

A Framework for Examining the Influence of Artificial Intelligence, Marketing Automation, and Digital Marketing on Organizational Performance in the Mubadala Healthcare System, UAE

Fatema Abdullah Jumaa Karan Alqubaisi

Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia,
Malaysia

Anim Zalina Binti Azizan (Corresponding author)

Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia,
Malaysia

E-mail: animz@uthm.edu.my

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Abstract

This study developed and examined a framework for assessing the influence of artificial intelligence, marketing automation, and digital marketing on organizational performance in the Mubadala Healthcare System, UAE. The study was motivated by the increasing adoption of technology-driven marketing practices in healthcare and the need to understand how these practices contribute to performance outcomes such as patient engagement, service quality, brand positioning, operational efficiency, and organizational growth. A quantitative research approach was adopted, and primary data were collected through questionnaires distributed to employees of Mubadala Healthcare. The respondents included healthcare practitioners, administrative personnel, IT and digital transformation staff, marketing-related staff, and managerial decision-makers who were considered knowledgeable about or exposed to AI, marketing automation, digital marketing, and organizational performance processes. Purposive sampling was used to select participants from an accessible population of approximately 372 employees. The proposed framework was assessed through measurement and structural model analysis. The measurement model results confirmed acceptable reliability and convergent validity, as all Cronbach's alpha, composite reliability, and average

variance extracted values met the recommended thresholds. The structural model results showed that artificial intelligence, marketing automation, and digital marketing jointly explained 74.7% of the variance in organizational performance. The hypothesis testing results revealed that digital marketing had a positive and significant effect on organizational performance, while marketing automation also had a positive and significant effect. However, artificial intelligence showed a positive but insignificant direct effect on organizational performance. The study concludes that digital marketing and marketing automation are significant drivers of organizational performance in Mubadala Healthcare, while AI requires stronger strategic integration, infrastructure, and organizational readiness to produce measurable performance benefits.

Keywords: Artificial intelligence, marketing automation, digital marketing, organizational performance, Mubadala Healthcare, UAE

1. Introduction

Digital and technological advances have significantly transformed contemporary marketing practices. In recent years, scholars have increasingly examined how digital technologies influence organizations' ability to understand customer needs, monitor market changes, improve customer engagement, and deliver more personalized services. Digital transformation has become a major strategic concern because it changes how organizations create value, communicate with customers, and improve performance outcomes (Verhoef et al., 2021; Kotler, Kartajaya & Setiawan, 2021). Existing marketing literature has explored the role of various technologies in improving marketing performance; however, research at the intersection of artificial intelligence, marketing automation, digital marketing, and organizational performance remains relatively underdeveloped, particularly in service-based sectors such as healthcare (Dwivedi et al., 2021; Kumar, Ramachandran & Kumar, 2021).

Artificial intelligence has become an important tool in modern marketing because it enables organizations to collect, process, and analyse large volumes of customer data. AI-supported marketing systems can recommend or execute marketing actions based on available information about customers, competitors, and the organization itself, with the aim of achieving improved marketing outcomes (Petrescu et al., 2022). Through predictive analytics, customer segmentation, personalization, and automated decision-making, AI allows organizations to respond more quickly and effectively to customer needs. Previous studies have shown that AI can support marketing decision-making, customer insight development, customer relationship management, and personalized digital interaction (Davenport et al., 2020; Huang & Rust, 2021; Chintalapati & Pandey, 2022).

Marketing automation has also become a major component of digital transformation. It allows organizations to automate repetitive marketing tasks, personalize communication, manage customer relationships, and improve campaign efficiency. In healthcare settings, marketing automation can support patient engagement, appointment communication, service awareness, and customer relationship management. However, while marketing automation is widely discussed in business and marketing practice, its contribution to broader organizational performance outcomes such as service quality, patient satisfaction, operational efficiency, brand positioning, and organizational growth remains insufficiently examined. Previous studies suggest that marketing automation and CRM-related technologies can improve communication efficiency, relationship management, lead management, and organizational performance when effectively implemented (Järvinen & Taiminen, 2016; Buttle & Maklan, 2019; Chatterjee et al., 2021).

