Article

The impact of AI marketing activities on consumer-based brand equity: The mediating role of brand experience

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Abstract: In today's rapidly evolving world, the integration of artificial intelligence (AI) technologies has become paramount, offering unparalleled value propositions and unparalleled consumer experiences. This study delves into the transformative impact of five AI activities on brand experience and consumer-based brand equity within the retail banking landscape of Lebanon. Employing a quantitative deductive approach and a sample of 211 respondents, the research employs structural equation modeling to analyze the data. The findings underscore the significant influence of four AI marketing activities on brand experience, revealing that factors such as information, accessibility, and customization play pivotal roles, while interaction has a less pronounced effect. Importantly, the study unveils that brand experience acts as a partial mediator between AI marketing activities and consumer-based brand equity. These revelations not only illuminate pathways for retail banks in Lebanon to refine their AI strategies but also underscore the importance of leveraging AI-driven marketing initiatives to bolster customer equity, acquisition, and retention efforts in an increasingly competitive market age.

Keywords: banks; AI; brand experience; consumer-based brand equity

1. Introduction

Among various disruptive technologies that have emerged in recent years, artificial intelligence (AI) has appeared as an imperative component for the banking industry. Implementing AI offered the potential to significantly improve banks' ability to achieve higher profits, service personalization and customization, distinctive Omni-channel experiences, and rapid innovation cycles (Shan Ho and Choi Chow, 2023). Incorporating AI into their business processes, banks are found to be able to provide seamless and digitalized financial services to customers, this will certainly offer banks a huge competitive advantage in the marketplace. Nonetheless, despite its potential benefits artificial intelligence (AI) has only been partially adopted in Lebanon (Doumat et al., 2022). Particularly, local Lebanese banks are still hesitant to implement this technology in their financial operational routine. Costs associated with resolving customers' concerns about AI and the lack of top management support are two potential causes for not using AI technology in the banking sector in Lebanon (Shan Ho and Choi Chow, 2023). As a result, the purpose of this research is to support the use of AI technology as the basis for new

value propositions and delivering an exceptional customer experience in the Lebanese banking sector proving that when marketing effort uses AI this will surely end up with an enhanced consumer-based brand equity.

The enhancement of consumer experience is considered a significant driving force behind the deployment of artificial intelligence (Khan, 2022). Currently, banks employ artificial intelligence to register customer data and to deliver tailored wealth management solutions, monitor consumer information, and verify the identities of consumers to facilitate remote customer onboarding (Shan Ho and Choi Chow, 2023). With the increasing digitalization and streamlining of various business operations, clients' expectations in the banking sector about the quality and the range of offered products and services is rising (Zollo et al., 2020). According to a survey conducted by PWC (2019), it was found that 70% of banking customers expressed a keen desire to acquire additional tailored information and tools. Consumer preferences are transforming personalized digital services that should meet all their product and service requirements (Vlačić et al., 2021). According to the World Retail Bank Report (2022), retail banks are currently falling behind and delivering a genuine personalized customer experience. To address this issue, it is recommended that these banks enhance their utilization of artificial intelligence to offer customized experience that fosters stronger connection and optimize customer value (Capgemini and Efma, 2022).

Artificial intelligence plays a crucial role in the endeavors of banks to enhance customer experience, hence fortifying the relationship between consumers and brands. According to Trivedi (2019), customers experience the feeling of satisfaction when they have a positive encounter with the brand's AI offerings. According to Kumar et al. (2019), the creation of a satisfying customer experience can generate favorable value for the bank in terms of brand preference. In turn, this enables banks to attain distinctiveness and gain a competitive advantage (Shan Ho and Choi Chow, 2023). However, despite the significance of artificial intelligence in shaping consumer brand relationships, a scarcity of comprehensive and cohesive research on the impact of AI on branding is still an issue (Doumat et al., 2022). Several studies have indicated that artificial intelligence can have a beneficial impact on branding (Trivedi, 2019). Conversely, there is a contrasting approaches suggesting that information technology has transitioned from being an optional tool for gaining competitive advantage to becoming a necessity, leading to the emergence of the IT paradox (Handayani et al., 2022). The utilization of technology transactions has the potential to enhance efficiency and convenience for customers (Ibrahim et al., 2021). However, it is important to acknowledge that the presence of errors and the absence of sufficient human help can lead to inefficiencies ultimately resulting in customer dissatisfaction (Khan, 2022). Hence the precise impact of artificial intelligence on branding continues to be ambiguous (Shan Ho and Choi Chow, 2023). Bock et al. (2020) encouraged additional inquiries related to the impact of artificial intelligence on consumers' assessment of the servicescape and organizations. Similarly, Vlačić et al. (2021) suggested a further investigation about the effect of AI-powered marketing tools on consumers' attitude beliefs, and behaviors particularly during the COVID-19 pandemic. In order to address the need for additional research and enhance understanding of the AI effect, this study aimed to examine the impact of artificial

