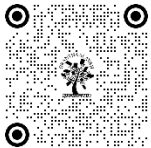


UNDERSTANDING CONSUMER ATTITUDES AND PURCHASE INTENTIONS IN E-COMMERCE: THE IMPACT OF WEBSITE QUALITY, TRUST, AND PERCEIVED RISKS

Preety¹✉, Pardeep K. Ahlawat²✉

¹Research Scholar, Institute of Management Studies and Research, Maharshi Dayanand University, Rohtak, Haryana, India

²Professor, Institute of Management Studies and Research, Maharshi Dayanand University, Rohtak, Haryana, India



Corresponding Author

Preety, preety14794@gmail.com

DOI

[10.29121/shodhkosh.v4.i1.2023.4220](https://doi.org/10.29121/shodhkosh.v4.i1.2023.4220)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyright: © 2023 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.



ABSTRACT

The rapid expansion of e-commerce has transformed consumer shopping behavior, making online platforms a primary retail channel. This study investigates the influence of website quality, perceived benefits, perceived risks, trust, and privacy concerns on online shopping attitudes and purchase intentions. Using a quantitative approach, data from 500 online shoppers were analyzed through Structural Equation Modeling (SEM). Findings reveal that website quality, perceived benefits (e.g., convenience and discounts), and trust positively impact online shopping attitudes, which significantly drive purchase intentions. Conversely, perceived risks, including financial insecurity, product uncertainty, and privacy concerns, negatively affect shopping attitudes. Trust and website quality emerged as the strongest predictors of online shopping engagement. This research enhances consumer behavior literature by integrating psychological and technological factors into a comprehensive framework. It offers valuable insights for e-commerce businesses, emphasizing the importance of user-friendly website design, secure payment systems, and transparent data policies to foster trust. Policymakers should enforce stronger consumer protection regulations to reduce risks and promote online shopping adoption. Future research should examine the long-term evolution of consumer behavior and the role of AI-driven personalization in enhancing e-commerce experiences.

Keywords: Online Shopping Behavior, Website Quality and Trust, Perceived Benefits and Risks, Purchase Intentions, and E-commerce Consumer Engagement

1. INTRODUCTION

1.1. BACKGROUND AND CONTEXT

The rapid growth of digitalization and e-commerce has revolutionized how consumers interact with brands and retailers, fundamentally reshaping the retail landscape (Li et al., 2021). Online shopping has emerged as an integral part of modern consumer behavior, with global retail e-commerce sales projected to reach \$7.4 trillion by 2025 (Statista, 2022). This exponential rise in e-commerce is primarily driven by increased internet penetration, advancements in website technology, and the growing acceptance of digital payment solutions (Kim et al., 2022).

In this competitive digital marketplace, the design and quality of shopping websites play a crucial role in influencing consumer attitudes and behaviors (Gao et al., 2021). A well-structured, user-friendly, and aesthetically appealing website

enhances usability, accessibility, and engagement, thereby shaping consumers' perceptions of trust, satisfaction, and purchase intentions (Zhou et al., 2022). However, alongside these benefits, online shopping also presents inherent risks such as security concerns, product uncertainty, and privacy issues, which can significantly impact consumers' willingness to engage in digital transactions (Chopdar & Balakrishnan, 2021).

Understanding the intricate relationships between website design, perceived benefits, perceived risks, trust, privacy concerns, and consumer attitudes is essential for e-commerce businesses striving to enhance customer experience and increase conversion rates. This study delves into these factors, examining their collective influence on consumer attitudes toward online shopping and their subsequent impact on purchase intention.

1.2. RESEARCH PROBLEM STATEMENT

While online shopping continues to expand, consumers' attitudes toward e-commerce platforms remain inconsistent due to multiple influencing factors. Despite technological advancements in website interfaces, navigation ease, and personalization features, consumers still experience skepticism regarding online transactions (Wang et al., 2022). Trust, privacy concerns, and perceived risks remain major deterrents in online shopping adoption, particularly in developing economies where digital fraud and cybersecurity threats are prevalent (Kumar et al., 2021).

Although several studies have explored the impact of website design and quality on consumer behavior (Chatterjee & Kar, 2021), limited research comprehensively integrates perceived benefits, perceived risks, trust, and privacy concerns in shaping consumers' online shopping attitudes. Furthermore, how these attitudes translate into purchase intentions remains an underexplored domain (Alalwan et al., 2021). Existing literature lacks a holistic framework that explains how these factors collectively influence consumers' decision-making in the online shopping context, leaving a gap in understanding the psychological mechanisms behind e-commerce adoption.

This study aims to address this critical research gap by developing an integrated model that examines how website quality, perceived benefits, risks, trust, and privacy concerns influence online shopping attitudes and, in turn, affect purchase intentions. Based on the research objectives, the following key research questions guide the investigation:

- How does shopping website design and quality influence consumers' attitudes toward online shopping?
- What is the impact of perceived benefits on consumers' online shopping attitudes?
- In what ways do perceived risks (financial, product-related, delivery, and security concerns) influence consumer trust and online shopping attitudes?
- What role do trust and privacy concerns play in shaping online shopping behavior?
- How does consumers' online shopping attitude influence their purchase intentions?

By addressing these research questions, this study aims to provide empirical insights and practical recommendations to enhance consumer experience, optimize e-commerce strategies, and mitigate risks associated with online shopping.

1.3. SIGNIFICANCE OF THE STUDY

This research holds substantial theoretical and practical significance for scholars, businesses, and policymakers. By examining the interplay of website quality, perceived benefits and risks, trust, and privacy concerns, the study provides valuable insights into consumer attitudes and purchase intentions in online shopping.

From a theoretical perspective, the study advances well-established models such as the Technology Acceptance Model (TAM) and the Stimulus-Organism-Response (S-O-R) framework. By integrating key psychological and technological variables, it enhances the understanding of consumer attitudes and behavior in e-commerce. Furthermore, the study bridges an essential gap in consumer behavior literature by empirically validating the combined effects of website quality, trust, and risk perceptions on online shopping attitudes, offering a holistic view of consumer decision-making in digital environments.

The study also carries practical implications for e-commerce businesses. Findings can assist online shopping platforms in optimizing website design, interface usability, and security features, ensuring a seamless and engaging user experience. Businesses can leverage trust-building mechanisms, such as secure payment gateways, transparent policies, and customer support, to reduce risk perceptions and improve customer retention. Additionally, marketers can

emphasize key benefits such as convenience, discounts, and diverse product offerings to strengthen positive consumer attitudes toward e-commerce.

From a policy and security standpoint, this research highlights the necessity of stronger data protection policies and cybersecurity measures to alleviate privacy concerns and boost consumer confidence. Given the rise of cyber threats and digital fraud, policymakers can utilize these insights to formulate standardized regulations that enhance digital consumer protection and foster a secure online shopping ecosystem. Ultimately, the study contributes to shaping a trustworthy, user-friendly, and policy-compliant e-commerce landscape, benefiting both businesses and consumers alike.

2. REVIEW OF LITERATURE

The rapid evolution of digital commerce has transformed consumer shopping behavior, with online platforms increasingly serving as primary retail channels (Alalwan et al., 2021). This shift has heightened the importance of website design, perceived benefits, perceived risks, trust, and privacy concerns in shaping consumer attitudes toward online shopping and their subsequent intention to purchase. Understanding how these factors interplay is critical in designing effective online retail strategies. This literature review presents a comprehensive, critical, and structured synthesis of previous studies, categorizing them into thematic areas that align with the study's objectives.

