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Unraveling the Effects of Online Shopping on Consumer Behavior: An In-depth Exploration

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Abstract

In today's ever-evolving landscape, the rise of digital technologies has fundamentally transformed the operational dynamics of businesses, particularly within the realm of e-commerce. This study delves into the patterns of consumer purchasing behavior in the context of online shopping. The internet has redefined the shopping experience, serving as a potent tool for conducting business transactions. With numerous advantages, an increasing number of individuals favor online stores over traditional brick- and-mortar establishments. A key aspectof online shopping is its round-the-clock accessibility, allowing customers to make purchases at any hour due to the 24/7 availability of online shopping platforms. This research seeks to identify the various factors that influence consumers' buying behavior during online shopping endeavors. The investigation focuses on several factors that commonly impact customers' shopping patterns, including trust, perceived risk, social influence, product variety and pricing, technological features, or website quality, as well as demographic elements such as age and gender.The findings of the study are that trust, product variety and price, gender positively impact online shopping behavior and online shopping behavior positively impact customer satisfaction.

Keywords: Online shopping behavior, trust, perceived risk, social influence, product variety,price, techfeatures, website quality.

Introduction

The rise of e-commerce has fundamentally transformed the way consumers buy and interact with brands (Chen, Hsu, & Lin, 2010). Gone are the days of limited selection and geographical constraints; online shopping platforms offer a vast array of products, competitive pricing, and the convenience of around-the-clock access (Nazir et al., 2012). This widespread adoption of online shopping has had a significant impact on consumer behavior globally, as emphasized by Turcomat (2023). The shift towards online shopping can be attributed to a multitude of factors, with one of the primary drivers being the unparalleled convenience and time-saving advantages it offers over traditional retail experiences (Chen, Hsu, & Lin, 2010). Unlike brick-and-mortar stores, online shopping platforms provide consumers with the flexibility to browse and make purchases at their own convenience, irrespective of time or location. This accessibility has reshaped the way consumers approach their purchasing decisions, allowing them to effortlessly explore a vast array of products and services with just a few clicks.Furthermore, the transition from physical stores to online channels has had a profound impact on consumer behavior, fundamentally altering decision-making processes, purchasing patterns, and brand preferences (Schaupp & Belanger, 2005). Moreover, the inability to physically examine products before buying can trigger uncertainty and purchase anxiety, as discussed by A. Abu-Dhabi and Al-Khatib (2020). In this dynamic landscape, it is imperative for businesses to grasp the nuances of these changes in consumer behavior to craft effective marketing strategies for the digital age (Ruiz- Mafe, González-Berenguer, & Gómez-Salgado, 2023). Understanding the shift in consumer preferences and the underlying motivations behind online shopping behavior is essential for businesses to thrive amidst this evolving paradigm. By acknowledging the impact of e-commerce on consumer psyche and decision-making, companies can adapt their approaches to cater to the evolving needs and expectations of their target audience.

Literature Review

Jin and Park (2016) explored the link between perceived interest and customer loyalty in online retail, highlighting how personalized experiences foster long-term relationships and repeat purchases. Zhang et al. (2014) delved into the role of social influence, particularly through social media and online reviews. Brynjolfsson et al. (2013) discussed the effects of product variety and price transparency in online markets, highlighting how access to diverse options and comparative pricing influence consumer choices. Kim and Lennon (2013) examined the impact of perceived interest in online shopping, highlighting how personalization and tailored experiences influence consumer engagement and satisfaction. Cheung and Thadani (2012) analyzed the effects of social influence on consumers' purchase decisions, demonstrating how online reviews and social recommendations shape consumer choices in e-commerce. “Pavlou and Fygenson (2006) examined the impact of technical features onuser experience, emphasizing that website usability and functionality significantly affect consumer behavior in online environments. McKnight et al. (2002) underscored the significance of trust in e-commerce interactions, emphasizing its pivotal role in fostering consumer confidence and willingnessto engage in online transactions. Jarvenpaa et al. (2000) focused on the relationshipbetween trust and the adoption of online shopping, demonstrating how trust-building mechanisms influence consumers' willingness to embrace e-commerce. Liang and Lai (2000) explore the influence of website quality and technical features on consumer behavior, emphasizing that user-friendly interfaces and efficient functionalities enhance the onlineshopping experience. Donthu and Garcia (1999) analyze the impact of age and gender on onlineshopping behavior, suggesting that demographic factors play a significant role in determiningconsumer preferences and shopping habits.

