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Identifying factors of online shopping and influence on purchase intention of product among Saudi consumers: The mediating role of consumer trust

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Abstract: The rise of Internet technology has transformed consumer shopping behaviors, offering convenience and a wide range of options, making online shopping increasingly popular. In Saudi Arabia, this trend has grown significantly due to higher internet penetration, technological advancements, and shifting consumer preferences. However, building and maintaining consumer trust remains a crucial challenge. Despite the growing interest, there is limited research on the unique aspects of Saudi consumers' online shopping behaviors. This study aims to address this gap by identifying key factors influencing these behaviors and examining their impact on purchase intentions, with a focus on the mediating role of consumer trust. This study explores factors influencing online shopping behavior and their impact on purchase intention, with a focus on consumer trust as a mediator. Using a survey of 573 respondents from Jeddah and Medina, Saudi Arabia, key factors identified through literature review include perceived usefulness, ease of use, risk perception, website quality, and social influence. The quantitative analysis revealed that customer service and return policies, information quality, perceived convenience, ease of use, usefulness, cost-saving, product variety, and social influence significantly affect consumer trust, which in turn enhances purchase intention. These findings provide valuable insights for businesses to optimize digital strategies, enhance consumer engagement, and foster long-term customer relationships, thereby boosting satisfaction and online business success.

Keywords: online shopping; purchase intention; consumer trust; consumer engagement; information quality; perceived convenience; perceived ease of use; perceived usefulness

1. Introduction

The advent of Internet technology has revolutionized consumer shopping behaviors, transforming preferences and gaining popularity for convenience and access to diverse products and services. Online shopping offers a wide range of options, making it a popular choice for consumers (Al-Gahtani and King, 2022). To enhance e-commerce strategies, businesses must understand the factors influencing online shopping behavior. These include perceived usefulness, ease of use, social influence, cost savings, convenience, information quality, customer service, return policies, and product variety. The growth of online shopping in Saudi Arabia has witnessed a notable upsurge driven by the widespread adoption of Internet connectivity, escalated utilization of smartphones, and supportive governmental regulations (Alzahrani et al., 2021; Altamony et al., 2022). These influential factors have collectively propelled the expansion of the e-commerce landscape within the country (Khan, Alakkas, et al., 2023). The augmentation of internet penetration, coupled with an upswing in smartphone usage and bolstered by government backing, has played a pivotal role in reshaping consumer behavior and fostering the availability

of diverse payment mechanisms. According to Nishad Abdu Rahiman(2024), Saudi Arabia's young, tech-savvy population and high smartphone penetration (97%) make it a prime market for e-commerce. The Kingdom's e-commerce market, driven by advanced mobile broadband and fast internet speeds, is projected to reach \$22.01 billion with a 13.5% retail market share by 2027, outpacing the global growth rate. In the first half of 2023, 35,000 commercial licenses were issued, and venture capital investment rose 153% to \$428 million, attracting new e-commerce businesses. A notable preference for cross-border platforms has been observed among online buyers, driven by the allure of competitive pricing, extensive product selections, convenience, and brand diversity (Siddiqui et al., 2021). Despite cross-border e-commerce commanding the majority share of total sales at 59%, local and hybrid enterprises have begun to establish their presence. Local e-commerce entities are gaining traction as underscored by Prince Waleed Bin Nasir Bin Fahad Al Saud. Notably, the COVID-19 pandemic catalyzed a substantial surge in Saudi Arabia's e-commerce market, fueled by evolving consumer preferences (Alzahrani et al., 2021).

2. Objectives of the study

The present study is taken up with the following objectives:

- To identify and analyze the various factors that influence online shopping intention among Saudi consumers.
- To evaluate how the identified factors directly affect the product purchase intention among Saudi consumers.
- To assess the impact of identified factors of online shopping and its impact on consumer trust and purchase intention among the consumers of Saudi Arabia.
- To investigate the role of consumer trust as a mediator between the identified factors and online purchase intention.

This objective seeks to understand how trust in online shopping platforms and vendors influences the likelihood of making a purchase. The research, based on data from Saudi Arabian customers, seeks to offer insights for marketers to develop effective strategies for promoting consumer trust and online purchase intention.

3. Review of related literature

3.1. Perceived usefulness

Perceived usefulness is the belief that online platforms enhance shopping experiences and meet needs effectively. Research shows that perceived usefulness significantly influences consumers' intention to engage in online shopping (Davis, 1989). When consumers perceive tangible benefits like time savings, convenience, and access to a broader range of products, they are more likely to adopt online shopping behavior (Khan, Vivek, et al., 2023). Venkatesh and Davis (2000) extend the Technology Acceptance Model (TAM) to include perceived usefulness as a critical factor affecting consumers' acceptance and usage of technology. Chiu et al. (2014) explore the factors influencing customers' repeat purchase intentions in B2C ecommerce, including perceived usefulness. Alalwan et al. (2020) examine the factors influencing mobile banking adoption, including perceived usefulness as a determinant

(Habib et al., 2021). Although not specifically focusing on Saudi Arabia, these studies offer valuable insights into the relationship between perceived usefulness and technology acceptance, these arguments lead to the following hypothesis:

H1: Perceived usefulness have significant influence on consumer online shopping.

3.2. Perceived ease of use

Perceived ease of use is a crucial factor in shaping consumers' perception of online shopping platforms, as it influences their intention to engage in online shopping and interest in mobile commerce. Venkatesh and Davis (2000) assert that perceived ease of use positively influences users' attitudes towards technology adoption, which in turn affects their online shopping behavior. Sari and Baridwan (2012) highlight the importance of perceived ease of use as a predictor of online shopping behavior. In researches of Nguyen Thi et al. (2022) and Yu and Lu (2022), it was found that perceived ease of use positively influences the online repurchase intention. Further, this study supported earlier findings that perceived ease of use indirectly influenced behavioral intention through perceived usefulness (Chen and Aklikokou, 2020) Recent research by Kim and Lennon (2021) supports this notion, finding that consumers who perceive online shopping platforms as easy to navigate and comprehend are more likely to engage in online shopping activities, these arguments lead to the following hypothesis:

H2: Perceived ease of use have significant influence on consumer online shopping.

