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Shopping in the Online Retailing: Examining Customer Trust Through Mobile Augmented Reality

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Abstract

Digital marketing and online customer experiences have been revolutionized by the quick development of augmented reality technologies. This study examines how important technology features—interactivity, vividness, and information quality—affect consumer trust and how that trust affects behavioral intention.

Data were collected through a structured questionnaire employing a five-point Likert scale from respondents with experience using digital platforms. A total of 315 individuals participated in the survey. Data analysis was conducted using Partial Least Squares Structural Equation Modeling with SmartPLS. The findings demonstrate that interactivity and information quality significantly enhance customer trust, whereas vividness does not. Additionally, customer trust exerts a strong positive influence on behavioral intention, underscoring its essential role in technology adoption behavior.

The results indicate that digital platforms should prioritize interactive features and provide accurate, useful information to enhance customer trust and promote favorable behavioral intentions. This study contributes to the literature on digital marketing and consumer behavior by offering empirical insights into how technological attributes influence trust and behavioral intention in technology-mediated environments. However, several limitations must be acknowledged. Future research should employ diverse sampling strategies and alternative data collection methods to further validate these results.

Keywords: Mobile Augmented reality, customer trust, online retailing, consumer behavior

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Introduction

Augmented reality (AR) is a computer application that blends virtual content with real-world locations displayed on electronic screens (Georgiou and Kyza, 2017; Dalili Saleh et al., 2022). Augmented reality (AR) enhances users' visual and auditory experiences by producing virtual images and sounds in real-world environments (Greene and Groenendyk, 2021). Marketing, management, entertainment, and museum education have all benefited from recent developments in augmented reality (AR) and virtual reality (VR) (Wu et al., 2023). By enhancing certain elements of the real world, augmented reality (AR) provides a more affordable and content-rich option than virtual reality (VR), which completely replaces the physical environment (Park et al., 2006).

Augmented reality (AR) employs computer applications to integrate virtual content with real-world locations displayed on electronic screens (Georgiou and Kyza, 2017; Dalili Saleh et al., 2022). AR enhances users' visual and auditory experiences by generating virtual images and sounds within real-life contexts (Greene and Groenendyk, 2021). Recent advancements in AR and virtual reality (VR) have contributed to fields such as marketing, management, entertainment, and museum education (Wu et al., 2023). In contrast to VR, which fully replaces the physical environment, AR offers a more cost-effective and content-rich solution by augmenting specific aspects of the real world (Park et al., 2006).

AR makes it easier for consumers to obtain and understand information related to cultural tourism by offering immersive and visually captivating experiences (Dag et al., 2023). Furthermore, AR and related technologies can create worlds that are customized for each user (Fritz et al., 2005). AR improves perception of

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the physical environment and boosts user engagement by tailoring information to user preferences (Khalil et al., 2023).

Additionally, AR promotes social connection and connectivity, which enhances the interactivity, engagement, and enjoyment of learning processes (Park et al., 2006). In order to facilitate the search for client information within mobile applications, brands have recently added augmented reality elements. Customers can now take a picture of a product on their smartphone and use it to search for a specific product within the mobile application thanks to the introduction of a search by image tool by online retailers Lenskart and Amazon. Additionally, customers can add furniture from the virtual world to their real-life view via the IKEA mobile application. As a result, there is an increasing need to comprehend augmented reality's impact on consumer behavior, its intended usage, and the experience it provides (Javornik, 2016). Prominent online retailers offer augmented reality (AR) smartphone apps that allow customers to preview products before making a purchase (Ames, 2021).

Conceptual background and hypothesis development

Mobile Augmented Reality (MAR)

AR is a visual technique and a form of digital content or computer-generated input that combines real imagery/environment and virtual 3D digital graphics/objects, which coexist in the same space as captured by the camera of a computer, mobile phone or other devices in real-time (Ames, 2021; Azuma, 1997; Fox, 2012; Kounavis et al., 2012; Rese et al., 2017). Mobile Augmented Reality (MAR) extends AR's capabilities using mobile devices like smartphones and tablets (Kang, Kim, Lee, & Lin, 2023) and enables users to interact with products or service providers in a virtual environment (Khashan, Elsotouhy, Alasker, & Ghonim, 2023).

