

Factors Influencing Online Impulse Buying Behavior and the Mediating Effect of Technology Acceptance Model (TAM)

Dr. Rajitha Xavior*

Associate Professor, Department of Commerce, Mary Matha Arts and Science College, Mananthavady, Wayanad, Kerala. (Affiliated to Kannur University).

*Corresponding Author: rajithajv@gmail.com

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ABSTRACT

The advancement in technology and its easy of handling makes the customers to go for online buying. The main aim of this study is to examine the factors that influence the consumers for online impulse buying behavior and to measure the mediating effect of technology acceptance model in online impulse buying. The analysis tool Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to achieve the goal. A standardized and pre-tested questionnaire was used to gather information from 305 respondents who were chosen using convenience sampling for the study. The study finds that, the factors such as 'Web Browsing' (WB), 'Visual Appeal' (VA), and 'Price Attributes'(PA) significantly influence the consumers for 'online impulse buying behaviour' (OIBB). Web browsing is not significantly associated with 'perceived ease of use' (PEOU) and 'perceived usefulness' (PU) while 'Visual Appeal' significantly associated with PEOU and PU. 'Price Attributes' (PA) is significantly associated with PEOU but not significantly associated with PU. Furthermore, perceived ease of use emerged as an important mediator between TAM and OIBB where PU is not. This research contributes to advancing theoretical frameworks and offer practical advice to online retailers to be success in their business.

Keywords: Web Browsing, Visual Appeal, Price Attributes, Perceived Ease of Use, Perceived Usefulness, Online Impulse Buying Behavior.

Introduction

The technology development and internet make the world move towards E- Commerce. One of the rapidly growing sectors in the world is online purchasing as it gives the consumers easiness and they don't have to spend much time on purchasing and it can be done at any point of time. Purchasing can be done easier through online shopping and it helps to fulfil the needs of impulsive shoppers. Online shoppers often engage in impulse buying, that happens when a customer has a sudden, persistent, and overwhelming need to make a purchase (Lee et.al, 2021). Direct sale and purchase are possible in online shopping and it avoids intermediaries. The customers are available with variety of choices which mostly led to impulse buying. Impulse buying is buying without thinking much carefully. In this online buying world, there are so many factors that influence the consumers for online impulse buying. Web browsing, visual appeal and price attributes are some of the factors.

Technology acceptance model (TAM) is the model which explains how men accept and use technology. In the year 1989, Davis created the most popular Technology Acceptance Model to describe the factors influencing adoption and utilization of technology. According to the paradigm, the attitudes of users which are impacted by perceived usefulness and ease of use have an impact on how

they make use of technology. TAM facilitates the customers for online shopping. E- Commerce and E-payments are done by using TAM. It facilitates the customers for faster, safer, and more effective electronic transactions (Arindy, 2020) and that results in online impulse buying.

As far as our knowledge increases, a gap can be found out in research related to the examination of the TAM factors, perceived ease of use and perceived usefulness as mediators among the factors influencing for online impulse buying. By understanding the importance of TAM factors, the researcher intends to evaluate the mediating role of perceived ease of use and perceived usefulness between the factors that influence the consumer for conducting online impulse buying.

Objectives

- To know whether the factors such as web browsing, visual appeal, and price attributes influence the consumers for online impulse buying.
- To measure the mediating effect of technology acceptance model among the factors towards online impulse buying.

Literature Review

The perceptions of web design, perceived privacy and reliability perceptions positively influence the customers repurchase intention. The influence of web design is also mediated by customer service perception on repurchase intention (Gusti Ayu, 2021). Online reviews create positive impact on purchase intention. Online rewards are not influencing the purchase behavior of consumers. Offline purchase creates more impulse buying customers than online impulse buying customers. Social networks influence for impulse buying (Zhang, 2020). The six factors that restrict the consumers from online shopping are fear, convenience of offline shopping, reputation, experience, insecurity and lack of trust (Daroch, 2021). The TAM factors such as perceived ease of use, perceived usefulness and attitude towards use influence the consumers for impulse buying. Personal tendency to purchase on impulse is the most important factor that intend the consumer for impulse buying intention online (Mijoska, 2023). Consumers impulse buying behavior is influenced by musical appeal and humor appeal. Demographic factors also influence the customers for impulse buying (Khawaja, 2018). Attitude, domain specific innovativeness and subjective norms positively influence the consumers for online shopping (Hosseini, et.al, 2012). Customer experience, perceived usefulness and perceived ease of use positively influence the intention to buy electric vehicles and also shows that perceived usefulness has impact on affect customer experience (Noor, et.al, 2025). The consumers experience on e-commerce, the perception about the product and customer service influence for online shopping. In the online shopping, customers mostly purchase clothes, books and online travel booking. Online shopping is a convenient shopping platform as there is no crowd of people (Jusoh et. al, 2012).

