

ASSESSING THE EFFECT OF CHATBOTS ON MANAGING BRAND REPUTATION AMONG COMMERCIAL BANKS IN MALAYSIA

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Abstract

Commercial banks in Malaysia are facing increasing competition from non-bank financial institutions, such as mobile money operators and microfinance institutions. To maintain their market share and reputation, banks need to find ways to improve customer service and engagement. Traditional customer support channels may be insufficient to meet the evolving expectations of tech-savvy customers in a digitally driven era. The reliance on manual customer service processes, which can be timeconsuming and prone to human error, may lead to delayed response times, inconsistent messaging, and inadequate handling of customer inquiries and complaints. This can negatively impact brand reputation, as customers value prompt and accurate support experiences. The objective of this study was to assess the effect of chatbots on managing brand reputation among commercial banks in Malaysia. This research was based on the communication accommodation theory and the technology acceptance model to explain the relationship between the study variables. A descriptive survey design was adopted. The target population included the 26 commercial banks operating in Malaysia. A census was conducted on all the 26 commercial banks. The unit of observation was the brand managers and communication managers in each of the commercial banks. Primary data was collected through structured questionnaires. The study reveals a strong positive correlation between the effective integration of chatbots and the management of brand reputation in commercial banks in Malaysia. The regression analysis further confirms the significant impact of chatbots on brand reputation, emphasizing their role in shaping favorable customer perceptions. The study concludes that as banks prioritize the seamless implementation of chatbots, they can enhance customer service experiences, contributing to a positive brand image. To leverage this potential, recommendations include refining chatbot efficiency to address perceived response time, investing in ongoing training, and monitoring interactions to strike a balance between automation and personalized service, thereby ensuring sustained and improved brand reputation in the competitive financial sector.



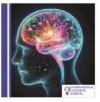
Keywords: Chatbots, managing brand reputation, commercial banks

1. Introduction

Managing brand reputation is crucial for commercial banks as it directly influences customer trust, loyalty, and overall business success. In an industry built on trust and credibility, a strong brand reputation distinguishes a bank from its competitors and attracts customers (Gonu & Agyapong, 2023). A positive reputation fosters customer confidence, leading to increased customer acquisition, retention, and advocacy. Moreover, a well-managed brand reputation helps banks navigate through crises and recover customer trust swiftly (Phi & Huong, 2023). It also contributes to regulatory compliance, investor confidence, and attracting top talent. Therefore, proactively managing brand reputation is essential for commercial banks to maintain a competitive edge, build long-term customer relationships, and sustain a thriving business (Alatyat et al., 2023).

Globally, the management of brand reputation among commercial banks is undergoing significant changes. Banks are increasingly recognizing the importance of actively monitoring and managing their brand reputation in the digital age (Damberg et al., 2022). The rise of social media and online platforms has amplified the impact of customer opinions and the speed at which information spreads. As a result, banks are investing in robust reputation management strategies that involve social media monitoring, proactive engagement with customers, and swift crisis response protocols. Additionally, there is a growing emphasis on transparency, ethical practices, and responsible banking, as customers are increasingly conscious of these factors when choosing their banking partners (Hafez, 2021). Ab Hamid et al. (2022) claim banks are also leveraging advanced technologies, such as artificial intelligence and natural language processing, to enhance customer interactions and deliver personalized experiences, thereby positively influencing their brand reputation.

Nicolescu and Tudorache (2022) noted one of the strategies being employed by organizations across the world to manage brand reputation is chatbots which are software applications that use artificial intelligence (AI) and natural language processing (NLP) technologies to interact with users through text-based or voice-based conversations. Chatbots are being used to manage brand reputation across various industries, including the banking sector. Chatbots provide a scalable and efficient way to engage with customers, address their concerns, and maintain consistent messaging, all of which contribute to brand reputation management. They can handle customer inquiries, provide real-time support, and offer personalized interactions, thereby enhancing customer satisfaction and loyalty (Haristiani, 2019). Chatbots also play a crucial role in crisis management, allowing banks to respond quickly and effectively to reputation-threatening situations. By leveraging chatbots' capabilities, banks can proactively manage their brand reputation, strengthen customer relationships, and ensure a positive brand image in the market (Cheng & Jiang, 2022).