3.3. Social influence

Social influence, including word-of-mouth and online reviews, significantly influences consumers' decision-making process (Khan, 2021). With the rise of social media and online reviews, social influence has become a powerful predictor of online shopping behavior (Cheung et al., 2018). Yu and Lu (2022) research reveals positive word-of-mouth and online reviews significantly impact consumers' online shopping intention, while Lee and Youn (2009) research highlights social influence boosting trust, confidence, and decision-making (Khan, Alhathal, et al., 2023). This includes social interactions, recommendations, opinions, and connections like friends and family, which impact individuals' online shopping decisions. these arguments lead to the following hypothesis:

H3: Social influence have significant influence on consumer online shopping.

3.4. Perceived cost saving

Perceived cost saving is the perception that consumers have regarding the financial benefits of shopping online compared to traditional brick-and-mortar stores (Arshad Khan and Alhumoudi, 2022). According to a number of research, customers' attitudes and intentions towards online purchasing are positively influenced by perceived cost savings (Jarvenpaa and Todd, 1997; Y. M. Wang et al., 2022). Research by Huang et al. (2022) shows consumers are more likely to engage in online shopping activities due to better bargains and discounts. Studies have shown that people view

Internet shopping as a cost-saving option because of the competitive price and lowered travel costs. (Kim and Lennon, 2013). Consumers are motivated to engage in online shopping when they perceive that they can obtain products at lower prices, save on transportation costs, and avail of exclusive online promotions (Jarvenpaa and Todd, 1997). these arguments lead to the following hypothesis:

H4: Perceived cost saving motives have significant influence on consumer online shopping.

3.5. Perceived convenience

Perceived convenience refers to consumers' perception of online buying's simplicity, accessibility, time-saving features, and flexible payment options, significantly influencing online purchasing. Research by Liu et al. (2021) reveals that customers are more likely to engage in online buying activities if they perceive it as a handy and time-saving option (Khan and Minhaj, 2022). Research has shown that consumers perceive online shopping as a convenient option, providing them with flexibility and eliminating the need for physical store visits. Higher perceived convenience positively impacts consumers' intention to shop online, as it provides flexibility and eliminates the need for physical store visits. these arguments lead to the following hypothesis:

H5: Perceived convenience have significant influence on consumer online shopping.

3.6. Information quality

Information quality is crucial for building consumers' trust and confidence in online purchasing platforms (Khan and Minhaj, 2021). Zhang and Liang et al. highlight the importance of high-quality information, which influences purchase intentions and happiness. Liang et al. (2023) and Chen et al. (2011) highlight the influence of thorough product descriptions, user reviews, and ratings on consumers' trust and confidence in online purchasing platforms (Ali et al., 2023). Customers are more inclined to purchase online when they believe the content on digital platforms to be reliable and beneficial. Studies have demonstrated that higher perceived information quality positively influences consumers' trust, confidence, and purchase intentions in online shopping (Li et al., 2019). These arguments lead to the following hypothesis:

H6: Information quality usefulness have significant influence on consumer online shopping.

3.7. Customer service and return policies

Customer service and return policies are important factors influencing consumers' trust, satisfaction, and loyalty toward online shopping platforms (Kim et al., 2020). Chen et al. (2022) highlight the significance of customer service and return policies in influencing consumers' trust, satisfaction, and loyalty towards online shopping platforms. Positive experiences with customer service and favorable return policies contribute to consumers' willingness to engage in online shopping activities. Reliable and responsive customer service and favorable return policies are more likely

to foster trust in online shopping platforms (Minhaj et al., 2024). Positive customer experiences, such as timely query resolution and efficient return processes, enhance trust and satisfaction, leading to repeat online shopping behavior. The presence of efficient customer service and lenient return policies significantly influences consumers' trust, satisfaction, and willingness to engage in online shopping. (Jiang et al., 2013). These arguments lead to the following hypothesis:

H7: Customer service and return policy have significant influence on consumer online shopping.

3.8. Product variety

Product variety and its availability is a crucial aspect of online purchasing platforms, as it enhances the overall shopping experience. Research shows that customers perceive increased product diversity as appealing and improve their online buying experience. According to Wang and Zhao (2022), customers who perceive online shopping platforms offering a broad range of product selections are more likely to engage in online purchasing activities. This diverse range of items from various categories and brands attracts consumers who are drawn to platforms that cater to their unique needs. Research shows that increased perceived product diversity increases customers' purchase intentions and satisfaction (Hsu et al., 2006). these arguments lead to the following hypothesis.

H8: Product variety have significant influence on consumer online shopping.

3.9. Factors of online shopping and purchase intention

Online shopping has gained popularity in Saudi Arabia, with studies indicating a close relationship between factors and purchase intention. Al-Debei and Al-Lozi (2014) found that perceived convenience influences customers' purchasing intentions, while Al-Somali et al. (2010) found that perceived trust influences purchasing intention favorably. Al-Maghrabi et al. (2014) found that perceived risk has a detrimental influence on customers' buying intentions. Al-Gahtani (2022) revealed that website quality has a considerable effect on consumers' purchasing intentions in Saudi Arabia. Several authors like Al-Gahtani (2022) and Alalwan et al. (2020) found that social impact influences customers' purchasing intentions favorably, and website quality significantly affects consumer purchasing intentions. However, individual preferences and experiences may also influence purchase intention, leading to the hypothesis that individual preferences and experiences also influence online shopping behavior in Saudi Arabia. These arguments lead to the following hypothesis:

H9: Factors on online shopping have a significant effect on consumer online purchase intention.

