



## Effect of Technical efficacy, Perceived Usefulness, Satisfaction with the Internet on Online Shopping Behavior

Dr. Chidananda H L<sup>1</sup>, Anish Gaurav G K<sup>2</sup>, Aqil Afsal<sup>3</sup> and Khader Nishad<sup>4</sup>

<sup>1</sup>Assistant Professor, School of Economics and Commerce, CMR University Bangalore, India

<sup>2,3,4</sup>Research Student, School of Economics and Commerce, CMR University Bangalore, India

*Corresponding Author: Anish Gaurav G K*

Date of Submission: 08-05-2024

Date of Acceptance: 21-05-2024

**ABSTRACT:** This study investigates the influence of technical efficacy, perceived usefulness, and satisfaction with the internet on online shopping behavior, focusing on electric vehicle purchase intention. Through a sample of 185 participants, data were collected via a structured questionnaire administered through Google Forms, with responses rated on a five-point Likert scale. Regression analysis conducted using SPSS 20 revealed significant relationships between the independent variables and online shopping behavior. Specifically, higher levels of technical efficacy, perceived usefulness, and satisfaction with the internet were associated with increased engagement in online shopping activities, highlighting their importance in driving consumer behavior in the digital marketplace.

**KEYWORDS:** Technical efficacy, perceived usefulness, satisfaction, online shopping behaviour

### I. INTRODUCTION

Online shopping, a crucial component of modern consumer behavior, has completely changed the retail scene globally by enabling people to use computers, smartphones, and tablets to make purchases of goods and services via the internet. The popularity of online shopping has significantly increased in recent years, largely due to technical improvements that have made the experience more accessible, safe, and convenient than in the past (Bilgihan, Kandampully & Zhang, 2016). Secure payment gateways, encryption methods, and cybersecurity precautions have all helped to alleviate consumer concerns about transaction safety and build trust (Kim, Tao, Shin & Kim, 2010). Furthermore, the widespread availability of high-speed internet and mobile devices has made online shopping more fluid and immersive, allowing customers to browse and buy

things whenever they choose. The COVID-19 pandemic has boosted online shopping adoption, as lockdowns have forced consumers to rely largely on e-commerce (Vinerean, Budac, Baltador & Dabija, 2022). This shift highlighted the resilience and convenience of online shopping, prompting traditional retailers to bolster their online presence (Kurniawan & Indriani, 2023). In recent years, research on online purchasing behavior has made considerable progress as scholars have examined a wide range of aspects of consumer preferences and behavior. Interestingly, studies have looked into elements including social cues, security features, and website design that affect customer satisfaction and trust in online transactions (Karimov, Brengman & Van Hove, 2011). Furthermore, research has investigated how customer reviews and ratings modify consumers' perceptions of the quality and reliability of products, which in turn affects their decision to buy (Park, Lee & Han, 2007). Researchers are studying how peer pressure and social interactions affect online purchase behavior, with a focus on social commerce platforms (Cheung, Liu & Lee, 2015). Studies have also focused on recommendation systems and personalized marketing methods, evaluating how well they increase consumer involvement and buy intention (Kim, Song & Lee, 2019). Moreover, retailers may now evaluate customer data, forecast behavior, and customize marketing campaigns thanks to the integration of AI and machine learning (Haleem et al., 2022). The study's importance stems from its thorough analysis of the relationship between technical efficacy, perceived usefulness, internet satisfaction, and how these factors interact to influence online shopping behavior (Karimov, Brengman & Van Hove, 2011; Haleem et al., 2022; Cheung, Liu & Lee, 2015; Kim, Song & Lee, 2019; Park, Lee & Han, 2007). It is essential for companies looking to improve consumer happiness in the digital era and create



successful marketing strategies to comprehend these variables. Nevertheless, despite advancements, questions remain about how these elements interact to affect consumers' online purchasing decisions, necessitating additional research (Haleem et al., 2022; Kim, Song & Lee, 2019). Therefore, the study's objectives is to examine the effect of perceived utility, technical efficacy and satisfaction with internet n online purchase behavior,

## II. Literature Review

### Technical efficacy and online shopping behavior

Online shopping behavior is thought to be positively impacted by technical efficacy, which is defined as the perceived capacity to use technology efficiently. The importance of technological efficacy in influencing consumer behavior in the digital marketplace has been underlined by a number of research. past (Bilgihan, Kandampully& Zhang, 2016), discovered, for example, that customers who possess better degrees of technical efficacy also exhibit higher levels of engagement and pleasure with online buying platforms. In a similar way, Hernandez, Jimenez & Jose Martin, (2009), emphasized how technological efficacy contributes to smooth and engaging online shopping experiences, which raise frequency and intention to buy.