Digital marketing further strengthens the ability of organizations to communicate with customers, promote services, build brand visibility, and improve customer engagement. Digital marketing channels such as websites, social media platforms, email campaigns, and personalized online communication are increasingly used to retain existing customers and attract new ones. Digital marketing capabilities help organizations improve brand positioning, customer interaction, and marketing effectiveness across online platforms (Chaffey & Ellis-Chadwick, 2019; Herhausen et al., 2020; Melović et al., 2020). However, there remains

a gap between the rapid development of digital marketing practices in the business sector and the level of academic understanding of their actual contribution to organizational performance, particularly within healthcare institutions (Baabdullah et al., 2021; Verhoef et al., 2021).

Although AI, marketing automation, and digital marketing are transforming organizational communication and customer engagement strategies, their influence on organizational performance in healthcare remains underexplored. Much of the existing research focuses on technology adoption, consumer behaviour, customer engagement, or specific marketing functions in isolation. As a result, there is limited understanding of how these three technological marketing practices collectively influence broader organizational outcomes, including operational efficiency, patient satisfaction, service quality, brand positioning, cost-effectiveness, and strategic decision-making. This concern is consistent with studies emphasizing the need for more integrated research on AI, digital marketing, and technology-enabled organizational performance (Dwivedi et al., 2021; Kumar, Ramachandran & Kumar, 2021; Verma et al., 2021).

This gap is particularly evident in the context of the Mubadala Healthcare System in the United Arab Emirates. While Mubadala Healthcare operates in a highly competitive and technology-driven healthcare environment, there is limited empirical research examining how artificial intelligence, marketing automation, and digital marketing contribute to its organizational performance. Existing studies have not sufficiently addressed how these technologies influence healthcare-related performance indicators such as patient engagement, service delivery, brand reputation, internal workflow improvement, and organizational growth. In the UAE healthcare context, digital marketing has been recognized as an important tool for healthcare providers, but further research is needed to understand its broader organizational performance implications (Khan & Khan, 2021).

Furthermore, studies on AI in marketing have often emphasized its potential benefits without providing sufficient empirical evidence of its actual organizational value. Some scholars argue that AI has strong potential to improve marketing intelligence, customer insights, personalization, and strategic decision-making, but its practical application may vary depending on organizational readiness, managerial capability, and technological infrastructure (Paschen, Kietzmann & Kietzmann, 2019; Davenport et al., 2020; Stone et al., 2020). Therefore, the central issue is not only whether AI, marketing automation, and digital marketing are being adopted, but how they can be integrated into a clear framework that explains their influence on organizational performance.

In addition, previous studies have examined AI-powered marketing, digital marketing, and automation as separate areas of inquiry. While these studies provide useful insights into customer segmentation, personalization, campaign automation, and digital communication, the literature remains fragmented and lacks a comprehensive framework that integrates these variables within the healthcare sector. Prior research has called for more integrated frameworks that explain how AI and new-age technologies influence marketing processes and organizational outcomes (Davenport et al., 2020; Huang & Rust, 2021; Kumar,

Ramachandran & Kumar, 2021; Petrescu et al., 2022; Rajagopal et al., 2022).

Therefore, this study seeks to address this research gap by developing a framework for examining the influence of artificial intelligence, marketing automation, and digital marketing on organizational performance in the Mubadala Healthcare System, UAE. By focusing on these three key technology-driven marketing variables, the study aims to provide a clearer understanding of how digital transformation in marketing can contribute to improved organizational outcomes in the healthcare sector.

2. Formulation of Conceptual Framework

The conceptual framework for this study was formulated to explain the relationship between artificial intelligence, marketing automation, digital marketing, and organizational performance in the Mubadala Healthcare System, UAE. As presented in Figure 1, artificial intelligence, marketing automation, and digital marketing are treated as independent variables, while organizational performance is treated as the dependent variable. The framework proposes that technology-driven marketing practices can enhance organizational performance by improving operational efficiency, customer and patient engagement, service quality, decision-making, brand visibility, and overall competitiveness.

Artificial intelligence is included in the framework because of its growing role in data-driven marketing and organizational decision-making. AI enables organizations to process large volumes of data, identify customer patterns, predict service needs, automate routine processes, and support strategic decisions. In healthcare organizations, these capabilities can assist in improving patient communication, service personalization, and operational responsiveness. Previous studies indicate that AI can transform marketing practices through personalization, predictive analytics, customer relationship management, and strategic decision-making (Davenport et al., 2020; Huang & Rust, 2021; Kumar, Ramachandran & Kumar, 2021).

