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### **Determinants of Online Purchase Intention and Behaviour: Role of Perceived Risk and Perceived Benefits**

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#### **ABSTRACT**

India has the more number of internet users and it is the second largest country after China in terms of number of internet users. The growth of India's internet users is reflected in various sectors like social media, digital advertising, e commerce and online payments. The most important goal of marketing is to reach consumers at the moments that most influence their decision<sup>1</sup>. This study aims to identify the determinants of online purchase intention and behaviour by integrating the theory of planned behaviour model. Questionnaire was developed based on literature review and data was collected from online users aged between 18 to 29 years. The developed research model was validated by SEM Path Analysis and the study revealed that perceived risk, perceived benefits, subjective norms, perceived behavioural control and attitude influences the online purchase intention and behaviour.

**KEYWORDS:** Perceived risk, perceived benefits, online, purchase intention, purchase behaviour.

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## 1. INTRODUCTION

Consumers can buy anything in online and in recent years online shopping has started gaining acceptance among consumers <sup>2</sup>. Consumer behaviour has changed since the emergence of internet and number of consumers using e-commerce to purchase goods and services has increased <sup>3</sup>. With 90 million strong online shoppers in India around 70% gather information from internet in which only 16 percent end up buying in the internet. For most of the products and services, consumers in urban areas, do online research and purchase offline, according to the report that surveyed 600 urban consumers who are active Internet users <sup>4</sup>. This study aims to integrate the theory of planned behaviour with additional determinants that shapes individual's Purchase intentions and behaviours. Perceived risk and perceived benefits of consumers has been added as determinants of online purchase intention. Online marketplace is dominated by youngsters and various studies have revealed that most of the internet users are aged between 18 and 29. Most of the marketers spend more attention in formulating online strategies by treating them as target segment <sup>5</sup>. The objective of this study is to identify the determinants of online purchase intention and to understand the role of perceived risk and perceived benefit on online purchase intention by extending the Theory of Planned Behaviour model among young internet users aged between 18 to 29 years.

## 1. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT:

### 2.1 Perceived Risk

Risks play a major role in consumer online buying behaviour. Since 1990, to explain consumer behaviour, the perceived risk theory is used. The readiness to purchase online is reduced due to perceived risk <sup>6</sup>. Peter and Rayan identified that the "Perceived Risk" is united in two ways which is Risk = Hazard + Outcome <sup>6</sup>. Perceived risk influences the online purchase intention and it is classified into various functional risks namely: financial risk, performance risk, physical risk, psychological risk and social risk <sup>7</sup>. Various researchers have identified that perception about various types of risks influences the online purchase intention. Various dimensions of perceived risk which influence the attitude towards online purchase intention are financial risk, time risk, social risk, advertisement risk, quality risk and information risk <sup>6</sup>. While engaging in purchasing behaviour, the unpredictable results which the consumers perceive is termed as Perceived risk which may influence consumers in a negative way <sup>8</sup>. Hunag (1998) found that online purchase intention depends upon the level of perceived risk and higher level of risk is associated with non-store purchase. In online purchases, Consumers are worried about various risks like fraud, payment risk and not receiving the ordered products. Previous studies have revealed that perceived risk has negative effect on consumers attitude towards shopping online. In other words, the lower the perceived risks the

consumers are more likely to shop online<sup>8</sup>. Based on the above reviews the following hypothesis is proposed:

Hypothesis H<sub>1</sub>: Perceived Risk has direct negative effect on online purchase intention

## **2.2 Perceived Benefits**

Davis (1989) defines Perceived usefulness or benefits as “the degree to which a person believes that using a particular system would accelerate his or her personal growth and would enhance his or her job performance”. User’s assessment about the product or service effect is termed as perceived benefit. Researchers have identified that the perceived benefit affects the motivation to use<sup>9</sup>. The most important factor which influences behavioural intention is perceived benefits. Perceived benefit play an important role and it affects the intention to pay for services online<sup>9</sup>. With this the following hypothesis is proposed:

Hypothesis H<sub>2</sub>: Perceived Benefits has direct positive effect on online purchase intention

