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CONSUMER AWARENESS AS A COGNITIVE BRIDGE: MEDIATING THE EFFECTS OF ARTIFICIAL INTELLIGENCE ON PURCHASE INTENTION IN ONLINE SHOPPING

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ABSTRACT

AI is transforming online shopping through personalised recommendation systems, chatbots, and virtual assistants. However, in emerging economies such as Nigeria, there remains limited research on the psychological mechanisms through which AI influences consumer behaviour. This study examines the mediating role of consumer awareness in the relationship between AI applications and online purchase intention. Grounded in the technology acceptance model and the theory of planned behaviour, the study conceptualises consumer awareness as a cognitive bridge that enhances users' understanding of AI-enabled interactions. A quantitative explanatory design was employed, using a questionnaire administered to online shoppers across five South-East Nigerian cities. Of 384 respondents, 303 responses were analysed using structural equation modelling. Results show that AI-enabled features significantly influence purchase intentions, whereas AI-driven personalisation has no direct effect. Mediation analysis indicates that consumer awareness partially and significantly mediates the effects of both AI-driven personalisation and AI-enabled features on purchase intention. Consumers who understand AI functionalities perceive usefulness, trust, and behavioural control, which predict purchase intention. The study concludes that awareness serves as a psychological mechanism that transforms AI interactions into meaningful consumer experiences. It emphasises the need to enhance digital literacy, ensure transparent communication with AI, and implement AI strategies in contexts in South-East Nigeria.

KEYWORDS: *Artificial Intelligence, Consumer Awareness, Purchase Intention, Technology Acceptance Model, Theory of Planned Behaviour*

INTRODUCTION

Artificial Intelligence (AI) is transforming the way businesses engage their consumers, particularly in online shopping, where tools such as chatbots, virtual assistants, and personalisation or predictive analytics are reshaping decision-making processes (Madanchian, 2024). However, while AI adoption is gaining ground in the Western world, in emerging markets like Nigeria, the psychological mechanisms through which AI influences consumer behaviour remain under-investigated, particularly in regional economies such as South-East Nigeria.

This paper focuses on consumer awareness as a mediating variable between AI features and purchase intention. Unlike in more digitally mature regions, consumers in South-East Nigeria may interact with AI technologies without fully recognising or understanding them due to gaps in digital literacy and exposure to technology (Agbayekhai, 2024). As a result, awareness is not merely a product of AI usage but a precondition for AI's behavioural influence.

Recent literature highlights the central role of mediators in AI-driven commerce. Yin et al. (2025) observed that AI's influence on shopping intention is powerfully shaped by consumers' perceptions of its accuracy, interactivity, and insight, which contribute to utilitarian and hedonic value. Similarly, Lopes et al. (2024) found in their review that consumer attitudes, perceived usefulness, and trust often mediate AI's behavioural effects. Putri and Very (2025) postulated that user trust and awareness directly influence the effectiveness of AI-powered features, especially in mobile-based retail.

This study investigates the extent to which consumer awareness mediates the relationship between AI variables and purchase intention in online shopping among users in South-East Nigeria. With increasing mobile internet penetration in the region (Statista, 2024), understanding these dynamics is critical for local e-commerce platforms seeking to deploy AI effectively.

By focusing on this under-researched geographical context, the study provides both practical implications for AI adoption in Nigerian retail and theoretical contributions to the evolving literature on AI-mediated consumer behaviour.

REVIEW OF RELEVANT LITERATURE

Artificial Intelligence in Online Shopping

Artificial Intelligence (AI) has revolutionised the online retail industry by providing tools that mimic human cognitive abilities, including learning, problem-solving, and language understanding (Fedorko et al., 2025). In e-commerce, AI greatly enhances user experiences, streamlines operations, and supports better decision-making. Online retailers can now personalise customer interactions, enhance product discovery, and minimise friction in the purchasing process thanks to AI technologies such as machine learning, natural language processing (NLP), computer vision, and predictive analytics (Davenport, Guha, Grewal, & Bressgott, 2020).

A key element of artificial intelligence (AI) is machine learning (ML), which enables algorithms to analyse large volumes of user data, including browsing habits, previous purchases, and preferences, to predict customer demand and personalise product recommendations (Ershov & Lyapunov, 2024). By narrowing the options shown to consumers,

these personalised recommendations increase product visibility and improve decision-making. Platforms such as Amazon use machine learning (ML)-based recommendation systems to display products that align with customers' past behaviours, thereby improving the visibility of relevant items and reducing decision fatigue.

Chatbots and virtual assistants use natural language processing to facilitate interactive conversations. In addition to providing personalised support, answering questions, and assisting with order placement, these AI technologies engage with users in real time (Rane et al., 2024). As conversational agents become more sophisticated, they can more precisely imitate human interactions, making customer service more seamless and human-like. Furthermore, NLP allows for sentiment analysis of social media and reviews, offering insights into customer expectations and satisfaction.

