

Factors Influencing Consumer Online Shopping Behaviour: A Factor Analytical Approach

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Abstract

The rapid growth of internet technology and e-commerce platforms has significantly transformed consumers' purchasing behaviour. Online shopping has become an important mode of purchasing due to its convenience, accessibility, variety of products, and time-saving benefits. The present study aims to identify and analyse the major factors influencing consumers' online shopping behaviour.

The study is based on primary data collected from 177 respondents through a structured questionnaire. Statistical tools such as descriptive analysis, reliability analysis, Kaiser-Meyer-Olkin (KMO) test, Bartlett's Test of Sphericity, and Exploratory Factor Analysis (EFA) were used to analyse the data.

The factor analysis extracted ten major factors influencing online shopping behaviour, namely Perceived Usefulness, Perceived Ease of Use, Social Influence, Facilitating Conditions, Hedonic Motivation, Price Value, Habit, Behavioural Intention, Perceived Risk, and Trust. The findings of the study reveal that convenience, ease of use, trust, price benefits, and enjoyment significantly influence consumers' intention and preference toward online shopping. The study also highlights that younger, educated, and urban consumers with frequent internet usage are more actively engaged in online shopping activities. However, perceived risk related to privacy and security remains a concern among consumers.

The study provides useful insights for e-commerce companies, marketers, and researchers in understanding consumer behaviour and developing effective strategies to improve customer satisfaction, trust, and online shopping experiences.

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Introduction

The rapid advancement of internet technology and digital communication has significantly transformed consumer purchasing behaviour across the globe. The emergence of e-commerce has revolutionized the traditional retail environment by providing consumers with convenient, efficient, and accessible shopping alternatives. Over the past two decades, online shopping has become one of the most preferred methods of purchasing products and services due to increasing internet penetration, widespread smartphone adoption, and the development of secure digital payment systems. Kotler and Keller (2016), technological innovations and changing consumer lifestyles have substantially influenced consumer buying behaviour and decision-making processes in modern markets.

Online shopping offers several advantages, including convenience, flexibility, wider product selection, price comparison opportunities, and time-saving benefits. These features have encouraged consumers to shift from conventional shopping methods to digital platforms. Research by Jarvenpaa and Todd (1997) highlighted that convenience and accessibility are among the primary factors motivating consumers to engage in online purchasing activities. Similarly, Monsuwé, Dellaert, and de Ruyter (2004) found that consumers' attitudes toward online shopping are largely influenced by perceived usefulness, convenience, and shopping enjoyment.

The success of online shopping platforms largely depends on consumer acceptance and adoption of technology. The Technology Acceptance Model (TAM), developed by Davis (1989), suggests that perceived usefulness and perceived ease of use are key determinants influencing users' acceptance of technological systems. Extending this perspective, Venkatesh et al. (2003), through the Unified Theory of Acceptance and Use of Technology (UTAUT), emphasized that performance expectancy, effort expectancy, social influence, and facilitating conditions significantly affect technology adoption and usage behaviour.

The rapid growth of e-commerce has intensified competition among online retailers, making it essential to understand consumer perceptions and preferences. Consumer perception plays a critical role in influencing purchase decisions, customer satisfaction, loyalty, and long-term usage intentions. Schiffman and Wisenblit (2019) stated that consumer perception is the process through which individuals select, organize, and interpret information to form meaningful views about products and services. Positive perceptions regarding website quality, information accuracy, ease of navigation, and transaction security can enhance consumers' willingness to purchase online.

Furthermore, social media platforms, digital marketing strategies, online reviews, and electronic word-of-mouth have become influential factors affecting online consumer behaviour. Cheung and Thadani (2012), online reviews significantly impact consumer trust and purchase intentions by providing valuable information and reducing perceived risk. Likewise, Hajli (2014) found that social commerce and social networking platforms positively influence consumer trust and online purchasing behaviour.

Trust remains one of the most critical determinants of successful online transactions. Consumers often face uncertainties related to product quality, privacy, security, and payment safety while shopping online. Gefen, Karahanna, and Straub (2003) reported that trust significantly influences consumers' intentions to engage in online transactions. Similarly, Pavlou (2003) argued that trust helps reduce perceived risk and uncertainty in electronic commerce environments, thereby encouraging online purchasing behaviour.

Despite the increasing popularity of online shopping, several challenges continue to affect consumer attitudes and purchasing decisions. Issues such as cybersecurity threats, privacy concerns, delayed deliveries, lack of physical product inspection, and discrepancies between advertised and actual products may negatively influence consumers' perceptions. Forsythe and Shi (2003) identified financial, product, privacy, and convenience risks as major concerns affecting online shopping adoption.

Given the continued expansion of digital marketplaces and the growing dependence on e-commerce platforms, understanding consumer perception and behaviour toward online

shopping has become an important area of academic and practical investigation. Therefore, the present study seeks to examine the major factors influencing consumer perception, purchase decisions, and online shopping behaviour. The findings of the study are expected to provide valuable insights into consumer attitudes, preferences, satisfaction levels, and adoption patterns within the rapidly evolving digital marketplace.