3.10. Factors of online shopping and consumer trust

Al-Maghrabi et al. (2014) and Al-Gahtani (2022) highlight the importance of understanding the relationship between online shopping factors and consumer trust in Saudi Arabia. Studying website quality, user friendliness, information quality, and website design significantly impact customer trust. Social aspects, positive online evaluations, word-of-mouth referrals, and online reputation also contribute to

customer trust. Al-Debei and Lozi (2014). highlight the importance of a trustworthy online presence and interacting with clients. Trust-building tools like certificates and seals boost customer confidence. Al-Somali et al. (2010) found that consumers trust online purchasing platforms with reputable third-party seals. Kim et al. (2021) found secure SSL certificates positively impact customer confidence. Nuseir, Mohammed & Akroush, Mamoun & Mahadin, Bushra & Bataineh, Abdallah. (2010). found on-time delivery, accurate tracking systems, and hassle-free return policies significantly affect consumer trust in online purchasing. These arguments lead to the assumption of the following hypothesis:

H10: Factors of online shopping have no significant effect on consumer trust in online line shopping.

3.11. Consumer trust and online purchase intention

Consumer trust is a critical factor for the success of online shopping platforms, particularly in the Kingdom of Saudi Arabia (KSA). Kim and Park (2021) highlight the importance of consumer trust in online shopping platforms, especially in the Kingdom of Saudi Arabia (KSA). Understanding the factors that shape consumer trust is crucial for engaging and retaining customers. Perceived security and privacy are key factors influencing consumer trust, as consumers in KSA prioritize safeguarding their personal information during transactions (Alalwan et al., 2020). Alzahrani et al. (2019) emphasize the significance of website design and functionality in fostering consumer trust in KSA. A visually appealing interface, user-friendly interface, and online customer reviews contribute to trust. Alalwan et al. (2020) emphasize the reputation and credibility of established sellers, such as Alzahrani (2019), which offer better customer service, reliable product information, and secure transactions, boosting trust among consumers.

H11: Consumer trust has a positive influence on online purchase intention.

3.12. Factors of online shopping, consumer trust and purchase intention: Mediation analysis

Online shopping has experienced significant growth, transforming consumer engagement in retail transactions. Trust plays a crucial role in shaping consumer behavior and influencing purchase decisions. Consumer trust is a critical mediator in the relationship between motivating factors and purchase intention. This review emphasizes the importance of customer trust as a predictive factor for online shopping (Habib and Hamadneh, 2021; Lal, 2017; Lu et al., 2016; Liu et al., 2019; Wang et al., 2022). Within the context of online buying, customer trust emerges as a pivotal determinant of purchase intention. Recent research by Liu et al. (2019), aligning with earlier studies by Lal (2017) and Lu et al. (2016), underscores the necessity of fostering and nurturing customer trust during the decision-making process for purchases, which necessitates the utilization of a diverse array of cues from various sources. These scholarly arguments collectively contribute to the formulation of the ensuing research hypothesis:

H12: Consumer trust mediates the relationship between factors of online shopping and consumer online purchase intention.

4. Theoretical framework

This theoretical framework investigates the variables affecting online purchasing in Saudi Arabia, focusing on the mediating function of customer trust in influencing purchase intentions. It incorporates literature on consumer behavior, e-commerce, and trust to provide a comprehensive understanding of online buying behavior in Saudi Arabia. The framework presents hypotheses that can guide empirical study and support connections between identified variables. The results can help online merchants and marketers create tactics to boost customer confidence and improve buy intent. This approach investigates the mediating function of customer trust in influencing purchase intention among Saudi consumers. It uses the Theory of Planned Behaviour (TPB), Technology Acceptance Model (TAM), and Trust Theory to predict online buying. TPB posits that attitudes, subjective norms, and perceived behavioral control influence intentions and behavior. Trust Theory emphasizes the importance of trust in building connections between customers and online vendors, while the Technology Acceptance Model (TAM) examines factors affecting technology adoption and use. Trust is a complex concept with behavioral, emotive, and cognitive components. It is developed through website design, security measures, reputation, and social influence. Understanding client trust in online buying environments can be improved using frameworks like TAM, Trust Transfer Theory, and UTAUT.

5. Research methodology

In order to examine the relationship between factors influencing online shopping and consumer trust in KSA, a quantitative research approach was utilized. A structured survey was given to a sample of online shoppers from KSA. The survey consisted of items of different factors, such as perceived usefulness (based on the previous work of Davis (1989)), perceived ease of use (also based on Davis (1989)), Social influence (Davis, 1989), perceived cost saving (based on Bearden et al. (1989)), perceived convenience (Kwon et al., 2010), information quality (Sweeney and Soutar, 2001), customer service and return policies (Bhattacherjee and Premkumar, 2004), product variety was derived from Chiu et al. (2006), consumer trust (Kim et al., 2000), and purchase intention (Ajzen, 1991; Devkant Kala and Chaubey, 2015). The study used a modified questionnaire to gather opinions from respondents using a five-point Likert scale. A panel of experts evaluated the questionnaire for content validity, item clarity, and alignment with research goals. A pilot test was conducted with 55 respondents, representing 10% of the total sample. Cronbach's alpha assessed the questionnaire's reliability, yielding a 0.940 value. The data was collected from 600 responses, with 573 suitable for analysis after excluding 27 incomplete or insincere responses. The collected data was organized, tabulated, and analyzed using SPSS 22 and Smart PLS software.