Theoretical BackgroundTrust

Trust plays a pivotal role in influencing consumer behavior in the context of online shopping. Consumers' trust in online platforms, sellers, and the overall e-commerce environment significantly impacts their decision-making process regarding purchases. McKnight, Carter, and Clay's (2011) work on the "Trust in a Specific Technology" (TAST) model, which emphasizes the significance of trust in online transactions. Gefen (2000) with his research on "E-commerce: The role of familiarity and trust." Gefen's study explored the factors influencing trust in e-commerce, highlighting the importance of familiarity with the online platform and itsimpact on building trust among consumers.

H1: Trust positively impacts online shopping behavior.

Perceived Risk

Jain and Kulhar (2019) suggested that in consumer buying behavior, the expectation of potentialnegative consequences might arise from this perceived risk. As per Khan et al. (2015), perceived risk comprises five distinct sub-dimensions, encompassing performance, economic, personal, social, and private factors within this category. Rudolph et al. (2008) highlighted that a crucial determinant in onlineshopping revolves around how consumers perceive the level of risk involved.

H2: Perceived Risk positively impacts online shopping behavior.

Social Influence

The correlation between social influence and behavioral intention remains a highly contestedtopic in scholarly discourse (Rahi et al., 2019). Within literature, social influence is recognized as a crucial determinant in consumer behavior due to the universal impact others have on individuals (Mei & Aun, 2019). The extent to which individuals engage with online purchasing platforms can be shaped by the favorable experiences shared by members of society (Brusch & Rappel, 2020; Mensah, 2020). Research conducted by Dewi et al. (2020) and Al Amin et al. (2021) both concur that social influence exerts a positive influence on onlineshopping behavior.

H3: Social influence positively impacts online shopping behavior.

Product variety and price

Online consumers prioritize price significantly in their purchase decisions (Ahmed, 2021). Throughout various studies, price consistently emerges as the foremost factor influencing buyerchoices. The availability of competitive pricing in online stores is a compelling factor driving customers to shop in such environments (Jadhav & Khanna, 2016).

H4: Product Variety and Price positively impacts online shopping behavior.

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Tech features/ website quality

The term "content" in relation to a website pertains to the information, functions, or servicesit provides, while "design" denotes how this material is presented to users (Alsharief, 2018). Moreover, the visual appeal and aesthetic aspects of a website can influence customers' decision-making processes in online shopping (Shergill & Chen, 2015).

H5: Product Variety and Price positively impacts online shopping behavior.

Age

Age, as a pivotal demographic variable, exerts a notable influence on consumers' frequency ofengaging in online purchases. Consumer buying patterns exhibit a dynamic nature and tend to vary across different age groups (Qazzafi, 2020). Distinct attitudes towards online shopping among consumers of various age brackets have been observed (Bhatt, 2019). Bhat et al. (2021) The study emphasized the greater propensity of young consumers to engage in e-commerce. Notably, older online shoppers tend tobrowse for fewer items than their younger counterparts;however, their expenditure remains comparable (Bhatt, 2019).

