The Role of Artificial Intelligence in Increasing E-Commerce Brand Equity

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Abstract

The main objective of this research is to determine the influence of artificial intelligence on e-commerce consumers' purchasing intentions. In addition, this research studies the mediating role of brand equity and the moderating variable brand credibility, which is still limited to e-commerce studies. We collected data through questionnaires from 242 e-commerce customer respondents. Data were analyzed using a structural equation modeling approach with two stages: measurement and structural models. The research results show that artificial intelligence cannot directly increase purchase intentions. Brand equity's mediating effect is needed to influence purchase intentions positively. Brand credibility also strengthened the relationship between brand equity and consumer purchasing intentions. This research develops an artificial intelligence model that can predict purchase intentions in e-commerce by examining brand equity's influence and credibility. This is an essential contribution to developing AI technology concepts that must constantly be updated, and previous research has yet to focus on the models offered. Providing input for policymakers in e-commerce companies in designing AI services that are more oriented towards increasing brand equity has been proven to increase consumer purchasing intentions.

Keywords: Artificial intelligence, marketing, brand equity, e-commerce, customer behavior.

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Introduction

The technological innovation that is currently being widely discussed for its sustainable benefits by companies and governments is artificial intelligence (AI). The government has an interest in seeing whether artificial intelligence has a beneficial impact on national development (Qin et al., 2023), and companies see whether the technology can be used sustainably which can be profitable (Shang et al., 2024). (Kulkov et al., 2024) found that AI can be sustainable and in line with the Sustainable Development Goals (SDGs) issue if it focuses on three main areas: organizational, technical, and processing. The managerial aspect includes the integration of AI in the company and the relationship between partners and customers. The technical aspect involves the development of AI algorithms to address global challenges. The processing aspect emphasizes the internal transformation of the company and business models in response to AI. The application of AI to companies in various fields will be a new force for consumers (Zhang & Wang, 2023). companies need to understand consumer behavior that the use of AI technology has influenced. One of the antecedents of the use of AI is increasing customer perception of the company's brand. Customers will be happy with a particular brand if they have a good experience with AI (Trivedi, 2019). The way to do this is by providing customized communication based on client data at the right time without requiring the involvement of advertising staff, thus ensuring optimal productivity (Z. Wang et al., 2022; Yuan et al., 2023). Therefore, it is important to study brands that are influenced by AI marketing (Argyris et al., 2020; Ezenwafor et al., 2021). Previous studies have also confirmed that increasing brand equity can affect purchase intention (Majeed et al., 2021; Verma, 2020). However, no one has paid attention to the moderating role of brand credibility in increasing consumer purchase intention, especially in the case of e-commerce sales. Consumers' psychological assessment of a product will be influenced by brand credibility in the market (Wan et al., 2021), which has implications for increasing purchase intentions (Chin et al., 2019). Perceived brand credibility when making online purchases is considered an important factor in reducing consumer uncertainty and saving decision-making costs, thereby increasing consumers' choice (Perera et al., 2021; Wan et al., 2021). However, although brand credibility is considered to have potential benefits for stakeholders in business, the role of perceived brand credibility has received little attention in the literature on online product sales, especially on e-commerce websites that use high technology. Perhaps they assume that AI can maximize sales without having to see the effects of other factors (Pallathadka et al., 2023; Qi et al., 2023), especially on the moderating effect of brand credibility. In addition, previous studies are still limited in identifying the direct and mediating effects of perceived brand credibility. Therefore, this study will investigate the moderating role of brand credibility in strengthening the relationship between brand equity and purchase intention, especially on the marketing concept of AI influence on e-commerce brand enhancement.

This study will provide four significant contributions to the literature and practice. First, we synthesize the influence of AI variables on increasing brand equity. Second, this study considers the unexplored moderating effect of brand credibility between brand equity and purchase intention. Third, this study examines the robustness of conceptualizations related to the use of AI on e-commerce websites

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to increase the generalizability of existing literature by testing the influence between artificial intelligence and brand equity to offer a comprehensive perspective on understanding the drivers of e-commerce purchase intention. In terms of managerial contribution, these findings provide valuable resources in designing AI services to increase consumer purchase intention.

This study is structured into several parts. The first part explains the urgency of the problem related to understanding AI in e-commerce. The second part determines the right research method for analyzing primary data. The third analyzes the research data results and interprets them descriptively by referring to theory. The fourth discusses the study results to provide theoretical and practical contributions.