The female consumers are more influenced by negative comments than positive comments for online shopping behavior. The visual browsing behavior of consumers and their purchase intention are highly related (Chen, et.al, 2022). In case of live streaming, the factors influencing consumers for impulse buying are sales promotion, social presence and insightful managerial implications (Chunhui Huo, et.al, 2023). Online impulse buying behavior was influenced by perceived enjoyment and perceived usefulness. Perceived enjoyment and perceived usefulness are positively connected to visual appeal and price attributes (Cuong, 2023). Factors such as service quality, information quality and system quality of website and demographic factors influence consumers for online impulse buying (Hashmi, et.al, 2019).

Methods

The object of this study is to measure the influence of the factors such as web browsing, visual appeal, and price attributes for online impulse buying and also to know the mediating effect of technology acceptance model among the factors towards online impulse buying. For the study, both primary and secondary data were used. The consumers conducting online shopping in the Wayanad district of Kerala were the respondents for the study. By using a pre-established and standardized questionnaire, the primary data were collected from 305 samples. The samples were selected through purposive sampling method. The researcher used theories to conduct test in the study. For testing the hypotheses, P-values are compared with an alpha limit of 5% (0.05). SEM, the Structural Equation Model is used for the analysis. By covariance analysis, SEM gives a highly accurate covariance matrix. (Hair, Black, Babin, Anderson & Tatham, 2010). In a Likert scale of 5 to 1, with 5 as strongly agree and 1 as of strongly disagree, each respondent's responses to a statement item were measured. First of all,

the validity and reliability of the tools used for the study were examined. The statement item is deemed acceptable when factor loading is employed in basic decision-making testing and the factor loading is ≥ 0.70 (Hair et al., 2010).

The association between dependent and independent variables are measured by testing the following hypotheses.

Hypotheses

- H1:** Web Browsing has a significant relation with Online Impulse Buying Behavior.
H2: Web Browsing has a significant relation with Perceived Ease of Use.
H3: Web Browsing has a significant relation with Perceived Usefulness.
H4: Visual Appeal has a significant relation with Online Impulse Buying Behavior.
H5: Visual Appeal has a significant relation with Perceived Ease of Use.
H6: Visual Appeal has a significant relation with Perceived Usefulness.
H7: Price Attributes has a significant relation with Online Impulse Buying Behavior.
H8: Price Attributes has a significant relation with Perceived Ease of Use.
H9: Price Attributes has a significant relation with Perceived Usefulness.
H10: Perceived Ease of Use has a significant relation with Online Impulse Buying Behavior.
H11: Perceived Usefulness has a significant relation with Online Impulse Buying Behavior.

Results

Table 1: Measurement of Convergent Validity and Reliability

Constructs	Indicators	Item Loadings	Ave Variance Extracted	Composite Reliability	VIF
Web Browsing	WB1	0.865	0.806	0.892	1.616
	WB2	0.928			1.616
Visual Appeal	VA1	0.831	0.660	0.853	1.519
	VA2	0.839			1.693
	VA3	0.764			1.368
Price Attributes	PA1	0.779	0.652	0.849	1.413
	PA2	0.828			1.500
	PA3	0.815			1.441
Perceived Ease of Use	PEOU1	0.886	0.713	0.881	1.595
	PEOU2	0.828			1.986
	PEOU3	0.817			1.828
Perceived Usefulness	PU1	0.797	0.690	0.816	1.171
	PU2	0.863			1.171
Online Impulse Buying Behavior	OIBB1	0.766	0.581	0.806	1.241
	OIBB2	0.750			1.245
	OIBB3	0.772			1.278

Table 1 reveals the reliability of the variables. As per Fornell & Larcker, 1981, the convergence validity of the indicators was based on the factor loadings that exceeded 0.70 on the respective constructs. The latent variables WB, VA, PA, PEOU, PU and OIBB fall within the allowed ranges for convergent validity. Not only the convergent validity, the Average Variance Extracted (AVE) was also analyzed by the researcher and it shows that all values are in between 0.581 to 0.806, exceeding the recommended value of 0.50 (Fornell & Larcker, 1981). Internal consistency reliability was measured by Composite Reliability (CR). The CR values for each construct ranged from 0.806 to 0.892, beyond the 0.70 threshold recommended by Hair et al. (2013). To test the multicollinearity problems, the Variance Inflation Factors (VIFs) of the latent variables were calculated. The result gives the VIF values that occur between 1.171 to 1.986, significantly below the cutoff value 3.3. Therefore, this study did not experience uncertainties about collinearity.

Table 2: Fornell and Larcker Criterion Test for Discriminant Validity

Constructs	OIBB	PEOU	PU	PA	VA	WB
OIBB	0.763					
PEOU	0.358	0.844				
PU	0.185	0.041	0.831			
PA	0.463	0.337	0.233	0.807		
VA	0.394	0.349	0.308	0.352	0.812	
WB	0.347	0.111	0.241	0.329	0.401	0.898

By computing the square root of the AVE coefficient, discriminant validity assesses the correlations between variables (Kock, 2017). The square root of the AVEs for each latent construct must be greater than the correlations of any of the variables, according to Fornell and Larcker (1981). The values on the diagonal must, in other words, be higher than the numbers shown in the row to their left (Kock, 2017). Table 2 shows that the metrics used in the study have discriminant validity, demonstrating that all latent variables meet the conditions for validity.