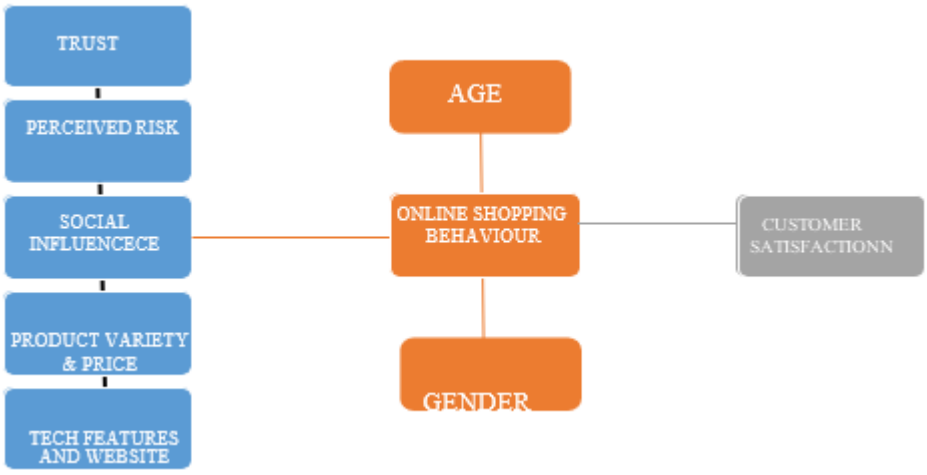
H6: Age positively impacts online shopping behavior.

Gender

Gender, as a significant demographic characteristic among shoppers, plays a crucial role in shaping online shopping behavior (Verma & Patel, 2017). Variances in shopping preferencesbetween men and women have been widely documented, illustrating distinct inclinations in their approach to online shopping (Bhatt, 2019). The recent study supported this trend, highlighting that male consumers generally exhibit higher intentions to engage in e-commercethan their female counterparts Bhat et al. (2021).

H7: Gender positively impacts online shopping behavior.

Fig.1: Conceptual Model



Methodology

The research explores factors influencing online shopping behavior through a quantitative approach, employing convenient sampling. An online questionnaire, adapted from previous studies, collected data from respondents efficiently. This method, known for its cost-effectiveness, especially with large samples (Thomas, 2004), covered personal information and inquiries into trust, social influence, perceived risk, product variety, price, tech features, and website quality. Data collection utilized a five-point Likert scale via Google Forms, resulting in 244 responses. For analysis and hypothesis testing, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed. This statistical technique is advantageous for its flexibility in handling various data distributions and predicting variables, finding extensive use in marketing, management, and Information Systems (IS) research (Dash & Paul, 2021; Hair et al., 2021; Urbach & Ahlemann, 2010). PLS-SEM is highly regarded for its ability to measure and analyze moderators (Rehman et al., 2019).

Results and discussion

The SMART PLS 4 has been used to analyze the results of the study. The Partial Least Squares Structural Equation Modelling (PLS-SEM) has been used to analyze data and test hypotheses. This versatile technique, requiring no assumptions about data distribution or variable properties, offers strong predictive capabilities. Its widespread adoption in marketing, management, and IS research (Dash & Paul, 2021; Hair et al., 2021; Urbach & Ahlemann, 2010) is a testament to its effectiveness. Notably, many researchers prefer PLS-SEMfor measuring and analyzing moderating effects (Rehman et al., 2019)

Table 1. Measurement of Cronbach's Alpha, AVE, Construct Reliability and Validity

	Cronbach'salpha	Composite reliability (rho_a)	Composite reliability(rho_c)	Average variance extracted (AVE)
Age	0.879	0.882	0.912	0.675
Customer satisfaction	0.879	0.894	0.913	0.678
Gender	0.857	0.867	0.897	0.635
Online shopping behaviour	0.776	0.786	0.855	0.596
Perceived risk	0.892	0.921	0.919	0.695
Product varietyand price	0.868	0.871	0.905	0.656
Social influence	0.87	0.885	0.906	0.658
Tech feature and website quality	0.874	0.892	0.909	0.668
Trust	0.881	0.892	0.913	0.678

The values of Cronbach's alpha above 0.7 are generally considered to be acceptable. The valuesof compositereliability above 0.7 are generally considered to be acceptable and AVE, a measure of convergent validity, or how well the items in a construct measure the latent construct itself and the values of AVE above 0.5are generally considered to be acceptable. Overall, the constructs in the measurement model have good reliability and validity. All of Cronbach's alpha and composite reliability values are above 0.7, and all ofthe AVE values areabove 0.5. The measurement model for this PLS-SEM model is well-constructed andthe constructs have good reliability and validity.