Literature Review

AI Marketing

AI is different from other technologies because it can learn independently through the data obtained and adapt quickly (Huang & Rust, 2021). The evolution of marketing that occurs due to technological advances is a collaborative process between artificial intelligence (AI) and the concept of existing marketing strategies (Siau & Yang, 2017; Wirth, 2018). AI is defined as a cognitive process, especially in reasoning (Pomerol, 1997). Like the ability to solve problems and the process of learning to understand something, AI does the same as the human mind (Sterne, 2017). AI can process and analyze data quickly, identify patterns, and accurately predict market trends and consumer behavior. The results can conclude customer perceptions from habits and direct them to the future (Shabbir & Anwer, 2015). The application of AI to marketing activities is divided into several parts, namely interaction, information, accessibility, and customization (Ho & Chow, 2023). Interaction is related to a more personal and responsive way of communicating with customers. Consumers tend to want to interact longer with chatbots or human-like AI devices because of their convenience (Ciechanowski et al., 2019). According to Computer Theory, AI as a social actor can make consumers act towards the device in a way that is similar to human interaction (Heerink et al., 2010; Nass et al., 1995). Second, the information relates to collecting and analyzing customer data to provide deeper insights into consumer preferences and behavior. Without human intervention or other programs, AI can learn from data and update its results (Huang & Rust, 2021). Consumers prefer to get information from AI features than other internet platforms because it can offer relevant information that allows users to make better decisions (Brill et al., 2022). AI's ability to analyze data by providing communication pertinent to its customers influences customer awareness and loyalty to the company's brand (Sadek et al., 2015). However, when companies are unable to present the right information, it can lower brand evaluations, especially for lesser-known brands (Cunha et al., 2015).

Third, the accessibility aspect relates to AI's ability to make it easier for customers to find the products or services they need through personalized recommendations. AI algorithms can recognize patterns and identify digital content (Abduljabbar et al., 2019). Accessibility also refers to AI's ability to provide timely assessments and responses to customer information (Ho & Chow, 2022), such as 24/7 chatbot services that can be accessed by customers at any time. These services function as human substitutes in resolving customer difficulties. This method has been proven to improve service quality and influence brand image and performance (Sultan & Wong, 2019). Accessibility can have an impact on brand experiences, such as in the banking sector, by providing access to customers through mobile applications, such as tips and financial savings insights (Ho & Chow, 2023). AI can reduce physical encounters and save customers time while still providing easy access to product or service information (Chung, Ko, Joung, & Kim, 2020). Application in e-commerce can also be made by entering specific product keywords or photos, and customers will have access to a practical and fast purchasing experience (Al-Ebrahim et al., 2024).

Finally, AI customization can create unique experiences that can be tailored to the individual needs of each customer. Application in business-to-customer (B2C) use of AI is used to gain in-depth insights into customers so that they can create customized offers (Davenport et al., 2019; Guha et al., 2021). Customization refers to personalized AI marketing activities that satisfy customer needs and ultimately build stronger brand interest and loyalty (Godey et al., 2016). The goal is to understand better and meet their specific needs, which in turn increases their interest and loyalty to the brand. Customization has a positive relationship with brand experience (Chung et al., 2020). Customizable AI capabilities, such as live chat virtual assistants, can provide a positive brand experience (Ho & Chow, 2022; Mishra, 2021). Companies must be able to provide service features that allow consumers to customize their applications (Tran et al., 2021). For example, the AI feature used by Starbucks provides personalized product recommendations based on customer data and preferences. Consumers will receive product suggestions that match their tastes and previous purchase history, improving the overall user experience. To achieve an effective level of customization, companies need to provide features in their applications that allow customers to customize their experience according to personal preferences. For example, customers can set notification preferences, application appearance, or the type of content they want to receive.

AI in branding is still limited and fragmented, although some studies have shown that AI has a positive effect on branding (Roy et al., 2018; Trivedi, 2019). Online platforms adopt AI to change the way consumers connect with the services provided by companies automatically (Oh et al., 2020). AI provides brand services with some types of interactions similar to company staff (Z. Wang et al., 2022) . For example, AI-powered chatbots and virtual assistants can provide instant responses to customer inquiries, resolve complaints, and provide personalized product recommendations without direct human involvement. Such automated conversations can enhance consumer interactions that can create a more intimate relationship between consumers and brands (Varsha et al., 2021). Therefore, AI is able to respond quickly and efficiently and collect useful data to understand consumer preferences and needs more deeply, which ultimately helps improve the company's brand.