Marketing automation is also incorporated into the framework because it supports the efficient management of marketing activities and customer communication. Through automated systems, organizations can personalize messages, manage leads, improve response time, and maintain continuous engagement with customers or patients. In the healthcare context, marketing automation can support appointment reminders, patient follow-ups, service promotion, and feedback collection. Prior studies have shown that marketing automation and customer relationship management technologies improve communication efficiency, customer targeting, relationship management, and organizational outcomes (Järvinen & Taiminen, 2016; Buttle & Maklan, 2019; Chatterjee et al., 2021).

Digital marketing forms the third independent variable in the framework because it provides organizations with interactive channels for communicating with customers, promoting services, and strengthening brand visibility. Digital marketing platforms such as websites, social media, email campaigns, and online service portals allow healthcare organizations to engage patients, provide service information, collect feedback, and build long-term relationships. Digital marketing capabilities have been associated with improved customer engagement, service promotion, competitive positioning, and business transformation

(Chaffey & Ellis-Chadwick, 2019; Herhausen et al., 2020; Verhoef et al., 2021).

Organizational performance is the dependent variable in the framework because the study seeks to determine how artificial intelligence, marketing automation, and digital marketing contribute to improved outcomes in Mubadala Healthcare. In this study, organizational performance refers to improvements in areas such as service efficiency, patient engagement, service quality, brand positioning, operational effectiveness, and organizational growth. Therefore, the proposed framework provides a structured basis for examining how technology-driven marketing practices directly influence organizational performance in the Mubadala Healthcare System, UAE.

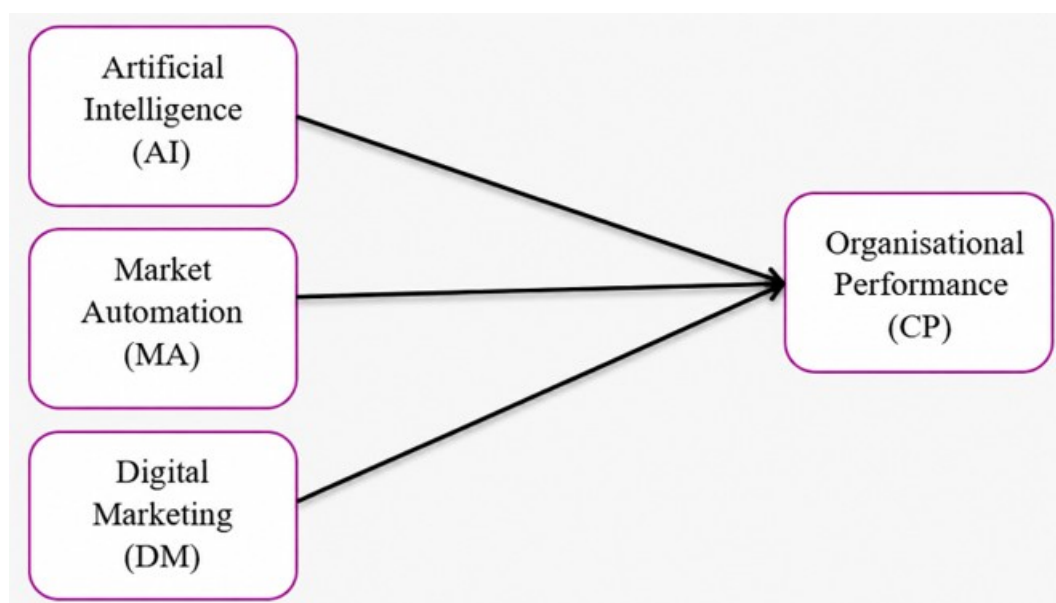


Figure 1. Conceptual framework

2.1 Artificial Intelligence and Organizational Performance

Artificial intelligence can be considered a strategic organizational capability because it enables firms to improve decision-making, automate operations, understand customer behaviour, and develop innovative products and services. AI-based technologies allow organizations to process large volumes of data and generate insights that can improve marketing actions, customer engagement, and operational decisions (Davenport et al., 2020; Paschen, Kietzmann, & Kietzmann, 2019; Stone et al., 2020).

