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RESEARCH ARTICLE

Critical Risk Features of Digital Buying: A Quantitative Assessment

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Abstract

Objective: The purpose of this study is to analyse Critical Risk Features via Digital Buying and to quantify the Risk Factor Score (RFS) during COVID 19 Pandemic. **Methods**: Theory of Planned Behaviour (TPB), Perceived Risk Theory (PRT) and Theory of Acceptance Model (TAM) were considered as a base models for selection the of variables. The survey instrument used in the present study was designed and validated using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Three hundred and twenty-two sample responses from Mysore city, Karnataka, India, were obtained through e-mail survey from digital buyers during May 2021–July 2021. The EFA, CFA and Linear regression models were adopted for quantitative assessment of risk features associated with digital buying. **Findings:** The critical risk features associated with digital buying were identified as; Contractual Risk (CR), Financial Risk (FR), Psychological Risk (PR), Perceived Quality Risk (PQR) and Social Risk (SR). The Risk Factor Score (RFS) for male and female digital buyers were noted as 3.7056 and 3.663 respectively. Thus, risk taking via digital buying by male is higher comparatively. The RFS for the group 31-45 years is 3.697, lesser than age group 15-30 (3.699), while the age group 46-60 RFS is noted as 3.827 which is higher comparatively. **Novelty:** The attempts were made to identify the risks features associated with digital buying during the pandemic. The present study outcome helps digital shopkeepers to respond positively to the needs of digital buyers during pandemic.

Keywords: Digital consumers; Digital Buyers; Risk factors; Consumer behaviour

1 Introduction

The COVID-19 pandemic is reshaping different forms of businesses; one of them is digital marketing. Many aspects of digital marketing augmented in response to the consequences of the virus [(1)]. The marketers shall have the knowledge about change in consumer responses towards digital buying with scientific evidence during pandemic [(2)].Post unlocking, consumer behaviour witnessed the modalities of 'new normal' life style. The risk factors in traditional versus digital buying evaluation revealed a notable change in buying behaviour. The digital buying intent positively affects shopping due to the risk factors. The assessment of various risk factors associated with

digital buying is to be measured to understand the digital buyer's attitude. The risk factors have significant effect on consumer decisions to buy online [3]. The situational factors affect hedonic and utilitarian motivation and hence there is a need to study various risk factors that influence digital buying [4]. The changes observed in Theory of Planned Behaviour (TPB) experienced the elasticity in terms of customer retention and hence there is a need to examine the perceived risk factors of digital buying intention [5]. It is vital to examine various risks factors that influences digital buying [6]. The literature remains silent to explore perceived risk factors associated with digital buying although there is rapid upsurge in digital shopping [7]. The existing literature have covered the risk factors associated with digital buying during non-pandemic situations while the recent COVID-19 pandemic which has brought drastic changes in digital buying intention need to be studied further [8].

The individuals having negative experiences demonstrated heightened fear of missing out (FOMO), loss aversion, and rumination during recent COVID-19 pandemic and demonstrated herd behaviour [9]. Given this background, there is strong need to assess the critical risk features associated with digital buying during COVID 19 Pandemic. Thus, the purpose of this study is to analyse Critical Risk Features via Digital Buying and to quantify the Risk Factor Score (RFS) during pandemic.

2 Methodology

The major determinants of Theory of Planned Behaviour (TPB), Perceived Risk Theory(PRT) and Theory of Acceptance Model (TAM) were used to explore the impact of COVID 19 Pandemic on digital buying attitude. The variables adopted for the current study were Contractual Risk (CR), Financial Risk (FR), Psychological Risk (PR), Perceived Quality Risk (PQR) and Social Risk (SR). The survey instrument was developed using 5 point Likert-Scale (Strongly Agree to Strongly Disagree). The sample size for the present research is computed as; n= $[1.96^2 * (0.3) (0.7)] / 0.05^2$, n= 322. Considering the possibilities of non-responses during pandemic situation, 375 questionnaires were distributed via email to digital consumers. After removing the outliers and incomplete responses, 322 responses were considered to be valid. The data were gathered during second wave of COVID-19 pandemic in tier-II city of Karnataka State, India between May 2021 to July 2021.The preliminary instrument development and field test was conducted with 30 respondents. The instrument has been designed having 5 drivers with 40 items. The Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were used to validate the instrument using SPSS software and AMOS [10]. The CFA confirms 15 items with 5 drivers. The model fitness is verified and Critical Risk Features associated via digital buying also Risk Factor Score (RFS) is quantified accordingly.