Review of Literature

The rapid expansion of internet technology and e-commerce platforms has significantly changed consumer purchasing behaviour across the world. Online shopping has emerged as an important mode of purchasing goods and services because of its convenience, accessibility, time-saving benefits, and wider product availability. The review of literature provides a theoretical and empirical foundation for the present study by examining earlier research related to online shopping behaviour. It helps in understanding the major determinants influencing consumers' online purchasing decisions and identifies research gaps for further investigation.

Perceived Usefulness / Convenience

Davis (1989) conducted a study on the Technology Acceptance Model (TAM) using 152 users and found that perceived usefulness significantly influences technology adoption behaviour. The study concluded that consumers are more likely to adopt digital systems when they believe such systems improve efficiency and performance. Venkatesh et al. (2012) examined consumer acceptance and use of technology among 1,512 respondents and found that convenience and usefulness positively affect behavioural intention toward online platforms. Agarwal and Venkatesh (2016) studied online shopping behaviour among internet users and reported that convenience, accessibility, and time-saving benefits are major reasons for consumer preference toward online shopping. Childers et al. (2001) found that convenience and efficiency significantly influence consumers' online purchase decisions.

Recent studies further support these findings. Alalwan (2020) reported that perceived usefulness remains a significant determinant of consumers' intention to use e-commerce and mobile commerce platforms. Malaquias and Hwang (2019) found that convenience and accessibility positively influence online purchasing behaviour among digital consumers.

Algharabat et al. (2022) observed that consumers prefer online platforms that enhance shopping efficiency and provide seamless purchasing experiences. Kumari and Rathee (2024) investigated the role of augmented reality in e-commerce and reported that perceived usefulness significantly mediates consumers' attitudes and purchase intentions toward online shopping platforms. Hipólito, Dias, and Pereira (2025) found that consumers who perceive online shopping platforms as useful and convenient exhibit higher satisfaction levels and stronger intentions to continue online purchasing.

Perceived Ease of Use

Davis (1989) found that perceived ease of use positively influences users' acceptance of technological systems. Gefen and Straub (2000) reported that user-friendly website design and simplified navigation positively influence consumer satisfaction and online purchase intention. Pavlou (2003) found that ease of website usage significantly affects trust and online transaction behaviour. Monsuwé et al. (2004) observed that consumers prefer online platforms that provide easy product search, quick payment procedures, and simple transaction systems.

Recent evidence indicates similar findings. Sharma and Crossler (2018) reported that website usability and navigation simplicity significantly influence online shopping satisfaction. Gupta and Arora (2020) found that easy-to-use mobile shopping applications positively affect purchase intentions among Indian consumers. Chawla and Joshi (2021) observed that perceived ease of use significantly predicts online shopping adoption and customer engagement.

Social Influence

Venkatesh et al. (2012) identified social influence as a major determinant of behavioural intention toward technology adoption. Cheung and Lee (2012) found that online reviews and social media recommendations strongly influence purchasing decisions. Hennig-Thurau et al. (2004) reported that electronic word-of-mouth communication positively affects consumer trust and product selection. Kim and Park (2013) found that social networking platforms and influencer recommendations significantly impact online shopping attitudes and purchase intention.

Recent studies highlight the growing role of digital communities. Djafarova and Rushworth (2017) found that social media influencers significantly affect consumer purchase decisions. Sokolova and Kefi (2020) reported that influencer credibility positively impacts online buying intentions. Nadeem et al. (2021) observed that social media engagement and peer recommendations strongly shape consumer attitudes toward online shopping. Jabeen et al. (2024) reported that social media advertising positively influences customer online buying behaviour, particularly when trust is established through social interactions and digital engagement. Saiyed and Bhatt (2025) found that social commerce platforms, peer recommendations, and social interactions significantly affect online purchase intentions through trust-building mechanisms.

Facilitating Conditions

Venkatesh et al. (2003) explained that facilitating conditions positively influence consumers' ability to use technology effectively. Taylor and Todd (1995) found that access to resources and technical support improves users' adoption behaviour. Rogers (2003) emphasized that availability of technological infrastructure significantly influences innovation adoption. Alalwan et al. (2017) reported that internet access, smartphones, and secure payment systems positively affect online shopping usage.

Recent studies support these findings. Oliveira et al. (2018) found that technological infrastructure and internet accessibility significantly influence e-commerce adoption. Sharma et al. (2020) reported that digital payment facilities and reliable internet connectivity enhance online shopping behaviour. Singh and Srivastava (2022) found that facilitating conditions significantly predict continued use of e-commerce platforms. Xiao et al. (2024) reported that platform functionality and service quality significantly affect consumers' willingness to continue using online shopping platforms.

Hedonic Motivation / Shopping Enjoyment

Holbrook and Hirschman (1982) explained that emotional and experiential aspects strongly influence consumer behaviour. Childers et al. (2001) found that enjoyment significantly motivates consumers toward online shopping adoption. To et al. (2007) observed that pleasurable shopping experiences positively influence purchase intention. Arnold and

Reynolds (2003) identified fun, excitement, and relaxation as important dimensions affecting shopping enjoyment.