Table 3: Hypotheses Testing

Hypothesis	Relationship	β	T-value	P-value	Result
H1	WB->OIBB	0.164	2.730	0.006	Supported
H2	WB->PEOU	-0.094	1.298	0.194	Not Supported
H3	WB->PU	0.113	1.755	0.079	Not Supported
H4	VA->OIBB	0.155	2.321	0.020	Supported
H5	VA->PEOU	0.293	5.262	0.000	Supported
H6	VA->PU	0.221	3.130	0.002	Supported
H7	PA->OIBB	0.286	5.014	0.000	Supported
H8	PA->PEOU	0.265	4.561	0.000	Supported
H9	PA->PU	0.118	1.877	0.061	Not Supported
H10	PEOU->OIBB	0.189	4.110	0.000	Supported
H11	PU->OIBB	0.024	0.392	0.695	Not Supported

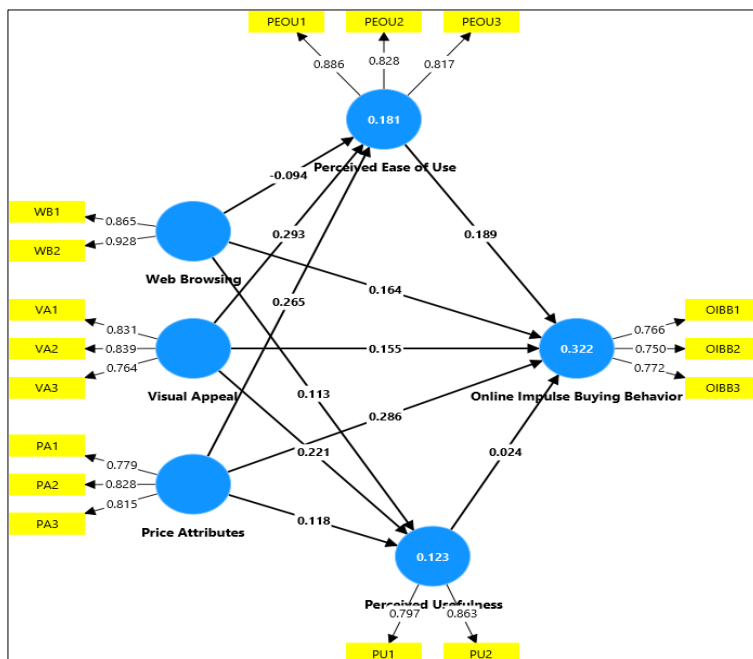


Fig. 1: Path analysis of structural model

Structural Model

Table 3 shows the path coefficient that WB has a significant relationship with OIBB ($\beta = 0.164$, $P = 0.006 < 0.05$). But WB does not show a positive relationship with PEOU ($\beta = -0.094$, $P = 0.194 > 0.05$) and with PU ($\beta = 0.113$, $P = 0.079 > 0.05$). VA displays a positive significant relation with OIBB ($\beta = 0.155$, $P = 0.020 < 0.05$) with PEOU ($\beta = 0.293$, $P = 0.000 < 0.05$) and also with PU ($\beta = 0.221$, $P = 0.002 < 0.05$). PA shows a positive relation with OIBB ($\beta = 0.286$, $P = 0.000 < 0.05$) and with PEOU ($\beta = 0.265$, $P = 0.000 < 0.05$) but does not significantly associate with PU ($\beta = 0.118$, $P = 0.061 > 0.05$). PEOU show a significant positive mediation effect towards OIBB ($\beta = 0.189$, $P = 0.000 < 0.05$) and PU does not show a significant mediation effect towards OIBB ($\beta = 0.024$, $P = 0.695 > 0.05$).

Discussion

The results indicate that the factors such as web browsing, visual appeal and price attributes significantly and positively influence the consumers online impulse buying behavior. Visual appeal and price attributes has positive association with perceived ease of use but web browsing is not related to perceived ease of use. Visual appeal positively and significantly related to perceived usefulness but web browsing and price attributes were not associated with perceived usefulness. By measuring the mediating effect of technology acceptance model through its factors in online impulse buying behavior of consumers, the result reveals that the factor perceived ease of use influence the consumers for online impulse buying behavior but perceived usefulness is no influencing the consumers for online impulse buying.

Conclusion

To conclude, this study offers insightful information on the association between the factors that influence the consumers for online impulse buying behavior. The study confirms the significant mediating role of TAM factors in influential customers' decisions to go for online impulse buying. Web browsing, visual appeal and price attributes have varying level of direct influence towards online impulse buying behavior of consumers. Also, the mediator, perceived ease of use also influences for online impulse buying behavior.

As the research provide valuable insights about the factors that influence the consumers for online impulse buying, it can be highly beneficial to the online retailers. The online retail business can design marketing strategies based on these factors. The importance of TAM factor, perceived easy of use can also be made in use while designing the strategies to influence the consumer, to create loyalty, and to improve overall online market performance. Thus, the study provides practical insights that can support online retailers in making informed business and marketing decisions.

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