Impact of Risk Factor in E-Commerce

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Abstract---This research work is an effort to develop a scale for exploring impact on various risk factor about E- commerce. With the assistance of Exploratory correlational analysis, three factors like Financial and Convenience Risk (FCR), Perceived Trust (PT) and merchandise and Delivery Risk (PDR) were extracted, accounting for 54.8% of total variance explained. The study considered impact of six major risk dimensions and trust on behavioral intensions of youth online shopper. thanks to its comprehensive coverage, the study expected to act because the foundation for future investigations in impact of assorted risk dimensions on online shopping behavior in Indian context. Testing statistical significance of revised conceptual framework on a bigger sample size would be the long run agenda of research.

Keywords: Financial and Convenience Risk (FCR), Perceived Trust (PT), merchandise and Delivery Risk (PDR)

I. INTRODUCTION

E-Commerce has been one amongst the rapidly growing business segments in developing countries like India. As per a consultation paper by IBEF, India's e-commerce sector is anticipated to achieve 14838 billion by 2026 from 20856 billion in 2017. Growing riddling in internet, steady rise's income, young consumer base and aggressive business strategies by e-commerce players would act as a catalyst for such a stupendous growth. Online consumer behavior has been one in every of the widely discussed research domains in western parts of the globe. With the appearance of e-commerce evolution in India, the requirement to explore India specific cultural and behavioral aspects in E-commerce has aggravated.

Across the world, TAM (Technology Acceptance Model) by Davis is widely wont to study the human-technology interaction. Researchers like Lele (2018) and Gangwal and Bansal (2019) studied E-commerce behavior in Indian context by testing the TAM construct. Based on this conceptual model, this research work aims at developing a scale which may be utilized further for an outsized size sample study to explore E-commerce behavior amongst the Indian youth (15-35 age group). Considering improvement in internet connectivity, lowered cost of smart phone acquisition and availability of E-commerce services in Tier II, III cities in recent times, a close investigation in perceived risk dimensions. By developing India specific scale of risk dimensions and their interplay with behavioral intensions this research work would have significant contribution to the present knowledge domain.

II. LITERATURE SURVEY

E-commerce and related behavioral aspects have attracted serious interest amongst the research fraternity globally. so as to know the theoretical base, the researchers reviewed about 20-30 peer reviewed research papers which target various risk dimensions or on trust and their interplay in context of E-commerce behavior. the small print of our observations and corresponding research as quoted as below,

Perceived Risk in E-commerce: in step with Li and Huang, the concept of perceived risk in E-commerce may be divided into two parts like, the probability of a loss and also the subjective feeling of unfavorable consequences. it had been observed that, perceived

risk and trust acts as antecedents of a user's deciding just in case of both the models. Similarly, Akram (2019) proposed and validated moderating role of perceived risk on relationship between four benefits (perceived convenience, product variety. The author also underlines the requirement to possess detailed investigation of interplay between risk and intensions, especially in developing countries because the system infrastructure in these economies is yet to develop satisfactorily. Various Risk Dimensions: The literature found evidences of varied risk dimensions considered by the previous researchers. The discussion on these dimensions is as follows,

A. Financial Risk: Derbaix defined financial risk as potential net loss of the cash. This refers to the perceived loss or possibility of monetary damage occurring from non-delivery or delivery of the faulty product. Ariffin (2019) analyzed impact of economic risk together with five other risk dimensions on a user's intension to continue with E-commerce. The research found significant negative impact of monetary risk on intensions to buy online. Similarly, Masoud found negative impact of economic risk on behavioral intensions in numerous contextual settings.

B. Privacy Risk: Miyazaki and Fernendez defined privacy risk because the user's concerns related with potential breach of privacy or improper usage of data for fraudulent activities. The research observed that, the perceived risk related with misuse of personal information acts as a serious obstacle in consumer's E-commerce intensions.

C. Time/Convenience Risk: - This definition also considers time lost in terms of delivery of the merchandise (late delivery, delivery on wrong address, no delivery). Forsythe et al. found time or convenience risk as a powerful predictor of behavioral intensions while, Masoud failed to find significant impact of your time or convenience risk on intension.