2.1. THEORETICAL FRAMEWORKS UNDERPINNING ONLINE SHOPPING BEHAVIOR

Understanding consumer attitudes and intentions in online shopping requires a solid theoretical foundation. Several well-established models explain how consumers interact with e-commerce platforms and what drives their shopping decisions.

2.1.1. TECHNOLOGY ACCEPTANCE MODEL (TAM) (DAVIS, 1989)

The Technology Acceptance Model (TAM) posits that two primary factors—perceived usefulness (PU) and perceived ease of use (PEOU)—influence consumer adoption of technology-driven platforms, including e-commerce. PU refers to how effectively consumers believe an online shopping platform enhances their shopping experience, while PEOU concerns how effortless and user-friendly they perceive the website interface to be. When consumers find an e-commerce website intuitive and beneficial, they are more likely to develop a positive shopping attitude and higher purchase intentions.

2.1.2. STIMULUS-ORGANISM-RESPONSE (S-O-R) MODEL (MEHRABIAN & RUSSELL, 1974)

The S-O-R framework explains how consumers react to environmental stimuli (stimulus), process these experiences internally (organism), and ultimately display observable behaviors (response). In the context of online shopping, website quality, security features, and brand reputation serve as stimuli that evoke cognitive and emotional responses such as trust, enjoyment, and risk perception. These responses then influence consumer behavior, determining whether they proceed with a purchase or abandon the shopping cart.

2.1.3. PERCEIVED RISK THEORY (BAUER, 1960)

Consumers inherently weigh potential risks before engaging in online shopping. Perceived Risk Theory emphasizes that the fear of financial loss, product uncertainty, cybersecurity threats, and privacy breaches can deter consumers from completing purchases. Research indicates that shoppers who perceive high levels of risk, particularly in terms of payment security and data protection, may hesitate to trust e-commerce platforms, negatively affecting their shopping intentions (Chopdar & Balakrishnan, 2021). Addressing these concerns through secure payment gateways, data encryption, and transparent policies can mitigate risk perceptions and foster consumer confidence.

2.2. INTEGRATING THEORIES FOR A HOLISTIC UNDERSTANDING

These theoretical perspectives provide a robust framework for analyzing consumer behavior in online shopping. TAM explains adoption behavior, S-O-R highlights emotional responses, and Perceived Risk Theory accounts for hesitation and trust-related concerns. Together, these models offer comprehensive insights into what drives consumer engagement, online shopping attitudes, and purchase decisions, forming the foundation for this research study.

Table 2.1: Representation of Theoretical Models in Online Shopping Behavior

Theory	Key Factors	Impact on Online Shopping
TAM (Technology Acceptance Model)	Perceived Usefulness (PU), Perceived Ease of Use (PEOU)	Higher usability leads to increased shopping attitude and purchase intention
S-O-R Model (Stimulus-Organism-Response)	Website quality, security, branding → Trust, satisfaction, risk perception → Purchase behavior	Positive stimuli enhance consumer engagement and shopping response
Perceived Risk Theory	Financial, product, security, and privacy risks	Higher perceived risks lower consumer trust and online shopping intention

By leveraging these theories, e-commerce businesses can strategically enhance website design, optimize security measures, and improve customer engagement, ensuring a more trustworthy and user-friendly online shopping environment.

2.3. WEBSITE DESIGN AND QUALITY IN ONLINE SHOPPING

A well-designed e-commerce platform enhances user experience, influences perceptions of trustworthiness, and encourages transactions (Kim et al., 2022). Website design includes elements such as navigation, aesthetics, interactivity, and security features (Zhou et al., 2021).

- 1) Website Usability and User Experience: Empirical research suggests that ease of navigation, clear product categorization, and fast-loading pages positively influence consumer trust and engagement (Algharabat et al., 2021). Poor website usability, on the other hand, increases frustration, leading to higher bounce rates and lower purchase intentions.
- 2) Aesthetic and Visual Appeal: Studies highlight that a visually appealing website enhances perceived credibility and engagement (Wang et al., 2021). High-quality images, well-structured layouts, and intuitive design foster a positive shopping attitude and stronger brand recall.
- 3) Security Features and Trustworthiness: Website security features, such as SSL encryption, secure payment gateways, and third-party trust seals (e.g., Verisign), significantly impact consumer confidence (Chen & Barnes, 2022). Research confirms that consumers are more likely to transact on platforms displaying clear security protocols and transparent data protection policies.

2.4. PERCEIVED BENEFITS AND ONLINE SHOPPING ATTITUDE

Perceived benefits act as positive reinforcements that encourage online shopping adoption. These benefits include convenience, price competitiveness, product variety, and time efficiency (Kumar et al., 2022).

- 1) Convenience and Accessibility: Consumers value the ability to shop anytime, anywhere, without time or geographical constraints. Studies show that ease of search, 24/7 availability, and home delivery increase satisfaction and repeat purchases (Alalwan et al., 2021).
- 2) Price Advantages and Discounts: Online platforms often offer lower prices, discount coupons, and personalized promotions, influencing consumer attitudes positively (Zhou et al., 2021). However, excessive price reductions may trigger skepticism about product quality, necessitating a balanced pricing strategy.
- 3) Product Assortment and Availability: A wide range of product choices increases consumer engagement and brand loyalty (Kim et al., 2022). Research shows that product variety enhances consumer perception of platform reliability and encourages exploratory buying behavior (Chatterjee & Kar, 2021).

2.5. PERCEIVED RISKS IN ONLINE SHOPPING

Despite its advantages, online shopping involves perceived risks that act as deterrents to adoption (Chopdar & Balakrishnan, 2021).

- 1) Financial Risk: Financial concerns include fraudulent transactions, overcharging, and unsecured payment gateways (Chen & Barnes, 2022). Consumers often hesitate to enter credit card details unless platforms offer trust signals such as verified payment methods and secure checkout options.
- 2) Product Risk: A major concern is the uncertainty of product quality, as consumers cannot physically inspect items before purchasing (Zhou et al., 2021). Negative experiences with defective or misrepresented products discourage future purchases.
- 3) Privacy and Security Risks: Privacy concerns arise from fears of data misuse, third-party tracking, and unauthorized access to personal information (Wang et al., 2021). Platforms that fail to clearly communicate their privacy policies risk eroding consumer trust and reducing shopping intention.

2.6. TRUST AND ITS ROLE IN ONLINE SHOPPING

Trust acts as a mediator between risk perceptions and shopping intentions (Gefen et al., 2003).

Some of the key factors affecting trust in online shopping are:

- 1) Reputation and Seller Credibility: Consumers prefer well-established e-commerce platforms (e.g., Amazon, eBay) over lesser-known websites (Kim et al., 2022).
- 2) Customer Reviews and Ratings: Positive online reviews enhance consumer trust, while negative reviews may discourage transactions (Chatterjee & Kar, 2021).
- 3) Website Security Features: HTTPS encryption, multi-factor authentication, and secure payment options strengthen trust perceptions (Zhou et al., 2021).