## **2.3 Perceived Behavioural Control (PBC)**

Perceived Behavioural Control is integrated as an antecedent of behavioural intention in the theory of planned behaviour<sup>10</sup>. According to Ajzen (2002), perceived control is the perception of individuals that they can control the performance of a given behaviour. In Theory of Planned Behaviour, the antecedents for purchase intention are attitude, perceived behavioural control and subjective norm. Perceived behavioural control is regarded as an important determinant of behavioural intention according to technology adoption theories. Various researchers have argued that perceived behavioural control will influence customers’ attitude towards online store positively<sup>10</sup>. People perception on how much they are capable of performing a given behaviour is Perceived Behavioural Control which is divided into self-efficacy and facilitating condition. Previous researchers have shown that perceived behavioural control enables better prediction of behavioural intentions<sup>10</sup>. With these the following hypothesis is proposed:

Hypothesis H<sub>3</sub>: Perceived Behavioural control has direct positive effect on online purchase intention

## **2.4 Subjective Norm (SN)**

Theory of Reasoned Action states that the core determinant of behaviour is social influence. Subjective norm is defined by Fishbein & Ajzen, 1975 as the “a person’s perception that most people who are important to him think he should or should not perform the behaviour in question”. In Technology acceptance model (TAM), social influence was not considered whereas in TAM 2 social influence was considered to have direct effect on perceived usefulness which will influence purchase

intention<sup>11</sup>. According to the theory of planned behaviour, there are three determinants which explains the behavioural intention (i) Attitude (opinions of oneself about the behaviour) (ii) Subjective norm (opinions of others about the behaviour) and (iii) perceived behavioural control (self-efficacy towards the behaviour). Attitude, subjective norm, perceived behavioural control predicts and influences the intention and behaviour. According to Theory of Reasoned Action, Behavioural intention is a function of both attitudes and subjective norms towards that behaviour. Based on the above literatures the following hypothesis is proposed:

Hypothesis H<sub>4</sub>: Subjective norm has a direct positive effect on online purchase intention

## **2.5 Attitude**

Researchers argue that attitudes can be either strong or weak and they have found that attitude has an effect on behavioural intentions. Studies reveal that attitudes have a strong influence on online purchase intention<sup>10</sup>. Attitudes are defined as general and lasting feelings either positive or negative about an issue, or person or objects. And attitude towards online purchase is considered as the level of affect which can be positive, negative or neutral towards buying in online<sup>12</sup>. Theory of reasoned action and theory of planned behaviour is based on the postulation that the key determinant of behaviour intention is attitude<sup>12</sup>. The consumer's willingness to purchase online is referred as purchase intention. People's negative or positive attitude will influence the purchase intention and attitude is an important factor on purchase intention<sup>2</sup>. Various studies have found that attitude and purchase intention has a positive link across different products and services<sup>13</sup>. With these the following hypothesis is formulated:

Hypothesis H<sub>5</sub>: Attitude has a direct positive effect on online purchase intention

## **2.6 Purchase Intention (PI)**

Purchase intention refers to the subjective possibility that a consumer will buy a product or service and it is a predictor of subsequent purchase behaviour<sup>14</sup>. Smith & Murphy (2015) defined purchase intention as "a consumer's subject tendency to certain product, which could be the important indicator to predict consumer behaviour". Gomez, Lopez, & Molina (2015) proposed that purchase intention could be used for predicting purchase behaviour. Wong, & Lau (2015) pointed out purchase intention as the possibility of a consumer tending to purchase the product. Rodrigo & Hendry (2015) regarded purchase intention as the psychological state of a consumer planning to consume specific brand in certain period. Meanwhile, it was the probability and possibility of a consumer taking or having real purchase reaction<sup>15</sup>. The higher purchase intention stood for larger purchase probability, and consumers with positive purchase intention would form positive commitment<sup>16</sup>.