Mobile Augmented Reality (MAR) is playing a bigger role in online retail in India by changing how customers shop and what influences their decisions. The vivid and interactive features of MAR help keep consumers engaged and encourage them to make purchases in the digital marketplace (Pandey, P. K., & Pandey, P. K., 2024; Riar, M. et al., 2022). Building customer trust is important for online shopping with MAR, especially because digital commerce and AR technology have their own challenges. Since shoppers cannot physically interact with products online, other ways are needed to build their confidence. AR helps by offering immersive and interactive experiences (Pandey, P. K., & Pandey, P. K., 2024). MAR lets companies add virtual information and images to the real world in real time, giving them new ways to share content with customers. Augmented reality can change how people try products, try on items virtually, and search for information (Javornik, 2016). Mobile AR apps in e-commerce have several advantages. They can increase conversion rates, like with virtual dressing rooms, lower return rates, as seen with IKEA's AR catalog, and make physical inventories more engaging, as with Lowe's AR app (Dacko, 2017). AR also gives accurate information about clothing sizes and looks, helping shoppers make better decisions online (Baytar et al., 2020). In addition, AR apps help customers connect more with products before buying and allow for more personalized and confident pre-purchase evaluations, such as with Converse's shoe-fitting app (Ames, 2021; Dacko, 2017; Pantano, 2009). This study looks at specific features of MAR that affect customer trust and behavior.

Interactivity

Interactivity, as defined by Steuer (J. Steuer, 1992), refers to the extent to which users can actively engage in real-time modifications of both form and content within a mediated environment. This concept encompasses proactive behavioral processing of information, highlighting the user's ability to shape their experience rather than passively consume a product or service (J. Lim et al., 2018). Steuer (J. Steuer, 1992) emphasizes the importance of technological attributes in shaping the concept of interactivity that arises from the technology in use. Therefore, interactivity results from the capacity of technological systems to enable individuals to interact efficiently with the technology and engage with the content (D.L. Hoffman et al., 2018). The present study examines the extent to which positive interactions develop between consumers and online product modifications after using MAR technology. Accordingly, the hypotheses are as follows:

H1

MAR interactivity has a positive and significant influence on customer trust.

Vividness-

Flavian et al. (2021) highlight the transformative impact of augmented reality (AR) on conversion rates and consumer trust in both online and physical retail environments. MAR enhances engagement and supports informed purchasing decisions by establishing

authentic visual and tactile connections between consumers and products. The vividness of MAR is essential, enabling users to interact with lifelike, high-quality images (Leung et al., 2023). Additionally, AR provides detailed 3D animations of products (Feng & Xie, 2019), which help consumers visualize how virtual items integrate into their actual surroundings. Marc et al. (2023) note that MAR demonstrates product usage through clear, computer-generated visuals and immerses consumers in an experiential process that strengthens their connection to the product (Rese et al., 2017). Based on these findings, the following hypothesis is proposed:

H2

MAR vividness has a positive and significant influence on customer trust.

Informative

Information is a critical factor in online retail, influencing whether a product is considered or selected during the decision-making process. Mobile Augmented Reality (MAR) enables consumers to interact with products beyond textual information by providing sensory experiences through personalized technologies, such as virtual try-ons. MAR enhances online purchasing by integrating digital information into the physical environment, which fosters greater consumer trust and understanding of product use (Rodrigo-Carranza et al., 2022). Flavian et al. (2021) note that brands and businesses incorporating AR into their websites utilize hardware, software, services, and supporting infrastructure to manage and deliver information to consumers via voice, data, and video. Leung et al. (2023) argue that AR-based product and service presentations generally provide more effective communication than traditional web-based presentations. Additionally, AR serves as an informative tool that helps consumers evaluate products (Daassi & Debbabi, 2021). Drawing from these findings, the following hypothesis is proposed:

H3

MAR information has a positive and significant influence on consumer trust.