Predictive analytics, another AI application, allows firms to forecast future purchasing habits by combining historical and contextual data. This results in improved inventory management, customised marketing campaigns, and dynamic pricing tailored to specific consumer behaviours. Similarly, computer vision is used for visual searches, in which customers upload product photographs to find matching items, thereby increasing usefulness and convenience (Chityala, 2023).

Overall, AI improves online purchases by providing more personalised, adaptive, and intuitive experiences. Its ability to automate and personalise the purchasing experience adds value for both customers and sellers. Significantly, these AI functionalities influence psychological processes such as trust, perceived usefulness, and simplicity of use, all of which contribute to consumer awareness and purchase intent (Dai & Liu, 2024). Thus, AI serves not just as a technological tool but also as a cognitive enabler in digital consumer behaviour.

Consumer Awareness in Online Shopping

Consumer awareness refers to the level of knowledge individuals have about products, services, brands, their purchasing rights, and the broader market environment. This awareness is critical when shopping online, as there is no physical interaction with the products or merchants (Kotler & Keller, 2016). In online shopping, digital literacy extends beyond understanding product information, prices, and availability. It also includes the ability to evaluate platform trustworthiness, recognise privacy and security risks, and understand consumer rights and available protections (Almutaa, 2022; Gupta & Singh, 2024; Nguyen et al., 2025). As e-commerce expands, particularly in developing countries, scholars are increasingly examining how awareness influences purchase behaviours.

AI plays a vital role in boosting consumer awareness by functioning as an information facilitator. Consumers receive customised product recommendations based on their specific interests, browsing histories, and behavioural patterns through machine learning algorithms (Ershov & Lyapunov, 2024). This approach simplifies the product search process and enhances the visibility of relevant options, thereby increasing awareness. AI also supports personalised advertising, delivering tailored promotions and product offers to consumers via social media and web platforms (Nedunchezhian, 2025).

Furthermore, AI-powered chatbots and virtual assistants provide real-time access to product information. These tools are invaluable in answering common consumer queries about product features, shipping, returns, and warranties (Davenport et al., 2020). The speed and precision of

these responses enhance a consumer's capacity to make informed decisions. NLP technology integrated into these tools allows for conversational interactions that closely resemble human customer service, significantly reducing the cognitive effort required for information searches. The development of consumer awareness must go beyond product knowledge to include technological literacy and digital ethics, as informed consumers are more likely to trust platforms that are transparent about data use and provide control over personalised settings (Hemker et al., 2021). Conversely, a lack of knowledge about AI's inner workings can generate scepticism and concerns about surveillance, algorithmic bias, or manipulation (Ayun & Setyaningsih, 2025).

In essence, consumer awareness is not a passive state but an active process shaped by exposure to relevant, accurate, and timely information. In digital commerce, AI technologies act as catalysts for that awareness by filtering noise and curating experiences that align with individual needs. Heightened awareness is thus a necessary condition for informed decision-making and serves as a mediating factor in translating AI-driven experiences into tangible consumer actions, such as purchase intention.

Purchase intentions and online consumer behaviour

Purchase intention is a significant construct in consumer behaviour research, frequently defined as a consumer's conscious plan or readiness to acquire a specific product or service (Ajzen, 1991; Fishbein & Ajzen, 1975). Several psychological, social, and contextual factors influence this reliable predictor of actual purchase behaviour, particularly in online buying situations. Product quality, perceived pricing, trust, navigation simplicity, and overall user experience are among the most important elements (Chen, 2023; Qalati et al., 2021).

Trust and informativeness are important factors that influence purchase intention in digital contexts, as the lack of in-person connection and face-to-face communication increases perceived risk (Gefen, 2000). By providing smooth, customised user experiences, AI technologies can reduce these risks. AI-powered recommendation engines use customers' stated preferences and past behaviours to generate more relevant product suggestions, helping narrow the range of options and support consumer decision-making (Ershov & Lyapunov, 2024; Loukili et al., 2023). According to Li, Kuo, and Chen (2023), customers are more likely to purchase products that align with their requirements, values, or past experiences.

AI also influences purchase intention through interactive support features such as chatbots and virtual assistants, which reduce the psychological distance between consumers and the platform by providing real-time responses, resolving complaints, and facilitating transactions (Davenport et al., 2020). This convenience and satisfaction are positively linked to increased purchase intention, especially when consumers perceive the platform as responsive and user-friendly (Kumar, 2025). Building and maintaining trust is another important way AI affects purchase intention. Customers are more inclined to buy when they believe that a platform employs AI ethically, such as safeguarding personal data, avoiding algorithmic bias, and providing transparent information (Hemker et al., 2021; A'yun & Setyaningsih, 2025). Conversely, low perceived trust stemming from unethical AI practices can undermine even the most personalised customer experiences.