Recent research demonstrates the continued importance of hedonic motivation. Rodríguez-Torrico et al. (2020) found that enjoyment significantly increases online purchase intentions. Kazancoglu and Demir (2021) reported that entertainment value and interactive experiences positively influence online shopping satisfaction. Ozturk et al. (2023) found that hedonic motivations contribute significantly to customer loyalty in e-commerce environments. Cuong (2024) reported that positive emotions, personalization, and hedonic shopping motivations significantly influence consumer shopping behaviour on e-commerce platforms. Xiao et al. (2024) observed that satisfaction and perceived value derived from shopping experiences positively influence consumers' willingness to continue shopping online.

Price Value / Economic Benefit

Kotler and Keller (2016) stated that consumers are highly influenced by perceived financial value while making purchase decisions. Zeithaml (1988) explained that consumers evaluate products based on perceived value and economic benefits. Sorce et al. (2005) found that discounts and competitive pricing positively influence online shopping behaviour. Kukar-Kinney et al. (2009) reported that promotional offers encourage consumers to make online purchases.

Recent studies indicate similar trends. Chiu et al. (2020) found that perceived price advantages significantly influence online purchase intentions. Arora and Aggarwal (2021) reported that discounts and cashback offer positively affect consumer satisfaction. Gupta et al. (2023) found that price competitiveness remains one of the strongest predictors of online shopping behaviour. Xiao et al. (2024) found that perceived value significantly affects customer satisfaction and willingness to use online shopping platforms. Consumers who perceive greater economic benefits demonstrate stronger purchase intentions.

Habit

Limayem et al. (2007) found that habitual behaviour significantly influences continued technology usage. Verplanken and Aarts (1999) explained that repeated behaviour gradually becomes automatic and influences consumer decision-making processes. Venkatesh et al. (2012) identified habit as an important predictor of technology acceptance and actual usage behaviour. Liao et al. (2006) reported that frequent online shoppers develop routine purchasing habits.

Recent studies support the significance of habit. Hsu et al. (2018) found that habit positively affects online repurchase intention. Kapoor et al. (2020) reported that repeated use of e-commerce applications strengthens consumers' shopping routines. Nguyen et al. (2022) observed that habit significantly predicts long-term online shopping engagement. Xiao et al. (2024) reported that prior platform satisfaction encourages repeated use and strengthens consumers' shopping habits over time. Hipólito et al. (2025) observed that positive online shopping experiences encourage repeat purchasing behaviour and long-term platform engagement.

Behavioural Intention / Preference

Ajzen (1991) explained that behavioural intention is one of the strongest predictors of actual behaviour. Fishbein and Ajzen (1975) found that attitudes and intentions significantly influence consumer decision-making behaviour. Bhattacharjee (2001) found that satisfaction positively affects future usage intention. Pavlou (2003) reported that trust, usefulness, and perceived ease of use significantly influence online purchase intention.

Recent studies confirm these findings. Alalwan (2020) found that behavioural intention is a key determinant of online shopping adoption. Chawla and Joshi (2021) reported that consumer attitudes and satisfaction significantly influence purchase intentions. Nadeem et al. (2021) found that digital engagement positively predicts online shopping intentions.

Perceived Risk

Featherman and Pavlou (2003) found that perceived risk negatively affects consumers' willingness to engage in online shopping. Forsythe and Shi (2003) identified financial risk,

privacy concerns, and product uncertainty as major barriers. Bhatnagar et al. (2000) reported that security concerns reduce consumer confidence. Kim et al. (2008) found that reducing perceived risk improves online purchase intention.

Recent studies reveal similar concerns. Gupta and Dubey (2018) found that privacy and security risks remain significant barriers to online purchasing. Ariffin et al. (2018) reported that perceived risk negatively influences online shopping behaviour. Tran (2021) observed that cybersecurity concerns continue to affect consumers' trust and purchasing decisions. Jabeen et al. (2024) found that perceived risk negatively affects customer online buying behaviour, while trust helps mitigate risk perceptions. Singh (2024) reported that perceived privacy and security risks negatively influence consumers' online buying intentions.

Trust

Gefen (2000) found that trust positively affects consumers' intention to purchase products online. Jarvenpaa et al. (2000) concluded that trust significantly influences purchase intention and customer loyalty. McKnight et al. (2002) explained that trust reduces uncertainty and increases confidence in online systems. Pavlou (2003) reported that trust plays a crucial role in reducing perceived risk.

Recent studies continue to emphasize the importance of trust. Bilgihan et al. (2016) found that consumer trust significantly influences online purchase decisions. Alalwan et al. (2018) reported that trust positively affects customer engagement and online shopping adoption. Singh and Sinha (2023) found that trust remains one of the strongest predictors of consumer loyalty and repurchase intention in e-commerce environments. Hipólito et al. (2025) observed that trust significantly reduces perceived risk and enhances customer satisfaction in online shopping environments. Saiyed and Bhatt (2025) further reported that online trust positively affects purchase intentions and consumer decision-making processes in social commerce platforms.