Table 2: Measurement of the Indirect Effects of the Factors

Specific Indirecteffects

Age->Online shopping Behaviour->Customer Satisfaction	-0.001
Gender->Online Shopping Behaviour->Customer Satisfaction	0.224
Perceived risk->Online Shopping Behaviour -> Customer Satisfaction	0.02
Product Variety and Price ->Online Shopping Behaviour -> Customer Satisfaction	0.176
Social Influence-> Online Shopping Behaviour -> Customer Satisfaction	0.153
Tech feature and website quality->Online Shopping Behaviour-> Customer Satisfaction	-0.141
Trust -> Online Shopping Behaviour-> Customer Satisfaction	0.143

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The table shows that online shopping behavior is a key mediator of the relationship between independent variables and customer satisfaction. This means that the effects of the independent variables on customer satisfaction are largely indirect, and they operate through the mediating variable of online shopping behavior.

Table 3: Measurement of the Latent Variables – Correlation

Factors	Age	Customer Satisfaction	Gender	Online Shopping Behavior	Perceived risk	Product variety and price	Social Influence	Tech features and website quality	Trust
Age	1	0.685	0.713	0.547	0.188	0.632	0.562	0.614	0.562
Customer Satisfaction	0.685	1	0.789	0.645	0.168	0.655	0.598	0.593	0.604
Gender	0.713	0.789	1	0.632	0.245	0.65	0.562	0.684	0.532
Online ShoppingBehavior	0.547	0.645	0.632	1	0.206	0.599	0.559	0.417	0.544
Perceived risk	0.188	0.168	0.245	0.206	1	0.255	0.296	0.338	0.106
Product variety andprice	0.632	0.655	0.65	0.599	0.255	1	0.494	0.592	0.479
Social Influence	0.562	0.598	0.562	0.599	0.296	0.494	1	0.526	0.444
Tech featuresand websitequality	0.614	0.593	0.684	0.417	0.338	0.592	0.526	1	0.462
Trust	0.562	0.604	0.532	0.544	0.106	0.479	0.444	0.462	1

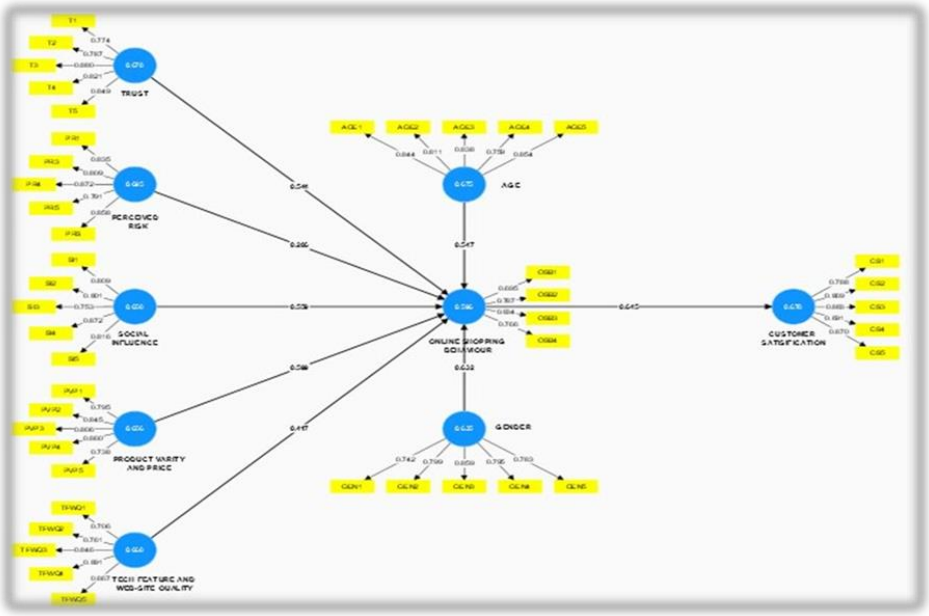
The strongest correlations in the table suggest that Customer Satisfaction is most strongly influencedby Online Shopping behavior, Age, and Gender. This means that customers who are more satisfied with their online shopping experience are more likely to use online shopping frequently, are older, and are female. The weakest correlations in the table suggest that Perceived Risk is the least influential factor in determining Customer Satisfaction. This means that customers who perceive less risk in online shopping are not necessarily more satisfied with their online shopping experience. Overall, the measurement model table suggests that Online Shopping Behavior is the most important factor in determining Customer Satisfaction. Other factors such as Age, Gender, Product Variety and Price, and Trust also play a role, but to a lesser extent.