6. Results

Table 1 displays demographic characteristics of respondents, including age, gender, marital status, education level, occupation, and monthly income. The majority of respondents were between 26–35 years old, with 22.2% aged up to 25 years, 25%

between 36–45 years, 16.9% between 46–55 years, and 4% above 55 years. The majority of respondents were male, accounting for 71.4% of the total sample, while females constituted 28.6%. Marital status varied among respondents, with 68.2% married and 31.8% unmarried. The respondents had diverse education levels, with postgraduates comprising 31.4%, graduates 27.7%, and undergraduates 15.9%. Professionals made up 25% of the sample. The largest proportion (32.6%) was retired, followed by service professionals at 28.8%, self-employed individuals at 27.6%, and students at 11%. The data shows a wide range of monthly income levels among respondents. The highest percentage (35.6%) reported between 1001 and 2500 SAR, while 13.4% had income up to 1000 SAR PM. 20.6% fell between 2501 and 5000 SAR, 18.5% between 5001 and 10,000 SAR, and 11.9% exceeded 10,000 SAR per month. This table provides a comprehensive overview of demographic characteristics, allowing for deeper understanding and further analysis of the data.

The data reveals that 19.5% of the surveyed population engages in frequent online shopping, with the next most frequent category being "once in a week." A significant proportion of participants engage in online shopping on a monthly basis, with 141 responses representing 24.6% of the total sample. A smaller segment of individuals reported a less frequent online shopping pattern, with 94 respondents (16.4%) stating they shop less than once in a month. Additionally, 124 respondents engaged in online shopping only rarely, with 21.6% of the total sample engaging only rarely. Overall, a significant portion of the population engages in frequent or regular online shopping, with a considerable number shopping either weekly or monthly. However, a noteworthy proportion of respondents indicated less frequent or rare involvement in online shopping.

Table 1. Demographic characteristics of respondents (Source: Compiled from primary survey).

Categories	Description	Frequency	Percentage	
	Up to 25 years	127	22.2	
	26–35 years	183	31.9	
Age	36–45 years	143	25.0	
	46–55 years	97	16.9	
	Above 55 years	23	4.0	
C1	Male	409	71.4	
Gender	Female	164	28.6	
M 'd l d d	Unmarried	182	31.8	
Marital status	Married	391	68.2	
	Under graduate	91	15.9	
T1	Graduate	159	27.7	
Education level	Post graduate	180	31.4	
	Professionals	143	25.0	

Table 1. (Continued).

Categories	Description	Frequency	Percentage
	Students	63	11.0
Occupation	Service	158	27.6
Occupation	Self employed	165	28.8
	Retired	187	32.6
	Up to 1000 SAR PM	77	13.4
	From 1001 SAR to 2500 SAR	204	35.6
Monthly income (SAR)	2501 SAR to 5000 SAR	118	20.6
	From 5001 SAR 10,000 SAR	106	18.5
	Above100,000 PM	68	11.9

Table 2 indicates respondents' online shopping frequency, with data showing varied shopping habits. Out of a total of 573 participants surveyed, it was observed that 19.5% (112 respondents) reported shopping online many times in a week, indicating a frequent online shopping habit. Another 17.8% (102 respondents) shopped online once a week, while 24.6% (141 respondents) engaged in online shopping once a month. A smaller proportion, 16.4% (94 respondents), shopped online less than once a month, and 21.6% (124 respondents) did so very rarely. These figures highlight that the majority of respondents shop online with moderate frequency, with monthly shopping being the most common pattern.

Table 2. Frequency of online shopping.

Sl. No	Description	Frequency	Percentage
A	Many times in a week	112	19.5
В	Once in a week	102	17.8
C	Once in a month	141	24.6
D	Less than once in a month	94	16.4
E	Very rarely	124	21.6
	Total	573	100.0

Table 3 shows the importance of various factors in online shopping decision-making. It is observed that customer grievances and service issues are the most significant, with a mean value of 4.0873 and a standard deviation of 0.97668. Factors such as product quality issues, returns and refund policies, payment security concerns, and delivery time were also considered important. However, there was variability in participants' opinions on these factors. The results emphasize the need for effective customer service and grievance handling to retain customer satisfaction and loyalty. Additionally, concerns about product quality, returns and refunds, payment security, and delivery time were expressed, highlighting the need for online retailers to address these areas to instill trust and confidence in their customers.

Table 3. Importance given to different factors in online shopping decision making: A descriptive statistics (N = 573).

Factor description	Mean	Std. deviation
Payment security concerns	3.8464	0.95207
Delivery time taken	3.7644	0.95639
Product quality issues	3.6981	1.06170
Returns and refund policies	3.7836	1.02688
Customer grievances and other service issues	4.0873	0.97668

Table 4 presents descriptive statistics of consumer interest in emerging trends in online shopping. A survey of 573 respondents revealed that the mean score for of subscription-based services has scored a mean of 3.8778 with standard deviation of 1.04902. This is followed by augmented reality (AR) shopping experiences is 3.8080, with a standard deviation of 1.08299. This indicates that consumers show moderate interest in using AR technology for their shopping experiences, with low variation among respondents. The mean score for voice-activated shopping assistants is 3.4660, with a standard deviation of 0.94294, suggesting moderate interest in using these assistants. Social commerce, subscription-based services, and personalized shopping experiences also show moderate interest. These statistics provide insights into consumer interest in these emerging trends.

Table 4. Consumer interest in emerging trends in online shopping: Descriptive statistics (N = 573).