intelligence on both brand experience and consumer-based brand equity within the context of Lebanese banks. While the use of AI is a global trend, research on the role of AI in branding especially in the banking sector is considered rare (Shan Ho and Choi Chow, 2023). Although a few studies have been conducted in India, United States and United Kingdom, however, their focuses were not similar to the current research and are not applicable in Lebanon because of the differences in financial technology development customer, infrastructure, consumer preferences and culture (Khan, 2022). Therefore theoretically, this study can contribute to the AI context, marketing, and the branding literature by providing an understanding of AI consumer brand relationships within the Lebanese banking setting.

The use of AI marketing became crucial for numerous institutions, particularly banks, in order to ensure their survival, giving the growing significance of AI and its substantial influence on client's attitude and perceptions. Artificial intelligence (AI) has been acknowledged as a crucial element in facilitating the exchange of information and ideas, while also assuming a growing significance in providing distinctive and meaningful brand experience (Shan Ho and Choi Chow, 2023). The aforementioned circumstances have incited academics, scholars and professionals to reconsider the function of AI activities in delivering and ensuring brand experience (Khan, 2022). Therefore, recent research investigated the importance of artificial intelligence (AI) in improving brand experience (Zollo et al., 2020). According to Zollo et al. (2020), researchers have emphasized that individuals are attracted to artificial intelligence marketing activities in order to satisfy their sensorial, behavioral, effective, and intellectual problem solving experiences. The above-mentioned experiences have a significant impact on the structure of consumers engagement towards companies, highlighting the crucial needs to comprehend the correlation between AI marketing activities and brand experience (Kim and Lee, 2019). The main purpose of this research is to test if the four proposed AI marketing activities can impact consumer-based brand equity. For this reason, two questions are to be investigated: Which AI marketing activity effectively impacts the brand experience? And are AI marketing activities able to impact consumer-based brand equity through brand experience? Previous studies have shown that the implementation of AI marketing activities have the potential to increase consumer intimacy (Han and Kim, 2020), as well as positively impacting brand preferences, willingness to pay a premium price, and increasing the brand awareness (Kim and Lee, 2019). Nevertheless, the investigations about the correlation between AI marketing activities and brand experience has been rather scarce, despite the potential for civil favorable effect on consumer perception of the company (Shan Ho and Choi Chow, 2023). Therefore, this research examines the impact of AI marketing activities on brand experience which may have a positive impact on consumer based brand equity, taking into consideration the mediating impact of brand experience between AI marketing activities and consumer based brand equity.

This study addresses pressing market needs within the Lebanese banking sector by investigating the impact of artificial intelligence (AI) marketing activities on brand experience and consumer-based brand equity. In a rapidly evolving digital age, where customer expectations are on the rise, banks face the imperative to enhance their offerings and customer interactions. By bridging the gap between AI

technology and branding strategies, this research provides banks with valuable insights to meet the growing demand for personalized, seamless, and digitally-driven banking experiences. Understanding the mediating role of brand experience, this study offers a pathway for banks to not only differentiate themselves but also to build stronger connections with their customers, ultimately fulfilling market demands for enhanced service quality and customer satisfaction.