Customer Trust and Behavior intention

In business research, trust is a key factor shaping consumers' decisions in e-commerce (Pavlou, 2003). Trust means "the belief in a service provider's ability to fulfill its obligations to its customers" (Wang and Lin, 2017, p. 4; Fang et al., 2011) and shows that "people are willing to rely, or intend to rely on something" (Lin and Wang, 2006). In this study, trust in AR apps means users are willing to rely on AR apps provided by service providers they find reliable and interesting. Users' trust can grow as their needs are met. If users think an AR app performs as expected, they are likely to trust it more.

Earlier studies showed that consumers' trust in online merchants and shopping affects their willingness to buy online (Hong and Cha, 2013) and their choice to buy again from the same retailer (Lee et al., 2011; Shin et al., 2013). In mobile commerce, trust also increases the likelihood of installing a mobile app (Harris et al., 2016). Wang and Lin (2017) found that trust in location-based services leads to continued use of those apps. Patel et al. (2020) found that trust encourages people to buy through shopping apps. Overall, these studies suggest that trust influences how much consumers engage with and return to online retailers, as well as their willingness to use mobile apps (Hong and Cha, 2013; Patel et al., 2020; Shin et al., 2013; Wang and Lin, 2017).

Behavioral intention refers to the desire or interest in engaging in specific behaviors, reflecting an individual's willingness to perform those actions. Within the field of behavioral science, intention or desire signifies a motivation to exhibit a particular behavior. In this study, behavioral intention indicates a person's inclination to utilize certain technologies to help achieve their goals (Moorthy et al., 2018; Revythi & Tselios, 2019; Warshaw & Davis, 1985). It is characterized as a conscious decision to either perform or refrain from certain behaviors in the future (Warshaw & Davis, 1985). Leong, Hew, Tan, and Ooi (2013) define this intention as the degree to which a person is motivated to exert effort while performing a behavior. Furthermore, interest can serve as an indicator that an individual is likely to undertake a behavior in the future while also showing the potential to abandon it. This study demonstrates that behavioral intention is a key driver of the repeated adoption of mobile augmented reality for purchasing products.

H4

Trust positively and strongly influence to consumer behavior intention in online purchasing.

Research Methodology

This study employs a survey methodology to assess customer perceptions and trust following the use of MAR technology, as well as its ultimate impact on behavioral intention.

Measurement

The questionnaire was developed based on previously validated constructs to evaluate customer trust in mobile augmented reality (MAR) applications and future online purchase intentions. The instrument included established measures of Interactivity (Kowalczuk et al., 2021; McLean and Wilson, 2019), Vividness (McLean and Wilson, 2019; Nguyen, Le, and Chau, 2023; Nikhashemi et al., 2021), and Informative (Kowalczuk et al., 2021), as well as customer trust and behavioral intention. Demographic data were also collected, and all items utilized a five-point Likert scale.

Respondents were recruited by contacting consumers who had previously used mobile augmented reality features in branded retail applications, such as Amazon, Myntra, Lenskart, and Flipkart, available on the Play Store (Android) and App Store (iOS). Eligibility criteria specified that participants must have downloaded and retained the application for a minimum of six months and used the mobile augmented reality feature at least once. These criteria were verified using screening questions, including

(1) When was AR-enabled app downloaded?

(2) What was the frequency of use of the mobile augmented reality feature on the (brand name inserted) app during online purchasing?

Respondents had used the MAR feature in the selected application; a video demonstration of an individual utilizing the AR feature was presented. Respondents were then asked to confirm their use of this feature. Individuals who had not retained the application for at least one month or had not used the AR feature at least once were excluded from completing the remainder of the online questionnaire.