D. Product Risk: A critical appraisal of the present literature base reveals that, the merchandise risk is studied in two different contexts. the primary approach deals with inconvenience caused to the user thanks to faulty product or the particular product not meeting to the specifications shown on the web site. Another aspect is said with post purchase performance of the merchandise. For this study, we've considered product performance as a separate factor altogether.

E. Delivery Risk: Dan et al. This aspect is said with a possible loss to the patron because of wrong delivery of products, goods sent to the incorrect address or quantity of the products ordered not matching to the products delivered.

F. Performance Risk: in step with Chu and Lee, performance risk is defined because the loss incurred when the merchandise chosen won't perform as desired. a number of the researchers clubbed the merchandise performance and merchandise risk together during a single construct. However, this research treated performance risk separately to unearth the precise risk dimensions perceived important by the users. Trust and E-commerce intensions: Trust is one among the largely considered factors in E-commerce behavioral studies altogether these studies, trust was found to own curtailing effect on perceived risk. In nutshell, because the trust of a user on system grows, the perceived risk in E-commerce diminishes considerably.

III. RESEARCH MODEL

The conceptual model of the research is based on Banerjee and Vidyasagar (2019). This research work presented a conceptual model comprising of six dimensions of risk (financial, privacy, product, performance, delivery and time) and trust as determinants of online shopping behavior. The proposed framework is presented as Figure 1. This research work would like to conduct a survey to check suitability of this model and the instrument designed for a large-scale survey in future.

A. Instrument development process: In any inquiry, it is vital to have an instrument which can be tested on an information collected from the respondents. The researcher has two options to exercise, either to use previously validated scale or to develop own instrument by employing a standardized procedure. Since this research aims to explore impact of varied risk dimensions and trust on online shopping behavior amongst the Indian youth, it had been decided to develop a personalized scale for conducting the research further.

B. Pooling of the statements: Banerjee and Vidyasagar (2019) presented literature synthesis on existing research work available on risk dimensions and trust and its corresponding impact on

online shopping behavior (in Indian or in global context). Taking a clue from this research, a conceptualized model for the research was developed. For developing a greenhorn scale, all papers which considered various risk dimensions and Trust because the determinant of online shopping were studied and items from previously validated scales like Lele (2018), Masoud (2013), Martins (2012), Dash and Saji, (2008) were collated together.

C. Expert Opinion Method: so, on test the face validity of the instrument, the draft questionnaire was sent to a panel of experts for his or her valuable suggestions. A team of 5 research scholars from online customer centricity domain and a team of 5 digital marketing from e-commerce industry were selected for the review. The involvement of the experts during this task was voluntary and no remuneration was offered to them for this assignment. All the experts were asked to rate the items on the thought of their perceived importance (1 = most important and last being the littlest amount significant). On the premise of mean ranking of each statement, a threshold was set and thus the things were selected for the questionnaire. supported the inputs by the experts, necessary changes in wording of the instrument were incorporated and also the draft questionnaire was prepared. Variables studied and final count of things under each of the variable is presented as Table no.1Table 1:

Table 1. Variables considered for the study

Sr. No	Name of the construct	Construct Code	No. of Items
1	Perceived Trust	**T**	**5**
2	Financial Risk	**FR**	**3**
3	Time & Convenience Risk	**TR**	**6**
4	Privacy Risk	**PRV**	**5**
5	Product Risk	**PR**	**5**
6	Delivery Risk	**DR**	**4**
7	Performance Risk	**PRF**	**5**
8	Behavioural Intensions	**I**	**5**
	Total Items		**38**

A total of 38 statements related with eight variables were taken together for formulation of the draft questionnaire.