H1: Artificial intelligence has a significant effect on brand equity

H2: Artificial intelligence is having a significant impact on purchase intention

Brand Equity

Products that have value by brands are called brand equity (Schivinski & Dabrowski, 2015). (Aaker, 1991) defines brand equity as a collection of assets that can reduce or add value to products offered to consumers. Researchers will see the success of a brand depending on consumer perception. They will react in the form of behavior that occurs due to brand knowledge stimuli (Xu et al., 2022). Industries widely use the concept of utilizing brand equity strategies because it has been proven to increase consumer purchasing intentions, including the service industry (Aggarwal & Saxena, 2023), e-commerce (Beig & Nika, 2022), and manufacturing (Mehdikhani & Valmohammadi, 2022). Overall, brand equity can increase purchasing intentions (Gong et al., 2020; Ray et al., 2021; W. T. Wang & Li, 2012).

To find out the factors that form brand equity, (Aaker, 1991) looks at four dimensions, namely brand awareness, brand associations, perceived quality, and brand loyalty. Brand awareness is defined as an approach strategy for consumers to realize, recognize, and remember the existence of a particular brand (Barreda et al., 2015). Consumers who recognize a brand will be more willing to pay the price of a product even though the price is more expensive than its competitors and become a priority brand choice (Anselmsson et al., 2014; Prasad & Dev, 2000; Sean Hyun & Kim, 2011). With brand awareness, it will be possible to build brand purchase intentions in the form of attitudes towards the brand (Rossiter et al., 1991). Therefore, brand awareness plays a key role in marketing communications that form brand equity.

The second dimension is brand association, which is interpreted as an evaluation of consumer perception of a brand that forms associations in consumer memory (Aaker et al., 2013). A brand will be easier to remember and consider by consumers if it has more associations (Vriens et al., 2019). The association is related to certain cues associated with the brand (Wei et al., 2023). Consumers will know a particular brand when they see or hear something, such as a slogan, logo, celebrity endorsement, and so on. This brand association can also include consumers' personal experiences with the brand, testimonials from other users, and the values carried by the brand. These factors collectively form strong brand equity and influence consumer purchasing decisions (Ratnasari et al., 2023) .

The third dimension of brand equity, namely perceived quality, is interpreted as a consumer's assessment of a product or brand as a whole (Zeithaml, 1988). The evaluation of perceived quality is often based on consumer experience, product features, and their perception of brand superiority compared to competitors. Previous studies have confirmed that the positive influence of perceived quality can increase consumer purchase intention (Baek et al., 2010; Liaogang et al., 2007). When consumers have a high perception of a product's quality, they tend to be more confident and satisfied with the brand.

The fourth dimension of brand equity formation is brand loyalty, defined as a form of long-term consumer commitment to repurchase products with the same brand (Aaker, 1991; Baker et al., 2010; Oliver, 1999). Loyal customers to a brand not only have a high purchase frequency, but they are willing to spread positive information about the brand without being influenced by competitors' brand promotions (Dick & Basu, 1994; Holbrook & Chaudhuri, 2001). Brand loyalty reflects consumers' emotional connection and trust in the brand, which ultimately strengthens the brand's position in the market and increases the overall brand equity value. High consumer loyalty has an impact on the willingness to pay more for products offered by the brand (Srinivasan et al., 2002).

H3: Brand equity has a positive and significant effect on purchase intention

Previous studies have also seen that brand equity has a role as a mediator in the relationship between independent and dependent variables. (Augusto & Torres, 2018; Lee et al., 2020; Vahdati & Nejad, 2016) confirmed that brand equity can bridge the influence of several marketing strategies to increase purchase intention. In the e-commerce literature, the mediation effect of brand equity between artificial intelligence and purchase intention is rarely explored. (Cheng & Jiang, 2021; Ho & Chow, 2022) emphasized that a good consumer experience with a brand can mediate the relationship between marketing AI service features and increasing repurchase intention and customer preferences. Especially for millennial consumers, will prefer brand experience to choose a brand to be the choice to search for products (Zollo et al., 2020). The results of this study indicate that several marketing efforts made by companies can increase consumer intentions to choose products through their brand equity. Therefore, we argue that:

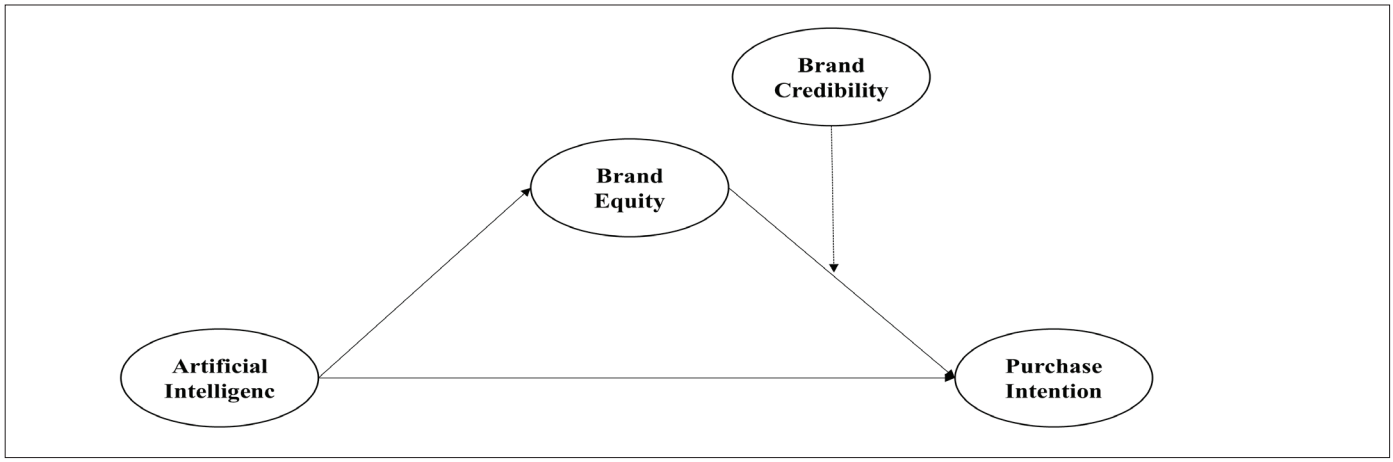
H4: Brand equity mediates the effect of AI on purchase intention

Brand Credibility

Brand credibility is defined as the ability of a brand to deliver on its promises consistently and combines reliability and expertise (Erdem & Swait, 2004). Consumers will have a high perception of the brand if the message is delivered by a brand that has high credibility and will have implications for purchasing decisions (wu & Wang, 2011). Brand credibility is an important precursor to brand equity (del Barrio-Garcia & Prados-Peña, 2019; Wan et al., 2021). According to signaling theory, brand credibility can improve perceptions between customers and brands through perceived service quality built in the minds of customers (del Barrio-Garcia & Prados-Peña, 2019; Spry et al., 2011)Despite the increasing recognition of the importance of brand credibility and equity as profitable corporate brand enhancers, very little research has investigated how brand credibility and equity affect consumer choice behavior, especially in e-commerce businesses. (Kashif et al., 2018; Takacs Haynes et al., 2017) advocate placing brand credibility as a moderator for marketing theory and practice that is currently still limited, especially in e-commerce. On the other hand, brand equity has been criticized for a lack of comprehensiveness in helping marketers overcome the challenges faced by brands in different sectors (Kuhn et al., 2008). Therefore, it is essential to test the moderating effect of brand credibility on brand equity, especially in e-commerce, as in Figure 1.

H5: Brand credibility moderates the relationship between brand equity and purchase intention

Figure 1: Research model



Methodology

Our study was conducted through a quantitative approach to prove or refute the phenomena that occurred (Jain et al., 2017), and a positivist perspective was carried out for hypothesis testing and generalization of the finding model (Karupiah, 2022). Data collection was carried out in 2024 by distributing questionnaires in a structured manner. A total of 242 respondents were involved in filling out the questionnaire. Sample collection was conducted through Google Forms directly by inserting initial questions that ensure the willingness of respondents to fill out the questionnaire voluntarily. In addition, confirmation questions regarding the experience of using e-commerce were also asked to ensure that respondents met the research criteria. This approach ensures that the data obtained is relevant and comes from individuals who have direct experience related to the topic being studied. The sampling procedure representing the population uses a purposive technique because there is no sampling frame. Respondents are e-commerce website users in Indonesia. The selection of respondents is very important to ensure that the data collected is by the research objectives and reflects the characteristics needed. E-commerce users were selected because they have direct experience in using the platform, so they can provide valid information about the behavior, preferences, or challenges faced in using e-commerce in Indonesia. This approach allows the research results to be more focused, accurate and can be used as a basis for relevant strategic recommendations. Several respondent characteristics have been determined in Table 1, which includes information such as gender, education, age, e-commerce brand, and products to be purchased.

Survey instrument

The questionnaire was developed by adapting previous studies according to the variables used, such as Artificial intelligence (Ho & Chow, 2023), brand equity (Beig & Nika, 2022), brand credibility (Erdem & Swait, 2004), and purchase intention (Yin & Qiu, 2021) as shown in Table 2. The questionnaire is divided into two parts. First, it contains questions to obtain respondents' demographic data. Second, it questions consumer perceptions or experiences when accessing e-commerce websites. A Likert-type scale of 1-5 is used to facilitate the analysis of consumer responses. 1: strongly disagree; 2: disagree; 3: neutral; 4: agree; and 5: strongly agree.