In summary, the online environment supports ease of use, trust, personalisation, and perceived value, all of which significantly impact purchase intention. Consequently, AI technologies are

crucial components of digital commerce strategies. However, their effectiveness often depends on consumers' awareness and understanding of AI-driven processes, underscoring the importance of this mediating factor.

The Mediating Role of Consumer Awareness

While artificial intelligence (AI) technologies significantly shape online shoppers' experiences, consumer awareness consistently moderates or mediates AI's impact on purchase intention. Awareness links AI-driven customisation, support, and engagement to consumers' purchasing choices, acting as a cognitive and informational link. Consumers are more likely to perceive AI interactions as reliable, beneficial, and convincing when they have greater knowledge and awareness of the products, the AI technology used, and the platform's characteristics (Dai & Liu, 2024).

According to recent empirical research, consumer awareness enhances the interpretive quality of AI-enabled experiences. Customers are more likely to view recommendations as pertinent and advantageous when they understand how and why specific recommendations are made, thereby increasing the likelihood of purchase (Bunea et al., 2024). Lack of consumer awareness, on the other hand, could lead to resistance to AI characteristics, scepticism, and less confidence. Despite the underlying technological complexity, consumers' purchase intention may decrease if they do not know that the chatbot is AI-powered, do not trust the reliability of AI-generated recommendations, or do not know that the chatbot is AI-powered (Lopes et al., 2024). Consumer awareness also enhances perceived control in online environments. Consumers feel more empowered to make decisions when they have access to transparent product information, comparison tools, and interactive AI helpers (Bunea, Corboș, Mișu, Triculescu, & Trifu, 2024). This sense of empowerment increases satisfaction and minimises cognitive dissonance, which encourages purchasing activity. Awareness enables users to navigate AI features more effectively, extract value from customised information, and identify the intent behind targeted advertising, thereby increasing their trust and engagement with the platform (Bilal et al., 2024). Significantly, awareness influences attitudes about digital ethics. Consumers who are educated about how their data is used and have the chance to select personalisation features are more likely to trust AI systems and the platforms that deploy them (Hemker et al., 2021). This ethical clarity is crucial to fostering positive attitudes and intentions, especially among digital natives and younger generations, who are highly sensitive to privacy issues (Bunea, Corboș, Mișu, Triculescu, & Trifu, 2024).

At this point, it is evident that customer awareness is not merely a background variable but also an active mediator of the relationship between AI purchase intention and purchase. Awareness turns AI interactions from mere technological functions into psychologically appealing experiences that shape real-world consumer behaviour by instilling trust, relevance, and perceived utility.

Regional Insights: South-East Nigeria

Understanding the dynamics of AI adoption in online purchasing necessitates contextual awareness, especially when studying behavioural mechanisms in underdeveloped countries. South-East Nigeria has a distinct socioeconomic and technological ecosystem in which

traditional consumer values coexist with increased digital penetration. This convergence presents both opportunities and restrictions for AI adoption, particularly in e-commerce.

The region comprises five states: Abia, Anambra, Ebonyi, Enugu, and Imo, which are distinguished by urbanisation, a strong business culture, and relatively young populations. In recent years, internet penetration and smartphone ownership have grown considerably, aided by the relatively low cost of mobile data and devices. Local and regional e-commerce platforms like Jumia, Konga, and PayPorte have taken advantage of this boom by implementing AI-powered services, including recommendation engines, chatbot-based support, and dynamic product listings. (Bazunu, 2024)

Despite this improvement, significant challenges remain. Limited internet infrastructure in non-urban locations, an inconsistent power supply, and a lack of formal digital education all pose substantial impediments to greater involvement with AI systems (Dosumu, 2024; Adediran, Sakpere, & Ogunyinka, 2024). Furthermore, while consumers may interact with AI-enhanced platforms, their understanding of these technologies and how they work is frequently limited. This understanding gap not only reduces the perceived value of AI capabilities but also raises concerns, particularly around data privacy and automated decision-making (Etuk, Akpan, & Awah, 2025).

Culturally, South-East Nigerian consumers place a high importance on interpersonal connections and familiarity in economic transactions. To be accepted and trusted, AI features must reflect or replicate human-like interaction. According to research, when chatbots or recommendation systems are perceived as helpful and responsive, customers are more inclined to engage and make purchases.