D. Reliability of the instrument: Reliability Analysis is that the opening conducted in any quantitative survey-based research. Reliability of the instrument refers to the degree at which the study is predicted to deliver stable and consistent results. Seminal work by Cronbach (1951) is taken into account because the base for reliability calculations by an oversized set of researchers and is named as Cronbach's Alpha. The statistical analysis on the info collected indicates that, the general instrument reliability stands at 0.957, which is much above the edge limits (equal to or greater than 0.7) prescribed by Nunally (1967). These results indicate that, the instrument is acceptable for data collection and analysis on a bigger sample size.
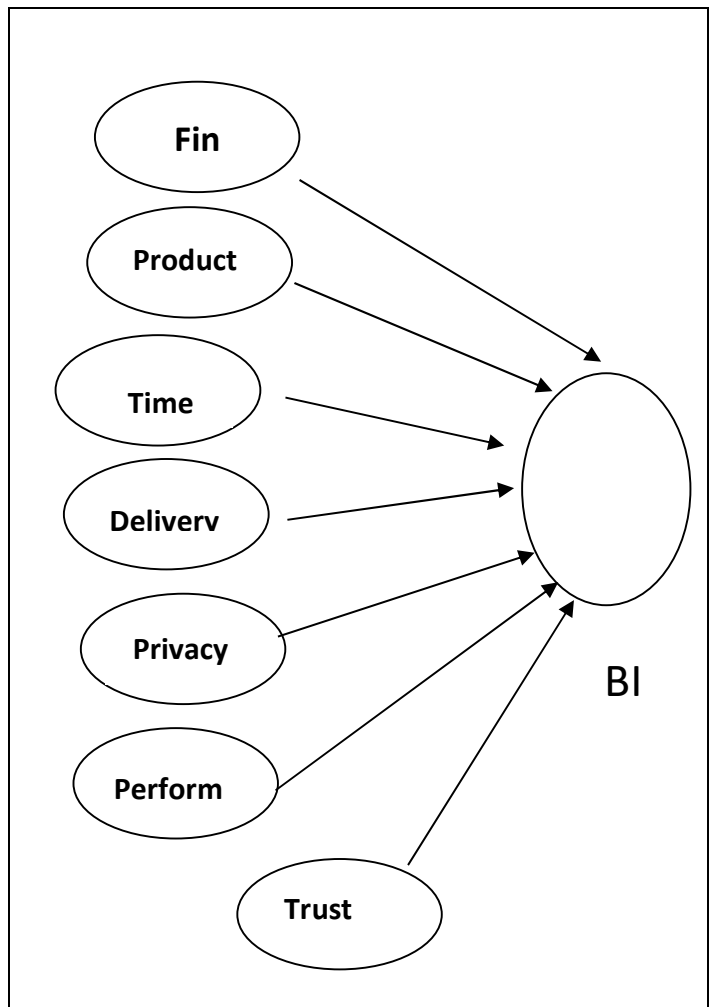
BI= Behavioral Intensions.

IV. RESEARCH METHODOLGY

In the first stage we will use the sampling method to get the nod of the population. In second stage we will explaining the methodology of the Research Paper.

A. Population, Measurement and Sampling Technique:

To verify questions Causes by this research the we conducted a Survey Form with the help of sampling Method using google form. The Survey Form was Plot to investigate all the data variables are there in Research model indicate that the Survey Form was reliable and therefore the Cronbach Alpha value was (0.68). The Survey Form was designed asper Likert scaling technique.

B. Data Collection

We have collected the info using google forms. We got the responses from 172 people across India Out of which 71.5% are Male and 28.5% are Female. Data is collected through Likert scale. during this response we ought to understand how frequently user are using E-commerce for shopping and of which age of individuals are using it frequently supported this we've got done the test.

C. Hypothesis

After doing the survey a hypothesis testing is completed on the chance. For this hypothesis is given as.

Null Hypothesis. H0=there isn't any risk in e-commerce.

Alternate Hypothesis H1= There are some risks in e-commerce.

D. Explanation and Analysis

Demographic Test: The demographic profile of the respondent is showing during this table (knowledge of all the respondent). Table 2 shows No of respondents which is 172 respondents in which 123 are male and 49 are females. In age, under 20 are 16

(9.3%), age 20-30 are 82(47.6%), age 31- 40 are 55

(31.9%), age 41-50 are 16 (9.3%) and above 51 are 3 (1.7%). Purchasing items from e-commerce over 1.5-2.5 times per year:

19.18% 1.5-2.5 times per year: 9.18% over 1.5-2.5 times per month: 42.81% 1.5-2.5 times per month: 23% Never: 10.09%.