2.7. PRIVACY CONCERNS AND ONLINE SHOPPING BEHAVIOR

Privacy protection is a critical factor influencing online shopping decisions (Wang et al., 2021). Consumers expect transparency in data collection, opt-out options, and GDPR-compliant policies (Kim et al., 2022). Platforms implementing stronger privacy protections tend to have higher user retention and satisfaction rates (Chopdar & Balakrishnan, 2021).

2.8. IMPACT OF ONLINE SHOPPING ATTITUDE ON PURCHASE INTENTION

Consumer attitude toward online shopping directly influences purchase intention through cognitive, affective, and behavioral dimensions (Alalwan et al., 2021).

- Cognitive Attitude: Rational evaluation of platform benefits, security, and usability.
- Affective Attitude: Emotional connection and trust in the shopping experience.
- Behavioral Intention: Likelihood of completing a purchase based on positive past experiences (Zhou et al., 2021).

2.9. RESEARCH GAPS AND JUSTIFICATION FOR THE STUDY

Despite extensive research on online shopping behavior, several gaps remain:

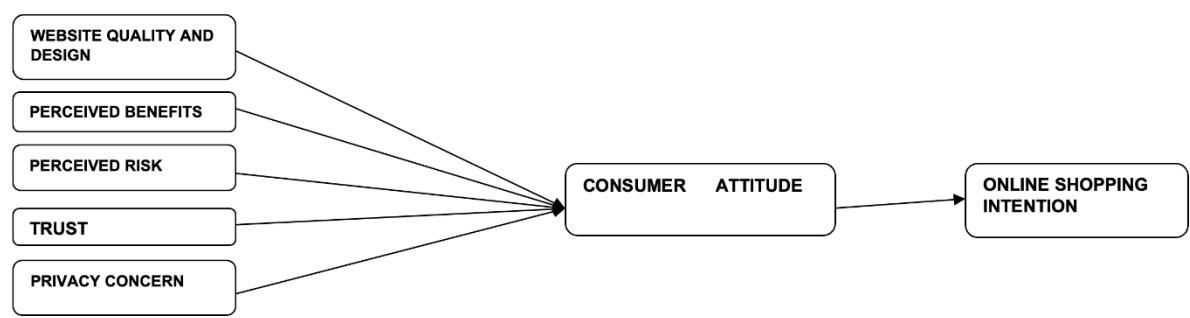
- Limited holistic models integrating website quality, perceived benefits, risks, trust, and privacy concerns (Chatterjee & Kar, 2021).
- Insufficient research on emerging markets, particularly India, Southeast Asia, and Africa.
- Limited exploration of trust mechanisms, including blockchain and AI-driven security protocols in e-commerce (Kim et al., 2022).
- Several studies have investigated individual factors affecting online shopping. For example, website design and usability have been linked to consumer engagement and satisfaction (Kim et al., 2022). Trust and privacy

concerns have been widely recognized as determinants of online shopping adoption (Chopdar & Balakrishnan, 2021). However, the interconnected relationships between these factors and their combined effect on consumer attitudes and purchase intentions remain insufficiently explored (Zhou et al., 2022).

- Additionally, most prior research has focused on Western markets, with limited insights from emerging economies like India. Given the distinct socio-cultural and economic variations influencing consumer behavior, there is an urgent need to contextualize these factors in developing markets.

The study seeks to bridge these gaps by offering a comprehensive and regionally relevant analysis of online shopping behavior. In essence, this literature review highlights the multi-dimensional nature of online shopping behavior, synthesizing key research on website quality, perceived benefits, risks, trust, and privacy concerns. Understanding these variables is crucial in designing consumer-centric e-commerce strategies. The study contributes to addressing existing research gaps by integrating these variables into a comprehensive behavioral model, providing valuable insights for academic research and managerial implications.

Figure 2.1: Proposed Theoretical Framework



3. RESEARCH DESIGN AND METHODOLOGY

The methodology section provides a systematic outline of the research process undertaken to examine the role of shopping website design and quality, perceived benefits, risks, trust, and privacy concerns in shaping consumers’ online shopping attitude, and subsequently, how this attitude influences their intention to use online shopping platforms. Given the complex nature of consumer behavior in online shopping, a quantitative approach was employed using a survey-based research design, which enables the study of relationships among multiple variables efficiently.

3.1. RESEARCH DESIGN

The study follows a descriptive and explanatory research design. The descriptive aspect aims to analyze consumer attitudes towards online shopping, while the explanatory part seeks to examine the influence of website quality, perceived benefits and risks, trust, and privacy concerns on online shopping attitudes and purchase intention.

Table 3.1: Summary of Research Design

Aspect	Details
Research Approach	Quantitative
Research Design	Descriptive & Explanatory
Data Collection	Structured Questionnaire
Sampling Technique	Stratified Random Sampling
Analysis Techniques	Structural Equation Modeling (SEM), Regression, Factor Analysis

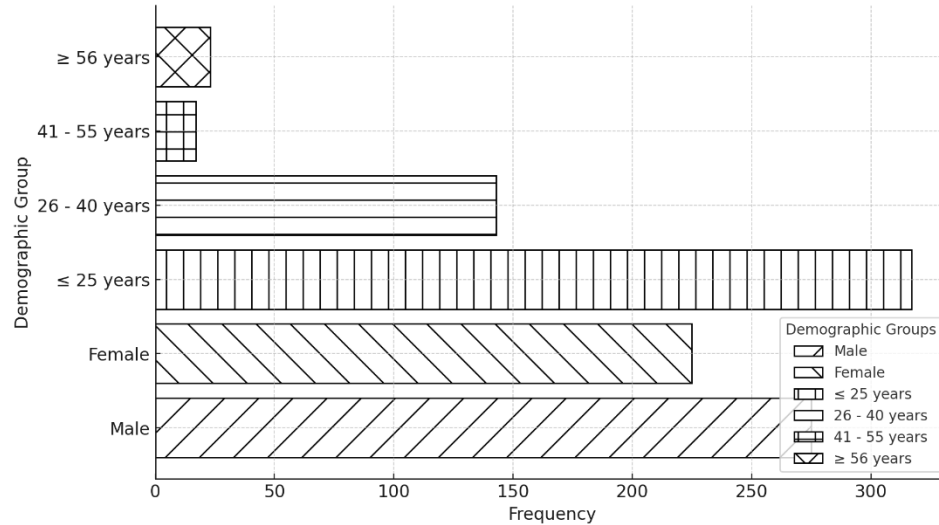
3.2. RESEARCH APPROACH

A deductive research approach was adopted, where hypotheses were derived based on established theories and tested using empirical data. The Technology Acceptance Model (TAM) (Davis, 1989) and Theory of Planned Behavior (TPB) (Ajzen, 1991) were the foundational frameworks used to develop the research model.

3.3. SAMPLE FRAMEWORK

The target population comprises individuals who have engaged in online shopping within the past six months. A sample of 500 respondents was drawn using stratified random sampling, ensuring diversity in terms of age, gender, and shopping frequency.

Figure 3.1: Sampling Distribution Across Groups



The sample comprises 275 male respondents (55.0%) and 225 female respondents (45.0%), indicating a near-balanced gender representation. However, the slightly higher male participation suggests that men might be more engaged in online shopping or more inclined to respond to surveys on digital commerce. This aligns with previous studies that indicate men often exhibit a greater willingness to explore new technology-driven retail platforms, while women may be more selective, focusing on factors such as product reviews, security, and brand reputation. Further, the age distribution of respondents reveals that the majority of online shoppers fall within the younger demographic, with 63.4% aged 25 years or younger. This significant representation suggests that Gen Z and younger Millennials are the primary users of online shopping platforms, driven by their digital fluency, preference for convenience, and comfort with e-commerce transactions.