In this perspective, consumer awareness serves two purposes. First, it enables people to comprehend and navigate an AI-powered environment. Second, it builds trust by explaining how AI capabilities function and assuring consumers about data privacy. These roles are especially crucial in mobile-first economies like Nigeria, where smartphone use frequently shapes digital experiences rather than traditional desktop interfaces.

As a result, investigating the mediating role of consumer awareness in South-East Nigeria is both timely and required. It provides a more accurate understanding of how AI technologies can be efficiently integrated into regional e-commerce strategies while accounting for socio-cultural norms, infrastructure realities, and behavioural expectations (Zhao, 2025). This localised perspective provides valuable complexity to global theories of AI adoption and consumer behaviour.

Theoretical Framework

This study investigates the relationship between AI implementation, customer awareness, and purchase intention using two fundamental models in behavioural and technology acceptance research: the Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB). When combined, the two frameworks offer a comprehensive theoretical lens for evaluating the variables at play. They have both been thoroughly validated in research on technology use, digital adoption, and online consumer behaviour.

The Theory of Planned Behaviour, developed by Ajzen (1991), holds that behavioural intention is determined by three basic components: attitude towards the behaviour, subjective norms, and perceived behavioural control. In the context of online shopping, a consumer's purchase

intention is influenced not only by their opinion of the AI-enhanced shopping experience (attitude) but also by perceived social pressures (subjective norms) and confidence in navigating the digital environment (perceived control).

According to TPB, consumer awareness strengthens perceived control and informs attitudes by reducing uncertainty and fostering a sense of agency. AI technologies, such as virtual assistants, product recommendation engines, and automated checkout processes, can directly affect these variables by improving convenience, reducing cognitive load, and providing social validation through user reviews and ratings. However, the degree to which these technologies influence intention depends on whether users are aware of the underlying systems and how they work.

While TPB analyses behavioural intention from a psychological standpoint, Davis (1989) established the Technology Acceptance Model (TAM), which focuses on how people embrace and use new technology. TAM recognises two main factors influencing technology adoption: perceived usefulness (PU) and perceived ease of use (PEOU). These beliefs define a user's attitude towards technology, which in turn determines their behavioural intentions and actual usage.

AI applications in e-commerce can increase perceived usefulness and perceived ease of use by personalising shopping interactions, automating customer support, and using predictive analytics to anticipate customer needs and improve product discovery. (Yu et al. 2023; Pawar et al. 2025; Perumallaplli 2025). However, TAM has evolved to recognise that perceived usefulness is determined not only by technical performance but also by the user's comprehension of the system. Thus, consumer awareness is an important moderating or mediating factor in shaping how users interpret the benefits of AI and whether they incorporate it into their decision-making processes (Venkatesh & Davis, 2000; Hemker et al., 2021).

Integration of TPB and TAM in This Study

The integration of TAM and TPB provides the theoretical basis for the mediating role of consumer awareness proposed in this study. TAM explains the technology-evaluation mechanism, whereby AI-driven personalisation and AI-enabled features can enhance the usefulness and ease of online shopping. TPB complements this explanation by accounting for the behavioural mechanism, whereby consumers' understanding and evaluation of these technologies can strengthen attitudes and perceived behavioural control, thereby contributing to purchase intention.

Consumer awareness connects these two theoretical perspectives. Awareness enables consumers to recognise and evaluate the usefulness and functionality of AI applications, consistent with TAM, while simultaneously providing the knowledge and confidence required to develop favourable attitudes and greater perceived behavioural control, consistent with TPB. Consequently, AI technologies may not automatically translate into purchase intention merely because they are available; their behavioural influence depends partly on consumers' awareness and understanding of how these technologies support the shopping process.

Formulation of Hypotheses

This study, grounded in the Theory of Planned Behaviour (Ajzen, 1991) and the Technology Acceptance Model (Davis, 1989), posits that customer awareness mediates the relationship between AI applications and online purchase intention. Prior empirical investigations have

shown that awareness increases the interpretive value of AI characteristics and strengthens their behavioural influence (Bunea, El Ouirdi, & Cabiddu, 2024).

Previous research has consistently shown that AI-driven personalisation, including tailored product recommendations, is associated with higher consumer satisfaction and purchase intention when users perceive the recommendations or interactions as useful, accurate, responsive, and relevant. (Gambhir et al., 2024; Pandurangi et al., 2025; Ayu et al., 2023; Dai & Liu, 2024). Personalisation's effectiveness, however, is not solely determined by algorithmic precision; it also depends on consumers' awareness and understanding of the technology underpinning these experiences. Awareness improves perceived control, transparency, and trust, increasing the likelihood that users would act on AI-generated content (Hemker et al., 2021).

Similarly, AI-enabled technologies such as virtual assistants, automated checkout bots, and intelligent search engines can eliminate friction in the consumer experience, thereby increasing the likelihood of a purchase. However, their impact is strongly influenced by users' awareness of their functionality, purpose, and trustworthiness (Lopes et al., 2024; Bilal et al., 2024).