Hypothesis H<sub>6</sub>: Purchase intention has a direct positive effect on online purchase behaviour (PB)

## 2. CONCEPTUAL MODEL

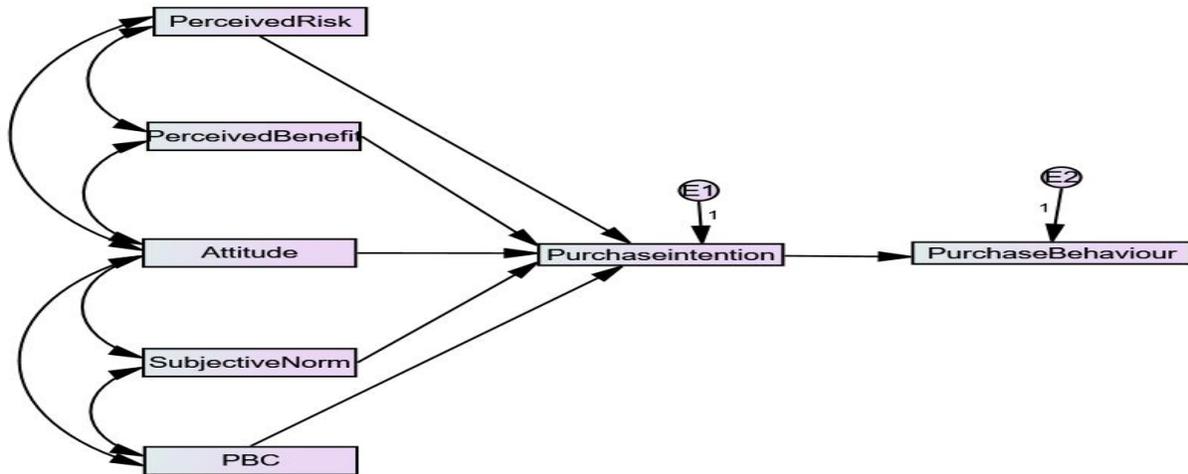


Figure 1: Conceptual Model – “Determinants of Online Purchase Intention Model”

## 3. RESEARCH METHODOLOGY

Descriptive research was undertaken and primary data for the study was collected using structured questionnaire. Questionnaire is an effective marketing tool which provides insight into a consumer’s opinion for business market research<sup>17</sup>. Likert Scale Questionnaire was designed using Google forms and distributed through e-mail and social media platforms for data collection. Questionnaire items were adopted from existing literature in order to enhance the content validity of the research. Samples for the survey constituted only internet users aged between 18 to 29 years and Convenience sampling method was adopted. 160 Questionnaire were duly filled by the respondents and was used for further analysis. Structural equation modelling (SEM) path analysis is used in order to analyze the data and identify the relationship between constructs.

## 4. ANALYSIS AND RESULTS

The internal consistency is measured by Cronbach’s alpha and it is above .70 which ensures the reliability of the research. SEM was administered to examine the modified Theory of Planned behaviour and to evaluate goodness of fit for the data collected.

Table 1. The Criteria of SEM

Criteria Item	Accepted values for good model fitness	Results of the model
GFI	> 0.90	0.95
CFI	> 0.90	0.94
RMR	< 0.05	0.021
RMSEA	< 0.08	0.062
CMIN/D	<2-3	1.190
$\chi^2$	NS	10.626

The  $\chi^2$  value indicated that the model fit for the collected data. Because of the drawbacks of the  $\chi^2$  goodness-of-fit tests, other descriptive fit indices are presented. Due to the sensitivity of the  $\chi^2$  statistic to sample size, alternative goodness-of-fit, root mean square residual (RMR), and root mean square error approximation (RMSEA) demonstrate the extent that overall model fit of SEM corresponds to the empirical data. The RMR value of 0.021 and the RMSEA value of 0.062 were both considered as a good fit. In addition, fit index for a baseline model will usually indicate a bad model fit and serves as a comparison value. The basic idea of comparison indices is that the fit of a model of interest is compared to the fit of some baseline model. The issue is whether the target model is an improvement relative to the baseline model. Often used measures based on model comparisons are the Comparative Fit Index (CFI) and the Goodness-of-Fit Index (GFI). As shown in Table.1 the GFI and CFI values were 0.95 and 0.94, respectively, all indicating the target model is an improvement relative to the baseline model.