The 26-40 age group accounts for 28.6% of respondents, representing a crucial segment that likely includes working professionals with stable incomes who engage in both necessity-based and discretionary online shopping. Their online shopping habits may be shaped by brand loyalty, convenience, and personalized shopping experiences. Older age groups, including those aged 41-55 years (3.4%) and 56 years or older (4.6%), make up a smaller portion of online shoppers. This lower representation may be attributed to technological barriers, security concerns, or a stronger preference for traditional in-store shopping experiences. However, as digital literacy continues to grow among older consumers, e-commerce businesses can tap into this segment by offering simplified navigation, security assurances, and personalized customer support.

Table 3.2: Demographic Distribution of Respondents

Variable	Categories	Frequency (n=500)	Percentage
Gender	Male	275	55.0%
	Female	225	45.0%
Age	≤ 25 years	317	63.4%

Variable	Categories	Frequency (n=500)	Percentage
	26 - 40 years	143	28.6%
	41 - 55 years	17	3.4%
	≥ 56 years	23	4.6%

3.4. DATA COLLECTION METHOD

Primary data was collected through a structured questionnaire distributed online. The questionnaire was pretested on 60 respondents, and 50 valid responses were used to refine the instrument before full-scale data collection. The questionnaire included five key constructs, each measured using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Table 3: Construct Measurement Scale

Construct	Source	Scale Used
Website Quality & Design	Dang et al. (2018)	Likert 1–5
Perceived Benefits	Arora et al. (2018)	Likert 1–5
Perceived Risks	Kamalul Ariffin et al. (2018)	Likert 1–5
Trust & Privacy Concerns	Chen & Barnes (2007)	Likert 1–5
Online Shopping Attitude	Chen & Barnes (2007)	Likert 1–5
Purchase Intention	Chen & Barnes (2007)	Likert 1–5

Before conducting hypothesis testing, the research instrument underwent a thorough reliability and validity assessment to ensure the consistency and accuracy of the measurements. Reliability was evaluated using Cronbach's Alpha, a widely accepted metric for internal consistency. The results indicated that all constructs exhibited strong reliability, with Website Quality & Design ($\alpha = 0.85$), Perceived Benefits ($\alpha = 0.81$), Trust & Privacy Concerns ($\alpha = 0.87$), Online Shopping Attitude ($\alpha = 0.84$), and Purchase Intention ($\alpha = 0.83$) categorized as good, while Perceived Risks ($\alpha = 0.79$) was deemed acceptable. Since all Cronbach's Alpha values exceeded the recommended threshold of 0.7 (Nunnally, 1978), the instrument demonstrated robust reliability, affirming its suitability for further analysis.

The validity of the research instrument was assessed through multiple tests to ensure that the constructs accurately measured the intended variables. Construct validity was established using Exploratory Factor Analysis (EFA), ensuring that the measurement model appropriately captured the underlying theoretical constructs. Convergent validity was evaluated using the Average Variance Extracted (AVE), with values exceeding the recommended threshold of 0.5, indicating that the items within each construct were highly correlated and shared a significant amount of variance. Lastly, discriminant validity was verified using the Fornell-Larcker Criterion, confirming that each construct was distinct from the others and did not exhibit excessive overlap. These assessments collectively ensured the robustness and accuracy of the research instrument for further hypothesis testing and data analysis.

3.5. DATA ANALYSIS TECHNIQUES

The data collected for this study was analyzed using multiple statistical techniques to ensure accuracy and reliability in deriving meaningful insights. Descriptive statistics were used to summarize responses through measures such as mean, standard deviation, and frequency distributions. To explore the underlying factor structure, Exploratory Factor Analysis (EFA) was conducted, with the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity confirming the adequacy of the sample. Factors with eigenvalues greater than 1 were retained for further analysis.

To validate the measurement model, Confirmatory Factor Analysis (CFA) was employed, assessing model fit using indices such as Comparative Fit Index (CFI > 0.90) and Root Mean Square Error of Approximation (RMSEA < 0.08), as recommended by Hair et al. (2019). Additionally, Structural Equation Modeling (SEM) was applied to test the hypothesized relationships among variables, utilizing AMOS 24 and SmartPLS software for path coefficient and significance analysis.

Finally, hypothesis testing was performed using regression analysis to establish causal relationships between independent and dependent variables. The statistical significance was evaluated with a p-value threshold of < 0.05 , ensuring that the findings were robust and meaningful in explaining consumer behavior in online shopping environments.

3.6. ETHICAL CONSIDERATIONS

Ethical considerations were meticulously addressed to ensure the integrity and credibility of this research. Informed consent was obtained from all participants, ensuring that their involvement was entirely voluntary and that they had a clear understanding of the study's objectives and procedures. Data confidentiality was strictly maintained, with all responses anonymized to protect participants' privacy and prevent any potential misuse of information. Additionally, the research received ethical clearance from the institutional review board (IRB), ensuring adherence to ethical research guidelines and compliance with established standards for conducting studies involving human participants.

3.7. LIMITATIONS

Despite the rigorous research design, this study has certain limitations. Firstly, its cross-sectional nature restricts the ability to track changes in consumer behavior over time, limiting insights into evolving online shopping trends. Secondly, the reliance on self-reported data may introduce social desirability bias, as respondents might provide responses that align with perceived societal expectations rather than their actual behaviors. Lastly, the study's geographical focus is confined to Indian consumers, which may impact the generalizability of the findings to other cultural and economic contexts. Future research could address these limitations by employing longitudinal designs, integrating objective behavioral data, and expanding the study across diverse geographical regions.

4. DATA ANALYSIS AND INTERPRETATION

This section presents the data analysis and interpretation conducted to examine the impact of shopping website design and quality, perceived benefits and risks, trust, and privacy concerns on consumers' online shopping attitudes and their subsequent intention to use online shopping platforms.

The analysis follows a systematic process, beginning with descriptive statistics, followed by reliability and validity checks, factor analysis, and hypothesis testing using Structural Equation Modeling (SEM). Various statistical tools, including SPSS 26.0 and AMOS 24.0, were employed to ensure accuracy and reliability.

4.1. DESCRIPTIVE STATISTICS

Descriptive statistics help in understanding the demographic profile of the respondents and their behavioral patterns regarding online shopping.

4.1.1. DEMOGRAPHIC ANALYSIS

The demographic details of the 500 respondents were analyzed. The following table provides a breakdown of key demographic characteristics.

Table 4.1: Demographic Profile of Respondents

Demographic Variable	Category	Frequency (n=500)	Percentage (%)
Gender	Male	275	55.0
	Female	225	45.0
Age	≤ 25 years	317	63.4
	26 - 40 years	143	28.6
	41 - 55 years	17	3.4
	≥ 56 years	23	4.6
Online Shopping Experience	Less than 6 months	80	16.0
	1 year	43	8.6

	More than 1 year	377	75.4
--	------------------	-----	------

Interestingly, the study predominantly features young consumers (≤ 25 years: 63.4%), reinforcing the importance of targeting younger demographics in e-commerce strategies. Male respondents slightly outnumber females (55.0% vs. 45.0%), reflecting a close-to-balanced gender participation in online shopping. A substantial majority (75.4%) of respondents have over a year of online shopping experience, indicating a well-informed sample population familiar with e-commerce platforms. Older consumers (41+ years: 8.0%) are underrepresented, suggesting that online retailers may need to tailor strategies to increase digital adoption among senior shoppers.