Previous studies have shown that AI capability can positively influence organizational performance. Wamba-Taguimdje et al. (2020) found that AI-based transformation projects can improve firm performance by enhancing efficiency, innovation, and customer satisfaction. Mikalef and Gupta (2021) also argued that AI capability can contribute to organizational creativity and firm performance when supported by appropriate resources and organizational conditions. Similarly, Chatterjee et al. (2021) found that AI-based customer relationship management can improve organizational performance and competitive advantage.

However, AI alone may not be sufficient to guarantee improved performance. Organizations must combine AI resources with appropriate strategies, leadership, employee skills, data quality, and complementary technological capabilities in order to achieve stronger performance outcomes (Mikalef & Gupta, 2021; Wamba-Taguimdje et al., 2020). Based on this argument, the following hypothesis is proposed:

H1: Artificial intelligence positively impacts Organizational Performance.

2.2 Marketing Automation and Organizational Performance

Marketing automation refers to the use of digital technologies to automate, manage, and improve marketing activities. It enables organizations to reach new customers, communicate with existing customers, personalize marketing messages, and respond more effectively to customer needs. By automating repetitive marketing processes, organizations can improve efficiency, reduce costs, and enhance customer relationship management.

Marketing automation can contribute to organizational performance by increasing brand awareness, improving sales-related activities, strengthening customer relationships, and supporting market expansion. Järvinen and Taiminen (2016) emphasized that marketing automation can support content marketing, lead management, and improved marketing efficiency. Buttle and Maklan (2019) also highlighted the importance of customer relationship management systems in improving customer interaction, relationship quality, and organizational outcomes.

The effectiveness of marketing automation is further strengthened by technologies such as artificial intelligence, machine learning, big data, and customer analytics. These technologies allow organizations to collect and analyse customer information, predict customer behavior, and deliver personalized marketing experiences (Davenport et al., 2020; Overgoor et al., 2019; Paschen, Kietzmann & Kietzmann, 2019). As a result, marketing automation can improve customer engagement, service efficiency, marketing performance, and competitive advantage. Based on this discussion, the following hypothesis is proposed:

H2: Marketing automation positively impacts Organizational Performance.

2.3 Digital Marketing and Organizational Performance

Digital marketing involves the use of online platforms and digital channels to promote products and services, communicate with customers, and build long-term customer relationships. It allows organizations to interact with customers more efficiently, improve brand visibility, gather customer feedback, and support real-time communication. As a result, digital marketing has become an important tool for improving organizational performance.

Previous studies suggest that organizations that develop strong digital marketing capabilities can improve customer engagement, brand positioning, communication effectiveness, and business competitiveness. Chaffey and Ellis-Chadwick (2019) explained that digital marketing supports customer communication, targeting, engagement, and relationship development. Herhausen et al. (2020) further argued that digital marketing capabilities are important for closing the gap between digital tools and marketing performance. Similarly,

Verhoef et al. (2021) emphasized that digital transformation can reshape organizational processes, customer interaction, and business performance.

Digital marketing can also improve organizational performance by increasing customer engagement, customer satisfaction, brand awareness, and service visibility. Melović et al. (2020) found that digital transformation and digital marketing can support brand promotion, positioning, and electronic business performance. In the healthcare context, digital marketing is particularly useful for improving patient communication, service awareness, trust-building, and stakeholder engagement. Therefore, the following hypothesis is proposed:

H3: Digital marketing positively impacts Organizational Performance.

3. Modelling of the Framework

This section presents the modelling of the proposed framework for examining the influence of artificial intelligence, marketing automation, and digital marketing on organizational performance in the Mubadala Healthcare System, UAE. The framework was assessed using quantitative data collected from selected employees of Mubadala Healthcare. The analysis focused on two main stages: the measurement model assessment and the structural model assessment. The measurement model was used to evaluate the reliability and validity of the constructs, while the structural model was used to examine the explanatory power of the model and test the proposed hypotheses.

The key constructs in the model include Artificial Intelligence (AI), Marketing Automation (MA), Digital Marketing (DM), and Organizational Performance (CP). Artificial intelligence, marketing automation, and digital marketing were treated as independent variables, while Organizational Performance was treated as the dependent variable. The purpose of the modelling process was to determine whether the three independent variables significantly influence organizational performance within the healthcare context.