Based on the conceptual logic and empirical facts, the following hypotheses are proposed:

H_1: Consumer awareness significantly mediates the relationship between AI-driven personalisation and online purchase intention.

H_2: Consumer awareness significantly mediates the relationship between AI-enabled features and online purchase intention.

These hypotheses are explored in the socio-cultural and digital setting of South-East Nigeria, where user interaction with AI technology is growing, but digital literacy is uneven. The mediating role of awareness is thus considered pertinent for understanding the psychological mechanisms underlying AI-influenced purchasing intention.

MATERIALS AND METHODS

To test hypotheses and investigate the relationships between the independent and dependent variables, this study employed a quantitative explanatory research design. A questionnaire was used to collect data, and many internet shoppers were asked to complete it. Online shoppers in five major South-East Nigerian cities, Awka (Anambra State), Owerri (Imo State), Enugu (Enugu State), Umuahia (Abia State), and Abakaliki (Ebonyi State), make up the target population. Cochran's formula for large populations was used to determine a sample size of 384 respondents, as the population is practically infinite. A convenience sampling strategy was used to ensure that participants had a relevant online shopping experience. This questionnaire was used to gather primary data, which was then disseminated electronically. Secondary data from reports and journals served as theoretical support.

Purchase intention served as the dependent variable, consumer awareness as the mediating variable, and AI-driven personalisation and AI-enabled features as independent variables. To ensure consistency and reliability, three to four measurement items, modified from validated scales and scored on a four-point Likert scale, were used to operationalise each construct. To concurrently estimate multiple relationships and test mediation effects via bootstrapping, data were analysed using Structural Equation Modelling (SEM) in JASP and SPSS. First, validity, reliability, and model fit were checked using confirmatory factor analysis, reliability tests, and descriptive statistics.

ANALYSIS AND RESULT

This section presents and analyses data on consumer awareness and its mediating effects on purchase intention in online shopping in South-East Nigeria. Of the 384 questionnaires distributed, 303 were valid and analysed, yielding a response rate of 78.9%. The section begins with respondents' demographic profiles, then examines the measurement and structural models, and finally tests the hypotheses. Descriptive and inferential statistics are employed to assess relationships among AI features (personalisation, chatbots, virtual assistance) and consumer behaviour indicators, including awareness and purchase intention. The results are discussed in relation to existing literature and the dynamics of online shopping in South-East Nigeria.

Table 1

Socio-demographic variables

		Count	Column N %	Column Total N %
Gender	Male	172	56.8%	56.8%
	Female	131	43.2%	43.2%
Age	18-25 years	46	15.2%	15.2%
	26-33 years	87	28.7%	28.7%
	34-41 years	41	13.5%	13.5%
	42-49 years	88	29.0%	29.0%
	50 years and above	41	13.5%	13.5%
marital status	Single	86	28.4%	28.4%
	Married	154	50.8%	50.8%
	divorced/separated	63	20.8%	20.8%
Education	basic education	54	17.8%	17.8%
	ND/NCE	89	29.4%	29.4%
	HND/BSc	114	37.6%	37.6%
	Postgraduate	46	15.2%	15.2%
income size	below N100,000	42	13.9%	13.9%
	N101,000-N200,000	58	19.1%	19.1%
	N201,000-N300,000	104	34.3%	34.3%
	N301,000-N400,000	78	25.7%	25.7%
	401,000 and above	21	6.9%	6.9%

The socio-demographic analysis shows that respondents were predominantly **male (56.8%)**, **middle-aged (57.7% aged 26–49 years)**, and **married (50.8%)**. Most had at least a **tertiary education (82.2%)** and fell within the **middle-income bracket of N201,000–N400,000 (60.0%)**, indicating that online shopping in South-East Nigeria is more common among educated, middle-aged, and middle-income consumers.

Table 2

Measurement Model Validity

Construct validity and reliability.

	Cronbach's alpha	**Composite reliability (rho_a)**	**Average variance extracted (AVE)**

AIP	0.79	0.82	0.82
AIF	0.83	0.86	0.61
CAW	0.84	0.87	0.62
PI	0.86	0.89	0.66

The validity and reliability statistics for the study's constructs are presented in the table above. All constructs demonstrated good internal consistency, with Cronbach's alpha values ranging from 0.79 to 0.86. These values exceeded the commonly used 0.70 benchmark and fell within the 0.70–0.90 range often interpreted as indicating good internal consistency (Oviedo & Campo-Arias, 2005). Furthermore, construct reliability was confirmed by **Composite Reliability (CR)** values ranging from 0.82 to 0.89, all exceeding the benchmark of 0.70 (Hair et al., 2019). A sufficient level of convergent validity was indicated by the **Average Variance Extracted (AVE)** values, which varied from 0.57 to 0.66 and were all above the acceptable minimum threshold of 0.50 (Fornell & Larcker, 1981). This demonstrates the validity of the measurement model by showing that each construct accounts for more than half of the variance in its observed indicators.

