### **Distribution by buying preferences:**

##### **Preferred sites for shopping online:**

Options	Percentage
Flipkart	42%
Amazon	92%
Snapdeal	10%
Jabong	3%
Myntra	52%
Homeshop 18	3%
Shopclues	2%
Firstcry	5%
Nykaa	35%
Other	8%



### Type of Products bought online:

Options	Percentage
Fashion (clothes, handbags etc.)	82%
Electronics & software	49%
Books, music, films, etc.	37%
Mobile Phones	42%
Health care/Pharmaceutical products	22%
Travel	20%
Home and Garden	18%
Sports	15%
Motors (cars, equipment, etc.)	3%
Groceries	51%
Cosmetic products	48%
Other	2%

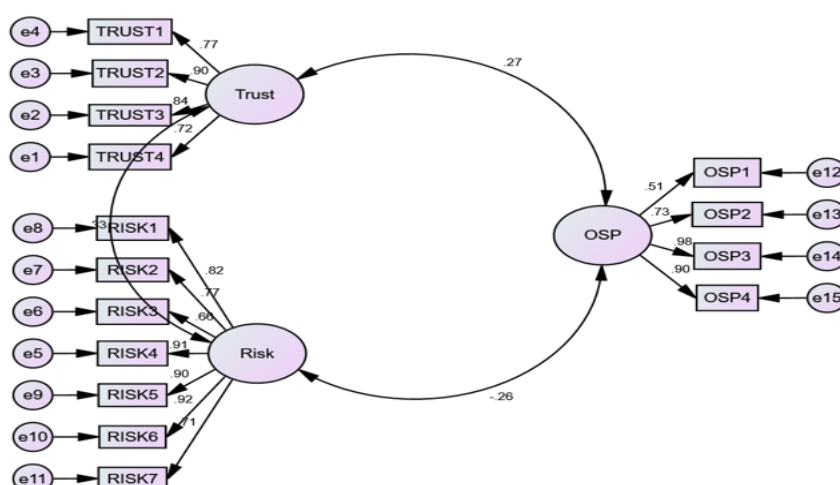
## 3.2. Reliability

For the purpose of calculating Cronbach Alpha to check the internal consistency within constructs items, we used SPSS 20. According to the standard norms, all the variables' Cronbach Alpha are above 0.7 proving that there is internal consistency for these variables. As stated before, the N i.e. no. of responses is 210.

Variable	Cronbach's Alpha	N of Items
Overall	0.722	15
Trust	0.882	4
Risk	0.931	7
OSP (Online Shopping Behaviour)	0.865	4

After calculating the reliability, AMOS 24 statistical tool was used in order to apply and measure the results of Measurement model (CFA) and Structural Model (SEM). For calculating the validity of the constructs, CFA was used. Below is the model along with the results indicated in the tables:

## 3.3. Measurement Model



**Figure 2** Measurement Model for Risk, Trust and Online Shopping Behaviour

*Note: OSP indicates Online Shopping Behaviour*

**Regression Results** indicate that the P value is less than  $<0.05$  and hence, is significant. It holds true for all items. Refer to the table below for details:

			Estimate	S.E.	C.R.	P
TRUST4	<---	TRUST	1			
TRUST3	<---	TRUST	1.151	0.099	11.625	***
TRUST2	<---	TRUST	1.185	0.097	12.249	***
TRUST1	<---	TRUST	1.057	0.099	10.698	***
RISK4	<---	RISK	1			
RISK3	<---	RISK	0.762	0.067	11.381	***
RISK2	<---	RISK	0.858	0.059	14.629	***
RISK1	<---	RISK	0.771	0.046	16.589	***
RISK5	<---	RISK	1.077	0.052	20.685	***
RISK6	<---	RISK	1.07	0.049	21.927	***
RISK7	<---	RISK	0.796	0.063	12.74	***
OSP1	<---	OSP	1			
OSP2	<---	OSP	1.309	0.177	7.385	***
OSP3	<---	OSP	1.479	0.18	8.222	***
OSP4	<---	OSP	1.291	0.159	8.099	***

Assessing the Construct Validity through Convergent and Discriminant Validity, we used professor's gaskin's plug in (Gaskin, J., James, M., and Lim, J. (2019), "Master Validity Tool", AMOS Plugin. Gaskination's StatWiki.) and the following results were achieved:

### 3.4. Convergent Validity

#### *Model Validity Measures*

##### Validity Analysis

	CR	AVE	MSV	MaxR(H)	TRUST	RISK	OSP
TRUST	0.885	0.659	0.109	0.903	<b>0.812</b>		
RISK	0.933	0.668	0.109	0.952	-0.330***	<b>0.817</b>	-
OSP	0.872	0.642	0.074	0.972	0.273	**	<b>0.801</b>

##### Validity Concerns

\*\*Correlation is not specified in the model.

No validity concerns here.