2. Theoretical background and hypothesis development

2.1. AI in the banking sector

Artificial intelligence facilitates the execution of any business tasks typically carried out by human beings (Vlačić et al., 2021). The objective of artificial intelligence is to facilitate the emulation of the human intellect by computers, enabling them to acquire knowledge, perceive their surroundings, engage in cognitive processes, and execute actions fast and costless (Vlačić et al., 2021). Presently, the banking industry has included many applications of artificial intelligence such as chat bots, virtual chat agents and robots that offer round the clock individualized customer service and make recommendations for appropriate financial services and products (Castillo et al., 2021). By utilizing facial recognition and voice recognition technologies, individuals are able to establish an account remotely, access their banking information and grant approval for financial activities at any given moment and location (Klochko et al., 2023). The utilization of artificial intelligence in the banking sector has resulted in the development of mobile application that offers customers simple means to access banking services (Castillo et al., 2021). These applications also provide individualized recommendations and valuable information pertaining to savings, expenses, investments and many other financial involvements. Giving the recent circumstances resulting from the COVID-19 and the imperative of maintaining social separation, there is an anticipated rise in the significance of AI driven marketing tools and interaction incensement between customers and brands. Although artificial intelligence has the potential to provide good value, it can also serve as a catalyst for customer unhappiness (Bock et al., 2020). The technical data associated with artificial intelligence is primarily attributed to the constraint of a human help (Bernarto et al., 2020). Due to the limited scope of application programming interface capabilities, users may experience frustration when they encounter situations where they are needed to rephrase their queries or seek information from alternate sources in order to obtain a satisfactory response (Vlačić et al., 2021). Customers may experience a sense of undervaluation and detachment due to the impersonal nature of their online social interactions (Zollo et al., 2020). Communication can be distorted and problems may potentially arise in situations where there is a lack of information during interactions with artificial intelligence or during the transition to a human customer care assistant (Vlačić et al., 2021). The existence of those negative aspects of artificial intelligence requires additional investigation about the relation between AI and brands experience, which serves the primary objective of this research.

2.2. AI marketing activities

The impact of AI marketing activities on customers' response and decision making has been studied by Chen et al. (2022). According to Roberts-Lombard and Petzer (2021), bank personnel foster consumer trust offering customer-employee interactions by demonstrating customer orientation, engaging in information exchange, and addressing customer issues (Libai et al., 2020). Marketing efforts and activities play a crucial role for banks that are required to transmit financial information or updates in order to offer professional and tailored services (Cheng and Jiang, 2021). According to Chung (2020), artificial intelligence has the potential to decrease the physical and temporal gap between customers and banks by providing convenient access to information about product and services. Cheng and Jiang (2021) were among the researchers who conducted investigations into the impact of AI marketing activities on consumer behavior and consumer-firm interaction. However, it is important to note that their investigations were mostly centered around the utilization of chatbots (Chen and Lin, 2019). In order to further explore the topic of AI marketing individuals and their constituents' elements, the objective of this research is to offer a contemporary analysis of the use of AI in the Lebanese banking sector.

Cheng and Jiang (2021) propose that AI marketing activities involve 5 online dimensions including: interaction, information, accessibility customization and entertainment. However, the relevance of entertainment within the banking sector is to be disregarded since banking services, products and investment are rarely associated to entertainment but mostly related to financial commitment and engagement. In contrast with other business contacts, banking customers have a greater inclination toward utilitarian orientation or transactional behavior (Roberts-Lombard and Petzer, 2021). Bank customers rarely find financial activities or transaction to be joyful or entertaining (Chen et al., 2022). As a result, only the remaining four dimensions were adopted in this study. Social interaction pertains to the exchange of information and conversation that occurs between consumers and artificial intelligence agent representing the brand (Libai et al., 2020). The significance of social interaction in the context of customer experience is highlighted when customer engage in conversations or interactions with AI agents (Roberts-Lombard and Petzer, 2021). Information encompasses the AI's dimension of knowledge to customers regarding products, services, investments or brand itself (Cheng and Jiang, 2021). The utilization of big data analysis enables artificial intelligence to provide client with pertinent marketing messages, which is a crucial aspect of the brand recognition establishment and customer loyalty (Libai et al., 2020). Accessibility encompasses the evaluation and prompt handling of consumer data through the utilization of artificial intelligence technology (Vlačić et al., 2021). By offering 24/7 customer services, AI can improve service quality which affect the brand image and performance (Shan Ho and Choi Chow, 2023). Customization pertaining to the fact of AI marketing strategies implementation can provide customers with tailored help in order to fulfill their individual requirements.