Overall, the reviewed studies provide valuable insights into the factors influencing online shopping behaviour and establish a strong foundation for the present research. The literature confirms that perceived usefulness, perceived ease of use, social influence, facilitating

conditions, hedonic motivation, price value, habit, behavioural intention, perceived risk, and trust are critical variables affecting consumers' online shopping decisions. Therefore, the present study seeks to examine these factors collectively to develop a more comprehensive understanding of consumer online shopping behaviour in the contemporary digital marketplace.

Research Gap

The review of literature reveals that online shopping behaviour has been extensively examined from technological, psychological, social, and economic perspectives. Foundational studies by Davis (1989), Gefen (2000), Pavlou (2003), Venkatesh et al. (2012), and subsequent researchers significantly contributed to understanding the determinants of consumers' online shopping adoption and usage behaviour. More recent studies conducted between 2020 and 2025 have further emphasized the importance of digital transformation, mobile commerce, social media engagement, artificial intelligence-based recommendations, and personalized shopping experiences in influencing consumer behaviour. Despite the substantial body of literature available, several important research gaps remain.

First, previous studies have predominantly examined online shopping behaviour by focusing on a limited set of variables such as perceived usefulness, perceived ease of use, trust, perceived risk, or behavioural intention. Relatively few studies have attempted to integrate technological factors (perceived usefulness, perceived ease of use, facilitating conditions), social factors (social influence), motivational factors (hedonic motivation), economic factors (price value), and psychological factors (habit, trust, and perceived risk) within a single comprehensive framework. Consequently, a holistic understanding of online shopping behaviour remains limited.

Second, a considerable proportion of existing studies have been conducted in developed economies where digital infrastructure, internet accessibility, and online shopping penetration are highly advanced. The findings of these studies may not be fully applicable to developing countries such as India, where consumer behaviour is influenced by diverse socio-economic conditions, varying levels of digital literacy, cultural differences, and unequal access to

technological resources. Therefore, there is a need for context-specific research in emerging digital markets.

Third, although demographic characteristics have been recognized as important determinants of consumer behaviour, limited studies have comprehensively examined online shopping behaviour across diverse demographic groups, including different age categories, educational levels, occupations, income groups, and residential backgrounds. Understanding these differences is essential for developing targeted marketing strategies and enhancing customer engagement.

Fourth, the online shopping environment has undergone significant transformation due to the rapid growth of mobile commerce, social commerce, influencer marketing, digital payment systems, and artificial intelligence-enabled shopping platforms. Many earlier studies were conducted before these technological advancements became mainstream. Consequently, there is a need to reassess consumer perceptions and behavioural patterns within the contemporary digital commerce ecosystem.

Fifth, while trust and perceived risk have consistently been identified as significant determinants of online shopping behaviour, limited empirical research has explored their simultaneous influence alongside habit, social influence, hedonic motivation, and facilitating conditions. The complex interrelationships among these factors require further investigation to provide a more comprehensive explanation of consumer decision-making processes.

Sixth, previous research has largely employed regression-based approaches and technology acceptance frameworks, whereas relatively few studies have utilized exploratory factor analysis and related multivariate techniques to identify the underlying dimensions shaping online shopping behaviour. Such approaches can provide deeper insights into the latent factors influencing consumer perceptions and purchasing decisions.

Finally, despite the growing body of literature, there remains a scarcity of comprehensive studies that simultaneously investigate perceived usefulness, perceived ease of use, social influence, facilitating conditions, hedonic motivation, price value, habit, behavioural intention, perceived risk, and trust within a unified analytical framework. Addressing this gap

is essential for developing a more integrated understanding of contemporary online shopping behaviour.

Therefore, the present study seeks to bridge these gaps by examining the combined influence of technological, social, motivational, economic, and psychological factors on online shopping behaviour. Using factor analytical techniques and data collected from a diverse group of consumers, the study aims to identify the underlying dimensions that shape online shopping behaviour and provide meaningful insights for researchers, marketers, e-commerce practitioners, and policy makers.

Objectives of the Study

To study the demographic profile of consumers using online shopping platforms.

To identify the major factors influencing consumers' online shopping behaviour.

To provide suggestions for improving consumers' online shopping experience and satisfaction.

Research Methodology

Research Design

The present study is descriptive and analytical in nature. The population of the study consists of consumers who use online shopping platforms for purchasing products and services. The respondents include individuals who have prior experience with online shopping applications and websites. A total of 177 respondents were selected for the study. The respondents were chosen from different demographic backgrounds to obtain diverse opinions regarding online shopping behaviour.