Results

Sample profile

The total sample consisted of 315 responses (59.3% male and 40.7% female). This research, therefore, has a sufficient sample size of five to 10 times the number of items. The respondents were 21–60 years old (24% aged 21–30, 32.7% aged 31–40, 30.4% aged 41–50 and 12.9% aged 51–60). A total of 19% were students, 24% were stay-at-home parents and 57% were working professionals. The evidence from the demographics suggests that MAR app usage is lower among the older population as are they are less likely to embrace new technologies. The greatest usage was among the middle-aged working population. The participants mainly used eyewear, furniture and fashion apparel apps to evaluate their experiences. A preliminary analysis of the study defines both content validity and reliability of the data. The 5-point Likert scale used in the questionnaire were drawn from previously used scales in the extant literature to measure purchase intention and features of mobile augmented reality (MAR) with customer experience. Likert scale range from strongly disagree to strongly agree. Table 2 illustrate the scales and items used in the questionnaire with reliability and validity of the measurement scale which show all items are reliable value show above 0.7 with average variance extracted (AVE) values above 0.5. As illustrated in Table 1 and figure1, the factor load coefficients of the tested items are all greater than 0.5, which aligns with the recommendations set forth by Shevlin and Miles (1998).

Cronbach's alpha and composite reliability values are used to evaluate the reliability of the constructs. According to established guidelines, values above 0.70 indicate satisfactory internal consistency (Hair et al., 2012). Overall, all constructs exceed the recommended threshold of 0.70, confirming that the measurement items are internally consistent and reliable (Pallant, 2013).

Additionally, this study assessed the model's discriminant validity using the Heterotrait-Monotrait (HTMT) ratio. According to Gold and other researchers' findings, a model is considered to have sufficient discriminant validity when the HTMT value is less than 0.90, making it stable, dependable, and appropriate for additional investigation (Gold et al., 2001). All HTMT readings continue to be below the set threshold, as shown in Table 3.

Model verification

This study employs SMART PLS-SEM 4 to assess the overall fit of the model to determine whether the established theoretical model and research hypothesis

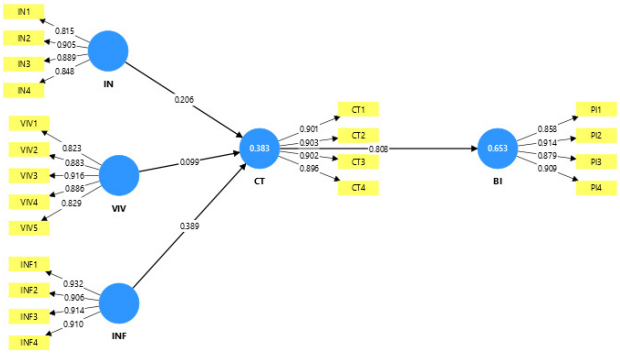

Fig1: PLS- algorithm result (factor loading values)

Table 1: Factor Loading Table

Items		*Measurement Scale*	*BI*	*CT*	*IN*	*INF*	*VIV*
Customer Trust (CT)	CT1	I trust AR-based mobile shopping applications.		0.901			
	CT2	AR-based mobile shopping applications are reliable.		0.903			
	CT3	AR-based mobile shopping applications act in the best interest of users.		0.902			
	CT4	I feel confident when using AR-based mobile shopping applications.		0.896			
Interactivity (IN)	IN1	I felt in control while navigating products using mobile augmented reality			0.815		
	IN2	Mobile augmented reality allowed me to easily explore different product options.			0.905		
	IN3	The Mobile augmented reality feature responded quickly and smoothly to my actions			0.889		
	IN4	I could interact with the product in a way that suited my personal needs.			0.848		
Informative (INF)	INF1	I get detailed product information by using the AR feature of e-commerce platforms.				0.932	
	INF2	I get complete product information by using the AR feature in e-commerce platforms.				0.906	
	INF3	I can make shopping decisions from the information I get when using AR features in e-commerce platforms.				0.914	
	INF4	I can compare product information with other products when using the AR feature in e-commerce platforms.				0.91	
Behavior Intention (BI)	BI1	I will use MAR tools as much as possible in conducting transactions.	0.858				
	BI2	I prefer to use MAR tools instead of making a direct online purchase.	0.914				
	BI3	I recommend MAR tools to others.	0.879				
	BI4	I prefer to buy products or services through those online platforms that provide MAR tools.	0.909				
Vividness (VIV)	VIV1	The visual display through the AR technology was clear(R)					0.823
	VIV2	The visual display through the AR technology was vivid					0.883
	VIV3	The visual display through the AR technology was detailed					0.916
	VIV4	The visual display through the AR technology was sharp					0.886
	VIV5	The visual display through the AR technology was vague					0.829