Sample characteristics

The demographic profile of respondents is displayed by looking at several characteristics with the percentage of respondents observed. The male category is 102, and the female category is higher by 140. Age is categorized into three groups: the adolescent age group, 17-26; adults, 27-42; and older people, 43-58. Education is classified as senior high school graduates, bachelor's, and post-degree. The most visited e-commerce brands are Shopee, Tokopedia, and Lazada. The products most sought after by e-commerce customers are Fashion (Clothes, pants, shoes, bags, watches), Care & beauty (makeup, perfume), and Electronics.

Table 1: Respondent's Characteristics

Characteristics	Frequency
Gender	
Male	102
Female	140
Age	
17 – 26	215
27 – 42	24
43 – 58	3
Education	
High school	190
Bachelor	31
Postgraduate	21
E-commerce brand	
Shopee	120
Tokopedia	56
Lazada	66
Product	
Fashion (Clothes, pants, shoes, bags, watches)	154
Care & beauty (makeup, perfume)	72
Electronic	16

Table 2: Measurement model

Dimensi	Item	Loading	AVE	Discriminant Validity	CR
AI Marketing (Ho & Chow, 2023)					
Interaction	AI provides individual attention to customers		0.53	0.73	0.69
	AI has the knowledge to answer customer questions	0.72			
	AI is sensitive to current customer needs	0.737			
Information	AI provides information that helps my purchasing decisions	0.752	0.51	0.71	0.67
	AI provides recommendations on products/services	0.671			
	AI helps understand events that occur				
Accessibility	AI can provide immediate answers anytime and anywhere	0.71	0.57	0.76	0.84
	AI can provide efficient digital assistance or information	0.819			
	AI is convenient and efficient	0.828			
	AI provides more timely responses	0.658			
Customization	I believe that AI can get the job done	0.702	0.54	0.74	0.78
	When I have a problem, AI shows a genuine interest in solving it	0.699			
	AI can handle customer complaints directly and promptly	0.827			
	I feel that the use of AI meets my personal needs	0.724			
Brand Equity (Beig & Nika, 2022)					
Awareness	I am familiar with my 'favorite e-commerce brand.'	0.743	0.54	0.73	0.78
	I can quickly recognize my 'favorite e-commerce brand' among other e-commerce brands.	0.782			
	Several characteristics of my 'favorite e-commerce brand' come to mind quickly	0.666			
Associations	My 'favorite e-commerce brand' is a customer-friendly company.	0.788	0.55	0.74	0.83
	I like the brand image of my 'favorite e-commerce brand.'	0.766			
	I respect and admire the people who shop from my 'favorite e-commerce brand'	0.698			
	Compared to other e-commerce brands, 'my favorite e-commerce brand' has a unique image.	0.723			
Perceived Quality	The services offered by my 'favorite e-commerce brand' are reliable.	0.796	0.65	0.81	0.88
	My 'favorite e-commerce brand' provides the best services.	0.813			
	The products provided by my 'favorite e-commerce brand' are of good quality.	0.788			
	I trust the quality of the products provided by my 'favorite e-commerce brand.'	0.838			
Brand Loyalty	'My favorite e-commerce brand' will be my first choice when shopping online.	0.686	0.50	0.71	0.67
	I consider myself loyal to my 'favorite e-commerce brand.'	0.734			
Brand Credibility (Erdem & Swait, 2004)					
Expertise	This brand can deliver what it promises	0.741			
	This brand reminds me of someone who is competent and knows what he is doing	0.789	0.59	0.77	0.74
	This brand does not pretend to be something it is not	0.61			
Trust	This brand has a name you can trust	0.699	0.50	0.71	0.87
	Over time, my experience with this brand has made me expect it to deliver on its promises, no more, no less				
	The brand's product claims are trustworthy	0.688			
	This brand delivers what it promises	0.823			
Purchase Intention (Yin & Qiu, 2021)					
	I tend to buy unplanned products when shopping on online platforms	0.589	0.52	0.72	0.81
	I tend to buy products recommended by the platform	0.775			
	I am willing to buy products recommended by the website	0.889			
	I am willing to browse products recommended by AI-powered e-commerce websites when shopping	0.573			