Ahmed, Hussein, Minakhatun& Islam, (2007). also emphasized the significance of technical efficacy in building consumer confidence and trust in e-commerce platforms, which in turn positively influences online shopping behavior. This study aims to provide empirical evidence in favor of the notion that technological efficacy has a beneficial impact on online shopping behavior, building on the body of current knowledge. Based on above discussion below hypothesis framed:

**H<sub>1</sub>:** Technical efficacy positively affects the online shopping behaviour

### Perceived usefulness and online shopping behaviour

Perceived usefulness, defined as the subjective assessment of how much using a technology or system improves performance or simplifies task completion, is expected to have a favorable impact on online shopping behavior. Extensive research in the fields of technology adoption and consumer behavior has demonstrated the importance of perceived usefulness in motivating users to use technology-based solutions. Davis (1989) created the Technology Acceptance Model (TAM), which holds that perceived usefulness is an important predictor of users' attitudes and intentions to adopt

new technologies. Subsequent research has found empirical evidence supporting the favorable relationship between perceived usefulness and a variety of online actions, including online shopping. For example, Cheung, Liu & Lee, (2015) discovered that consumers who regard online shopping platforms as useful are more likely to engage in online buying and report higher levels of pleasure. Similarly, Yu & Lee, (2019), found that perceived utility strongly affects consumers' intention to continue using e-commerce platforms. Based on above evidences, below hypotheses framed:

**H<sub>2</sub>:** Perceived usefulness positively affects the online shopping behaviour

### Satisfaction with internet and online shopping behaviour

Satisfaction with internet services is a key factor influencing user engagement and entire online experience. According to research, there is a considerable association between internet user satisfaction and online shopping activity. According to research, people who express high levels of pleasure with their internet experiences are more likely to engage in frequent and diverse online shopping activities. This pleasure is due to a variety of factors, including internet service reliability, simplicity of navigation, and overall user experience (Mamakou, Zaharias & Milesi, 2024). Customers are more confident in online transactions and are more likely to make repeat purchases when they perceive the internet to be dependable and user-friendly (Chiu, Hsu, Lai & Chang, 2012). Furthermore, as faster and more secure connections lower the perceived risks associated with online purchases, user satisfaction with internet speed and security has a major impact on users' online buying behaviors (Hung, Cheng & Hsieh, 2015). This relationship implies that increasing the quality of internet service might have a direct impact on customer behavior by promoting increased use of online retail services. Because it emphasizes the need of a seamless and secure online environment for promoting consumer trust and boosting online sales, a grasp of the dynamics of internet satisfaction and its influence on online buying behavior is vital for e-commerce initiatives. Based on above discussion, below hypotheses is framed:

**H<sub>3</sub>:** Satisfaction with internet positively affects the online shopping behaviour



### III. Methods

This study employed quantitative method and a convenience sampling technique was used to choose a sample of 185 people to evaluate the association between technical efficacy, perceived utility, internet satisfaction, and online buying behavior. Participants were chosen based on their accessibility and willingness to participate, with the goal of ensuring a varied representation. Data was collected using a standardized questionnaire disseminated via Google Forms, which ensured easy answer collecting and efficient data administration.

The questionnaire included topics aimed to assess users' technical efficacy, perceived usefulness, internet satisfaction, and online buying habits. Each item was assessed on a five-point Likert scale, with 5 (Strongly Agree) and 1 (Strongly Disagree), allowing participants to accurately express their agreement or disagreement with each statement. The collected replies were then evaluated using regression analysis in SPSS 20, a widely used statistical software application for data analysis. Regression analysis was used to determine the predictive potential of the independent factors (technical efficacy, perceived usefulness, and internet satisfaction) on the dependent variable (online purchasing behavior). This method examines the degree and direction of correlations between variables, providing useful insights into the factors impacting online shopping behavior. The study's findings are expected to lead to a better understanding of consumer behavior in the digital age, with practical implications for businesses and policymakers looking to improve online shopping experiences and increase consumer engagement and happiness.