Table 2: Reliability and validity table

	Cronbach's alpha	*Composite reliability (rho_a)*	*Composite reliability (rho_c)*	*Average variance extracted (AVE)*
Customer Trust (CT)	0.922	0.923	0.945	0.81
Interactivity(IN)	0.887	0.888	0.922	0.748
Informative(INF)	0.936	0.939	0.954	0.838
Behavior Intention (BI)	0.913	0.914	0.939	0.793
Vividness(VI)	0.918	0.934	0.938	0.754

Table 3: Discriminant validity (Heterotrait-monotrait ratio(HTMT))

	BI	*CT*	*IN*	*INF*	*VIV*
BI					
CT	0.88				
IN	0.55	0.549			
INF	0.657	0.633	0.681		
VIV	0.543	0.529	0.592	0.8	

Table 4: Model fit measurement

	Saturated model	*Estimated model*
SRMR	0.061	0.072
d_ULS	0.851	1.213
d_G	0.755	0.774
Chi-square	395.152	401.467
NFI	0.808	0.805

Table 5: Hypothesis table (Path coefficients is significant at p<0.05)

H#		*Original sample (O)*	*Sample mean (M)*	*Standard deviation (STDEV)*	*T statistics (|O/STDEV|)*	*P values*	*Supported*
H1	Interactivity -> Customer Trust	0.206	0.222	0.103	1.993	0.046	YES
H2	Vividness -> Customer trust	0.099	0.108	0.129	0.769	0.442	No
H3	Information -> Customer trust	0.389	0.375	0.148	2.633	0.008	YES
H4	Customer trust ->Behavior Intention	0.808	0.808	0.045	18.076	0	YES

align with the data items to be analyzed. The verification of a model's goodness of fit is not contingent on a single p-value; rather, it necessitates the consideration of a range of indices (Kline, 2015; Whittaker, 2011). The results of the model verification are presented in Table 4. A path analysis of the various latent variables revealed that the multiple indexes of goodness of fit, including X^2/df, NFI, SRMR meet the standards for model fit as proposed (Ringle et al., 2015). To ensure the stability and accuracy of the parameters, the PLS algorithm was executed for 300 iterations and 5,000 bootstrap subsamples with a 95% confidence interval, two-tailed and a significance

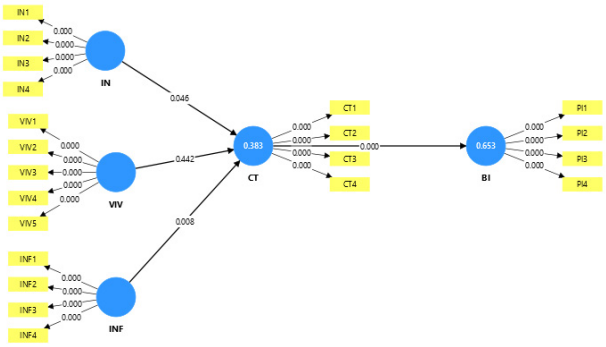

Fig 2: Bootstrapping result (P-value)

level of 5%, as recommended by Ringle et al. (2015), Hair et al. (2012).