3.1 Data for the Modelling

The respondents for this study comprise employees of the Mubadala Healthcare System in the UAE who are directly or indirectly involved in, knowledgeable about, or affected by artificial intelligence, marketing automation, and digital marketing practices. These include healthcare practitioners, administrative personnel, IT and digital transformation staff, marketing-related staff, and managerial decision-makers within the organization. These groups were considered appropriate because they are expected to possess relevant knowledge and experience concerning the application of AI and digital marketing within Mubadala Healthcare.

The accessible population for the study consists of approximately 372 employees from selected departments and facilities within Mubadala Healthcare. Since the study requires information from individuals with specific knowledge and experience related to the research objectives, purposive sampling was adopted. Purposive sampling allows the researcher to deliberately select participants who are most capable of providing relevant and meaningful information for the study (Etikan et al., 2016). Therefore, respondents were purposively

selected from employees who have direct or indirect exposure to AI, marketing automation, digital marketing activities, or organizational performance processes within Mubadala Healthcare.

3.2 Measurement Model Assessment

The measurement model assessment was conducted to evaluate the reliability and validity of the constructs used in the study. This stage is important because it determines whether the measurement items are internally consistent, valid, and suitable for further structural model analysis. In accordance with PLS-SEM reporting guidelines, the assessment focused on internal consistency reliability, convergent validity, and discriminant validity. Internal consistency was assessed using Cronbach's alpha and composite reliability, while convergent validity was assessed using average variance extracted (AVE) (Benitez et al., 2020). These indicators are commonly used in quantitative survey-based research to confirm the quality of measurement instruments before testing the hypothesized structural relationships (Gaur et al., 2020).

3.2.1 Construct Reliability and Validity

Cronbach's alpha and composite reliability were used to assess the internal consistency reliability of the constructs. As shown in Table 1, all constructs recorded Cronbach's alpha values above the recommended threshold of 0.70. The values ranged from 0.812 to 0.912, indicating that the items used to measure each construct have acceptable reliability. Similarly, the composite reliability values ranged from 0.826 to 0.914, exceeding the recommended minimum value of 0.70. This confirms that the constructs demonstrate satisfactory internal consistency and are suitable for further PLS-SEM analysis (Benitez et al., 2020).

Table 1. Construct reliability and validity results

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
AI	0.848	0.872	0.674
CP	0.820	0.826	0.627
DM	0.912	0.914	0.695
MA	0.812	0.833	0.612

Table 1 indicates that all constructs achieved acceptable levels of reliability and convergent validity. The Cronbach's alpha values ranged from 0.812 to 0.912, which are above the recommended threshold of 0.70. This shows that the measurement items for artificial intelligence, organizational performance, digital marketing, and marketing automation have good internal consistency.

Similarly, the composite reliability values ranged from 0.826 to 0.914, also exceeding the recommended minimum value of 0.70. This confirms that the constructs are reliable and suitable for further analysis. In addition, the average variance extracted values ranged from

0.612 to 0.695, which are above the recommended threshold of 0.50. This indicates that each construct explains more than half of the variance in its measurement items.

Therefore, the results confirm that the measurement model has acceptable internal consistency reliability and convergent validity. This means that the constructs used in the study are adequately measured and can be retained for the structural model assessment.

3.2.2 Discriminant Validity

Discriminant validity was assessed using the Fornell-Larcker criterion analysis. Discriminant validity is important because it confirms whether each construct is empirically distinct from the other constructs in the model. Under the Fornell-Larcker criterion, the square root of the AVE for each construct should be greater than its correlations with other constructs. This indicates that a construct shares more variance with its own indicators than with other constructs in the model (Benitez et al., 2020).

Table 2. Fornell-Larcker criterion

Construct	AI	CP	DM	MA
AI	0.821			
CP	0.726	0.792		
DM	0.734	0.740	0.834	
MA	0.715	0.709	0.716	0.782

Table 2 indicates that the measurement model satisfies the Fornell-Larcker criterion for discriminant validity. The diagonal values represent the square root of the AVE for each construct, while the off-diagonal values represent the correlations between constructs. According to the Fornell-Larcker criterion, discriminant validity is achieved when the diagonal value of each construct is higher than its correlations with other constructs.

The results show that the diagonal value for artificial intelligence is 0.821, which is higher than its correlations with organizational performance, digital marketing, and marketing automation. Similarly, the diagonal value for organizational performance is 0.792, which is higher than its correlations with the other constructs. Digital marketing also recorded a diagonal value of 0.834, which is higher than its correlations with artificial intelligence, organizational performance, and marketing automation. In addition, marketing automation recorded a diagonal value of 0.782, which is higher than its correlations with the other constructs.