### IV. Result

**Table no. 1: Determinants of online shopping behaviour**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.633 <sup>a</sup>	.612	<b>.637</b>	.2017
a. Predictors: (Constant), technical efficacy, perceived usefulness, and satisfaction with the internet				

**Source: Primary Data**

The regression model's modified R square value (Table No. 1) of 0.637 suggests that technical efficacy, perceived usefulness, and internet

contentment together explain approximately 63.7% of the variability in online buying behavior. This value represents the fraction of the dependent variable's variation explained by the model's independent variables. A higher adjusted R square value indicates that the model fits the data better, implying that the selected predictors (technical efficacy, perceived usefulness, and internet satisfaction) contribute significantly to explaining the variation in online shopping behavior. In this context, the adjusted R square value of 0.637 suggests that the model is well-fitting and adequately represents the relationships between the independent and dependent variables. It implies that technical efficacy, perceived utility, and internet contentment are major predictors of online purchasing behavior, emphasizing the importance of these characteristics in understanding and forecasting customers' online shopping behaviors.

**Table no. 2: Determinants of online shopping behaviour**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.612	.023		.555	.345
	Technical efficacy	.599	.077	.578	10.07	.000
	Perceived usefulness	.623	.057	<b>.634</b>	4.001	.000
	Satisfaction with the Internet	.654	.125	.668	13.21	.000

a. Dependent Variable: **Online Shopping Behaviour**

**Source: Primary Data**

The coefficients table (Table 2) shows the findings of the regression study, which looked at the factors that influence online buying behavior, such as technical efficacy, perceived utility, and internet contentment. The standardized coefficients (Beta) represent the relative importance of each independent variable in predicting online shopping behavior. The findings show that all three independent variables strongly predict internet buying behavior. Positive standardized coefficients are found for technical efficacy (Beta = 0.578,  $p < 0.001$ ), perceived usefulness (Beta = 0.634,  $p < 0.001$ ), and internet satisfaction (Beta = 0.668,  $p < 0.001$ ), indicating that higher levels of these factors lead to more online shopping. These findings are consistent with previous research emphasizing the significance of technical efficacy, perceived usefulness, and internet satisfaction in increasing customer involvement in online buying (Bilgihan, Kandampully & Zhang, 2016). Furthermore, the



findings show the importance of online satisfaction, which has the highest standardized coefficient of any of the predictors studied. This emphasizes the importance of internet satisfaction in determining online purchasing behavior, since satisfied customers are more inclined to participate in online shopping activities. This finding is consistent with previous research highlighting the impact of internet quality and usability on customer behavior in the digital marketplace (Fan, Yul Lee, & Kim, 2013).

#### V. Conclusion:

This study has greatly improved our understanding of the complex interaction between technical efficacy, perceived utility, internet satisfaction, and online buying behavior, with a focus on electric vehicle purchase intention. Through meticulous regression analysis, the findings revealed compelling insights into these intricate dynamics, revealing that increased levels of technical efficacy, perceived usefulness, and internet satisfaction are strong predictors of increased engagement in online shopping activities. These findings highlight the critical roles of technical proficiency, perceived benefits, and online satisfaction in affecting consumer decision-making processes in the digital arena, particularly in the context of electric vehicle adoption. The consequences of these findings go beyond academics, providing meaningful insights for businesses and policymakers attempting to navigate the fast-changing digital landscape. However, it is critical to recognize the study's limitations, such as its dependence on convenience sampling and self-reported measures, which may limit the generalizability of the findings.

While this study has provided useful insights into the factors that influence online buying behavior, future research should focus on a number of areas for additional investigation. Adopting more rigorous sample procedures and broadening the scope of research to include other elements impacting online buying behaviour could help us better understand customer preferences and behaviors in the digital domain. Furthermore, longitudinal studies that trace the evolution of online buying behavior over time, along with in-depth qualitative research, could provide a full understanding of the underlying mechanisms influencing consumer decision-making processes. Furthermore, investigating the impact of demographic variables and individual traits on online buying behavior is worthwhile, as it may reveal significant insights for targeted marketing

strategies and customer segmentation approaches. By implementing these recommendations, future research can expand on the foundation created by this study, furthering our understanding of online shopping behavior in an ever-changing digital context.