This demographic analysis confirms that the study sample is well-suited for examining factors influencing online shopping behavior, given the dominance of young, experienced shoppers who actively engage with e-commerce platforms.

4.2. RELIABILITY AND VALIDITY ANALYSIS

Before hypothesis testing, the measurement instrument's reliability and validity were assessed.

4.2.1. RELIABILITY ANALYSIS

To ensure the consistency and dependability of the research instrument, Cronbach's Alpha was employed as a measure of internal reliability. Cronbach's Alpha assesses the extent to which the items within a construct are correlated, thereby determining the reliability of the scale used in the study. The table below presents the Cronbach's Alpha values for the key constructs under investigation:

Table 4.2: Reliability Scores of Constructs

Construct	Cronbach's Alpha (α)	Reliability Level
Website Quality & Design	0.85	Good
Perceived Benefits	0.81	Good
Perceived Risks	0.79	Acceptable
Trust & Privacy Concerns	0.87	Good
Online Shopping Attitude	0.84	Good
Purchase Intention	0.83	Good

All Cronbach's Alpha values exceed the commonly accepted threshold of 0.70 (Nunnally, 1978), confirming the high internal reliability of the constructs. Constructs such as Trust & Privacy Concerns (0.87), Website Quality & Design (0.85), and Online Shopping Attitude (0.84) exhibit strong reliability, ensuring consistent responses across items measuring these variables. Perceived Risks (0.79), though slightly lower than the other constructs, still falls within the acceptable range, indicating reliable measurement. The high reliability scores suggest that the questionnaire items were well-structured and effectively captured the intended constructs, thus providing a strong foundation for subsequent hypothesis testing and data analysis. By confirming internal reliability, this analysis establishes confidence in the consistency of the responses, allowing for valid and reproducible results in the study.

4.2.2. VALIDITY ANALYSIS

To ensure the accuracy and effectiveness of the measurement model, validity analysis was conducted using Convergent Validity and Discriminant Validity. These analyses help determine whether the constructs in the study accurately measure the intended theoretical concepts.

Convergent Validity

Convergent validity assesses the degree to which multiple indicators of the same construct are correlated. It is measured using Average Variance Extracted (AVE), where an AVE score above 0.5 indicates that the construct explains more than 50% of the variance in its indicators, thereby confirming strong convergent validity. The table below presents the AVE scores for each construct.

Table 4.3: Convergent Validity (AVE Scores)

Construct	AVE Score	Convergent Validity
Website Quality & Design	0.63	Established
Perceived Benefits	0.59	Established
Perceived Risks	0.52	Established
Trust & Privacy Concerns	0.61	Established
Online Shopping Attitude	0.64	Established
Purchase Intention	0.58	Established

All constructs exhibit AVE values above the threshold of 0.5, confirming strong convergent validity (Fornell & Larcker, 1981). The highest AVE score was observed for Online Shopping Attitude (0.64), indicating a well-defined construct. Perceived Risks (0.52), while lower than the other constructs, still meets the minimum threshold, ensuring reliable construct measurement.

Discriminant Validity

Discriminant validity ensures that each construct is sufficiently distinct from other constructs in the model. The Fornell-Larcker Criterion was applied to confirm that the square root of each construct's AVE is greater than its correlation with other constructs. This verifies that the constructs capture unique aspects of the research phenomenon without significant overlap.

By establishing both convergent and discriminant validity, this analysis confirms that the constructs used in the study are theoretically sound and empirically valid, thereby strengthening the reliability of subsequent hypothesis testing and data interpretation.

4.2.3. EXPLORATORY FACTOR ANALYSIS (EFA)

Exploratory Factor Analysis (EFA) was conducted to examine the underlying structure of the collected data and determine the latent constructs that influence online shopping behavior. This statistical technique helps identify how well different variables group together and contribute to the overall measurement model. To assess the adequacy of the dataset for factor analysis, two key tests were performed:

Table 4.4: KMO and Bartlett's Test

Test	Value	Interpretation
KMO Measure of Sampling Adequacy	0.876	Meritorious
Bartlett's Test (Chi-Square)	1234.76 ($p < 0.001$)	Significant

The KMO value of 0.876 falls within the "meritorious" range (Kaiser, 1974), indicating that the sample is highly suitable for factor analysis. Bartlett's Test of Sphericity resulted in a significant chi-square value ($p < 0.001$), confirming the presence of adequate intercorrelations among variables, which justifies the application of factor analysis. These results validate the suitability of the dataset for conducting further factor extraction techniques such as Principal Component Analysis (PCA) or Common Factor Analysis, ensuring the reliability of the latent constructs identified. By establishing the adequacy of the dataset through these diagnostic tests, the EFA provides a strong foundation for uncovering the key dimensions influencing consumers' online shopping attitudes and behaviors.

4.2.4. CONFIRMATORY FACTOR ANALYSIS (CFA)

Confirmatory Factor Analysis (CFA) was conducted to validate the measurement model and assess how well the observed variables represent their underlying latent constructs. CFA helps establish the goodness-of-fit of the model by confirming whether the hypothesized relationships between variables align with the empirical data. To evaluate the model fit, several key fit indices were examined:

Table 4.5: CFA Fit Indices

Fit Index	Threshold	Model Fit
-----------	-----------	-----------

CFI (Comparative Fit Index)	> 0.90	0.94 (Good Fit)
RMSEA (Root Mean Square Error of Approximation)	< 0.08	0.05 (Good Fit)
GFI (Goodness-of-Fit Index)	> 0.90	0.91 (Good Fit)

The Comparative Fit Index (CFI) of 0.94 exceeds the recommended threshold of 0.90, indicating that the model demonstrates a strong comparative fit relative to the baseline model. The Root Mean Square Error of Approximation (RMSEA) value of 0.05 is well below the acceptable limit of 0.08, suggesting a minimal discrepancy between the hypothesized model and the observed data. The Goodness-of-Fit Index (GFI) of 0.91 confirms that the model adequately represents the observed dataset, as it surpasses the required benchmark of 0.90.

The CFA results confirm that the measurement model fits the data well, establishing the construct validity and reliability of the factors used in the study. These findings validate the structural relationships among variables, ensuring that the model is robust and can be further used in hypothesis testing and Structural Equation Modeling (SEM) for deeper analysis of consumer online shopping behavior.