The study used a convenience sampling method for data collection. Respondents who were easily accessible and actively engaged in online shopping were included in the survey. Both primary and secondary data were used in the study. Primary data were collected through a structured questionnaire distributed among online shoppers. Secondary data were collected from research articles, journals, books, websites, and previous studies related to consumer behaviour and online shopping. A structured questionnaire was used as the main research

instrument for data collection. The questionnaire consisted of two sections: Demographic Information – including age, gender, education, occupation, and online shopping experience. Variable Measurement Statements – based on the eleven major factors influencing online shopping behaviour. The responses were measured using a five-point Likert scale: “Strongly Disagree to Strongly Agree. Statistical analysis was conducted using software such as SPSS and MS Excel.

Results and interpretation

Demographic Profile

The demographic profile of respondents provides important information regarding the characteristics of consumers participating in the study. The analysis includes variables such as gender, age, marital status, educational qualification, area of residence, and internet usage frequency. Understanding these demographic characteristics helps in identifying the nature of online shopping consumers and their behavioural patterns. The following table presents the frequency and percentage distribution of respondents based on different demographic variables. A table is as below:

Table 1: Demographic Profile

Demographic Variable	Category	Frequency	Percentage
Gender	Male	105	59.3%
	Female	72	40.7%
	Total	177	100%
Age	18–25 years	121	68.4%
	26–35 years	44	24.9%
	36–45 years	5	2.8%
	46 & above	7	4%
	Total	177	100%
Marital Status	Unmarried	139	78.5%
	Married	38	21.5%

	Total	177	100%
Educational Qualification	10+2 / Higher Secondary	28	15.8%
	Graduate	53	29.9%
	Postgraduate	81	45.8%
	Doctorate	9	5.1%
	Professional Qualification (CA/MBA/Engineering etc.)	6	3.4%
	Total	177	100%
Area of Residence	Urban	100	56.5%
	Rural	64	36.2%
	Semi-Urban	13	7.3%
	Total	177	100%
Internet Usage Frequency	Rarely	10	5.6%
	Frequently	67	37.9%
	Weekly	42	23.7%
	Daily (less than 2 hours)	51	28.8%
	Occasionally	7	4%
	Total	177	100

Source: Primary Data

The demographic profile of the respondents provides an overview of the characteristics of the sample selected for the study. A total of 177 respondents participated in the survey. The gender-wise distribution shows that 105 respondents (59.3%) were male, while 72 respondents (40.7%) were female, indicating that male respondents constituted the majority of the sample population.

The age-wise analysis reveals that most of the respondents belonged to the 18–25 years age group, accounting for 121 respondents (68.4%). This was followed by respondents in the 26–35 years category with 44 respondents (24.9%). Only 5 respondents (2.8%) belonged to the 36–45 years age group, while 7 respondents (4.0%) were aged 46 years and above. These

findings suggest that younger consumers are more actively engaged in online shopping activities.

With regard to marital status, the majority of respondents were unmarried, comprising 139 respondents (78.5%), whereas married respondents accounted for 38 respondents (21.5%). This indicates that unmarried individuals are more inclined toward online shopping compared to married individuals.

The educational qualification analysis indicates that the highest proportion of respondents were postgraduates, representing 81 respondents (45.8%). Graduates accounted for 53 respondents (29.9%), while 28 respondents (15.8%) had completed 10+2 or Higher Secondary education. Doctorate holders represented 9 respondents (5.1%), and respondents with professional qualifications such as CA, MBA, or Engineering constituted 6 respondents (3.4%). The findings imply that highly educated consumers are more likely to adopt online shopping platforms.

The area-wise distribution shows that 100 respondents (56.5%) belonged to urban areas, while 64 respondents (36.2%) were from rural areas and 13 respondents (7.3%) belonged to semi-urban areas. This indicates that online shopping is more popular among urban consumers due to better technological infrastructure and internet accessibility.

Regarding internet usage frequency, 67 respondents (37.9%) reported using the internet frequently, while 51 respondents (28.8%) used it daily for less than two hours. Weekly users accounted for 42 respondents (23.7%), whereas 10 respondents (5.6%) used the internet rarely and 7 respondents (4.0%) used it occasionally. The results indicate that regular internet usage positively influences consumers' participation in online shopping activities.

Overall, the demographic profile suggests that the majority of respondents were young, educated, unmarried urban consumers with frequent internet usage habits, reflecting the dominant consumer segment actively involved in online shopping behaviour.

Extracted Latent Factors Affecting Online Shopping Behaviour

To identify the major dimensions influencing consumers' online shopping behaviour, factor analysis was conducted on the collected responses. The analysis grouped related variables into meaningful factors based on similarities among the items. These factors represent the key psychological, technological, social, and behavioural aspects that affect consumers' decisions and experiences in online shopping environments.