2.3. AI marketing activities and brand experience

Brand experience encompasses a sequence of engagements with individuals, entities, procedures, and surroundings, which afterwards elicit cognitive, emotional, sensory, and behavioral reactions (Shan Ho and Choi Chow, 2023). The idea of brand experience encompasses multiple dimensions as it has been identified by Koay et al. (2020), which can be quantified through sensory, affective, behavioral, and intellectual aspects. In the realm of banking, bank experience referred to the assessment made by clients regarding their whole service encounter (Shan Ho and Choi Chow, 2023). Consumer sentiment is the amalgamation of emotions, cognitions and attitude that are developed by individuals where they engage in the process of making decisions and consuming goods and services (Shan Ho and Choi Chow, 2023). The phenomenon being described is a synthesis of various elements, including the art of consuming, the characteristics of the product or service, and the overall online experience of purchasing (Roberts-Lombard and Petzer, 2021). These elements are interconnected and arise from the online interaction between the client and the brand. Customers derive satisfaction from brand that offered them a remarkable and superior experience (Cheng and Jiang, 2021). For instance, when individuals encounter a gratifying online experience with a specific brand, their degree of involvement with the company tends to increase. This in turn strengthened their happiness and loyalty toward the brand (Chen and Lin, 2019). Hence, brands have the potential to enhance their sales and foster sustained engagement by providing a more immersive and comprehensive online experience; this can happen through online marketing information and online interaction (Libai et al., 2020). In order to enhance consumer attraction, it is imperative for business to offer a remarkable brand experience and effectively marked a diverse range of interactive, informational and customized experience (Shan Ho and Choi Chow, 2023). This is of utmost importance in establishing brand distinctiveness within the highly competitive banking sector. Especially, technology advancement plays a significant role in shaping the client experience when making this experience accessible. The integration of AI technology in banking services enhanced the overall brand experience provided by traditional banks especially when banking marketing activities use AI that offers a high level of interaction and customization in the product and service lines (Chen et al., 2022).

Previous research has indicated that the utilization of AI in marketing has an impact on the relationship between customers and brand through the type and the quality of online offered information. When the quality of artificial intelligence is high, it is observed that clients generally express satisfaction with the AI interaction and customization provided. According to Cheng and Jiang (2021) the provision of timely, accurate, interactive, accessible and relevant information by AI system has been identified as a significant factor in consumers continued adoption and usage of the technology, mostly due to the positive user offered personalized experience. According to the findings of Roberts-Lombard and Petzer (2021) there is a direct impact of AI activities on the quality of chat bot communication in the banking sector. This in turn has a good effect on the relationship between customers and brands experience, leading to favorable responses from consumers (Shan Ho and

Choi Chow, 2023). According to Huwang et al. (2021) service robots have demonstrated effective performance in offering both functional and emotional value within the hospitality and tourism industry; this in turn has resulted in pleasant client experience. According to the research conducted by Chen et al. (2022) customers demonstrate a greater level of satisfaction where they can access and customize all their purchasing activity. The researchers discovered that the utilization of robot baristas offered clients a novel service experience that included AI interactions. Therefore, this led to an increase in customer affection and loyalty toward the brand. Thus, this research proposes the following hypothesis.

Hypothesis 1: The brand experience is impacted by online interaction being an AI marketing effort.

Hypothesis 2: The brand experience is impacted by online information being an AI marketing effort.

Hypothesis 3: The brand experience is impacted by online accessibility being an AI marketing effort.

Hypothesis 4: The brand experience is impacted by online customization being an AI marketing effort.