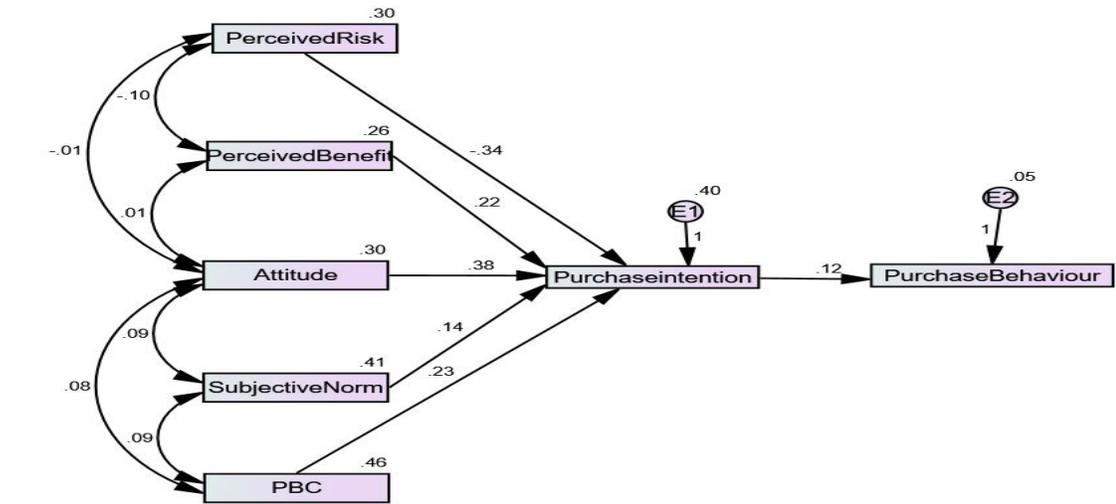


Figure 1: Estimates of the Proposed Model – “Determinants of Online Purchase Intention”

Table 2. Hypothesis testing

Hypothesis	Path	Direct effect on PI	Direct effect on PB	Indirect effect on PI	Indirect effect on PB	Total effect on PI	Total effect on PB
H1	Perceived Risk →PI →PB	-.336	.000	.000	-.040	-.336	-.040
H2	Perceived Benefit →PI→PB	.224	.000	.000	.026	.224	.026
H3	Attitude →PI →PB	.379	.000	.000	.045	.379	.045
H4	Subjective Norm →PI →PB	.137	.000	.000	.016	.137	.016
H5	PBC →PI →PB	.228	.000	.000	.027	.228	.027
H6	PI →PB	.000	.118	.000	.000	.000	.118

\*p Value <0.05

\*\* p Value <0.01

\*\*\*p Value <0.001

The direct path {Perceived risk → Purchase intention} is significant, with a regression parameter of -.336; t= -1.903; p-value, 0.057. Hypothesis H1 is therefore supported. The results indicate that perceived risk in the prediction of purchase intention is significantly different from zero at the 0.05 level (two tailed). The total (direct and indirect) effect of Perceived Risk on Purchase intention is -.336. That is, due to both direct (unmediated) and indirect (mediated) effects of Perceived Risk on Purchase intention, when Perceived Risk goes up by 1, Purchase intention goes down by 0.336. The total (direct and indirect) effect of Perceived Risk on Purchase Behaviour is -

.040. That is, due to both direct (unmediated) and indirect (mediated) effects of Perceived Risk on Purchase Behaviour, when Perceived Risk goes up by 1, Purchase Behaviour goes down by 0.04.

The path {Perceived benefit→ Purchase intention} is significant, with a regression parameter of .224;  $t = 1.192$ ;  $p$ -value, 0.233. Hypothesis H2 is therefore supported. The results indicate that perceived benefit in the prediction of purchase intention is significantly different from zero at the 0.05 level (two-tailed). The total (direct and indirect) effect of Perceived Benefit on Purchase intention is .224. That is, due to both direct (unmediated) and indirect (mediated) effects of Perceived Benefit on Purchase intention, when Perceived Benefit goes up by 1, Purchase intention goes up by 0.224. The total (direct and indirect) effect of Perceived Benefit on Purchase Behaviour is .026. That is, due to both direct (unmediated) and indirect (mediated) effects of Perceived Benefit on Purchase Behaviour, when Perceived Benefit goes up by 1, Purchase Behaviour goes up by 0.026.