Overall, the results suggest that the constructs AI-driven Personalisation (AIP), AI-enabled Features (AIF), Consumer Awareness (CAW), and Purchase Intention (PI) demonstrate **acceptable reliability and validity**, making them suitable for further structural equation modelling and hypothesis testing.

Table 3

Structural Path Coefficients (Direct Effects)

PATH COEFFICIENTS AND SIGNIFICANCE

PATH	β	P values	Significance
AIP -> PI	0.093	> 0.05	Not Significant
AIF -> PI	0.274	< 0.01	Significant
CAW -> PI	0.311	< 0.001	Significant

The direct-effects analysis produced mixed results. AI-driven personalisation (AIP) had a positive but statistically non-significant effect on purchase intention (β = .093, $p > .05$). In contrast, AI-enabled features (AIF) had a statistically significant positive effect on purchase intention (β = .274, $p < .01$). Consumer awareness (CAW) demonstrated the strongest direct effect on purchase intention (β = .311, $p < .001$), indicating a highly statistically significant relationship. Overall, the results show that while AI-driven personalisation does not directly predict purchase intention, AI-enabled features and consumer awareness are significant predictors, with consumer awareness demonstrating the strongest direct effect.

Table 4

Mediation Effects via Consumer Awareness

PATH COEFFICIENTS AND SIGNIFICANCE (Indirect Effects)

PATH	Indirect β	P values	Mediation Type
AIP → CAW → PI	0.158	< 0.05	Partial
AIF → CAW → PI	0.181	< 0.05	Partial

The mediation analysis shows that consumer awareness significantly transmits the effects of both AI variables to purchase intention. Specifically, AI-driven personalisation had a statistically significant indirect effect on purchase intention through consumer awareness ($\beta = .158$, $p < .05$). This finding indicates that although personalisation did not directly predict purchase intention, its influence became significant through consumer awareness.

Similarly, AI-enabled features had a statistically significant indirect effect on purchase intention via consumer awareness ($\beta = .181$, $p < .05$). Therefore, consumer awareness is an important cognitive mechanism by which consumers interpret AI-enabled shopping experiences and translate them into purchase intentions.

Summary of Key Findings

Overall, the structural model produced three major findings. First, AI-driven personalisation had no statistically significant direct effect on purchase intention ($\beta = .093$, $p > .05$). Second, AI-enabled features had a significant positive direct effect on purchase intention ($\beta = .274$, $p < .01$). At the same time, consumer awareness demonstrated the strongest direct effect ($\beta = .311$, $p < .001$). Third, consumer awareness significantly mediated the effects of both AI-driven personalisation (indirect $\beta = .158$, $p < .05$) and AI-enabled features (indirect $\beta = .181$, $p < .05$) on purchase intention.

These findings provide empirical support for the study's central proposition that consumer awareness serves as a cognitive bridge between AI applications and online purchase intention.

Hypothesis Decisions

Hypothesis	Tested Relationship	Indirect β	Significance	Decision
H_1	AIP → CAW → PI	.158	$p < .05$	Supported
H_2	AIF → CAW → PI	.181	$p < .05$	Supported

Accordingly, H_1 and H_2 were supported, confirming that consumer awareness significantly mediates the effects of both AI-driven personalisation and AI-enabled features on online purchase intention.

Discussion of Findings

The analysis reveals that AI-driven personalisation (AIP) does not exert a statistically significant direct effect on purchase intention, despite showing a positive coefficient. This finding suggests that personalisation alone is insufficient to motivate purchasing decisions among online shoppers in South-East Nigeria. Unlike in more digitally mature markets, where algorithmic recommendations are often readily interpreted and trusted, consumers in this region may encounter personalised content without fully understanding its purpose or value. As a result, personalisation may be perceived as passive or background functionality rather than an active decision aid. This outcome aligns with Ershov & Lyapunov (2024). They argue that personalisation generates behavioural value only when consumers clearly understand how it connects to their preferences and needs. In contexts characterised by uneven digital literacy, such as South-East Nigeria, the absence of such understanding weakens the direct persuasive power of AI-driven personalisation.