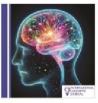


The use of chatbots in the banking industry to manage brand reputation is justified for several reasons. To start with, chatbots offer round-the-clock availability, allowing banks to provide prompt and consistent customer support, which enhances customer satisfaction and portrays the brand as reliable and responsive (Thomas, 2020). In addition, Hwang, and Chang (2021) chatbots can handle a high volume of inquiries simultaneously, ensuring that no customer is left unattended, which helps in maintaining a positive perception of the brand's efficiency. Further, chatbots can be programmed to deliver accurate and standardized information, ensuring consistent messaging, and reducing the risk of misinformation that could harm the brand's reputation. Chatbots can also gather valuable customer data and sentiment analysis, providing insights that enable banks to identify areas for improvement and proactively address customer concerns, thus strengthening the brand's reputation as customer-centric and trustworthy (Chung et al., 2020).

Chatbots are being widely used in developed economies, including among commercial banks. Developed economies have embraced digital transformation and the adoption of advanced technologies, leading to increased utilization of chatbot solutions (Eren, 2021). Kumar, Mokha and Pattnaik (2022) argue commercial banks have recognized the benefits of chatbots in enhancing customer experience, improving operational efficiency, and managing brand reputation. Many banks have integrated chatbots into their websites, mobile apps, and messaging platforms to provide personalized customer support, streamline account inquiries, offer financial advice, and assist with transactions (Rani et al., 2023). Shaik et al. (2023) noted these chatbots leverage AI and NLP capabilities to understand customer queries, provide accurate responses, and learn from interactions, ultimately contributing to a seamless and efficient banking experience.

China has been at the forefront of adopting advanced technologies in various industries, including banking. Chinese commercial banks have leveraged chatbot solutions to enhance customer service, improve operational efficiency, and streamline banking processes. Chatbots are integrated into banking apps, websites, and popular messaging platforms such as WeChat (Huang et al., 2022). Hwang and Kim (2021) discovered these chatbots provide services such as balance inquiries, fund transfers, bill payments, account management, and customer support. They are equipped with AI and natural language processing capabilities to understand and respond to customer queries in Mandarin Chinese. Chatbots have become a key component of digital banking strategies in China, providing customers with convenient and efficient banking services while supporting the brand reputation and competitiveness of commercial banks in the country (Yuan et al., 2023).

Chatbot adoption among commercial banks in the United Kingdom (UK) has seen significant growth in recent years. Many banks in the UK have implemented chatbot solutions to enhance customer engagement, streamline banking processes, and improve operational efficiency (Nguyen & Mogaji, 2022). Chatbots are commonly integrated into banking websites, mobile apps, and customer service platforms to provide personalized assistance, handle routine inquiries, and offer self-service



options (Buhalis & Cheng, 2020). Banks in the UK leverage chatbot technologies powered by AI and NLP to understand customer intent, provide relevant information, and even assist with complex transactions. The adoption of chatbots in the UK banking sector reflects a commitment to digital innovation and improving customer experiences while driving operational effectiveness (Wewege et al., 2020).

Malaysian banks have recognized the potential of chatbots in transforming customer experiences and driving operational efficiency (Ali et al., 2019). Chatbots are being integrated into banking platforms, mobile apps, and websites to provide round-the-clock customer support, offer personalized recommendations, and assist with common banking transactions (Ab Hamid et al., 2022). These chatbots are often equipped with AI and NLP capabilities to understand and respond to customer queries in multiple languages, including Malay, English, and Chinese. By leveraging chatbots, Malaysian banks can deliver convenient and accessible banking services, enhance customer engagement, and streamline processes, ultimately contributing to a more digitally driven and customer-centric banking landscape in the country (Saif et al., 2022).