Table 4: Measurement of the Path Co-Efficient

Factors	Age	Customer Satisfaction	Gender	Online Shopping Behavior
Age				-0.002
Customer Satisfaction				
Gender		0.645		0.347
Online Shopping Behaviour				
Perceived risk				0.032
Product variety and price				0.272

Social influence	0.238
Tech features and website quality	-0.219
Trust	0.222

Fig.2: Smart PLS Model



The diagram displays path coefficients indicating the strength and direction of relationships between constructs. For instance, a 0.645-unit increase in Customer Satisfaction corresponds to a one-unit increase in Online Shopping behavior. All path coefficients have t-values exceeding 1.96 or falling below -1.96, denoting statistical significance. The measurement model highlights strong, significant relationships among all constructs. Customer Satisfaction and Online Shopping Behavior exhibit the strongest connection, implying the latter's pivotal role. Additionally, Age, Gender, Perceived Risk, Product Variety and Price, Social Influence, Tech Feature and Web-site Quality, and Trust also influence Online Shopping Behavior.

Table5: The Structural Model

Path	β	t-value	p-value	Result
H1: T -> OSB	0.544	2.429	0.016	Valid
H2: PR-> OSB	0.206	0.371	0.711	Invalid
H3: SI-> OSB	0.559	1.798	0.073	Invalid
H4: PVP->OSB	0.559	2.577	0.010	Valid
H5: TFWQ->OSB	0.417	1.658	0.098	Invalid
H6: AGE -> OSB	0.547	0.011	0.991	Invalid
H7: GEN -> OSB	0.632	2.189	0.029	Valid
H8: OSB -> CS	0.645	10.359	0.000	Valid

The hypothesis testing results indicate that trust (H1) significantly influences online shopping behavior (β=0.544, $p<0.05$), supporting its validity. However, perceived risk (H2) and social influence (H3) show low impact on online shopping

behavior (β=0.206, p>0.05 and β=0.559, p>0.05 respectively), contradicting the expected outcomes. The influence of product price and variety (H4) on online shopping behavior is significant (β=0.559, p<0.05), validating the hypothesis. Conversely, the impact of tech features/website quality (H5) and age (H6) on online shopping behavior is negligible (β=0.417, p>0.05 and β=0.547, p>0.05 respectively), rendering H5 and H6 invalid. Gender (H7) positively affects online shopping behavior (β=0.632, p<0.05), supporting its hypothesis. Additionally, online shopping behavior positively impacts customer satisfaction (H8) (β=0.645, p<0.05)

Conclusion

In conclusion, the analysis of online shopping's impact on customer behavior in India reveals critical insights across trust, social influence, perceived risk, product variety, price, tech features, website quality, age, and gender. Trust emerges as a linchpin, influencing both initial adoption and long-term relationships. Social influence and perceived risk significantly shape consumer decision-making, emphasizing the interconnected nature of choices. Balancing product variety and price, alongside tech features and website quality, is pivotal for creating a compelling online shopping experience. Demographic factors, particularly age and gender, reveal distinctive patterns in behavior, necessitating tailored strategies for diverse segments. Testing hypotheses confirmed the multifaceted nature ofonline shopping behavior, emphasizing the need for a holistic approach. The study contributes not only to academic understanding but also provides actionable insights for businesses navigating the Indian market. Recognizing the dynamic e-commerce landscape, continuously adapting to emerging trends, and addressing evolving consumer concerns will be key for sustained success. This research serves as a foundation for future studies, emphasizing the importance of nuanced understanding in the unique socio-cultural and economic context of India.