Therefore, the results confirm that each construct is empirically distinct from the others. This means that artificial intelligence, organizational performance, digital marketing, and marketing automation measure different concepts within the proposed framework. Hence, the measurement model demonstrates acceptable discriminant validity and is suitable for further structural model assessment.

3.3 Structural Model Assessment

After assessing the measurement model, the structural model was examined to evaluate the explanatory power of the proposed framework and to test the hypothesized relationships. In PLS-SEM, structural model assessment is conducted after confirming the adequacy of the measurement model, as this stage determines whether the proposed relationships among the constructs are statistically meaningful and theoretically relevant (Benitez et al., 2020). The structural model assessment focused on the coefficient of determination, effect size, and hypothesis testing results.

The coefficient of determination, represented by R-square, was used to determine the extent to which artificial intelligence, digital marketing, and marketing automation explain variations in organizational performance. R-square is commonly used in PLS-SEM to evaluate the predictive and explanatory power of the model by showing the proportion of variance in the endogenous construct explained by the exogenous constructs (Benitez et al., 2020). As shown in Table 3, the R-square value for organizational performance is 0.747. This means that artificial intelligence, digital marketing, and marketing automation jointly explain 74.7% of the variance in organizational performance.

This result indicates that the model has strong explanatory power, as a large proportion of organizational performance can be explained by the three independent variables. The finding also supports the suitability of the proposed framework for examining technology-driven marketing practices and their influence on organizational performance. In line with quantitative survey-based research, reporting the R-square value improves the transparency of the model evaluation and helps clarify the predictive relevance of the tested framework (Gaur et al., 2020; Benitez et al., 2020).

Table 3. Coefficient of determination

Endogenous Construct	R ²
CP	0.747

The effect size, represented by f-square, was used to determine the individual contribution of each independent variable to organizational performance. In PLS-SEM, effect size assessment helps explain the practical contribution of each exogenous construct to the endogenous construct beyond statistical significance (Benitez et al., 2020).

Table 4. Effect size

Relationship	f ²
AI -> CP	0.001
DM -> CP	0.186
MA -> CP	0.163

As shown in Table 4, artificial intelligence has an f-square value of 0.001, indicating a very weak effect on organizational performance. Digital marketing has an f-square value of 0.186, indicating a moderate effect. Marketing automation has an f-square value of 0.163, also indicating a moderate effect. These findings suggest that digital marketing and marketing automation make more meaningful contributions to organizational performance than artificial intelligence in this model.

The hypothesis testing results are presented in Table 5. Hypothesis testing in PLS-SEM is used to determine whether the proposed relationships among constructs are statistically significant and theoretically meaningful (Benitez et al., 2020). The results show that artificial intelligence has a positive but insignificant effect on organizational performance, with a beta value of 0.026, t-statistic of 0.432, and p-value of 0.665. Since the p-value is greater than 0.05, H1 is not supported. This implies that artificial intelligence does not have a statistically significant direct impact on organizational performance in this study. Although previous studies suggest that AI can improve firm performance through better decision-making, operational efficiency, innovation, and customer insight, its impact often depends on the organization's readiness, infrastructure, data quality, and strategic alignment (Wamba-Taguimdje et al., 2020; Mikalef & Gupta, 2021; Davenport et al., 2020).

Digital marketing has a positive and significant effect on organizational performance, with a beta value of 0.519, t-statistic of 6.822, and p-value of 0.000. Since the p-value is below 0.05, H2 is supported. This indicates that digital marketing significantly improves organizational performance within the Mubadala Healthcare System. This finding is consistent with previous studies which argue that digital marketing capabilities enhance customer engagement, brand positioning, communication effectiveness, and overall organizational competitiveness (Herhausen et al., 2020; Verhoef et al., 2021; Chaffey & Ellis-Chadwick, 2019; Melović et al., 2020).

Marketing automation also has a positive and significant effect on organizational performance, with a beta value of 0.361, t-statistic of 5.352, and p-value of 0.000. Since the p-value is below 0.05, H3 is supported. This suggests that marketing automation contributes significantly to organizational performance by improving marketing efficiency, customer engagement, communication processes, and organizational responsiveness. This result supports earlier studies which show that marketing automation and CRM-related technologies help organizations personalize communication, manage customer relationships, improve lead generation, and strengthen marketing performance (Järvinen & Taiminen, 2016; Buttle & Maklan, 2019; Chatterjee et al., 2021).