	Mean	Std. deviation
Augmented reality (AR) shopping experience	3.8080	1.08299
Voice-activated shopping assistants	3.4660	0.94294
Social commerce (buying directly from social media platforms)	3.2705	1.16855
Subscription-based services	3.8778	1.04902
Personalized shopping experiences	3.7347	1.05419

Table 5 presents the descriptive statistics for key factors influencing online shopping, consumer trust, and purchase intention. The mean values offer insights into respondents' perceptions of these factors, while the standard deviations provide a measure of the variability within the sample. Notably, perceived usefulness scored the highest mean (M = 3.7277) among all factors, indicating that participants generally considered online shopping to be a valuable experience. Perceived ease of use (M = 3.5284) and social influence (M = 3.3346) also ranked favorably, suggesting that users found online shopping platforms relatively user-friendly and were influenced by their social networks. Moreover, factors such as perceived cost savings (M = 3.6044), convenience (M = 3.5143), information quality (M = 3.7679), and customer service and refund policy (M = 3.7030) exhibited positive mean values, indicating their importance in online shopping decisions. Furthermore, customer trust (M = 3.6134) and purchase intention (M = 3.7701) received moderate mean scores, suggesting a reasonable level of trust in online retailers and a willingness to make future online purchases. These findings provide a comprehensive overview of the factors shaping

consumer behavior in the online shopping context, offering valuable insights for researchers and practitioners in the e-commerce industry.

Table 5. Factors of online shopping, consumer trust and purchase intention: Descriptive statistics.

	Mean	Std. deviation
Perceived usefulness (PU)	3.7277	0.97996
Online shopping provides me with convenience that is of great use to me and saves time.	3.6963	1.07837
Online shopping offers a wide variety of useful products and services.	3.7260	1.16023
Online shopping enhances my ability to compare prices and find the best deals enhance its utility.	3.7609	1.04968
Perceived ease of use (PEOU)	3.5284	0.93714
Online shopping platforms are user-friendly and easy to navigate.	3.8063	0.92318
I find it easy to learn how to use online shopping websites.	3.3822	1.21277
Online shopping websites have clear and understandable instructions.	3.5689	1.06807
Online shopping requires minimal effort and is hassle-free.	3.3560	1.33365
Social influence (SI)	3.3346	1.00525
I am influenced by online reviews and recommendations from friends or family.	3.4136	1.25225
Online shopping platforms provide social features that allow me to seek opinions and share experience.	3.5218	1.12114
I consider the popularity of a product among my peers when making a purchase.	3.3194	1.13784
I am influenced by celebrities or influencers endorsing products online.	3.0838	1.22330
Perceived cost saving (PCS)	3.6044	0.96289
Online shopping helps me save money on transportation costs.	3.7208	1.05886
Online shopping provides access to exclusive online-only promotions.	3.5183	1.16404
Online shopping allows me to compare prices across different retailers.	3.5742	1.18122
Perceived convenience (PC)	3.5143	0.84803
Online shopping saves me time compared to traditional shopping.	3.2792	1.24830
Online shopping provides me with a wide range of product options.to compare prices and features.	3.6073	1.04668
Online shopping offers a user-friendly interface for easy navigation.	3.6562	0.97814
Information quality (IQ)	3.7679	0.91844
Online shopping provides detailed product information and specifications.	3.7068	1.04509

 Table 5. (Continued).

	Mean	Std. deviation
Online customer reviews and ratings help me make informed purchasing decisions.	3.7557	1.13109
Online shopping platforms provide accurate and reliable product descriptions.	3.7749	1.03940
Online shopping allows me to easily compare the quality of different products.	3.8342	1.02012
Customer service and refund policy (CSRP)	3.7030	0.84651
Online retailers have responsive and helpful customer service.	3.7888	1.16734
Online retailers have clear and transparent return and refund policies.	3.8342	0.99056
Online retailers offer easy and convenient return processes.	3.6527	0.98404
I trust that online retailers will resolve any issues with my purchase.	3.4939	1.23415
Online retailers provide sufficient information on warranties and guarantees.	3.7452	1.08454
Product variety (PV)	3.6873	0.90843
The online store offers a wide range of product categories.	3.8237	1.07026
The online store provides a diverse selection within each product category.	3.8063	1.18815
There is a large number of brands available in the online store.	3.8098	1.05799
The online store offers a variety of product options (e.g., sizes, colors, models).	3.5654	1.03673
The online store features unique and exclusive items.	3.4311	1.28366
Customer trust (CT)	3.6134	0.52030
The online shopping platform provide safe and secure personal and financial information and is more trustworthy.	3.7941	0.64192
I believe that the online sellers provide accurate product descriptions and information that can be trusted.	3.5410	0.65884
The online sellers I have dealt with have a good reputation.	3.5375	0.81554
I believe that the online shopping platform provides reliable customer support.	3.6702	0.83064
I have had positive experiences with online shopping in the past.	3.6161	0.70653
I would recommend online shopping to others.	3.5218	0.71568
Purchase intention (PI)	3.7701	0.47470
I enjoy the experience of exploring and browsing products online and would like to make a purchase from an online retailer in the coming future.	3.9005	0.60205
I intend to increase my online shopping frequency in the future.	3.7661	0.65401

Table 5. (Continued).

	Mean	Std. deviation
I would recommend online shopping to friends and family.	3.7260	0.61163
Online shopping is a preferred option for my future purchases.	3.6876	0.68842
Valid N (listwise)		

6.1. Factor of online shopping, consumer trust and purchase intention: PLS-SEM modeling

The factor of online shopping, consumer trust, and purchase intention is a crucial area of research in the field of e-commerce. In order to understand the underlying factors that influence online shopping consumers' trust and purchase intention, a comprehensive measurement model has been proposed. Based on previous literature (Emurian, 2005; Wang et al., 2022). A comprehensive measurement model has been proposed to understand the factors influencing consumer trust and purchase intention. The model considers constructs like perceived usefulness, ease of use, social influence, convenience, cost saving, customer service, return policies, information quality, and product variety as predictors, with purchase intention as the dependent variable and consumer trust as the mediating variable. This model offers researchers and practitioners a valuable framework for studying and enhancing consumer trust in online shopping experiences.