2.4. Brand experience and consumer-based brand equity

Consumers tend to exhibit favorable reactions when they have a pleasant experience with a brand. Altaf et al. (2017) conducted a study in which they discovered empirical data that substantiates the notable beneficial impact of brand experience on both brand image, brand equity and brand awareness. Furthermore, it has been shown that customers who have favorable brand experience tend to have a greater willingness to pay a higher price (Altaf et al., 2017). In a research conducted by Dwivedi (2015), It was shown that there is a positive correlation between emotional engagement with the brand and the probability of customer purchase. Moreover, the study conducted by Sahin et al. (2011) reveal that brand experience has a significant and favorable impact on consumer satisfaction, brand trust, brand equity and brand loyalty. Xie et al. (2017) suggested that the variable of brand experience has a beneficial impact on the nature of the brand relationship, leading to the enhancement of consumer citizenship behaviour.

Hypothesis 5: Consumer-based brand equity is impacted by brand experience.

2.5. AI marketing activities and consumer-based brand equity

AI marketing activities may be described as the strategic use of artificial intelligence by firms to generate, convey, and distribute digital marketing offering. This approach aims to develop a cultivate relationship with stakeholders, ultimately augmenting the overall value of the company. The aforementioned objectives are accomplished via the facilitation of interaction, information sharing, providing personalized purchase recommendation, and the generation of word-of-mouth conservations among stakeholders about both established an emerging goods and services (Yadav and Rahman, 2017). In contrast, AI marketing activities pertain to the manner in which customers perceived the level of involvement showing by a company's brand and thus impacting consumer-based brand equity (Hariguna and

Ruangkanjanases, 2023). The emergence of artificial intelligence has presented marketers with prospects to engage, cooperate, and disseminate with their customers. As a result, several enterprises and governmental organization have acknowledged the significance of proficient AI marketing activities in establishing value, fostering connections, expanding customer base, and enhancing brand equity (Yu and Yuan, 2019). Furthermore, it has been argued by Ismail (2017) that businesses proactively interacting with consumers using artificial marketing intelligent activities have the ability to not only attract their attention but also foster their loyalty and brand equity.

Hypothesis 6: Consumer-based brand equity is impacted by AI marketing activities.

2.6. Mediation of brand experience between AI marketing activities and consumer-based brand equity

This study is proposing that brand experience mediates the relationship between artificial intelligence marketing activities and consumer-based brand equity. In the context of e-commerce, AI marketing activities are viewed as stimuli that is expected to produce customer brand experience, thereby affecting consumer-based brand equity. Brand experience is the subjective internal response and behavioral reaction elicited by brand related stimuli, including design, identity, packaging, communication, interaction, personalization and the environment (Koay et al., 2020). It includes different dimensions like sensory, affective, cognitive, and behavioral. A brand experience is influenced by the overall product, purchasing, and consumption experiences, leading to brand satisfaction, equity and loyalty. In addition to physical interactions, consumer can also obtain brand specific information through AI. Effective marketing activities enhance consumer memory, knowledge, and positive emotions (Beig and Khan, 2018). Notably, Beig and Khan (2018) discovered that brands that shared content and interacted with artificial intelligence fostered positive brand experience that lead to increase the consumer based brand equity. On the basis of these findings, it is hypothesized that a positive brand experience is contingent on consumers favorable opinion of a brand's AI marketing effort.

According to the study conducted by Chen and Lin (2019), it was observed that the implementation of efficient AI marketing activities may result in sustained customer involvement and heightened inclination to make purchases decisions. Based on the aforementioned facts, it is postulated that individuals who encounter a favorable brand experience as a result of effective AI marketing activities are more likely to exhibit positive consumer-based brand equity.

Hypothesis 7: AI marketing activities do impact consumer-based brand equity through brand experience.

3. Methodology

The present study employs convenience sampling method and adopts a quantitative approach to collect and analyze data. The sample size determination was conducted using G*power software, adhering to the guidelines proposed by Faul et al. (2007) and Hair et al. (2019) with an effect size of 0.01 and a statistical power of 80%. A minimum R square value of 0.1 and a significant level alpha of 0.01 were

established. Based on the compute range of 147 to 179, it can be inferred that a sample size larger than 179 participants will be considered appropriate to compute result analysis and making conclusions that may be applied to a larger population.