A total of ten factors were extracted from the analysis, namely Perceived Usefulness/Convenience, Perceived Ease of Use, Social Influence, Facilitating Conditions, Hedonic Motivation/Shopping Enjoyment, Price Value/Economic Benefit, Habit, Behavioural Intention/Preference, Perceived Risk, and Trust. Each factor consists of a set of items that collectively explain a particular dimension of consumer behaviour in online shopping. A detail of the table is as below:

Table 2: Calculation of Eigen values Total Variance Explained

Component	Initial Eigen values (>1)			Rotation Sums of Squared Loadings (50-&70%)		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.009	38.318	38.318	7.815	16.628	16.628
2	4.010	8.532	46.850	4.722	10.047	26.675
3	2.053	4.369	51.219	3.271	6.960	33.635
4	1.580	3.362	54.581	3.092	6.579	40.213
5	1.523	3.240	57.822	3.000	6.384	46.597
6	1.260	2.681	60.503	2.770	5.894	52.491
7	1.247	2.652	63.156	2.657	5.653	58.144
8	1.100	2.340	65.496	2.369	5.040	63.184
9	1.053	2.240	67.736	1.658	3.527	66.711
10	1.001	2.130	69.867	1.483	3.156	69.867
Reliability			0.897			

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	5801.731
	df	1081
	Sig.	0.000

Source: Primary data

The results of factor analysis indicate that ten significant factors were extracted from the study variables based on the criterion of eigenvalues greater than 1. Kaiser, factors with eigenvalues above 1 are considered meaningful and capable of explaining a substantial amount of variance in the data.

The first component reported the highest eigenvalue of 18.009 and explained 38.318% of the total variance, indicating that this factor contributes most strongly to explaining consumers' online shopping behaviour. The second component explained an additional 8.532% variance, followed by the third component contributing 4.369%. The cumulative variance explained by the first three factors reached 51.219%, demonstrating that these factors collectively capture a major proportion of the variability in the dataset.

After extraction, the cumulative variance explained by all ten factors was 69.867%, which exceeds the commonly accepted threshold of 60% recommended in social science research. This suggests that the extracted factor structure provides a satisfactory representation of the observed variables and adequately explains online shopping behaviour dimensions.

The rotated component matrix further improved the interpretability of the factors. After rotation, the first rotated factor explained 16.628% variance, while the second and third factors explained 10.047% and 6.960% variance respectively. Rotation redistributed the explained variance more evenly among the factors, resulting in a clearer and more interpretable factor structure.

The reliability analysis revealed a Cronbach's Alpha value of 0.897, which is significantly higher than the recommended threshold value of 0.70 suggested by Nunnally. This indicates excellent internal consistency and reliability of the measurement scale used in the study.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was found to be 0.859, which exceeds the acceptable benchmark value of 0.70. Kaiser, KMO values above 0.80 are considered meritorious, indicating that the sample size is adequate and suitable for factor analysis.

Furthermore, Bartlett's Test of Sphericity produced an approximate Chi-square value of 5801.73 with 1081 degrees of freedom and a significance value of 0.000. Since the significance level is less than 0.05, the null hypothesis that the correlation matrix is an identity matrix is rejected. This confirms that sufficient correlations exist among the variables, making the data appropriate for factor analysis.

Overall, the results demonstrate that the measurement instrument possesses strong reliability, sampling adequacy, and construct validity. The extracted ten-factor model effectively explains consumers' online shopping behaviour and provides a statistically sound foundation for further analysis and hypothesis testing.

Factor Loadings and Communality

The factor loading and communality values presented in the table indicate the strength and adequacy of the relationship between the observed variables and their respective latent constructs. Hair et al., factor loadings greater than 0.50 are considered practically significant, while values above 0.70 indicate a strong contribution of items toward the underlying construct. Similarly, communality values above 0.50 suggest that a substantial proportion of variance in each item is explained by the extracted factors. A table is as under:

Table 3: Factors loadings Analysis

Factor Name	Item Code	Factor Loading (>0.7)	Communality (>0.5)
Perceived Usefulness / Convenience	PU1	0.812	0.684
	PU2	0.796	0.651
	PU3	0.774	0.628

	Perceived Ease of Use	PU4	0.758	0.603
		PU5	0.741	0.587
		PEOU1	0.823	0.692
		PEOU2	0.801	0.664
		PEOU3	0.786	0.639
	Social Influence	SI1	0.794	0.648
		SI2	0.781	0.624
		SI3	0.765	0.601
		SI4	0.748	0.582
	Facilitating Conditions	FC1	0.817	0.676
		FC2	0.796	0.649
		FC3	0.772	0.618
		FC4	0.754	0.596
	Hedonic Motivation / Shopping Enjoyment	HM1	0.836	0.711
		HM2	0.814	0.688
		HM3	0.791	0.653
		HM4	0.776	0.632
	Price Value / Economic Benefit	PV1	0.829	0.701
		PV2	0.807	0.671
		PV3	0.784	0.642
		PV4	0.761	0.611
	Habit	HB1	0.842	0.718
		HB2	0.821	0.694
		HB3	0.798	0.661
		HB4	0.775	0.628
	Behavioural Intention / Preference	BI1	0.851	0.732
		BI2	0.833	0.706
		BI3	0.806	0.672
		BI4	0.782	0.641

Perceived Risk Trust			
	PR1	0.793	0.645
	PR2	0.774	0.618
	PR3	0.752	0.589
	PR4	0.731	0.561
	TR1	0.846	0.724
	TR2	0.824	0.698
	TR3	0.803	0.667
	TR4	0.781	0.638

Source: Primary Data

The factor loadings for the items under Perceived Usefulness/Convenience range from 0.741 to 0.812, indicating a strong association between the items and the construct. The communality values range from 0.587 to 0.684, showing that the extracted factor adequately explains the variance in the items. This suggests that consumers strongly perceive online shopping as time-saving, efficient, and convenient.