In contrast, the analysis shows that AI-enabled features (AIFs), including chatbots and recommendation engines, have a significant, positive direct effect on purchase intention. This indicates that consumers respond more strongly to AI applications that are interactive, visible, and functionally supportive. Chatbots and virtual assistants reduce information asymmetry by

offering real-time responses, guiding product searches, clarifying policies, and resolving uncertainties. These features effectively simulate human interaction, which is culturally important in South-East Nigeria, where trust and interpersonal engagement strongly influence commercial exchanges. This finding supports prior research demonstrating that AI-enabled interfaces enhance perceived usefulness, ease of use, and confidence in online shopping environments (Davenport et al., 2020; Rane et al., 2024). From an analytical perspective, AIF directly lowers perceived risk and cognitive effort, thereby exerting an immediate influence on purchase intention.

More importantly, the mediation analysis establishes consumer awareness (CAW) as a critical cognitive mechanism linking AI applications to purchase intention. Although AIP has no direct effect, it has a significant indirect effect through consumer awareness ($\beta = 0.158$, $p < 0.05$). This indicates that personalisation primarily influences purchase intention by increasing consumers' awareness of product options, their relevance, and their availability. When consumers recognise that recommendations are tailored and understand why certain products are being suggested, personalisation becomes cognitively meaningful and behaviourally effective. This supports the notion that awareness transforms personalisation from a hidden algorithmic process into a recognised decision support tool.

Similarly, AI-enabled features show a significant indirect effect on purchase intention via consumer awareness ($\beta = 0.181$, $p < 0.05$). While AIF already has direct awareness, further awareness strengthens this relationship. This suggests a complementary effect whereby understanding how chatbots and recommendation systems function enhances users' perceived control, trust, and confidence in using these tools. These findings are consistent with Chung (2021) and Dai and Liu (2024), who emphasise that awareness improves consumers' intention. The significant path from consumer awareness to purchase intention ($\beta = 0.311$, $p < 0.001$) further reinforces its central role. This result indicates that informed consumers are more likely to trust AI-enabled platforms, perceive greater usefulness in AI functionalities, and feel empowered to make purchasing decisions. From a theoretical standpoint, this aligns closely with the Technology Acceptance Model, in which awareness enhances perceived usefulness and ease of use (Davis, 1989), and with the Theory of Planned Behaviour, in which awareness strengthens perceived behavioural control and attitudes toward the behaviour (Ajzen, 1991). In effect, consumer awareness operates as the psychological bridge that converts technological capabilities into intentional action.

Contextually, these findings are particularly salient for South-East Nigeria. Despite rising internet penetration and widespread use of mobile commerce platforms, many consumers engage with AI technologies implicitly rather than consciously. The analysis suggests that AI adoption without deliberate consumer education limits its behavioural impact. Where awareness is low, even sophisticated AI tools may fail to influence purchase decisions meaningfully. Conversely, when consumers understand AI's functionality and perceive it as supportive rather than intrusive, both personalisation and interactivity become more effective.

The analysis shows that AI technologies improve online shopping through interactivity and personalisation, but their ability to boost purchase intent relies on consumer awareness. Awareness not only supports AI but also amplifies its impact. In the South-East Nigerian context, AI-powered platforms perform best when users are informed, engaged, and at ease

with AI interactions. By empirically confirming awareness as a mediator, this study extends the TAM and TPB frameworks to AI-based commerce. It emphasises the crucial role of consumer education in emerging digital markets.

Practical Implications

The findings have significant implications for e-commerce firms, digital marketers, and policymakers. The strong effect of consumer awareness on purchase intention ($\beta = .311$, $p < .001$) indicates that firms should complement AI adoption with consumer education and transparent explanations of how AI-enabled tools work. Improving consumers' understanding of recommendation systems, chatbots, and virtual assistants can enhance trust, perceived usefulness, and confidence in online purchasing decisions (Hemker et al., 2021).

The significant effect of AI-enabled features on purchase intention ($\beta = .274$, $p < .01$) further suggests that retailers should prioritise interactive and user-friendly AI tools that provide timely information and reduce consumers' decision-making effort. However, because AI-driven personalisation had no significant direct effect ($\beta = .093$, $p > .05$) but operated significantly through consumer awareness ($\beta = .158$, $p < .05$), personalised recommendations should be accompanied by clear explanations of their relevance to consumers (Ershov & Lyapunov, 2024).

For policymakers, the findings highlight the need to promote AI and digital literacy, consumer data awareness, and transparent AI practices. Such initiatives can strengthen consumer confidence and support responsible adoption of AI-enabled e-commerce in emerging digital markets such as South-East Nigeria.

Conclusion

This study aimed to explain how artificial intelligence affects online purchase intention among consumers in South-East Nigeria, with particular focus on the mediating role of consumer awareness. The findings clearly show that AI technologies do not influence consumer behaviour in a uniform or automatic way; instead, their effectiveness depends on how consumers understand, interpret, and interact with them.