The data collection process involves the utilization of an online questionnaire, employing a cross-sectional temporal horizon. The participant of this study where several employees and managers working in the Lebanese banking sector in marketing divisions. To assure the reliability and validity of the research instrument and its items, a sample of 25 experts in the banking sector participated in a pilot study. Prior to the actual data collection procedure, all required adjustments were made. The questionnaire was distributed to 400 working individuals in the banking sector precisely in marketing departments, and the response rate was 55%, with 220 questionnaire returned. To prevent research errors, 9 responses were eliminated, leaving 211 valid responses.

Respondents' answers were kept confidential and names remained anonymous. Collinearity was confirmed with a VIF of less than 3.3 to ensure model accuracy, thereby addressing method biased concerns (Kock, 2015). Participants were told about the objective of this study and their engagement was voluntary.

3.1. Measures

All the questionnaire items were evaluated using a 5-point Likert scale extending from 1, indicating "strongly disagree", to 5 indicating "strongly agree". The survey questions used in this research were derived from established research and validated measurement instruments. AI marketing activities, namely online interaction, online information, online accessibility and online customization, were each measured with four items adopted from Cheng and Jiang (2021). Brand experience was assessed using 4 items from Trivedi (2019). Consumer based brand equity was assessed using four items from Koay et al. (2020).

3.2. Analysis

To analyze the proposed research model depicted in **Figure 1**, the researcher used the partially square structure equation model (PLS-SEM). The presence of latent variables in the model influences the decision. Furthermore, the need for a normally distributed data set was not a concern, and statistically significance could be achieved with a reduced sample size.
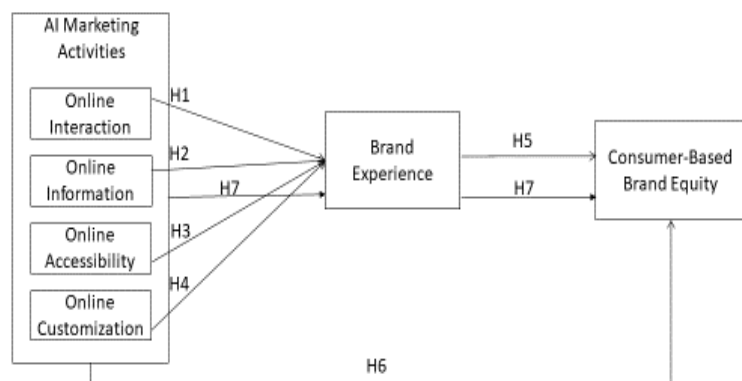

Figure 1. Conceptual framework.

3.3. Results

Table 1 displays the HTMT ratios, which are used to evaluate the discriminant validity which is the degree to which various constructs or variables in a study are distinct from one another, by estimating the correlation between the constructs. According to **Table 2**, the outer loadings of all study framework constructs are greater than 0.7. In accordance with established standards (Hair et al., 2019). The values $α$, Rho A, and CR exceed the threshold value of 0.7 while remaining until 0.9. In addition, the AVE is greater than 0.5, indicating adequate conversion validity. This is consistent with the HTMT value shown in **Table 1**, which are all less than 0.85 and indicate sufficient discriminate validity (Hair et al., 2019). Collectively, these results validate the model's applicability for subsequent phases of data analysis.

Table 1. Heterotrait-Monotrait ratios (HTMT).

	AIMA	BEXP	CBBE
AIMA	0.725		
BEXP	0.714	0.609	
CBBE	0.704	0.675	0.766

Table 2 shows the measurement model used in this research; each variable of the conceptual model was statistically processed to show the model fit and proceed with further analyses.

Table 2. Measurement model.

Constructs	Indicators	Outer loadings	Alpha	Rho *A*	Composite reliability	Average variance extracted
	INTER1	0.801				
	INTER2	0.745				
	INTER3	0.811				
	INTER4	0.769				
	INFOR1	0.911				
	INFOR2	0.756				
	INFOR3	0.788				
AI marketing activities	INFOR4	0.893	0.785	0.833	0.798	0.771
	ACCE1	0.851				
	ACCE2	0.734				
	ACCE3	0.765				
	ACCE4	0.867				
	CUST1	0.856				
	CUST2	0.888				
	CUST3	0.844				

Table 2. (*Continued*).