6.2. Measurement model

The table presents the reliability and validity metrics for various constructs used in the study, evaluated through Cronbach's alpha, composite reliability (rho a and rho c), and average variance extracted (AVE). All constructs exhibit acceptable reliability, with Cronbach's alpha values ranging from 0.732 to 0.891, indicating satisfactory internal consistency. Composite reliability (rho a and rho c) values further support this, with all constructs exceeding the recommended threshold of 0.7, demonstrating strong reliability. The AVE values, representing the amount of variance captured by the constructs relative to the amount due to measurement error, range from 0.513 to 0.802. This indicates that most constructs achieve the minimum acceptable AVE of 0.5, suggesting that more than half of the variance is captured by the constructs rather than error. Specifically, constructs like information quality, perceived convenience, perceived usefulness, and social influence show particularly high AVE values, indicating strong convergent validity. These metrics collectively demonstrate that the constructs used in the study are both reliable and valid, supporting the robustness of the measurement model and ensuring that the constructs adequately represent the underlying theoretical concepts they are intended to measure (**Table 6**).

Table 6. Construct reliability and validity.

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Consumer trust	0.804	0.811	0.861	0.513
Customer service and return policies	0.835	0.846	0.883	0.602
Information quality	0.891	0.899	0.925	0.755
Perceived convenience	0.866	0.880	0.919	0.792
Perceived ease of use	0.838	0.850	0.892	0.674
Perceived usefulness	0.876	0.889	0.924	0.802
Perceived cost saving	0.807	0.807	0.886	0.721
Product variety	0.865	0.873	0.903	0.650
Purchase intention	0.732	0.730	0.833	0.555
Social influence	0.873	0.876	0.913	0.726

Table 7. Discriminant validity: Heterotrait-Monotrait ratio (HTMT)—Matrix.

	CT	CSRP	IQ	PC	PEOU	PU	PCS	PV	PI	SI
CT										
CSRP	0.724									
IQ	0.746	0.885								
PC	0.339	0.446	0.566							
PEOU	0.760	0.618	0.458	0.374						
PU	0.610	0.780	0.921	0.437	0.433					
PCS	0.376	0.096	0.041	0.074	0.061	0.083				
PV	0.658	0.980	0.802	0.411	0.548	0.702	0.082			
PI	1.100	0.786	0.741	0.333	0.858	0.651	0.436	0.717		
SI	0.878	0.664	0.556	0.287	0.657	0.483	0.119	0.629	0.681	

The information provided in **Table 7** represents the Heterotrait-Monotrait (HTMT) ratio matrix, which is used to assess discriminant validity in a structural equation model. Discriminant validity is achieved when constructs are distinct from one another. In the matrix, values less than 0.90 indicate acceptable discriminant validity. Constructs such as CT, CSRP, IQ, PC, PEOU, PU, PCS, PV, PI, and SI are compared. Notably, some values exceed the 0.90 threshold, such as the HTMT ratio between IQ and PU (0.921) and between PV and CSRP (0.980), suggesting potential issues with discriminant validity between these constructs. Conversely, other values, such as the ratios between PCS and other constructs, are well below the threshold, indicating good discriminant validity. Overall, the table provides critical insights into the relationships between constructs, highlighting areas where distinctions are clear and others where further examination may be needed to ensure the constructs are distinct.

Table 8 illustrates discriminant validity using the Fornell-Larcker criterion, emphasizing the diagonal values representing the square roots of the average variance extracted (AVE) for constructs: CT (0.716), CSRP (0.776), IQ (0.869), PC (0.890), PEOU (0.821), PU (0.895), PCS (0.849), PV (0.806), PI (0.745), and SI (0.852). These

values should exceed the correlations between the constructs, located off-diagonal, indicating that each construct is distinct from the others. For instance, CSRP correlates highly with IQ (0.783), but since both values are less than the AVE square roots of the respective constructs (0.776 and 0.869), discriminant validity is established. Constructs such as PCS show negative or negligible correlations with others (e.g., -0.065 with CSRP), reinforcing distinctiveness. Thus, the constructs demonstrate adequate discriminant validity, ensuring that the measured items accurately reflect separate underlying dimensions in the theoretical model.

Table 8. Discriminant validity: Fornell-Larcker criterion.

	CT	CSRP	IQ	PC	PEOU	PU	PCS	PV	PI	SI
CT	0.716									
CSRP	0.616	0.776								
IQ	0.650	0.783	0.869							
PC	0.294	0.373	0.489	0.890						
PEOU	0.625	0.529	0.411	0.324	0.821					
PU	0.530	0.684	0.813	0.375	0.385	0.895				
PCS	0.225	-0.065	-0.032	-0.041	-0.023	-0.067	0.849			
PV	0.569	0.842	0.720	0.353	0.475	0.626	-0.060	0.806		
PI	0.844	0.633	0.607	0.272	0.674	0.529	0.336	0.583	0.745	
SI	0.748	0.570	0.496	0.249	0.566	0.429	-0.051	0.550	0.553	0.852

Table 9. *R*-square.

Construct	R-square	R-square adjusted
Consumer trust	0.769	0.768
Factors of online shopping	0.983	0.983
Purchase intention	0.782	0.781

Table 9 provides the *R*-squared values, which indicate the proportion of variance in a dependent variable explained by the independent variables in a regression model. The *R*-square adjusted value is a modified version of *R*-square that adjusts for the number of predictors in the model. In this table, the constructs "consumer trust," "factors of online shopping," and "purchase intention" have *R*-square values of 0.769, 0.983 and 0.782 respectively. These values suggest that these constructs explain a substantial amount of variance in their respective dependent variables (**Table 9**).