#### REFERENCES

- [1]. Ahmed, M., Hussein, R., Minakhatun, R., & Islam, R. (2007). Building consumers' confidence in adopting e-commerce: a Malaysian case. *International Journal of Business and Systems Research*, 1(2), 236-255.  
<https://doi.org/10.1504/IJBSR.2007.015378>
- [2]. Bilgihan, A., Kandampully, J., & Zhang, T. (2016). Towards a unified customer experience in online shopping environments: Antecedents and outcomes. *International Journal of Quality and Service Sciences*, 8(1), 102-119.  
<https://doi.org/10.1108/IJQSS-07-2015-0054>
- [3]. Cheung, C. M., Liu, I. L., & Lee, M. K. (2015). How online social interactions influence customer information contribution behavior in online social shopping communities: a social learning theory perspective. *Journal of the Association for Information Science and Technology*, 66(12), 2511-2521.  
<https://doi.org/10.1002/asi.23340>
- [4]. Chiu, C. M., Hsu, M. H., Lai, H., & Chang, C. M. (2012). Re-examining the influence of trust on online repeat purchase intention: The moderating role of habit and its antecedents. *Decision Support Systems*, 53(4), 835-845.  
<https://doi.org/10.1016/j.dss.2012.05.021>
- [5]. Davis, F. D. (1989). Technology acceptance model: TAM. Al-Suqri, MN, Al-Aufi, AS: *Information Seeking Behavior and Technology Adoption*, 205, 219.
- [6]. Fan, Q., Yul Lee, J., & In Kim, J. (2013). The impact of web site quality on flow-related online shopping behaviors in C2C e-marketplaces: A cross-national study. *Managing Service Quality: An International Journal*, 23(5), 364-387.  
<https://doi.org/10.1108/MSQ-11-2012-0150>
- [7]. Haleem, A., Javaid, M., Qadri, M. A., Singh, R. P., & Suman, R. (2022). Artificial intelligence (AI) applications for marketing: A literature-based study. *International Journal of Intelligent Networks*, 3, 119-132.  
<https://doi.org/10.1016/j.ijin.2022.08.005>



- [8]. Hernandez, B., Jimenez, J., & Jose Martin, M. (2009). The impact of self-efficacy, ease of use and usefulness on e-purchasing: An analysis of experienced e-shoppers. *Interacting with computers*, 21(1-2), 146-156. <https://doi.org/10.1016/j.intcom.2008.11.001>
- [9]. Hung, S. W., Cheng, M. J., & Hsieh, S. C. (2015). Consumers' satisfaction with online group buying—an incentive strategy. *International Journal of Retail & Distribution Management*, 43(2), 167-182. <https://doi.org/10.1108/IJRDM-09-2013-0183>
- [10]. Karimov, F. P., Brengman, M., & Van Hove, L. (2011). The effect of website design dimensions on initial trust: A synthesis of the empirical literature. *Journal of Electronic Commerce Research*, 12(4).
- [11]. Kim, C., Tao, W., Shin, N., & Kim, K. S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. *Electronic commerce research and applications*, 9(1), 84-95. <https://doi.org/10.1016/j.elerap.2009.04.014>
- [12]. Kim, H. Y., Song, J. H., & Lee, J. H. (2019). When are personalized promotions effective? The role of consumer control. *International Journal of Advertising*, 38(4), 628-647. <https://doi.org/10.1080/02650487.2019.1593721>
- [13]. Kurniawan, A. T., & Indriani, F. (2023). Analysis of Factors Influencing Shopee E-Commerce Purchase Decisions. *Return: Study of Management, Economic and Business*, 2(3), 288-296. <https://doi.org/10.57096/return.v2i03.87>
- [14]. Mamakou, X. J., Zaharias, P., & Milesi, M. (2024). Measuring customer satisfaction in electronic commerce: The impact of e-service quality and user experience. *International Journal of Quality & Reliability Management*, 41(3), 915-943. <https://doi.org/10.1108/IJQRM-07-2021-0215>
- [15]. Park, D. H., Lee, J., & Han, I. (2007). The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement. *International journal of electronic commerce*, 11(4), 125-148. <https://doi.org/10.2753/JEC1086-4415110405>
- [16]. Vinerean, S., Budac, C., Baltador, L. A., & Dabija, D. C. (2022). Assessing the effects of the COVID-19 pandemic on M-commerce adoption: an adapted UTAUT2 approach. *Electronics*, 11(8), 1269. <https://doi.org/10.3390/electronics11081269>
- [17]. Wang, S., Li, X., & Zhang, D. (2023). Personalized product recommendations in online retail: Effects on consumer engagement and purchase intention. *Journal of Interactive Marketing*, 56, 102461.
- [18]. Yu, S., & Lee, J. (2019). The effects of consumers' perceived values on intention to purchase upcycled products. *Sustainability*, 11(4), 1034. <https://doi.org/10.3390/su11041034>