The proposed structural model was evaluated using PLS-SEM to determine its fit parameters. To determine the model's acceptability, we used the Normed Fit Index (NFI) with a threshold of 0.8 or greater and the Standardized Root Mean Square Residual (SRMR) with a threshold of 0.08 or less (Gupta and Singharia, 2021). The analysis results indicate a good model fit, as both fitness indices exceeded the threshold values. Specifically, the NFI was 0.805, and the SRMR was 0.072.

The structural model (Figure 2)was evaluated using path coefficients, t-statistics, and p-values derived from bootstrapped analyses with Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS. The results indicate that the hypothesized relationships among the constructs are statistically significant.

Hypothesis H1 posited that interactivity positively influences customer trust. The path coefficient (0.206) indicates a positive association, with a t-statistic (1.993) marginally exceeding the conventional threshold of 1.96 and a p-value (0.046) below the 0.05 significance level. Although the t-statistic is only slightly above the typical cut-off, the p-value supports statistical significance at the 5 percent level, thereby supporting H1. This finding implies that increased interactivity within the system enhances user trust in the platform.

Hypothesis H2 looked at the relationship between vividness and customer trust. There is a weak positive association between the estimated path coefficients (0.099); however, the t-statistic (0.769) is less than the critical value of 1.96, and the p-value (0.442) is more than 0.05. Thus, there is no statistical significance in the relationship, and H2 is not upheld. This means that vivid visual representation does not play a significant role in customer trust in the current situation. One possible reason for this non-significance is that users may prioritise the platform's functional and informational aspects over its aesthetic or vivid features when assessing trustworthiness. Additionally, it is possible that vividness alone does not convey reliability or credibility, especially if users perceive visually appealing features as superficial or distracting rather than as signals of trust. These findings suggest that, in this context, focusing on vividness may not be sufficient to positively influence customer trust.

Hypothesis H3 proposed that information quality significantly affects customer trust. In this study, information quality is defined as the accuracy, completeness, reliability, and currency of platform content. Survey items assessed participants' perceptions of clarity, relevance, and accuracy. The path coefficient (0.389) demonstrates a strong positive relationship between information quality and customer trust. The t-value (2.633) exceeds the recommended threshold, and the p-value (0.008) is below 0.05, confirming statistical significance. Therefore, H3 is supported. These findings underscore the necessity of providing high-quality, useful information to foster customer confidence.

Hypothesis H4 examined the relationship between customer trust and behavioral intention. The path coefficient (0.808) indicates a strong positive effect, with a t-statistic (18.076) and a p-value below 0.001 confirming high statistical significance. This result demonstrates that increased customer trust substantially influences users' behavioral intentions toward the online platform. Overall, the structural model reveals that interactivity and information qualities significantly affect customer trust, while vividness does not. Furthermore, customer trust emerges as a critical determinant of behavioral intention, suggesting that trust is essential for technology adoption and continued use.

It is important to acknowledge certain limitations of this study. The findings are derived from a specific sample, which may restrict their generalizability to broader populations or alternative contexts. Additionally, the measurement of constructs such as interactivity, vividness, and trust relies on self-reported survey data, which may introduce bias. The focus on a particular platform or technological context may further limit the applicability of the results to other settings. Future research should consider employing more diverse samples, alternative methodologies, and examining different platforms to validate and extend these findings.

Discussion

This paper has discussed the effect of interactivity, vividness and the quality of information on customer trust, and has then discussed the effect of trust on behavioral intention through a technology-enabled environment. The study used a survey research design, in which the authors collected responses to questions from 315 adult users of digital platforms via an online questionnaire. The hypothesized relationships between the variables were evaluated by means of structural equation modeling, and the empirical findings partially supported the proposed model, with trust playing the central role in the determination of the behavioral intentions of the users. (Choudhury et al., 2025)