For all the constructs/variables, Convergent Validity was achieved as  $AVE > 0.5$ ,  $CR > 0.7$  and  $CR > AVE$ .

### 3.5. Discriminant Validity

For all the variables, Discriminant Validity was achieved as:

- Square roots of AVE should be higher than the other correlation coefficients for adequate discriminant validity (Fornell and Larcker, 1981), OR
- HTMT value should be below 0.9

#### HTMT Analysis

	TRUST	RISK	OSP
TRUST			
RISK	0.331		
OSP	0.299	0.22	

#### HTMT Warnings

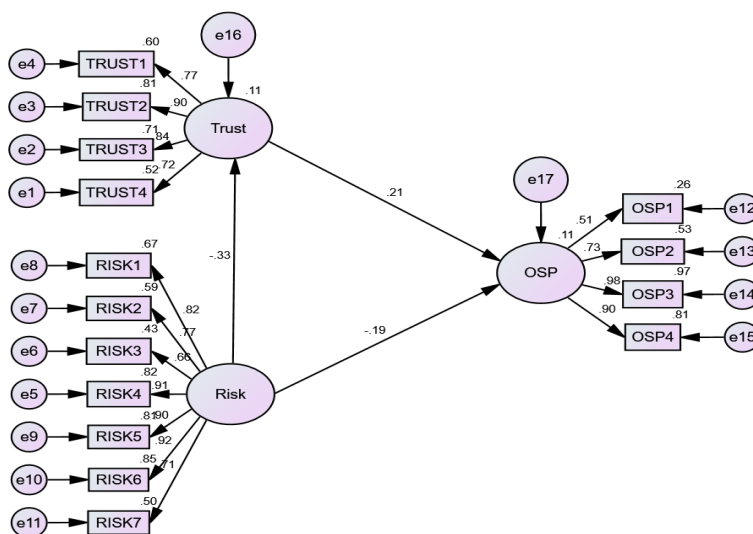
There are no warnings for this HTMT analysis.

**Model Fit Indices for Measurement Model:** The indices show relatively good fit for the model.

Model Fit Indices	Default Model	Recommended Criteria	Reference
CMIN/DF	3.922	<5	(Marsh & Hocevar, 1985).
CFI	0.902	>0.9	Bentler, 1990; Cole, 1987; Marsh, Balla & McDonald, 1988
NFI	0.865	>0.8	Bentler, 1990; Cole, 1987; Marsh, Balla & McDonald, 1988
RMSEA	0.074	<0.08	Bentler, 1990; Cole, 1987; Marsh, Balla & McDonald, 1988

### 3.6. SEM

Further in the study, Structure Equation Modelling (SEM) in AMOS 24 is applied to test the model proposed and hypothesized paths. Below is the model along with the results indicated in the tables:



**Figure 3** Structure Equation Model for Risk, Trust and Online Shopping Behaviour

**Model Fit Indices for Measurement Model:** All Indices prove overall statistical fit and the model is acceptable

Model Fit Indices	Default Model	Recommended Criteria	Reference
CMIN/DF	3.922	<5	(Marsh & Hocevar, 1985).
CFI	0.902	>0.9	Bentler, 1990; Cole, 1987; Marsh, Balla & McDonald, 1988
NFI	0.865	>0.8	Bentler, 1990; Cole, 1987; Marsh, Balla & McDonald, 1988
RMSEA	0.074	<0.08	Bentler, 1990; Cole, 1987; Marsh, Balla & McDonald, 1988

### Hypothesis Testing

#### Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P
TRUST	<---	RISK	-0.233	0.053	-4.391	***
OSP	<---	TRUST	0.161	0.062	2.608	0.009
OSP	<---	RISK	-0.105	0.042	-2.52	0.012

#### Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
TRUST	<---	RISK	-0.33
OSP	<---	TRUST	0.209
OSP	<---	RISK	-0.193

#### Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
TRUST	0.109
OSP	0.108

The **Hypothesis 1 is supported** as results indicate that the relationship between Perceived Risk and Online Trust is significant and Perceived Risk is negatively related to Online Trust ( $\beta = -0.33$ ,  $P = ***$ )

The **Hypothesis 2 is supported** as results indicate that the relationship between Perceived Risk and Online Shopping Behaviour is significant and Perceived Risk is negatively related to Online Shopping Behaviour ( $\beta = -0.193$ ,  $P = 0.012$ ).

The **Hypothesis 3 is supported** as results indicate that the relationship between Online Trust and Online Shopping Behaviour is significant and Online Trust is positively related to Online Shopping Behaviour ( $\beta = 0.209$ ,  $P = 0.009$ ).