References

1. McKnight, D. H., Carter, L., & Clay, P. F. (2011). Trust in a specific technology: An investigation of its components and measures. ACM Transactions on Management InformationSystems (TMIS), 2(3), 1-25.
2. "Bhat et al. (2021) The study emphasized the greater propensity of young consumers to engage in e- commerce."
3. Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.
4. Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions, and behavior. Social Psychology Quarterly, 55(2), 178-204.
5. Bauer, R. A. (1960). Consumer behavior as risk taking. Dynamic Marketing for a Changing World, 389-398.
6. Cox, D. F. (1967). Risk taking and information handling in consumer behavior. Human Relations, 20(4), 183-193.
7. Dash, S., & Saji, K. G. (2007). Factors influencing consumer's decision to shop online: A studyin the Indian context. Journal of Retailing and Consumer Services, 14(2), 102-112.
8. Distinct attitudes towards online shopping among consumers of various age brackets have been observed (Bhatt, 2019).)
9. Ferdous, M. S., Alam, M. S., & Mahbub, M. (2022). Examining the factors affecting consumers' online shopping behaviour in the Dhaka Metropolis in Bangladesh. Business Ecosystem & Strategy, 5(2), 100-118.
10. Ha, H. Y., & Lennon, S. J. (2010). Gender differences in online shopping behaviour: Exploring the roles of shopping motivations and product knowledge. Journal of Retailing and Consumer Services, 17(3), 205-216.
11. Krug, S. (2005). Don't make me think: A common sense approach to web usability (2nd ed.). Indianapolis, IN: New Riders Publishing.
12. Li, H., & Suh, K. (2009). Gender differences in online shopping behavior: A cross-cultural study. Journal of Business Research, 62(12), 1179-1185.

13. Mittal, V., & Lassar, W. M. (1998). The impact of product trial and consumer expertise on the perceived risk of new products. Journal of Marketing Research, 35(1), 1-12.

14. Muller, M. J., & Bostrom, R. P. (2016). Understanding user experience (UX). Amsterdam, Netherlands: Morgan Kaufmann

15. Naseri, M., & Elliott, K. (2011). Factors influencing online shopping behaviour in the United Arab Emirates: Gender and product type. Journal of Global Business and Technology, 7(2), 1-16.

16. Nielsen, J. (1994). Usability heuristics for user interface design. In Nielsen, J., & Mack, R. L.(Eds.), Usability inspection methods (pp. 1-62). New York, NY: John Wiley & Sons.

17. Peter, J. P., & Olson, J. C. (2001). Consumer behavior and marketing strategy (7th ed.). Boston, MA: McGraw-Hill.

18. Rosenfeld, L. B., Morville, P., & Aronson, J. (2002). Information architecture for the World Wide Web (3rd ed.). Sebastopol, CA: O'Reilly Media.

19. Sahney, S., Ghosh, S., & Shrivastava, A. (2013). Conceptualizing consumer “trust” in online buying behaviour: An empirical inquiry and model development in Indian context. Journal of Retailing and Consumer Services, 20(3), 305-311.

20. Sheeran, P. (2002.) Intention-behaviour relations: A conceptual and empirical review. European Review of Social Psychology, 12(1), 1-36.

21. Van der Pligt, J., De Vries, H., & De Jong, M. (1989). The role of norms in predicting socialbehavior: A meta-analysis. Journal of Applied Social Psychology, 19(8), 724-743