Commercial banks in Malaysia are facing increasing competition from non-bank financial institutions, such as mobile money operators and microfinance institutions. To maintain their market share and reputation, banks need to find ways to improve customer service and engagement (Asisi et al., 2023). Traditional customer support channels may be insufficient to meet the evolving expectations of tech-savvy customers in a digitally driven era. The reliance on manual customer service processes, which can be time-consuming and prone to human error, may lead to delayed response times, inconsistent messaging, and inadequate handling of customer inquiries and complaints (Kavila & Kilika, 2023). This can negatively impact brand reputation, as customers value prompt and accurate support experiences. According to a recent study by the Central Bank of Malaysia (2020), 60% of Malaysians have a negative perception of commercial banks. The study also found that 40% of Malaysians have switched banks in the past year due to poor customer service.

Chatbots can be a valuable tool for improving customer service and engagement in the banking sector. Chatbots can be used to answer customer questions, resolve issues, and provide support 24/7. They can also be used to collect customer feedback and insights, which can be used to improve products and services. A study by Sari and Adinda (2023) found that 70% of customers who interacted with a chatbot were satisfied with the experience. The study also found that chatbots can reduce customer wait times by up to 80%. Despite the potential benefits of chatbots in enhancing brand reputation, their adoption and integration into brand reputation management strategies among Malaysian banks remain limited.

2. Literature Review

The Communication Accommodation Theory (CAT) was proposed by Howard Giles (1971), a renowned communication scholar. The theory postulates that individuals adjust their communication styles, including language, accent, and nonverbal



behavior, to either converge with or diverge from the behavior of others in social interactions. According to CAT, people seek to either enhance social solidarity by converging (adopting similar communication styles) or assert distinct social identity by diverging (highlighting differences in communication styles). The theory emphasizes that accommodation is influenced by factors such as social norms, context, perceived social status, and individual motivations (Jones et al., 2019).

The key tenets of the theory propose that individuals adjust their communication styles to either converge with or diverge from others in social interactions. This adjustment is influenced by social norms, context, perceived social status, and individual motivations (Hoffman & Zhang, 2023). Morgan et al. (2020) claim convergence involves adopting similar communication styles to enhance social solidarity, while divergence highlights differences in communication styles to assert distinct social identity. CAT emphasizes that accommodation can occur in various aspects of communication, such as language, accent, and nonverbal behavior. The theory provides insights into how people adapt their communication to establish and maintain social relationships, emphasizing the dynamic nature of interpersonal interactions (Watson, 2020).

The theory is relevant to the current study on the effect of chatbots in managing brand reputation. Understanding how individuals adjust their communication styles in response to chatbots can shed light on the interactions and perceptions between customers and chatbot interfaces. The theory can help explain how customers may converge or diverge their communication when interacting with chatbots, depending on factors such as their perceptions of the chatbot's effectiveness, ease of use, and personal preferences. By considering CAT, the study can gain insights into how chatbots influence customer-brand interactions, customer satisfaction, and ultimately the management of brand reputation in the banking sector.

The review of the literature on the effect of chatbots on managing brand reputation reveals several conceptual and contextual gaps that warrant further exploration. Conceptually, there is a need for a more comprehensive understanding of the mechanisms through which chatbots influence brand reputation. While existing studies have shown the potential benefits of chatbots in enhancing customer experiences and engagement, the specific processes and psychological factors involved in shaping brand reputation through chatbot interactions remain relatively unexplored. Understanding how chatbots influence customers' perceptions, attitudes, and emotions towards a brand can provide valuable insights for effective brand reputation management.

Contextually, most of the studies reviewed have focused on developed economies, such as the United States and European countries. There is a lack of research examining the effect of chatbots on brand reputation in emerging markets and different cultural contexts. Given the unique cultural, social, and economic factors in these regions, it is important to investigate how chatbots are perceived and their impact on brand reputation in diverse contexts. This will allow for a more comprehensive understanding



of the global implications and applicability of chatbots in brand reputation management.

3. Research Methodology

A descriptive survey design was adopted. The target population included the 26 commercial banks operating in Malaysia. A census was conducted on all the 26 commercial banks. The unit of observation was the brand managers and communication managers in each of the commercial banks. Primary data was collected through structured questionnaires. A Pilot study was done in determining the feasibility of conducting a complete study.