This is because the findings are positive and statistically significant, showing interactivity has a positive impact on customer trust (A. et al., 2025). The operationalization of interactivity was a result of a set of survey questions that evaluated the perceived capability of the users to interact with the digital platforms. The respondents were asked to rate a Likert-scale statement: "I felt in control while navigating products using mobile augmented reality in online purchasing." The fact that they may actively manipulate content, use interactive features, or prompt system responses, makes the users trust the platform more. Interactive capabilities provide a sense of control and interactivity, increasing the user's confidence. This finding is consistent with previous studies on digital marketing and interactive technologies, which show that the more interactive the system is, the stronger the perceptions of transparency and reliability are. (Hari & D, 2025) Similar studies by Yim, Chu, and Sauer have shown that interactions increase user interest and trust in online platforms. (The role of platform interactivity in enhancing trust: unlocking purchase intentions for skincare products on Facebook, 2025)

On the other hand, it was found that vividness does not play an important role in customer trust. (e-commerce website customer engagement: Delineating the role of UTAUT, vividness, and compulsion, 2024) Even though vividness refers to the richness and realism of visual presentation in digital systems, the evidence indicates that visually appealing features are not always enough to build user confidence. Users can find graphical visual representations appealing and interesting to view, but they do not always perceive it as a signal of trustworthiness or trust. To some extent, this result is incompatible with the previous literature, which suggested that profound visual material leads to better product comprehension among users. (Fan, Liu et. al., 2024) A possible reason for this disparity is the features of the sample: participants were mostly those who regularly used digital platforms, and thus they might focus on functionality factors in their beliefs and evaluations of trust rather than visual representation. Additionally, the unique nature of the platforms under analysis, such as those that are complex or informational, may have led users to focus on the quality of information and its credibility rather than aesthetics. With visual vividness so prevalent, people can no longer consider it a differentiating or trust-inducing factor, so these results are consistent with the conclusion that trust in online environments is more directly affected by functional factors such as system reliability and information accuracy.

The information also supports the idea that information quality has a substantial, positive impact on customer trust. (Prima et al., 2025) The quality of information was measured using measures of accuracy, completeness, relevance, and timeliness. Questions in the survey prompted respondents to assess how the information available on the digital platform was accurate and free of errors, whether it was comprehensive enough to meet their requirements, whether it was relevant to their interests, and whether it was regularly updated. Among the predictors of trust, information appears to be particularly relevant. The more users receive accurate, detailed, and helpful information through digital platforms, the more credible and trustworthy the system is perceived to be. The above finding can be supported by the past literature on Information Systems and digital commerce, which emphasizes the role of information quality in alleviating uncertainty and increasing consumer confidence. (Yaeri Kim et. al., 2023) With the sharp and applicable data, customers are able to make better judgments about products or services and hence enhance their confidence in the site.

Lastly, the findings prove that the impact of customer trust is strong and significant on behavioral intention. (Singh et al., 2024) The high path coefficient shows that trust is the major factor that determines the willingness of users to utilize or keep using a digital system. A trusted platform will encourage users to embrace its technology, buy products or refer to others. The result confirms the existing theoretical frameworks on Consumer Behavior and technology adoption, which highlight the key role of trust in shaping user intentions and promoting sustained use of digital technologies.

(Choudhury et al., 2025) Therefore, quality information is more relevant in the construction of customer trust rather than visual vividness on its own, and trust is a central process by which these technological qualities affect behavioral intentions of the users. The results are relevant to the emerging literature on digital consumer experiences, as they highlight the centrality of trust in the technological environment.

Limitation and future research

Although these are important insights, several limitations should be noted. To begin with, the research was based on self-reported survey data, which could have been prone to bias in responses or to distortion of participants' perceptions. Second, the sample included only adult users of digital platforms, which may not be applicable to other groups or cultures. Third, the cross-sectional design does not allow for making any conclusive causal inferences between variables. Research in the future can address these limitations by using longitudinal or experimental research designs, including more diverse samples, or addressing other determinants that have the potential to affect trust and behavioral intention in technology-facilitated contexts. Further, qualitative studies would provide more in-depth information about the processes by which interactivity, vividness, and information quality influence user trust and engagement.

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