Table 10 and **Figure 1** present the results of a structural model and hypothesis testing for various factors influencing online shopping, along with their impacts on purchase intention and consumer trust. The path coefficients (β), T statistics, and P values indicate the strength, significance, and validity of the hypothesized relationships. Factors such as information quality (β = 0.413, T = 9.185, P = 0.000), perceived ease of use (β = 0.409, T = 14.029, P = 0.000), perceived cost saving (β = 0.364, T = 13.352, P = 0.000), and social influence (β = 0.330, T = 13.077, P = 0.000) significantly influence online shopping. Conversely, customer service and return policies (β = 0.018, T = 0.812, P = 0.417), perceived usefulness (β = 0.006, T = 0.163, P = 0.870), and product variety (β = 0.031, T = 0.929, P = 0.353) are found to be

insignificant. Additionally, the factors of online shopping significantly impact both purchase intention ($\beta = 0.547$, T = 15.185, P = 0.000) and consumer trust ($\beta = 0.877$, T = 100.928, P = 0.000), with consumer trust further influencing purchase intention ($\beta = 0.365$, T = 9.570, P = 0.000). The mediating effect of consumer trust between factors of online shopping and purchase intention is also significant ($\beta = 0.320$, T = 9.530, P = 0.000). Overall, these results underscore the importance of certain factors in shaping online shopping behaviors and their subsequent effects on purchase intention and trust.

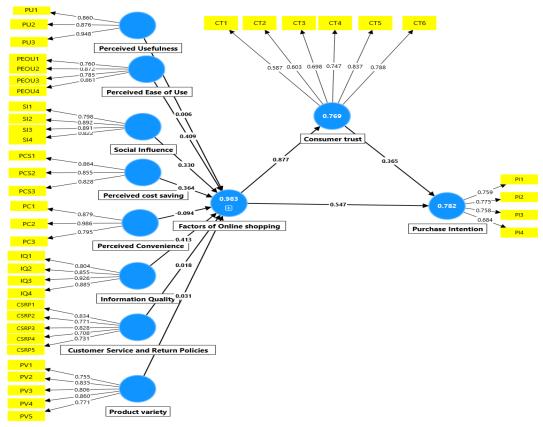


Figure 1. Structural model and outcomes.

Table 10. Structural model and hypothesis testing: Path coefficients (mean, STDEV, T values, and p values).

	Path coefficient (\$\beta\$)	T statistics (O/STDEV)	P values	Remarks
Customer service and return policies → factors of online shopping	0.018	0.812	0.417	Insignificant
Information quality → factors of online shopping	0.413	9.185	0.000	Significant
Perceived convenience → factors of online shopping	-0.094	3.609	0.000	Significant
Perceived ease of use → factors of online shopping	0.409	14.029	0.000	Significant
Perceived usefulness → factors of online shopping	0.006	0.163	0.870	Insignificant
Perceived cost saving → factors of online shopping	0.364	13.352	0.000	Significant
Product variety → factors of online shopping	0.031	0.929	0.353	Insignificant
Social influence → factors of online shopping	0.330	13.077	0.000	Significant
Factors of online shopping → purchase intention	0.547	15.185	0.000	Significant
Factors of online shopping → consumer trust	0.877	100.928	0.000	Significant
Consumer trust → purchase intention	0.365	9.570	0.000	Significant
Factors of online shopping \rightarrow consumer trust \rightarrow purchase intention	0.320	9.530	0.000	Significant

6.3. Mediating analysis

The mediation analysis detailed in **Table 10** explores the relationships between factors of online shopping, consumer trust, and purchase intention. The direct effect of factors of online shopping on purchase intention is represented by a path coefficient (β) of 0.547, with a T statistic of 15.185 and a p-value of 0.000, indicating a significant positive relationship. Similarly, the effect of factors of online shopping on consumer trust is strongly positive, with a path coefficient of 0.877, a T statistic of 100.928, and a p-value of 0.000, also significant. Furthermore, consumer trust significantly impacts purchase intention, with a path coefficient of 0.365, a T statistic of 9.570, and a p-value of 0.000. The mediation analysis shows that consumer trust significantly mediates the relationship between factors of online shopping and purchase intention, with an indirect effect path coefficient of 0.320, a T statistic of 9.530, and a p-value of 0.000. All hypotheses tested are significant, supporting the mediation role of consumer trust in the relationship between online shopping factors and purchase intention.

7. Discussion

The retail industry has undergone a significant transformation due to the rapid expansion of online shopping. The study examines factors influencing Saudi Arabian consumers' online shopping intentions using partial least squares structural equation modeling (PLS-SEM). It aims to explore the mediating role of consumer trust in the relationship between online shopping factors and purchase intentions. Trust remains a crucial issue for online shoppers. The results of our study demonstrated that the proposed model exhibited good validity and reliability, and it also possessed strong predictive power. Research shows that factors like perceived usefulness, ease of use, social influence, convenience, cost saving, customer service, return policies, information quality, and product variety significantly influence online shopping. These factors directly impact consumers' intentions to make purchases online. The finding of the present research is in conformance to the previous research findings of Ter Huurne, M., Ronteltap, A., Corten, R., & Buskens, V. (2017).; Zhang et al. (2021) and Zhao et al. (2020). Sharma et al. (2020) indicated antecedents of online consumer trust, website security, information richness in building effective tract in online shopping and building positive intention toward online shopping. Previous studies support the significance of product variety in customer satisfaction, with timely delivery and a wide range of choices being crucial strategic implications for online managers. Offering flexible order fulfillment and competent delivery can improve satisfaction and loyalty. Quality information and communication about delays are crucial for reducing customer disappointment. Addressing security concerns and enhancing e-commerce experiences, such as delivery efficiency, can boost satisfaction and loyalty. The perceived risk of product quality deterioration before delivery is also a significant factor, particularly for shoppers with five to ten years of experience.