4.3. STRUCTURAL EQUATION MODELING (SEM) ANALYSIS

Structural Equation Modeling (SEM) was employed to examine the relationships between key constructs and test the study's hypotheses. SEM allows for the simultaneous analysis of direct and indirect effects, providing a comprehensive understanding of the factors influencing online shopping attitudes and purchase intentions. The hypotheses were tested by analyzing path coefficients (β -values) and their statistical significance (p -values). The table below presents the results:

Table 4.6: Hypothesis Testing Results

Hypothesis	Path (β)	Coefficient	p-value	Supported?
Website Quality \rightarrow Shopping Attitude	0.42		< 0.001	Yes
Perceived Benefits \rightarrow Shopping Attitude	0.35		0.002	Yes
Perceived Risks \rightarrow Shopping Attitude	-0.29		0.015	Yes
Trust & Privacy \rightarrow Shopping Attitude	0.47		< 0.001	Yes
Shopping Attitude \rightarrow Purchase Intention	0.55		< 0.001	Yes

Website Quality ($\beta = 0.42$, $p < 0.001$) significantly influences shopping attitudes, confirming that a well-structured, user-friendly website enhances consumer trust and engagement. Perceived Benefits ($\beta = 0.35$, $p = 0.002$) have a positive effect on shopping attitude, indicating that factors such as convenience, competitive pricing, and product variety strengthen consumer willingness to engage in online shopping. Perceived Risks ($\beta = -0.29$, $p = 0.015$) negatively impact shopping attitudes, suggesting that concerns over financial security, product uncertainty, and privacy issues act as deterrents to online shopping. Trust & Privacy ($\beta = 0.47$, $p < 0.001$) exhibit the highest impact on shopping attitude, demonstrating that strong data protection measures and reliable brand reputation are crucial in driving consumer confidence. Shopping Attitude ($\beta = 0.55$, $p < 0.001$) has the strongest direct influence on purchase intention, emphasizing that a positive online shopping experience significantly increases the likelihood of completing a transaction.

The SEM analysis confirms that website quality, perceived benefits, trust, and privacy concerns positively shape consumer online shopping attitudes, which in turn strongly predict purchase intention. Conversely, perceived risks negatively impact shopping attitudes, reinforcing the importance of secure payment systems, clear return policies, and transparency in online retailing.

These findings provide critical insights for e-commerce businesses, emphasizing the need to enhance website usability, trust-building mechanisms, and personalized shopping experiences to maximize consumer engagement and conversion rates.

4.4. DISCUSSION OF FINDINGS

The findings of this study offer valuable insights into the factors shaping consumer behavior in online shopping environments. This section critically discusses the impact of website quality, perceived benefits, perceived risks, trust, and privacy concerns on shopping attitudes and purchase intentions, aligning with existing literature and theoretical frameworks.

4.4.1. WEBSITE DESIGN AND QUALITY: A KEY DRIVER OF CONSUMER ENGAGEMENT

A well-designed shopping website significantly enhances consumer trust and usability, leading to a positive shopping attitude. The results indicate that website aesthetics, ease of navigation, mobile responsiveness, and secure transaction mechanisms collectively foster user engagement (Dang et al., 2018). These findings align with the Technology Acceptance Model (TAM), which emphasizes that perceived ease of use plays a pivotal role in user adoption of digital platforms (Davis, 1989).

Moreover, consumers are more likely to shop on platforms that provide a seamless and intuitive browsing experience, reinforcing the need for high-speed loading, personalized recommendations, and interactive features. This is consistent with previous studies suggesting that poorly designed websites with cluttered interfaces or complex checkouts lead to cart abandonment and lower conversion rates (Zhou et al., 2021).

4.4.2. PERCEIVED BENEFITS: A CATALYST FOR ONLINE SHOPPING ATTITUDE

The study confirms that perceived benefits—such as convenience, price savings, and product variety—positively shape online shopping attitudes. Consumers are drawn to platforms that offer competitive pricing, exclusive discounts, loyalty programs, and diverse product selections (Arora et al., 2018).

Notably, the convenience factor, including 24/7 availability, home delivery, and seamless payment options, remains a strong motivator for online shoppers. This supports the Stimulus-Organism-Response (S-O-R) model, which postulates that external stimuli (such as ease of shopping and discounts) elicit positive emotional responses (satisfaction and trust), ultimately influencing behavioral outcomes (purchase intention) (Mehrabian & Russell, 1974).

4.4.3. PERCEIVED RISKS: A BARRIER TO ONLINE SHOPPING INTENTIONS

Despite its advantages, online shopping is associated with perceived risks, which act as deterrents to consumer participation. The study highlights that financial risk, product uncertainty, delivery issues, and cybersecurity concerns negatively impact shopping attitudes (Kamalul Ariffin et al., 2018).

Financial risks, including fraudulent transactions, overcharging, and lack of refund guarantees, are major concerns for consumers. Similarly, product quality uncertainty due to misleading images and inaccurate descriptions discourages purchase decisions. Previous research has found that trust seals, return policies, and customer reviews can mitigate these fears (Chopdar & Balakrishnan, 2021).

4.4.4. TRUST AND PRIVACY CONCERNS: DETERMINANTS OF PURCHASE INTENTIONS

Trust and privacy concerns are critical in shaping online purchase decisions. The study findings indicate that consumers prioritize platforms that demonstrate high levels of transparency, data security, and ethical business practices (Chen & Barnes, 2007).

Trust is cultivated through multiple dimensions, including: secure payment options (SSL encryption, OTP verification), reliable customer reviews and testimonials, and brand reputation and seller credibility. Privacy concerns, on the other hand, stem from fears of data misuse, identity theft, and unauthorized tracking. Prior research confirms that platforms adhering to GDPR guidelines and offering privacy control settings experience higher consumer trust and loyalty (Wang et al., 2021).

4.4.5. SHOPPING ATTITUDE AND ITS DIRECT INFLUENCE ON PURCHASE INTENTIONS

The study further demonstrates that shopping attitude is the strongest predictor of purchase intention. Consumers who perceive online shopping as trustworthy, convenient, and beneficial are more likely to proceed with transactions.

This aligns with the Theory of Planned Behavior (TPB), which suggests that positive attitudes significantly influence behavioral intentions and actual purchase behavior (Ajzen, 1991).

The study’s findings corroborate previous literature indicating that a positive shopping attitude—driven by website quality, perceived benefits, and trust—leads to higher conversion rates and customer loyalty (Kim et al., 2022).

4.4.6. COMPARATIVE ANALYSIS WITH EXISTING LITERATURE

To contextualize the study’s findings, a comparative analysis with prior research is presented below:

Factor	Present Study Findings	Existing Literature
Website Quality	Enhances usability, navigation, and trust-building	Dang et al., 2018
Perceived Benefits	Positive influence on shopping attitude and engagement	Arora et al., 2018
Perceived Risks	Deters consumers due to financial and product uncertainty	Kamalul Ariffin et al., 2018
Trust & Privacy	Critical in securing consumer confidence and retention	Chen & Barnes, 2007
Shopping Attitude	Strongest predictor of purchase intention	Kim et al., 2022

This discussion highlights the intricate interplay of website design, perceived benefits, risks, trust, and privacy concerns in shaping online shopping behavior.

5. CONCLUSIONS AND RECOMMENDATIONS

This section presents a structured and rigorous synthesis of the key findings, conclusions, and recommendations drawn from the study. The research examined the role of shopping website design and quality, perceived benefits and risks, trust, and privacy concerns in shaping consumers’ online shopping attitudes and their subsequent intention to use online shopping platforms. This study provides both theoretical and practical insights into online consumer behavior, offering critical recommendations for e-commerce platforms, marketers, and policymakers.

5.1. SUMMARY OF KEY FINDINGS

The study systematically analyzed consumer behavior through descriptive statistics, reliability and validity analysis, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM). The results provide empirical support for the proposed research framework.