Table 2.

RESPONDENT DEMOGRAPHIC	FREQUENCY	PERCENTAGE
Gender(N=172)		
Male	123	71.5
Female	49	28.5
Age(N=172)		
Under 20	16	9.3
20-30	82	47.6
31-40	55	31.9
41-50	16	9.3
above 51	3	1.7
Times Purchased		
In year	=< 1.5-2.5	26.36
In month	=< 1.5-2.5	64.51
Never		10.09

E. Reliability test

Reliability Analysis is that the commencement conducted in any quantitative survey-based research. Reliability of the instrument refers to the degree at which the study is predicted to deliver stable and consistent results. To get the measurement of proposed model and reliability assessment we are using Cronbach alpha method. The projected values of Cronbach's alpha are used as shown in table 3. during this table, the Cronbach's alpha values are between from 0.71- 0.89 which shows that every data has high upstanding. Alpha of monetary Risk is 0.89, alpha of Product risk is 0.71, alpha of Privacy risk is 0.82, NDR alpha is 0.77, alpha of Performance risk is 0.92.

Table 3.

construct	Valid N	Number of items	Cronbach's Alpha
Financial risk	172	3	0.89
Product risk	172	5	0.74
Non delivery risk	172	4	0.77
Performance risk	172	5	0.71
Privacy risk	172	5	0.82

The KMO evaluates the capability sampling that checks whether the responses of sample's are accepted or not. It must be around

0.6 for a good correlational analysis to start. If the cost of KMO is a smaller amount than 0.6 than its not acceptable. The worth of KMO for Financial Risk is 0.77, value of KMO for Product risk is 0.82, value of KMO for performance risk is 0.83, value of KMO for Non delivery risk for 0.86, value of KMO for Privacy is 0.81. Bartlett's test is preferred for strength of correlation Among variables.

Constructs	Number of items	KMO-measure of sample adequacy	Bartlett's Test-sphericity chi-square test	Bartlett's test-sphericity significance
Financial risk	3	0.77	356	0.00
Product risk	5	0.82	328	0.00
Non delivery risk	4	0.86	1023	0.00
Performance risk	5	0.83	289	0.00
Privacy risk	5	0.83	293	0.00

F. Total Variance and Eigen-values

Elements of the construct are stated Principal components that have eigen-value over one. it's possibly best to run a primary analysis with the eigen-value quite 1. Table 4 shows all the eigen-values and every one variance described for construct. The financial risk which has 3 items described the variance of 61.253%. the merchandise risk which has 5 items described the variance of 63.382%. The performance risk which has 5 items described the variance of 71.891%. The non-delivery risk which has 4 items described the variance of 55.467%. The privacy risk which has 5 items described the variance of 70.889%.

component	Total	%of variance
1	1.865	61.253
2	4.690	63.382
3	2.259	71.891
4	4.622	55.467
5	1.398	70.889

V. CONCLUSION

1. supported previously conceptualized research model, this research paper aimed toward developing and validating a scale based which analyses the impact of varied risk dimensions and trust on online shopping behavior. Six risk dimensions like financial, product, privacy, time & convenience, performance and delivery were considered within the construct. it absolutely was proposed that these six dimensions together with trust would act as determinants of online shopping behavior amongst the Indian people. The conceptual model was proposed and the draft questionnaire was tested on a sample of 172 internet buyers falling in a cohort of 15 to 65. Cronbach's Alpha reliability score for the draft questionnaire stood at 0.78, indicating the suitability of the instrument for larger sample collection and analysis. To explore the latent structure underlying the massive data, EFA was conducted and therefore the process extracted three factors like Financial and Convenience Risk (FCR), Perceived Trust (PT) and products and Delivery Risk (PDR). These five factors accounted for a complete variance of 63.57%. supported the results of the correlational analysis, a revised conceptual model was proposed. Based on p-value we reject the null hypothesis saying there's no risk in e-commerce and accept the alternate hypothesis.

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