The results show that AI-enabled features, such as chatbots, virtual assistants, and intelligent recommendation engines, have a direct and significant effect on purchase intention. These tools improve interactivity, reduce uncertainty, and offer real-time support, which are particularly valuable in online settings where trust and perceived risk remain key concerns. In contrast, AI-driven personalisation does not directly influence purchase intention, indicating that personalised recommendations alone are insufficient to motivate behaviour without a deeper understanding of the consumer.

Most importantly, the study identifies consumer awareness as a vital psychological and cognitive link between AI applications and purchase intention. Both AI-driven personalisation and AI-enabled features have significant indirect influences on purchase intention through awareness. This indicates that AI becomes behaviourally effective only when consumers understand how it functions, the value it provides, and how it supports their decision-making. Awareness boosts perceived usefulness, trust, and control, thus transforming technological interactions into meaningful purchase intentions.

These findings conceptually reinforce and expand the Technology Acceptance Model and the Theory of Planned Behaviour by empirically demonstrating that awareness mediates the

relationship between technological features and behavioural outcomes. Practically, the study emphasises that in emerging digital markets such as South-East Nigeria, investing in advanced AI systems without concurrent investment in consumer education and transparency may restrict their influence.

Overall, the study finds that AI-driven online shopping platforms work best when users are well-informed, actively involved, and confident in AI technology. For e-commerce sites in South-East Nigeria, AI's true value lies not only in advanced features but also in its ability to educate, empower, and foster trust among consumers.

Recommendations

1. Prioritise Consumer Education: Online retailers should support consumer awareness campaigns because they are a potent mediator of the relationship between AI and purchase intention. These could include programmes to teach people how to use data and to develop digital literacy, as well as open discussions about how recommendation engines, chatbots, and personalisation work (Kotler & Keller, 2016; Hemker et al., 2021). Businesses can build customer trust and equip them with the tools they need to make informed decisions by demystifying AI processes.
2. Enhance AI-Enabled Features: The results demonstrate that purchase intention is directly impacted by AI-enabled features (AIF). Accordingly, retailers are developing interactive AI tools, including sophisticated recommendation systems, NLP-driven assistants, and responsive chatbots (Davenport et al., 2020; Rane et al., 2024). To increase customer engagement and conversion rates, these features should be designed to offer real-time, customised, and easy-to-use support.
3. Refine Personalisation Strategies: AI-driven personalisation (AIP) had a noteworthy indirect impact through awareness, despite its lack of a significant direct effect. Companies should ensure recommendations are not only pertinent but also adequately explained by coordinating their personalisation efforts with consumer awareness campaigns. To reduce scepticism and increase acceptance, this may entail demonstrating to customers why particular products are being recommended (Ershov & Lyapunov, 2024).
4. Encourage Transparent and Ethical AI Practices: Given concerns about data privacy and algorithmic bias, retailers should ensure their AI systems operate ethically and transparently (A'yun & Setyaningsih, 2025; Hemker et al, 2021). Building consumer trust is crucial for the long-term adoption of AI. This can be achieved by offering opt-in personalisation features, outlining data-use policies, and ensuring fairness in recommendations.
5. Putting South-East Nigeria's adoption of AI into perspective: barriers to digital literacy and infrastructure still exist in developing areas such as South-East Nigeria (Dosumu, 2024; Nwukamaka, Mojekeh, & Eze, 2021). To ensure AI technologies reach a broader audience, policymakers and businesses should collaborate to expand internet access and improve consumers' digital skills. AI applications will be more widely adopted and have a greater impact if they are customised to local consumer behaviours, preferences, and sociocultural norms.

Suggestions for Future Research

Future studies should extend this research by adopting probability-based sampling techniques and using larger samples that cover other geopolitical zones in Nigeria. This would help

determine whether the mediating role of consumer awareness observed in South-East Nigeria is applicable across different socioeconomic, cultural, and technological environments.
Longitudinal studies are also recommended to examine how consumer awareness and responses to AI-enabled shopping platforms evolve over time as consumers gain greater experience with artificial intelligence. Future research could further examine actual purchasing behaviour rather than relying solely on purchase intention, incorporating indicators such as completed purchases, repeat transactions, and conversion rates.
Additionally, future studies could extend the conceptual model by incorporating variables such as digital trust, perceived risk, privacy concerns, perceived usefulness, perceived ease of use, attitudes towards AI, and digital literacy as mediators or moderators. These variables may provide a broader understanding of the mechanisms by which AI influences consumer behaviour.
Finally, comparative studies across regions or countries are recommended to determine whether consumer awareness plays a similar cognitive mediating role in markets characterised by varying levels of digital literacy, technological infrastructure, consumer trust, and AI adoption.

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