The factor loadings for Perceived Ease of Use vary between 0.786 and 0.823, reflecting a high degree of consistency among the items. The communality values range from 0.639 to 0.692, indicating satisfactory shared variance. These findings imply that consumers consider online shopping platforms easy to navigate and operate.

The factor loadings for Social Influence range from 0.748 to 0.794, while communality values range from 0.582 to 0.648. The results indicate that recommendations from friends, online reviews, and social media significantly influence consumers' online shopping behaviour.

The items under Facilitating Conditions show strong factor loadings ranging from 0.754 to 0.817 and communality values between 0.596 and 0.676. This indicates that consumers' access to internet facilities, payment systems, technological resources, and delivery services positively support online shopping adoption.

The factor loadings for Hedonic Motivation range from 0.776 to 0.836, with communalities ranging from 0.632 to 0.711. These high values suggest that enjoyment, excitement, and entertainment play a significant role in motivating consumers toward online shopping activities.

The factor loadings for Price Value range from 0.761 to 0.829, while communality values range from 0.611 to 0.701. The findings reveal that discounts, promotional offers, and value-for-money perceptions are important determinants of online shopping behaviour.

The Habit construct demonstrates strong factor loadings ranging from 0.775 to 0.842 and communality values between 0.628 and 0.718. This indicates that repeated and routine online purchasing behaviour significantly contributes to continued usage of online shopping platforms.

The factor loadings for Behavioural Intention range from 0.782 to 0.851, with communality values ranging from 0.641 to 0.732. These results indicate that consumers possess a strong intention to continue online shopping and are likely to recommend it to others.

The items measuring Perceived Risk show factor loadings ranging from 0.731 to 0.793 and communality values between 0.561 and 0.645. Although the values are comparatively lower than other constructs, they remain above acceptable thresholds, indicating that privacy concerns, financial insecurity, and product uncertainty still influence online shopping decisions.

The Trust construct exhibits strong factor loadings ranging from 0.781 to 0.846 and communality values between 0.638 and 0.724. These findings indicate that trust in online retailers, payment systems, and privacy protection mechanisms significantly affects consumers' online shopping behaviour.

Overall, all factor loading values exceed the recommended threshold of 0.50 suggested by Hair et al., confirming convergent validity and construct reliability. Likewise, the communality values above 0.50 indicate that the extracted factors adequately explain the

variance of the observed variables, supporting the appropriateness of the factor structure for analysing online shopping behaviour.

Suggestions

Based on the findings of the study, several suggestions can be proposed to improve consumers' online shopping experience and encourage greater adoption of online shopping platforms.

Online retailers should focus on enhancing the usefulness and convenience of shopping platforms by providing faster search options, simplified comparison features, and efficient checkout systems.

E-commerce companies should improve the ease of use of websites and mobile applications through user-friendly interfaces, smooth navigation, and simplified payment procedures.

Businesses should strengthen consumer trust by ensuring secure payment gateways, transparent privacy policies, and reliable customer support services.

Since social influence significantly affects consumer behaviour, marketers should utilize social media marketing, influencer promotions, and customer reviews to attract potential buyers.

Companies should provide better facilitating conditions such as flexible payment methods, efficient delivery systems, and easy return policies to increase customer satisfaction.

Attractive discounts, cashback offers, and promotional schemes should be introduced regularly to improve perceived price value and encourage repeat purchases.

To reduce perceived risk, e-commerce platforms should provide accurate product descriptions, secure transactions, product guarantees, and transparent return policies.

Online retailers should enhance hedonic motivation by making shopping more interactive, entertaining, and engaging through personalized recommendations and virtual experiences.

Organizations should encourage habit formation among consumers by introducing loyalty programs, reward points, and personalized shopping experiences.

Continuous technological innovation and improved service quality can positively influence consumers' behavioural intentions toward online shopping.

Limitations of the Study

Despite providing valuable insights into online shopping behaviour, the study has certain limitations.

The research relied mainly on primary data collected through questionnaires, which may contain personal bias and subjective responses.

The study considered only selected factors influencing online shopping behaviour, while other possible variables such as cultural, psychological, or demographic factors were not deeply examined.

Consumer behaviour changes rapidly due to technological advancements and market trends; therefore, the findings may vary over time.

Scope for Future Research

The present study opens several opportunities for future research in the field of online shopping behaviour.

Future studies may include larger and more diverse samples from different regions to improve generalizability of the findings.

Researchers can conduct comparative studies between urban and rural consumers to understand differences in online shopping behaviour.

Future research may examine the influence of demographic variables such as age, gender, income, education, and occupation on online shopping decisions.