The data was reviewed for completeness and the variables with missing or incomplete data removed. Social Sciences Statistical Package (SPSS) Version 27 was used to analyze data. The data was analyzed for descriptive statistics as well as correlation analysis. Diagnostic tests such as normality, multicollinearity, and autocorrelation and correlation analysis were undertaken to test if the regression model was well specified as per the assumptions of linear regression. Simple regression analysis was carried out where F-test and t-test were carried to test the relationship between the study variables. The research hypothesis was tested using the regression analysis. The following empirical model was adopted.

Y= $β_0 + β_1X_{1+ε}$ Where:

Y is 'managing brand reputation' B_0 is the 'Constant' β_1 represent 'Regression coefficient of predictor variable X_1 is 'Chatbots' ϵ represents 'Error Term'

Both descriptive and inferential statistics results were presented in tables and figures which were accompanied by pertinent interpretations and discussions.

4. Research Findings and Discussions

The descriptive statistics for chatbots in commercial banks in Malaysia reveal that, on average, respondents perceive a positive integration of chatbots into the service system (Mean = 3.59, Std. Dev = 0.61). There is a high frequency of interaction with the bank's chatbots for queries and concerns (Mean = 3.77, Std. Dev = 0.79), indicating a substantial user engagement. Although the response time of chatbots is perceived slightly below expectations (Mean = 3.45, Std. Dev = 0.78), respondents generally find them efficient and capable of providing relevant information (Mean = 4.05, Std. Dev = 0.74). The preference for using chatbots for routine queries overreaching out to human agents is notable (Mean = 3.95, Std. Dev = 0.74), suggesting a positive user inclination towards automated assistance. Moreover, respondents believe that chatbots can handle a high volume of interactions without compromising quality (Mean = 3.80, Std. Dev = 0.76) and find it easy to navigate and communicate with the bank's chatbots (Mean =



4.09, Std. Dev = 0.73). The overall mean score indicates a generally favourable

perception of chatbots among respondents (Overall Mean Score = 3.64, Std. Dev = 0.49), suggesting that chatbots play a significant role in enhancing customer service and engagement for commercial banks in Malaysia.

			Std.
Statements	Ν	Mean	Dev
The chatbots in this bank are seamlessly integrated into the			
service system.	47	3.59	0.61
I frequently interact with the bank's chatbots for my queries and			
concerns.	47	3.77	0.79
The response time of the chatbots meets my expectations.	47	3.45	0.78
The chatbots are efficient and provide relevant information.	47	4.05	0.74
I prefer using chatbots for routine queries instead of reaching			
out to human agents.	47	3.95	0.74
The chatbots can handle a high volume of interactions without			
compromising quality.	47	3.80	0.76
I find it easy to navigate and communicate with the bank's			
chatbots.	47	4.09	0.73
Overall Mean Score	47	3.64	0.49
Source: Author (2024)			

The descriptive statistics for managing brand reputation in commercial banks in Malaysia indicate that respondents, on average, perceive the banks to be moderately effective in addressing customer queries and concerns promptly (Mean = 3.34, Std. Dev = 0.82). The customer service team's quick response to customer feedback is also viewed positively (Mean = 3.52, Std. Dev = 0.75). Respondents generally perceive the bank as being highly responsive to customer needs and inquiries (Mean = 3.55, Std. Dev = 0.69) and acknowledge that the bank consistently delivers on its promises and commitments (Mean = 3.41, Std. Dev = 0.81). Trust in the bank to provide accurate and reliable information is moderately high (Mean = 3.45, Std. Dev = 0.86), and the bank's products and services are seen as known for their reliability and quality (Mean = 3.36). Std. Dev = 0.80). The bank's demonstration of a strong focus on meeting customer needs and expectations is perceived positively, albeit at a slightly lower level (Mean = 3.25, Std. Dev = 0.64). The overall mean score suggests a moderate level of effectiveness in managing brand reputation (Overall Mean Score = 3.37, Std. Dev = 0.38), highlighting areas where improvements or targeted strategies may be beneficial for commercial banks in Malaysia.