3 Results and Discussion

The Confirmatory Factor Analysis (CFA) is adopted to examine the model that is proposed and goodness-of-fit indexes are considered to evaluate proposed CFA. This investigation used the ratio of CMIN/ DF, which shall be within the threshold value of 5. The other fit indices include, GFI, AGFI, IFI, TLI, NFI and CFI are expected to be closer to unity and error approximation value RMSEA shall be less than 0.09 to be called as acceptable range [11].

The KMO value is 0.827, specifies that the sample size is sufficient and suitable to conduct EFA using Principal Component Analysis (PCA) followed by CFA. The key indicators of model fitness are good and acceptable. Based on extracted factors, CFA was carried out using SPSS and AMOS software. In the CFA analysis all, the five factors along with 15 items were confirmed.

Followings are the five confirmed Critical Risk Features;

1. Contractual Risk (CR)
2. Financial Risk (FR)
3. Psychological Risk (PR)
4. Perceived Quality Risk (PQR)
5. Social Risk (SR)

1. **Contractual Risk:** determines the extent of protection of e-consumers to overcome their anxieties as well as building up their confidence in digital buying. The enforcement of consumer rights through contractual agreement is vital for digital business. The digital brand trust and contractual risk are an antecedent to digital buying. The performance and contractual risk, trust and security have a significant impact on digital buying.
2. **Financial Risk:** has significant negative influence on digital buying. The financial risk along with product and non-delivery risks negatively affect the attitude of digital buyers. The fear for loss of money, non-delivery and improper return-policy has negative effect on the intention to buy.
3. **Psychological Risk:** led to panic buying due to buyer's perceptions such as threat of health crisis, scarcity of products, fear of unknown, negative emotions and uncertainty.

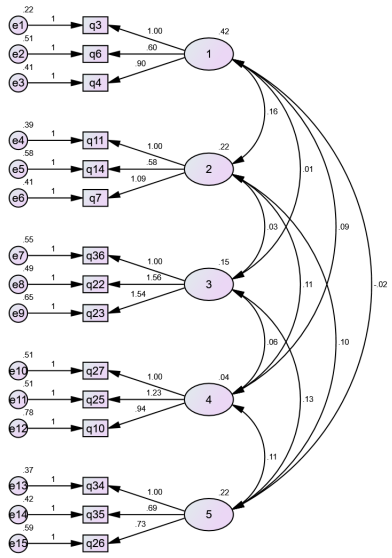

Fig 1. CFA for Critical Risk Features

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	49	270.579	141	.000	1.919
Saturated model	190	.000	0		
Independence model	19	1371.685	171	.000	8.022

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.034	.898	.862	.666
Saturated model	.000	1.000		
Independence model	.142	.445	.383	.400

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.062	.051	.074	.036
Independence model	.172	.164	.181	.000

Fig 2. Various fitness parameters of CFA

4. **Perceived Quality Risk:** influences digital buying. The perceived quality dimensions were; reliability, accessibility, ordering services, convenience, product content, assurance, and credibility.
5. **Social Risk factors:** have a negative impact on digital buying. Attitude, subjective norms, scarcity and healthy habit of social media use influence customers' panic buying intention during COVID-19 pandemic.

3.1 Assessment of Critical Risk Features

3.1.1 ***Predictive Model: Regression Analysis***

To assess the Critical Risk Features the linear regression equation is adopted in present study based on factors confirmed by second order CFA.

The variables and their relationship were shown in below section.

Thus, by substituting coefficients of dependent variables, risk score may be obtained. The respondents were classified based on the age and gender which are the demographic factors considered for the risk assessment independently. The summary of risk analysis is presented in below Table 1.