Measurement model

The research data analysis used a two-stage structural equation modeling approach: measurement and structural models. AMOS 24 was chosen as the statistical tool used. The measurement model was carried out to test the validity of the value of each construct by looking at the average variance extracted (AVE) (>0.5) (Joe F. Hair, Howard, & Nitzl, 2020), and Reliability between constructs by looking at the composite reliability value (>0.6) (Fornell, C., & Larcker, 2016; Nunnally & Bernstein, 1994). The first stage is to ensure that the data to be analyzed is consistent and is normally distributed. We use the SPSS tool to see the score value for each item. The results are that all items have a z-score value <3.0 according to the required value (Mondal & Rehena, 2020). Furthermore, the data is processed to the next stage. The results of the data analysis obtained an AVE value for each construct between 0.50 and 0.65 and a loading factor value> 0.5. The values are in accordance with the requirements as shown in Table 2. We also tested discriminant validity which describes the degree to which the measure of one construct differs from the measure of another measured construct in the same measurement model (Hulland, 1999). We tested and confirmed discriminant validity based on the square root of AVE being greater than the correlation between factors (Hair et al., 2010). The square root of AVE for all constructs should be greater than the correlation between that construct and the other constructs in the model. The composite reliability value also gets a value of > 0.6 with a range of values of 0.67 to 0.88, as required.

After the measurement model test is declared appropriate and meets the value requirements, we then conduct a structural model test for hypothesis testing between constructs. Hypothesis testing is divided into several parts, namely direct testing, mediation, and moderation effects. An example of direct testing is measuring the effect of Artificial Intelligence (AI) on brand equity and purchase intention, where this relationship is analyzed directly without considering other variables. Mediation testing is carried out by assessing whether brand equity acts as a mediator in the relationship between AI and purchase intention, namely calculating the extent of the indirect effect of AI on purchase intention through brand equity. Meanwhile, moderation effect testing evaluates whether brand credibility strengthens the relationship between brand equity and purchase intention, indicating that the presence of brand credibility can modify or strengthen the relationship. This approach provides more comprehensive insight into the dynamics between variables in the research model.

Results

The proposed research model is evaluated with the AMOS structural model run with 242 respondent data using the maximum likelihood estimation approach. The results of direct testing by AMOS are shown in Table 3. Which illustrates the estimation of various influence paths between constructs without moderating variables. The structural model also shows data from the model ($\chi 2$ /df 1.951; GOF 0.926; NFI 0.926, TLI 0.951; RMSEA 0.67). The study results show that all dimensions forming artificial intelligence have a positive and significant influence on increasing brand equity. Therefore, the H1 hypothesis is supported ($\beta = 0.427$, $p < 0.005$). These results indicate that artificial intelligence feature services formed from interaction, information, accessibility, and customization can increase the company's brand equity value. This finding is supported by previous studies (Musaiqer & Hamdan, 2023; Yuan et al., 2023), which emphasize the importance of AI in shaping brands and answering questions from (Puntoni et al., 2020).

AI can be a liaison between consumers and brands. Personalized interactions through chatbots and virtual assistants increase customer engagement by providing individual attention instantly and consistently. AI can respond to customer questions quickly and accurately, as well as process and analyze large amounts of data. With extensive knowledge and the ability to learn from each interaction, AI can provide relevant and useful answers, creating a more satisfying customer experience. In addition, AI sensitive to current customer needs can proactively offer the right solutions or products, thereby increasing the feeling of being valued and heard by customers. This can strengthen the relationship between customers and brands for the better in the long term. The use of collected information data allows companies to understand customer needs and preferences more deeply so that they can offer more targeted products and services. Increased accessibility through digital platforms makes it easier for customers to interact with brands anytime and anywhere. Additionally, customization allows companies to provide offers and recommendations tailored to individuals, increasing customer loyalty and trust, and ultimately increasing brand equity value.

The second finding is that AI does not significantly increase consumer purchase intentions in e-commerce. Therefore, hypothesis H2 is unsupported ($\beta = 0.156$, $p > 0.005$). These results indicate that using AI in e-commerce, such as product recommendations, personalization of shopping experiences, and customer service chatbots, cannot directly increase consumer purchase intentions. These results differ from previous studies (Bhagat et al., 2023; Malhotra & Ramalingam, 2023), which stated that the role of AI could increase purchase intentions. The difference in results occurs because of the mediating factors of other variables that stimulate the AI function to work better, such as trust and perceived intelligence. Therefore, the role of AI cannot directly influence purchase intentions. This can be caused by factors such as consumers who still doubt the reliability and accuracy of AI, privacy concerns, and preferences for more personal human interactions. In addition, although AI can increase efficiency and convenience, consumer purchasing decisions are often more influenced by complex emotional and social factors, which AI cannot yet entirely do. The third finding is that brand equity built by AI can increase e-commerce consumer purchase intentions. Therefore, hypothesis H3 is supported ($\beta = 0.675$, $p < 0.005$). These results explain that brand equity built by AI can increase e-commerce consumer purchase intentions through various more personal and relevant ways. These results support previous studies (Liu et al., 2020; Rizwan et al., 2021). By utilizing big data, AI can provide product recommendations that are highly tailored to consumer preferences and behaviors, thereby creating a more satisfying shopping experience and building brand loyalty. AI can also improve customer service by providing 24/7 support through intelligent chatbots, strengthening the brand's positive image. In addition, AI can analyze consumer habits to help brands