Table 2: Descriptive Statistics for Managing Brand Reputation

<u>N</u> 47 47 47	Mean 3.34 3.52 3.55	Dev 0.82 0.75 0.69
47	3.52	0.75
47	3 55	0.60
47	3 5 5	0.60
	5.55	0.09
47	3.41	0.81
47	3.45	0.86
47	3.36	0.80
47	3.25	0.64
47	3.37	0.38
4	17	47 3.25

The correlational table (Table 3) reveals a strong positive correlation (Pearson Correlation = 0.700, p < 0.001) between the use of chatbots and the performance in managing brand reputation among commercial banks in Malaysia. This suggests that as the integration and effectiveness of chatbots in customer service increase, there is a corresponding improvement in the management of brand reputation. The statistically significant correlation underscores the potential impact of chatbot implementation on positively influencing how banks are perceived in terms of brand reputation.

Table 3: Correlation Matrix for Chatbots and Managing Brand Reputation

		Performance
Chatbots	Pearson Correlation	.700**
	Sig. (2-tailed)	0.000

Source: Author (2024)

The model fitness results in Table 4 indicate that the proposed model, which incorporates the use of chatbots to manage brand reputation among commercial banks in Malaysia, is a good fit. The R Square value of 0.490 suggests that approximately 49% of the variance in managing brand reputation can be explained by the integration and performance of chatbots.



-	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.700 ^a	.490	.484	.420680

Table 4: Model Fitness Results for Chatbots and Managing Brand Reputation

Source: Author (2024)

The ANOVA results in Table 5 demonstrate a significant relationship between the use of chatbots and managing brand reputation among commercial banks in Malaysia. The regression model accounts for a substantial proportion of the variance, as indicated by the high F-statistic of 82.668 (p < 0.001). Overall, the ANOVA results support the conclusion that there is a statistically significant impact of chatbots on managing brand reputation in this context.

Table 5: ANOVA Results for Chatbots and Managing Brand Reputation

Sum of Squares	DI	Mean Square	F	Sig.
14.630	1	14.630	82.668	0.000
15.220	45	.177		
29.849	46			
	14.630 15.220	14.630115.2204529.84946	14.630 1 14.630 15.220 45 .177 29.849 46	14.630114.63082.66815.22045.17729.84946

Source: Author (2024)

In Table 6, the regression coefficients indicate that the constant term is not statistically significant (B = 0.508, p = 0.132), suggesting that without the presence of chatbots, the model's predicted value is not significantly different from zero. The coefficient for chatbots (B = 0.826, p < 0.001) is both statistically significant and positive, with a standardized coefficient (Beta) of 0.700. This implies that the use of chatbots has a substantial and positive impact on managing brand reputation among commercial banks in Malaysia, supporting the earlier correlation and ANOVA results.

Table 6: Regression Coefficients fo	r Chatbots and Managing Brand Reputation
	Charlotte and Managing Drand Repatation

	Unstandardized Coefficients		Standardized Coefficients	Т	Sig.
	B	Std. Error	Beta		
(Constant)	.508	.334		1.521	.132
Chatbots	.826	.091	.700	9.092	.000

Source: Author (2024)

5. Conclusions

This study concludes that the integration and effective performance of chatbots in commercial banks in Malaysia have a significantly positive impact on managing brand reputation. The strong correlation, supported by ANOVA and regression analysis, underscores the importance of chatbots in enhancing customer service experiences, thereby contributing to a favorable perception of the banks. As technology-driven



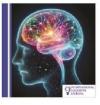
customer interactions become increasingly crucial, strategic implementation of chatbots emerges as a valuable tool for maintaining and improving brand reputation in the competitive financial landscape.

6. Recommendations

Based on the study findings, it is recommended that commercial banks in Malaysia prioritize the seamless integration and optimization of chatbots within their customer service systems to enhance brand reputation management. To address the perceived response time and ensure a positive user experience, banks should invest in refining the efficiency of their chatbots. Additionally, ongoing training and monitoring of chatbot interactions are advised to maintain a balance between automation and the personalized, reliable service that customers expect from financial institutions.

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