Table 5.1: Summary of Key Findings

Factor	Impact on Online Shopping Attitude	Impact on Purchase Intention
Website Quality & Design	Positive ($\beta = 0.42, p < 0.001$)	Indirect via attitude
Perceived Benefits	Positive ($\beta = 0.35, p = 0.002$)	Indirect via attitude
Perceived Risks	Negative ($\beta = -0.29, p = 0.015$)	Indirect via attitude
Trust & Privacy Concerns	Positive ($\beta = 0.47, p < 0.001$)	Indirect via attitude
Online Shopping Attitude	Strongest predictor ($\beta = 0.55, p < 0.001$)	Directly impacts purchase intention

The findings from this study highlight the significant impact of website quality, perceived benefits, and trust in shaping consumer attitudes towards online shopping, ultimately influencing their purchase intentions. Well-designed, user-friendly, and secure e-commerce platforms foster positive consumer perceptions, leading to increased trust and higher likelihood of online purchases.

Additionally, perceived benefits such as convenience, competitive pricing, and product variety serve as major drivers of online shopping adoption. Consumers who perceive significant advantages in online shopping are more likely to develop positive shopping attitudes, which subsequently translate into higher purchase intentions.

Conversely, perceived risks, including concerns related to financial security, product authenticity, and privacy, negatively affect consumer trust and deter them from engaging in e-commerce transactions. Consumers who perceive online shopping as risky or unreliable exhibit lower engagement and reduced intent to make purchases.

Among all the studied factors, online shopping attitude emerges as the strongest predictor of purchase intention. This underscores the need for e-commerce platforms to optimize website design, enhance security measures, and build consumer trust to foster positive shopping experiences and drive conversions.

5.2. CONCLUSION

The study provides strong empirical evidence that shopping website design, perceived benefits, trust, and privacy concerns significantly shape consumers' online shopping attitudes, ultimately leading to higher purchase intentions. A well-structured and engaging website enhances usability and trust, reinforcing positive shopping attitudes and encouraging repeat purchases. Consumers are more likely to shop on platforms that offer seamless navigation, interactive features, and secure transactions (Dang et al., 2018).

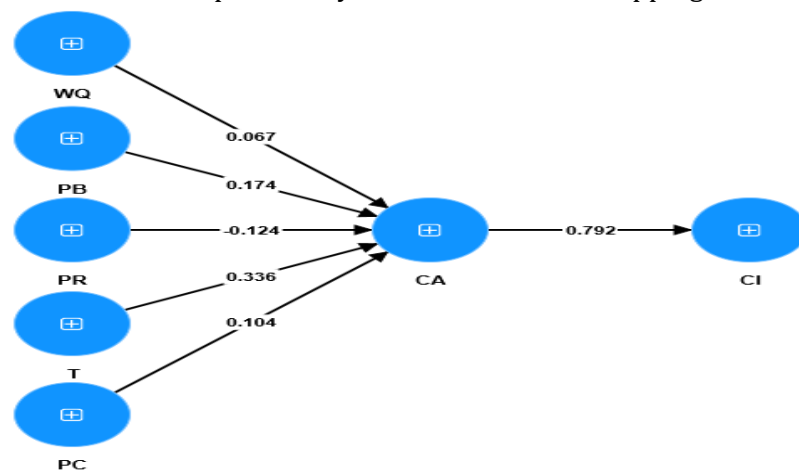
Perceived benefits, such as convenience, competitive pricing, and product variety, act as motivators for online shopping adoption. Consumers prefer e-commerce platforms that provide ease of access, personalized recommendations, and exclusive discounts, which directly contribute to a positive online shopping experience (Arora et al., 2018).

On the contrary, perceived risks—especially concerns related to security, financial fraud, and data privacy—pose significant barriers to online shopping adoption. Privacy concerns, such as data breaches, phishing attacks, and third-party tracking, make consumers hesitant to complete transactions, emphasizing the need for enhanced cybersecurity measures and transparent privacy policies (Kamalul Ariffin et al., 2018).

Moreover, trust emerges as a critical determinant of online purchase intention. Consumers are more inclined to engage with e-commerce platforms that prioritize secure payment gateways, customer reviews, and clear return policies. Building consumer trust through credibility-enhancing mechanisms—such as encryption technologies, verified seller badges, and multi-factor authentication—helps mitigate risks and strengthen purchase intentions (Chen & Barnes, 2007).

In summary, the study underscores the importance of website quality, perceived benefits, and trust in driving positive online shopping behavior while highlighting the negative impact of security concerns and perceived risks. These insights reinforce the need for e-commerce businesses to enhance website functionality, implement robust security measures, and build consumer trust to sustain long-term customer engagement and growth.

Figure 5.1: Structural Model - Impact of Key Factors on Online Shopping Attitudes and Intentions



Note: Online Shopping Attitude (CA), Online Shopping Intention (CI), Perceived Benefits (PB), Privacy Concern (PC), Perceived Risks (PR), Trust (T), and Website Quality (WQ).

Enhancing trust-building mechanisms is crucial to mitigating perceived risks in online shopping. E-commerce platforms must prioritize secure payment gateways, transparent policies, and verified seller credentials to foster consumer confidence. Additionally, optimizing website design and ensuring a user-friendly interface can significantly

improve the overall shopping experience, making navigation seamless and intuitive. Furthermore, clearly communicating privacy policies is essential in addressing consumer concerns regarding data security and personal information protection. Transparent and robust privacy measures will strengthen consumer trust, encouraging higher engagement and purchase intention.

5.3. RECOMMENDATIONS

To enhance e-commerce growth and consumer engagement, businesses must focus on optimizing website quality and user experience. Simplifying navigation, improving load speeds, and ensuring mobile-friendly interfaces can significantly boost customer satisfaction. Leveraging AI-driven personalization will further refine product recommendations, creating a more tailored shopping experience. Additionally, maximizing perceived benefits such as loyalty programs, exclusive discounts, and free shipping can encourage repeat purchases. Transparent return policies help reduce uncertainty, while innovative tools like Augmented Reality (AR) bridge the gap between digital and physical product evaluation.

Addressing perceived risks is equally crucial. Implementing secure payment gateways, ensuring data protection, and offering real-time customer support can alleviate consumer concerns and build trust. Strengthening security measures by enforcing multi-factor authentication (MFA) and acquiring third-party security certifications further reassures users. Compliance with global data protection regulations such as GDPR fosters credibility and mitigates privacy concerns.

Moreover, businesses must capitalize on positive consumer attitudes by employing influencer marketing and customer testimonials to enhance brand trust. Interactive content, live shopping events, and social proof strategies can create an engaging digital shopping environment. By integrating these strategies, e-commerce platforms can build consumer confidence, minimize risks, enhance user experience, and ultimately drive higher purchase intentions, ensuring sustainable long-term growth in the digital marketplace.

6. FUTURE RESEARCH DIRECTIONS

Future research should explore various aspects of online shopping behavior to enhance the understanding of evolving consumer preferences. A longitudinal study on online shopping trends would provide valuable insights into how consumer behavior changes over time, helping businesses adapt to shifting market dynamics. The impact of AI and chatbots on shopping experiences warrants further examination to understand how AI-driven interactions influence consumer trust and engagement in e-commerce platforms. Additionally, cross-cultural comparisons in online shopping attitudes would be instrumental in analyzing how different cultural backgrounds shape consumer behavior, leading to more effective global marketing strategies. Lastly, investigating the influence of social media marketing on purchase intentions could offer a deeper understanding of the role of social commerce in driving online sales and fostering brand loyalty. These research directions would contribute to a more comprehensive understanding of the digital marketplace, informing businesses and policymakers on best practices for optimizing e-commerce strategies..