Constructs	Indicators	Outer loadings	Alpha	Rho *A*	Composite reliability	Average variance extracted
	CUST4	0.721				
	BEXP1	0.706				
Brand experience	BEXP2	0.833	0.855	0.856	0.860	0.753
	BEXP3	0.912				
	BEXP4	0.781				
	CBBE1	0.801				
Consumer-based brand equity	CBBE2	0.911	0.887	0.871	0.845	0.725
	CBBE3	0.849				
	CBBE4	0.762				

Table 3 shows the structural model which serves as a framework for hypotheses testing and provides valuable insights into the interrelationships among variables of the study.

Table 3. Structural model and hypothesis testing.

Effects	Relations	β	t-statistics	$F2$	Decision
Hypothesis 1	INTER → BEXP	−0.012	0.136*	0.834	Rejected
Hypothesis 2	INFO → BEXP	0.321	5.186***	0.125	Supported
Hypothesis 3	ACCE → BEXP	0.276	2.276**	0.091	Supported
Hypothesis 4	CUST → BEXP	0.335	4.926***	0.174	Supported
Hypothesis 5	BEXP → CBBE	0.355	2.571**	0.129	Supported
Hypothesis 6	AIMA → CBBE	0.361	4.555***	0.138	Supported
Mediation					
Hypothesis 7	AIMA → BEXP → CBBE	0.227	1.238**	0.165	Supported

SRMR: 0.024; NFI: 0.911
*0.05, **0.01, ***0.001

As shown in **Table 3**, the structural framework of this study is analyzed, and the outcomes are confirmed. In this regard, the value of NFI (0.911), SRMR (0.024), and VIF Are all less than 3, indicating the absence of multi-collinearity issues. Consequently, the results presented in **Table 3** demonstrate a statistical model with excellent fit. In addition, the R^2 and Q^2 values indicate robust result in terms of in-sample relevance and predictive validity signifying a well-fitting statistical model.

Moreover, according to the results shown in **Table 3**, the direct and significant positive influence of all the constraint of AI marketing activities namely information, accessibility, and customization (INFO, ACCE, CUST) on brand experience (BEXP) is proven given the consecutive β statistics ($β = 0.321, 0.276, 0.335$), indicating that hypothesis (H2, H3, H4) are supported. However, results show no significant relationship between interaction (INTER) and brand experience (BEXP) with ($β = -0.012$), indicating the rejection of hypothesis (H1). In addition, the correlation between brand experience (BEXP) and consumer-based brand equity (CBBE) is statistically significant with ($β = 0.355$), confirming that hypothesis (H5) is

supported. The relationship between AI marketing activities (AIMA) and Consumer based brand equity (CBBE) is also significant ($\beta = 0.361$), which support hypothesis (H6). Lastly, the mediating role of brand experience between AI marketing activities and consumer base brand equity is also found to have a statistical significance ($\beta = 0.227$), which supports hypothesis (H7) and indicates that brand experience partially mediates the relationship between AI marketing activities and consumer-based brand equity.

4. Discussion and conclusions

Above listed findings demonstrate the influence of AI marketing activities on brand experience and consumer-based brand equity and reinforce the significance of AI marketing activities in consumer brand interaction within the banking context (Cheng and Jiang, 2021).