The direct path {Attitude→ Purchase intention} is significant, with a regression parameter of 0.379;  $t = 2.191$ ;  $p$ -value, 0.028. Hypothesis H3 is therefore supported. The results indicate that the Attitude in the prediction of purchase intention is significantly different from zero at the 0.05 level (two-tailed). The total (direct and indirect) effect of Attitude on Purchase intention is .379. That is, due to both direct (unmediated) and indirect (mediated) effects of Attitude on Purchase intention, when Attitude goes up by 1, Purchase intention goes up by 0.379. The total (direct and indirect) effect of Attitude on Purchase Behaviour is .045. That is, due to both direct (unmediated) and indirect (mediated) effects of Attitude on Purchase Behaviour, when Attitude goes up by 1, Purchase Behaviour goes up by 0.045.

The direct path {subjective norm→ Purchase intention} is significant, with a regression parameter of 0.;  $t = .927$ ;  $p$ -value, 0.354. Hypothesis H4 is therefore supported. The results indicate that the subjective norm in the prediction of purchase intention is significantly different from zero at the 0.05 level (two-tailed). The total (direct and indirect) effect of Subjective Norm on Purchase intention is .137. That is, due to both direct (unmediated) and indirect (mediated) effects of Subjective Norm on Purchase intention, when Subjective Norm goes up by 1, Purchase intention goes up by 0.137. The total (direct and indirect) effect of Subjective Norm on Purchase Behaviour is .016. That is, due to both direct (unmediated) and indirect (mediated) effects of Subjective Norm on Purchase Behaviour, when Subjective Norm goes up by 1, Purchase Behaviour goes up by 0.016.

The direct path {Perceived Behavioural control →Purchase intention} is significant, with a regression parameter of 0.228;  $t = 1.644$ ;  $p$ -value, 0.100. Hypothesis H5 is therefore supported. The results indicate that the Perceived behavioural control in the prediction of purchase intention is significantly different from zero at the 0.05 level (two-tailed). The total (direct and indirect) effect of PBC on Purchase intention is .228. That is, due to both direct (unmediated) and indirect (mediated)

effects of PBC on Purchase intention, when PBC goes up by 1, Purchase intention goes up by 0.228. The total (direct and indirect) effect of PBC on Purchase Behaviour is .027. That is, due to both direct (unmediated) and indirect (mediated) effects of PBC on Purchase Behaviour, when PBC goes up by 1, Purchase Behaviour goes up by 0.027.

The direct path {Purchase intention→ Purchase behaviour} is significant, with a regression parameter of 0.118;  $t = 2.828$ ; p-value, 0.005. Hypothesis H6 is therefore supported. The results indicate that the Purchase intention in the prediction of purchase behaviour is significantly different from zero at the 0.001 level (two-tailed). The total (direct and indirect) effect of Purchase intention on Purchase Behaviour is .118. That is, due to both direct (unmediated) and indirect (mediated) effects of Purchase intention on Purchase Behaviour, when Purchase intention goes up by 1, Purchase Behaviour goes up by 0.118.

## **5. CONCLUSION**

Theory of Planned Behaviour model was modified and administered to identify the determinants of online purchase intention and behaviour. SEM was used to identify the causal relationships among constructs and the results indicate that the research model fits the data collected. Perceived risk, perceived benefits, attitude, perceived behavioural control and subjective norm influences the online purchase intention which affects the online purchase behaviour. Hence these constructs are to be considered by the marketers while devising their online marketing strategies.

The limitation of the study is that the sample size was small and constituted only consumers in urban areas of Tamil Nadu aged between 18-29 years. As the internet population in urban areas are higher compared to rural areas and consumers aged between 18-29 years account to majority of online users, they constituted the sample for this study. Hence it is unclear whether the result of this study is applicable to consumers in rural areas or in other states or countries. In order to come with stronger conclusion on this model future study can be conducted with larger sample and in other areas.

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