Longitudinal studies can be conducted to analyse changes in consumer behaviour over time.

Researchers may explore the impact of emerging technologies such as artificial intelligence, virtual reality, augmented reality, and chatbots on online shopping behaviour.

Future studies can investigate the role of emotional and psychological factors such as impulse buying, trust, satisfaction, and customer loyalty in greater detail.

Comparative analysis among different e-commerce platforms may provide deeper insights into consumer preferences and platform effectiveness.

Researchers may also study the impact of digital marketing strategies, influencer marketing, and social media engagement on purchasing behaviour.

Future studies may integrate advanced statistical techniques such as Structural Equation Modelling (SEM) for deeper analysis of relationships among variables.

Conclusion

The present study examined the various factors influencing consumers' online shopping behaviour and identified the major dimensions affecting online purchasing decisions. Through Exploratory Factor Analysis (EFA), ten significant constructs were identified, namely Perceived Usefulness, Perceived Ease of Use, Social Influence, Facilitating Conditions, Hedonic Motivation, Price Value, Habit, Behavioural Intention, Perceived Risk, and Trust. These factors collectively explain consumers' attitudes, intentions, and actual behaviour toward online shopping platforms.

The findings revealed that perceived usefulness and convenience significantly influence consumers' adoption of online shopping. This result is consistent with the studies of Davis (1989), Venkatesh et al. (2012), Alalwan (2020), and Algharabat et al. (2022), who reported that consumers are more likely to adopt online shopping platforms when they perceive them as useful, efficient, and convenient. Similarly, perceived ease of use emerged as an important determinant of online shopping behaviour, supporting the findings of Davis (1989), Gefen and Straub (2000), Pavlou (2003), and Chawla and Joshi (2021), who emphasized that user-friendly interfaces and simple navigation positively influence online shopping adoption.

The study further found that social influence significantly affects consumers' purchasing decisions. This finding corroborates the work of Venkatesh et al. (2012), Cheung and Lee (2012), Sokolova and Kefi (2020), and Nadeem et al. (2021), who highlighted the role of social media, peer recommendations, online reviews, and influencer marketing in shaping consumer behaviour. Likewise, facilitating conditions such as internet accessibility, digital payment systems, and technological support were found to positively influence online shopping behaviour, which is in line with the findings of Venkatesh et al. (2003), Alalwan et al. (2017), Oliveira et al. (2018), and Singh and Srivastava (2022).

The results also demonstrated that hedonic motivation and shopping enjoyment play a significant role in encouraging online purchases. This finding supports the studies of Childers et al. (2001), Arnold and Reynolds (2003), Rodríguez-Torrico et al. (2020), and Ozturk et al. (2023), which concluded that enjoyment, entertainment, and pleasurable shopping experiences positively affect consumers' online shopping intentions. Similarly, price value was identified as an important factor influencing online shopping behaviour. This result is consistent with the findings of Zeithaml (1988), Kotler and Keller (2016), Chiu et al. (2020), and Gupta et al. (2023), who reported that consumers are highly attracted to discounts, competitive pricing, and economic benefits offered by online retailers.

The study further revealed that habit significantly influences consumers' continued use of online shopping platforms. This finding supports the conclusions of Limayem et al. (2007), Venkatesh et al. (2012), Hsu et al. (2018), and Nguyen et al. (2022), who found that repeated online purchasing behaviour develops into habitual usage and encourages long-term engagement. Likewise, behavioural intention emerged as a strong predictor of online shopping behaviour, confirming the findings of Ajzen (1991), Bhattacharjee (2001), Pavlou (2003), and Alalwan (2020).

The findings also indicated that perceived risk remains an important barrier affecting consumers' confidence in online shopping. This result is consistent with the studies of Featherman and Pavlou (2003), Forsythe and Shi (2003), Ariffin et al. (2018), and Tran (2021), which reported that concerns regarding privacy, security, and product quality negatively influence online shopping behaviour. Conversely, trust was found to positively

influence consumers' willingness to engage in online transactions. This finding supports the research of Gefen (2000), Jarvenpaa et al. (2000), McKnight et al. (2002), Alalwan et al. (2018), and Singh and Sinha (2023), who identified trust as one of the strongest determinants of online shopping adoption and customer loyalty.

The reliability and validity analyses confirmed that the research instrument was statistically reliable and valid for measuring online shopping behaviour. Furthermore, the extracted factors explained a substantial proportion of total variance, indicating that the proposed model effectively captures the multidimensional nature of consumer online shopping behaviour.

Overall, the findings of the present study are largely consistent with previous empirical research and theoretical models of technology acceptance and consumer behaviour. The study contributes to the existing body of knowledge by providing a comprehensive framework that integrates technological, social, motivational, economic, and psychological factors affecting online shopping behaviour. The results offer valuable insights for e-commerce companies, marketers, and policymakers in designing effective strategies to enhance customer satisfaction, strengthen consumer trust, improve shopping experiences, and promote long-term customer engagement in the rapidly evolving digital marketplace.

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