First, results indicate that interaction had no effect on brand experience (H1) which contradict with previous research (Cheng and Jiang, 2021); customers feel the brand is helpful and trustworthy if their interaction with the brand is positive. AI-customer interaction differs from employee-customer interaction due to the limited social interaction banks provide online; this might also be due to the fact of the importance of human presence in the banking sector customers might ask for. From customers' point of view, interaction with AI agents is merely interaction with technology or a machine and this is devoid of social and emotional exchange (Huang, 2017), resulting in a negative consumer social experience. However, information (H2), accessibility (H3), and customization (H4) showed positive association with brand experience, which is consistent with pre-research (Chung et al., 2020). Within banking context, consumers prefer to receive up-to-date information about financial trends via AI tools. Since AI provides pertinent and organized information, customers have positive emotions because they can make informed and structured decisions (Ostmann and Dorobantu, 2021). As banks expand their digital offerings, AI accessibility might help in attracting new customers and retaining existing ones (Gaul, 2022). As AI marketing initiatives rely on mobile applications, they can provide clients with direct access to services at any time in any location. Moreover, customized service satisfies individual preferences and foster strong consumer brand relationships and consumer loyalty which can affect positively consumer-based brand equity (Koay et al., 2020). AI is able to deliver customized communication to online operating customers. Through direct chats, virtual assistant can provide customized consumer services. Consequently, AI customized services contribute to a positive brand experience. Third, results demonstrated that brand experience can impact consumer-based brand equity (H5) and this is compatible with previous studies (Chen and Lin, 2019). Consequently, a positive brand experience can strengthen consumer-based brand equity, because customers select a brand primarily on the basis of their experience. A pleasurable experience results in a vivid memory, which promotes consumer-based brand equity (Koay et al., 2020). Considering this, establishing a strong brand with positive equity is essential for banks, as positive brand equity indicates that consumers have a high level of brand awareness, brand loyalty, and perceived quality toward the brand,

which may result in actual purchases (Chen and Lin, 2019). In addition, they are more likely to purchase a product or pay a higher price for a brand with which they have a strong positive brand equity when presented with less expensive alternative brands. Furthermore, the results of this research indicate that brand experience partially mediates the relationship between AI marketing activities and consumer-based brand equity supporting (H7).

This study validates the overall performance of AI by demonstrating that it can effectively enhance consumer-based brand equity among bank customers. Thus, this research contributes to marketing and branding literature by providing a holistic framework that demonstrates AI branding relationships. This study's findings will be of interest to marketing scholars who can apply this framework to other disciplines. In addition, this study clarifies that AI activities are necessary and may provide a competitive advantage. This research confirms the significant influence of AI marketing activities and activities on brand experience and consumer-based brand equity. Rare are the studies analyzing AI brand experience and equity, therefore this study aimed to cover this gap by clarifying the role of AI in consumer brand interaction in the context of banking services. In addition, the confirmation of the partial mediation effect of brand experience between AI marketing activities and consumer-based brand equity sheds the light on how AI marketing activities can predict, plan and enhance consumer-based brand equity in the banking context via their direct effect on consumer-based brand equity and their indirect effect via brand experience. Finally, this study found that AI marketing activities had a significant positive effect on consumer-based brand equity, this result suggests that AI based marketing activities should not only be viewed as a way to enhance the consumer experience but also as a crucial brand building tool (Koay et al., 2020). Banks should priorities AI based brand building initiatives in order to increase the desirability of their brands and improve their long-term business performance.

5. Limitations, future research and managerial implications

The primary limitation of this study was the sample size, which consisted of 211 respondents. Future studies should consider a larger sample size for more robust results. This study focused on the Lebanese banking sector, and while its findings may be applicable to other industries, this assertion remains speculative until confirmed. Subsequent research could replicate and extend this study to other Lebanese industries employing artificial intelligence, such as the education sector. Additionally, as this research is quantitative, future studies may benefit from employing qualitative or mixed-method approaches for triangulation.

Practical managerial implications derived from this study highlight the importance of fostering positive human-brand interactions in banking through AI. It is crucial for banks to train AI systems to emulate helpful and trustworthy interactions, aligning with customer preferences. Moreover, utilizing AI to enhance information accessibility can empower customers to make informed decisions, thereby fostering positive emotions towards the brand. Investing in initiatives that prioritize creating memorable experiences is imperative, as these experiences significantly contribute to consumer-based brand equity, driving loyalty and

perceived quality. Recognizing AI as a potent brand-building tool, banks should allocate resources towards initiatives that enrich consumer experiences and enhance brand performance. By embracing AI in strategic decision-making, informed decisions can be made regarding AI implementation in marketing and branding efforts, ensuring alignment with consumer preferences and industry trends for sustainable success in the dynamic banking sector.

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