The Risk Factor Score of male is 3.7056, while the same with female is 3.663. Thus, risk taking by the male buyers are higher comparatively. In case of age wise analysis, it may be interpreted as the risk taking by the group 31-45 is lesser than age group

Table 1. Risk Assessment (Gender and Age wise)

No	Risk- Male Buyers	Score	Risk- Female Buyers	Score
1	Y=3.088+.047β1+.148 β2-.019 β3+.000 β4-.109 β5+.093 β6	3.70562 (74.11%)	Y=3.053+.143 β1+.079 β2-.047 β3-.030 β4-.119 β5+.137 β6	3.663 (73.26%)
2	Age:15-30	Y=2.857+ 0.096 β1+-0.056 β2+0.021 β3+0.129 β4+-0.042 β5+0.071 β6		3.699 (73.97%)
3	Age:31-45	Y= 2 .076+-0.161 β1+0.058 β2+-0.147 β3+0.065 β4+0.018 β5+0.063 β6		3.697 (73.94 %)
4	Age:46-60	Y= 3.429+0.076 β1+0.034 β2+0.190 β3+0.001 β4+-0.243 β5+0.073 β6		3.827 (76.53%)

15-30 while the age group 46-60 comparatively takes higher risk. The present research identified five perceived risk factors that are associated with digital buying; Contractual Risk, Financial Risk, Psychological Risk, Perceived Quality Risk and Social Risk which affects digital buying.

The perceived risk factors associated with digital marketing are; social, psychological, physical, performance, financial risk, time risk which shows that the risk features such as physical and performance were existing before pandemic while the present study results during pandemic does not confirm. Due to threat of the health crisis, product scarcity, fear and negative emotions physical and performance were not gained much attention as a risk feature during pandemic [(12)]. Identified risk factors that stops potential digital buyers were found to be due to product risk, social risk, privacy risk and time risk during COVID-19.

The security risks are found to be on potential online buyers' minds followed by product risk, social risk, privacy risk, and time risk in the beginning of COVID spread in the year 2020. However, in 2021, as identified by present research contractual risk, financial risk, psychological risk, perceived quality risk were found in tire II city. The product risk and privacy risk influence consumer attitude in online shopping positively while delivery risk do not to have influence on attitude towards digital buying [(13)].

4 Conclusion

As there is a noticeable change in digital buying before and after the appearance of the COVID-19, the attempts are to be made to mitigate the risk features associated with digital buying during pandemic. The present study identifies critical risk features which digital shopkeepers are expected to understand so as to respond positively to the needs of digital buyers. Among the perceived risk features physical and performance were existing before pandemic while during pandemic does not confirm the same. Besides above risk factors discussed other features such as security, privacy, warranty, customer service, and website information, laws governing consumer rights protection in e-commerce influence customers' trust [(14)]. The effect of perceived size and perceived reputation on online trust is positively significant [(15)].In addition, the online trust has a positive influence on attitude and negative influence on perceived risk [(16)]. The perceived risk has a significant negative effect on attitude and purchase intentions [(17)]. The objective of the present study was fulfilled by identifying 5 perceived risk factors that are associated with digital buying were: Contractual Risk, Financial Risk, Psychological Risk, Perceived Quality Risk and Social Risk. The risk assessment was made on gender and age basis, the Risk Factor Score (RFS) on the five-point scale for male and female were noted as 3.7056 and 3.663. Thus, risk taking via digital buying by male is higher comparatively. The RFS of the group 31-45 years is 3.697, lesser than age group 15-30 (3.699), while the age group 46-60 is 3.827 indicating higher RFS comparatively. The exclusive study has been conducted during pandemic to understand the perceived risk factors associated with digital buying in tier II city of Karnataka, India. The outcome of the study will help digital store keepers to develop the marketing strategies to meet the digital consumers behavioural pattern. The present study has been carried out during pandemic in tire II city, while the study may be extended to other geographical region to note the differences in perceived risk features of digital buyers.

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