be more responsive to feedback and market trends. Thus, using AI in branding strategies can create a stronger emotional connection between consumers and brands, ultimately driving increased purchase intentions.

Table 3: Structural model

Hypotheses	Standard Estimate	S.E	C.R	P Value	Hypothesis Decision
AI to brand equity	0.427	0.057	7.492	0.000	Supported
AI to purchase intention	0.156	0.072	2.177	0.029	Not Supported
Brand equity to purchase intention	0.675	0.143	4.707	0.000	Supported

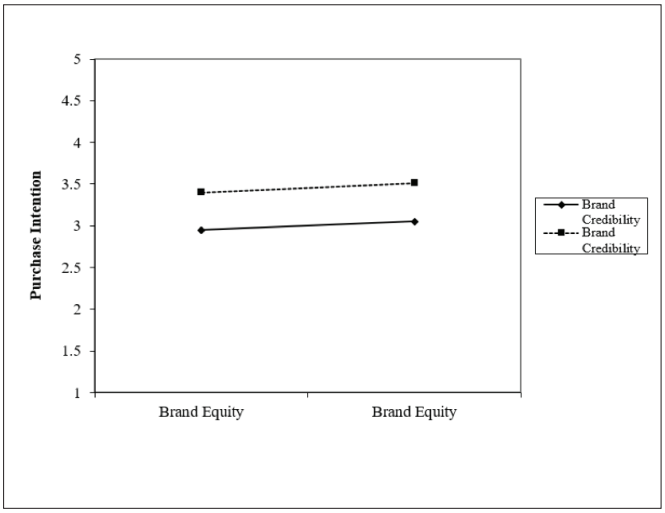
The results of the next study show that brand equity mediates the influence of AI on purchase intention. Therefore, the H4 hypothesis is supported by the full mediation results. These results support previous studies that found that brand equity can fully mediate the increase in consumer purchase intention (Shuyi et al., 2024). One approach to obtain information about the role of mediating variables is to calculate the ratio of indirect effects to total, also known as the Variance Accounted For (VAF) value. The VAF value measures the magnitude of the indirect impact on the total effect, namely how much direct effect can be explained by the mediating variable. In general, a VAF value of less than 20% indicates no mediation effect, if it is greater than 20% and less than 80%, it is a partial mediator, and if it is greater than 80% it is a full mediator (Hair et al., 2014; Irimia-Diéguez et al., 2023). We detect these values by looking at the indirect effect a × b and detecting the direct effect c '(Cohen, 1988). The calculation results are shown in Table 4. The VAF value of 89% shows that brand equity fully mediates the effect of AI on purchase intention. These results explain that the influence of brand equity is a link between AI technology and consumer perceptions of the services provided by e-commerce to increase purchase intention. When AI improves customer experience through personalization, accurate recommendations, and responsive customer service, it can strengthen brand equity by creating added value and higher satisfaction. Consumers who experience positive interactions with AI tend to develop better perceptions of the brand, feel more connected, and have more trust in the products offered. With strong brand equity, consumer trust and loyalty increase, directly affecting their purchase intention. Therefore, AI cannot directly affect purchase intention without increasing brand equity.

Table 4: Mediation

Hypothesis	Path		Calculation result					Result VAF
	A	B	c'	Ab	ab+c	ab/ab+c		
AI → Brand Equity → Purchase Inten	0.427	0.156	0.675	0.666	0.741	0.898	89%	Full Mediation

The final research result is to see the moderating effect of brand credibility. The result is that brand credibility can be moderated by strengthening the relationship between brand equity and purchase intention. We know the interaction value of the moderating variables, and the two-way interaction effect can be easily explained by the plot diagram (Dawson, 2023). Therefore, to visualize the moderating impact on the plot diagram, we follow the diagram as shown in Figure 2. When a brand has high credibility, consumers are more likely to trust the claims or actions taken by the brand, thereby strengthening the positive perception formed from brand equity. Brand credibility includes expertise and trust that influence consumers' beliefs that the brand will meet their expectations. Therefore, when brand equity is robust and high brand credibility will further strengthen consumers' purchase intentions because they feel confident that the experience and value promised by the brand can be realized. These results are in line with previous findings that looked at the moderating effect of brand credibility in other contex (Guo & Luo, 2023).