## 4. FINDINGS

Past studies have indicated the Perceived Risk and Online Trust have inter dependency on each other Delgado-Ballester and Herná'ndez-Espallardo, 2008; van der Heijden *et al.*, 2003. For trust, perceived risk is a necessity according to Kaluscha and Grabner-Krauter (2003). Study of trust is considered to be incomplete without consideration of risk according to Lee and Turban (2001). Perceived risk has a negative relationship with trust (Eastlick *et al.*, 2006). Although the respondents who have taken our survey shop online, they still perceive the online environment to be risky which is quite consistent with the past researches (Ha and Coghill, 2008; Kuhlmeier and Knight, 2005; Bourlakis *et al.*, 2008; McCole *et al.*, 2010; Drennan *et al.*, 2006).

Perceived Risk is considered to be one of the key barriers in the adoption of e-commerce and further has an effect on online shopping behaviour. The result observed in this study is found to be consistent with the studies conducted in the past like Featherman *et al.* (2010); Hong-Youl (2004) and Biswas and Biswas (2004). Although Perceived Risk has a significant impact on Online Shopping Behaviour, but the beta coefficient of Risk is lesser than that of Trust. It only indicates that Trust impacts Online Shopping Behaviour more strongly as compared to Perceived Risk.

Consumer's Trust in Online Shopping was expected to boost confidence of the consumers while shopping online in a country like India. It is supported by the studies that have taken place in the past like Li *et al.*, 2014; Pappas, 2016; Urban *et al.*, 2009, McCole *et al.*, 2010. Trust is recognized as one of the most important factors that contribute to the success of e-commerce and influence shoppers' behaviour.

Out of the two factors that were considered in this study, Trust influences Online Shopping Behaviour as compared to the Risk. Thus, in the times of Corona, where the world (India as well) is moving towards adopting e-commerce and buying more items online, even though consumers are skeptical about the risk attached to the buying things online, the effect of perceived risk is not very high. It suggests that the benefits attached to buying items online outweighs and disadvantages as buying online offers advantages like convenience, minimal risk of virus, no human intervention while selecting products online, time saving, discount and offers etc. which are very important during covid times to the people across different generations.

Overall findings suggest that perceived risk and online trust have an impact on the consumer's behaviour towards online shopping for Indian Consumers, especially for people who belong to Delhi NCR region. Thus, e-commerce companies should take enough measures to make sure consumers feel secure and protected while shopping online and on web.

## 5. IMPLICATIONS

For mitigating risk and developing trust among consumers, e-companies can do the following:

A few investigations and research recommend that a decent method of decreasing the risk perceived is by expanding brand loyalty (Mitra, 1999; Bauer, 1967, Roselius, 1971). The brand implies a guarantee made by the organization to the customers, brand loyalty implies that this guarantee is satisfied. Subsequently, customers will get faithful to that brand, accordingly, the perceived risk is essentially diminished. Regardless of whether they see an item interestingly, customers will be affected by the brand since it gives validity and lessens the risk perceived (Mitra *et al.*, 1999).

A compelling method to secure and protect the site (platform for e-shop) from unapproved access (breaking) is to set up a blend of models of authorization. Also, the association with an outsider confirmation or a third party assurance is critical as it signifies that the organization

consents to safety efforts guaranteeing e-customer's privacy and security. In addition, an e-organizations and companies should offer to the clients the chance to survey its credibility. This point can be at first achieved by permitting tests and samples requesting as orders. Along these lines, clients can determine the nature of items, the exhibition of delivery, and the hour of delivery. Also, the believability of an e-organization/company is guaranteed by sending an email or sms that confirm exchange dispatch after every checkout interaction. Consumers could likewise feel that they have the control of their dispatched request, in case that they get useful messages during the course.

The above-mentioned measures would reinforce adoption of internet shopping, by causing e-customer to have a sense of security while he/she buys items online. Along these lines when any order is delivered with all the safety and precautions, the standing of e-business is expanded through the informal interaction. Accordingly, an organization benefits when consumers profits by a reasonable and common collaboration (Angeliki Vosa, 2014).

## 6. LIMITATIONS & FUTURE SCOPE

**Sample Size:** The current population size is of 210 which is not good enough to generalize the results for India which is one of the countries to have largest population. Thus, a further research should be conducted by future researchers to if the findings are still valid and reliable

**Lack of Specific Products:** The study that was undertaken by keeping in mind various products like FMCG, Cosmetics, Apparels, Fashion etc. However, further studies should be conducted keeping in mind one product line

**Lack of one specific e-commerce site:** In the survey, it was asked if the respondent shops from various available e-commerce site. However, future research should be based upon assessing the risk and trust perceptions for a particular site, for ex., Amazon or Flipkart etc.

**Limited variables considered:** In this proposed model, other variables which are essential for and are pre-requisite for Online Shopping Behaviour are not considered, e.g., Attitude, Intention etc. Instead, the direct impact of Risk and Trust is evaluated directly on Online Shopping Behaviour. It will also be interesting to incorporate these variables and theories of consumer behaviour like TAM, TPB etc.

**Role of Demographics:** It will also be interesting to see how demographic variables could impact Online Shopping Behaviour differently. For example, how is it different by gender (Male Vs Female), Age groups (Across Generations), Income groups (Across different income groups) etc.

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