Despite the extensive literature suggesting that perceived usefulness, product variety, and customer service, including return policies, significantly impact online purchase decisions, recent studies indicate that these factors may have a less pronounced effect than previously thought. A study by Kim et al. (2022) found that perceived usefulness does not strongly influence repeat purchases, as consumers

increasingly prioritize experiential aspects over utilitarian benefits when shopping online. Similarly, research by Li and Zhang (2023) demonstrated that while product variety initially attracts consumers, it does not significantly contribute to long-term customer loyalty, which is more heavily influenced by personalization and user experience. Furthermore, Nguyen et al. (2022) in their study highlighted that while robust customer service and return policies are appreciated, they are not primary drivers of purchase decisions in the current market, where convenience and speed are often more critical. These findings suggest a shift in consumer priorities, necessitating a reevaluation of traditional e-commerce strategies. Several researchers like Al Hamli and Sobaih (2023); Alharthey (2020) and Baabdullah and Ansari (2020), indicated that consumer trust acts as a mediator between factors of online shopping and purchase intention. The proposed conceptual framework suggests that factors such as customer service and return policies, information quality, perceived ease of use, perceived usefulness, product variety and social influence consumer trust, which in turn affects purchase intention. The finding of this study is also supported by previous research work on mediation analysis can provide insights into the underlying mechanisms of the relationships

8. Theoretical and managerial implication of the study

8.1. Theoretical implication

Theoretical implications are concerned with how the results relate to other theories or concepts in the field, whereas practical implications are concerned with what we can do with the findings. The findings of the study provide significant theoretical insights into the dynamics of online shopping among Saudi consumers. Specifically, they highlight that information quality, perceived ease of use, perceived cost savings, and social influence are critical factors driving online shopping behavior. These factors not only directly affect purchase intentions but also enhance consumer trust, which in turn further influences purchase intentions. This underscores the central role of consumer trust as a mediator, bridging the gap between influential online shopping factors and the eventual purchase decisions. The study confirms that while certain elements like customer service, return policies, perceived usefulness, and product variety may not significantly impact online shopping behaviors, the overall trust consumers place in online platforms profoundly shapes their purchasing intentions. These insights contribute to a deeper understanding of consumer behavior in the digital marketplace, emphasizing the necessity for e-commerce platforms to foster trust through quality information, ease of use, cost efficiency, and social influence to drive purchase intentions.

8.2. Managerial implications

The study highlights that information quality, perceived ease of use, perceived cost savings, and social influence are pivotal factors driving online shopping behavior among Saudi consumers. These factors significantly enhance consumer trust, which in turn strongly influences purchase intention. The research underscores the critical role of consumer trust as a mediator, bridging the relationship between the influential

factors of online shopping and the consumers' purchase intentions. This implies that building and maintaining consumer trust is essential for online retailers aiming to boost purchase intentions, as trust acts as a crucial intermediary that enhances the impact of favorable online shopping conditions on consumers' buying decisions.

By identifying key factors influencing purchase intention and the mediating role of consumer trust, businesses can build and maintain trust with customers, fostering positive intentions and driving sales growth.

This research can assist managers in designing websites and marketing initiatives by delivering clear, concise information in clear language and graphics. Managers should prioritize providing high-quality educational material that is useful and pleasant for users. Online shopping has become an integral part of life, and failure to meet these criteria can lead to poor customer retention, lower revenue, and the need to reclaim clients from rivals.

To establish sustainable e-shopping relationships, managers must address direct factors (perceived usefulness, enjoyment, and social pressure) and indirect factors (site quality and trust) influencing customer intentions. Users associate the visual appeal of a website with positive beliefs, such as usefulness and enjoyment. E-retailers should enhance positive perceptions of trustworthiness and overall website quality.

E-shopping technology usage is influenced by social pressure and users' desire to build relationships within online communities. Active customer involvement in product design improves enjoyment and lifestyles. Platforms like social influence platforms foster consumer trust through effective customer service, transparent return policies, reliable information, user-friendly interfaces, useful product offerings, and social influence strategies. These factors improve purchase intention and satisfaction in online shopping experiences. The study's results can be cited in academic writing to support understanding of consumer trust's mediating role in online shopping and can be used as evidence for researchers to study the impact of consumer trust on purchase intention.

9. Conclusion

In conclusion, this study aims to contribute to the existing literature on online shopping behavior by investigating the factors that influence purchase intention and the mediating role of consumer trust. This study uses a comprehensive theoretical framework and quantitative research design to analyze consumer factors influencing online shopping in Saudi Arabia. The findings can help vendors understand these factors and maximize profits, benefiting both individuals and companies. Ultimately, the findings of this study will help businesses develop effective strategies to enhance consumer trust, foster positive purchase intentions, and thrive in the competitive online marketplace.

10. Limitations and future directions

The primary objective of this research was to examine the impact of various factors on consumer trust and purchase intention within the specific context of Saudi Arabia. However, it is crucial to acknowledge that the study has certain limitations.

The proposed model was tested on a limited sample of Saudi Arabian customers, making its findings difficult to extrapolate to national contexts. To improve comprehensiveness and inclusiveness, future studies should focus on larger sample sizes and broader contexts.

Secondly, this study focused on Saudi population, limiting generalizability across cultures. Future research should include participants from other countries for cross-cultural comparisons.

Thirdly, this study focused on limited factors; future research should explore factors like previous purchase experience and store reputation to assess consumer trust impact.

Lastly, Future studies should incorporate qualitative measures like content analysis and participant observations to better understand consumer trust development and purchase decisions, despite the validity and reliability of the proposed model.

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