Figure 2: Moderation



Discussion

The findings of this study have significant insights for e-commerce company policymakers regarding the use of artificial intelligence technology in increasing brand equity and consumer purchase intentions. This study can provide input and inspiration for them in developing effective marketing strategies and tactics. Some important implications highlighted in this study are that although AI does not significantly influence consumer purchase intentions directly, e-commerce must combine AI with other marketing strategies to increase purchase intentions, such as increasing brand equity, which ultimately affects purchase intentions. The findings show that AI technology offers new ways to meet consumer demand faster and more accurately, such as personalizing shopping experiences and predicting customer needs. In addition, AI can also improve brand image by providing more responsive, innovative, and relevant services, thereby creating positive impressions and loyalty among consumers (Ho & Chow, 2022; Yuan et al., 2023). This AI integration helps companies adapt to market changes while strengthening their competitiveness. In utilizing AI service features, interaction, information, accessibility, and customization must be oriented toward increasing brand equity. Policymakers in e-commerce must focus on developing and improving AI features to create personalized user experiences through chatbots, virtual assistants, and so on, which can increase good consumer perceptions of brand equity. E-commerce must also improve the reliability and security of AI to reduce consumer concerns regarding privacy and AI accuracy. When companies can maintain privacy and accuracy, it will have a significant impact on society and provide long-term benefits for the company (Habbal et al., 2024; Nguyen et al., 2024). For example, Big data collected by AI must be used to understand consumer behavior and preferences to provide more relevant and personalized offers. In addition, by building brand credibility that includes expertise and trustworthiness, e-commerce can strengthen the relationship between brand equity and consumer purchase intention because consumers are more likely to trust claims or actions made by brands with high credibility. Therefore, they need to continuously test and evaluate the effectiveness of AI features in increasing brand equity and purchase intention, as well as collect and analyze consumer feedback to make necessary improvements and adjustments. By implementing these steps, e-commerce can maximize the potential of AI to increase brand equity and indirectly increase consumer purchase intention.

This study has several limitations that can be used for further research. First, we used a quantitative approach with non-probability sampling, which may need to be more in-depth and generalized. Therefore, additional research can be done through a qualitative method approach with direct interviews with respondents to provide more in-depth results related to consumer experiences using AI so that they can generalize the study's conceptual model. Second, this study only focuses on brand equity, mediating variables in maximizing AI services and influencing purchase intention. Further research can test other variables that may mediate, such as satisfaction or other variables that shape positive customer perceptions due to AI stimuli. Third, this study was conducted in Indonesia, one of the developing countries, and testing with the same model can be carried out in other developing countries. Fourth, the sample only includes e-commerce shoppers from Indonesia, with a majority young age group (17-26 years old). This may cause bias in the responses because young consumers' preferences, behavior patterns, and experiences may differ significantly from other age groups. For example, the younger generation tends to be more adaptive to technology, use digital platforms more often, and have different shopping preferences than older consumers. Therefore, the results of this study may not be representative of the entire population of e-commerce shoppers in Indonesia.

Conclusion

E-commerce sales are significantly increasing, especially in Indonesia, which brings challenges and opportunities. Therefore, it is important to understand online consumer behavior and identify factors influencing online purchasing behavior in e-commerce. One of the positive characteristics of good e-commerce is the ease and method that is easy to use by consumers (Anvari & Norouzi, 2016). This study identified four artificial intelligence builders: interaction, information, accessibility, and customization. All of these dimensions support the development of artificial intelligence utilization in e-commerce. A conceptual framework was developed by examining the influence on brand equity, a mediating variable, and purchase intention. The moderation variable brand credibility is also used to see the effect of moderation in strengthening the relationship. Only one unsupported hypothesis was found: AI cannot increase purchase intention directly but through the mediation effect of brand equity. The moderation effect of brand credibility also strengthens the relationship between brand equity built by AI and purchase intention. These findings highlight the importance of brand equity as a critical link between AI technology and consumer purchase intention, as well as the essential role of brand credibility in strengthening the positive impact of brand equity on consumer purchase decisions, providing new insights that have not been revealed in previous studies.

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