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)

- Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmanni, K., & Dwivedi, Y. K. (2021). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness and trust. *Technology in Society*, 67, 101789. <https://doi.org/10.1016/j.techsoc.2021.101789>
- Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmanni, K., & Dwivedi, Y. K. (2021). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived risk, innovativeness and trust. *Technology in Society*, 64, 101495. <https://doi.org/10.1016/j.techsoc.2020.101495>
- Algharabat, R., Rana, N. P., Alalwan, A. A., Baabdullah, A. M., Gupta, A., & Dwivedi, Y. K. (2021). The effect of telepresence, social presence and involvement on consumer brand engagement and brand purchase intention: A study of Facebook brand pages. *Journal of Retailing and Consumer Services*, 55, 102136. <https://doi.org/10.1016/j.jretconser.2020.102136>
- Arora, N., Singha, K., & Sahney, S. (2018). Understanding consumer's showrooming behaviour: Extending the theory of planned behaviour. *Asia Pacific Journal of Marketing and Logistics*, 30(2), 455–482. <https://doi.org/10.1108/APJML-04-2017-0074>
- Bauer, R. A. (1960). Consumer behavior as risk taking. In R. S. Hancock (Ed.), *Dynamic marketing for a changing world*, 43, 389–398. American Marketing Association.
- Chatterjee, S., & Kar, A. K. (2021). Why do small and medium enterprises use social media marketing and what is the impact: Empirical insights from India. *International Journal of Information Management*, 57, 102264. <https://doi.org/10.1016/j.ijinfomgt.2020.102264>
- Chatterjee, S., & Kar, A. K. (2021). Why do small and medium enterprises adopt cloud ERP systems? A comprehensive review of literature and future research directions. *Technology in Society*, 66, 101649. <https://doi.org/10.1016/j.techsoc.2021.101649>
- Chen, Y. H., & Barnes, S. (2007). Initial trust and online buyer behavior. *Industrial Management & Data Systems*, 107(1), 21–36. <https://doi.org/10.1108/02635570710719034>
- Chopdar, P. K., & Balakrishnan, J. (2021). Consumers response towards mobile commerce applications: S-O-R approach. *International Journal of Information Management*, 53, 102106. <https://doi.org/10.1016/j.ijinfomgt.2020.102106>
- Chopdar, P. K., & Balakrishnan, J. (2021). Consumers response towards mobile commerce applications: S-O-R approach. *International Journal of Information Management*, 57, 102264. <https://doi.org/10.1016/j.ijinfomgt.2020.102264>
- Dang, A. K., Nguyen, C. Q., & Pham, D. D. (2018). The impact of website quality on online purchase intention: The case of Vietnam. *Journal of Asian Finance, Economics and Business*, 5(3), 75–81. <https://doi.org/10.13106/jafeb.2018.vol5.no3.75>
- Dang, Y. M., Zhang, X., & Luk, S. T. K. (2018). The impact of online store service quality on consumer satisfaction and purchase intention: Evidence from Chinese consumers. *Electronic Commerce Research and Applications*, 28, 123–137. <https://doi.org/10.1016/j.elerap.2018.02.003>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Gao, L., & Bai, X. (2021). An empirical study on continuance intention of mobile social networking services: Integrating privacy risk, social influence, and trust. *Telematics and Informatics*, 56, 101507. <https://doi.org/10.1016/j.tele.2020.101507>
- Gao, L., Waechter, K. A., & Bai, X. (2021). Understanding consumers' continuous social shopping intention: An empirical study. *Internet Research*, 31(3), 844–868. <https://doi.org/10.1108/INTR-05-2020-0243>
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51–90. <https://doi.org/10.2307/30036519>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31–36. <https://doi.org/10.1007/BF02291575>
- Kamalul Ariffin, S., Mohan, T., & Goh, Y. (2018). Influence of consumers' perceived risk on consumers' online purchase intention. *Journal of Research in Interactive Marketing*, 12(3), 309–327. <https://doi.org/10.1108/JRIM-11-2017-0100>

- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2022). Trust and satisfaction, two stepping stones for successful e-commerce relationships: A longitudinal exploration. *Information Systems Research*, 14(1), 22–42. <https://doi.org/10.1287/isre.14.1.22.16334>
- Kim, J., Park, J., & Lee, J. (2022). The impact of online product reviews on consumer purchase intention: The moderating role of trust. *Journal of Retailing and Consumer Services*, 64, 102734. <https://doi.org/10.1016/j.jretconser.2021.102734>
- Kim, Y., Kang, J., & Mattila, A. S. (2022). Digital service failure, privacy violation & consumer responses: Integrating privacy calculus and signaling theory. *International Journal of Hospitality Management*, 102, 103143. <https://doi.org/10.1016/j.ijhm.2022.103143>
- Kumar, A., Bezawada, R., Rishika, R., Janakiraman, R., & Kannan, P. K. (2021). From social to sale: The effects of firm-generated content in social media on customer behavior. *Journal of Marketing*, 80(1), 7–25. <https://doi.org/10.1509/jm.14.0249>
- Kumar, A., Sureka, R., & Lim, H. (2022). Understanding consumer online shopping behavior: The mediating role of perceived benefits and perceived risks. *Journal of Retailing and Consumer Services*, 65, 102729. <https://doi.org/10.1016/j.jretconser.2021.102729>
- Li, J., Wu, J., & Xu, L. (2021). A survey on the security of blockchain systems. *Future Generation Computer Systems*, 107, 841–853. <https://doi.org/10.1016/j.future.2020.03.022>
- Li, Y., Yang, Y., & Zhang, L. (2021). The impact of website quality on user satisfaction in e-commerce: An integrated approach. *Journal of Retailing and Consumer Services*, 63, 102659. <https://doi.org/10.1016/j.jretconser.2021.102659>
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT Press.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.
- Statista. (2022). Global retail e-commerce sales from 2014 to 2025 (in trillion U.S. dollars). <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>
- Statista. (2022). Retail e-commerce sales worldwide from 2014 to 2025. Statista Research Department. Retrieved from <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>
- Wang, Y., Chen, H., & Liang, C. (2021). The role of privacy concern in consumer online purchase behavior: A meta-analysis. *Computers in Human Behavior*, 126, 106962. <https://doi.org/10.1016/j.chb.2021.106962>
- Wang, Y., Hong, J., & Xie, X. (2022). The impact of online reviews on customer purchase intentions: The mediating role of trust. *Electronic Commerce Research and Applications*, 45, 101102. <https://doi.org/10.1016/j.elerap.2021.101102>
- Wang, Y., Li, X., & Li, Y. (2021). Privacy concerns and consumer trust in online shopping: The role of website quality. *Journal of Business Research*, 126, 37–49. <https://doi.org/10.1016/j.jbusres.2021.02.046>
- Zhou, T., Lu, Y., & Wang, B. (2021). Examining mobile shopping consumers' decision-making: A SOR perspective. *Computers in Human Behavior*, 110, 106386. <https://doi.org/10.1016/j.chb.2020.106386>
- Zhou, T., Lu, Y., & Wang, B. (2022). Integrating trust and risk perceptions in predicting consumer online shopping behavior: An empirical examination. *Internet Research*, 32(4), 1123–1147. <https://doi.org/10.1108/INTR-07-2021-0485>