Table 5. Hypothesis testing results

Hypothesis	Path	Beta	T Statistics	P Values	Decision
H1	AI -> CP	0.026	0.432	0.665	Not Supported
H2	DM -> CP	0.519	6.822	0.000	Supported
H3	MA -> CP	0.361	5.352	0.000	Supported

Overall, the structural model results indicate that digital marketing and marketing automation are significant predictors of organizational performance in the Mubadala Healthcare System, UAE. Digital marketing has the strongest influence on organizational performance, followed by marketing automation. However, artificial intelligence does not show a significant direct effect on organizational performance. This may suggest that AI is still at an early stage of implementation or that its influence on performance may occur indirectly through other organizational capabilities, such as digital marketing effectiveness, employee readiness, technology infrastructure, data-driven decision-making, or strategic alignment. This interpretation is consistent with prior research suggesting that AI capabilities alone may not automatically improve performance unless they are supported by complementary organizational resources and effective implementation strategies (Mikalef & Gupta, 2021; Wamba-Taguimdje et al., 2020; Rajagopal et al., 2022).

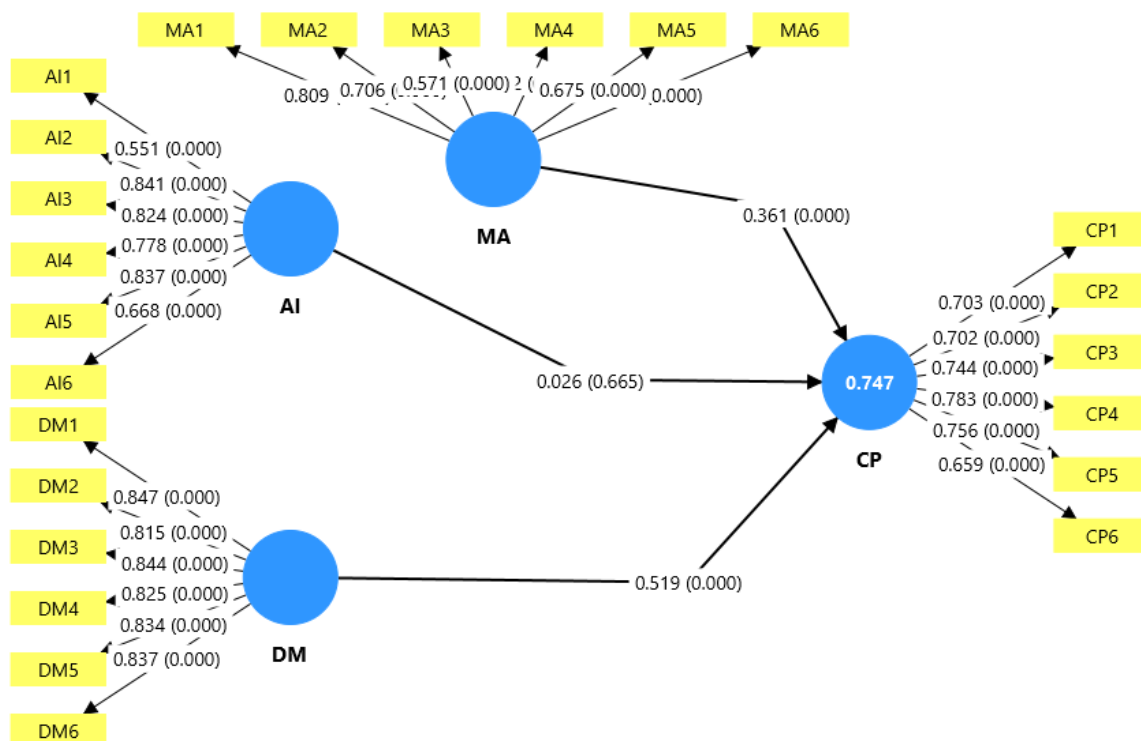


Figure 2. PLS-SEM model of the framework

4. Discussion of the Findings

This section discusses the findings of the study in relation to the research aim, proposed framework, and hypotheses. The study examined the influence of artificial intelligence, marketing automation, and digital marketing on organizational performance in the Mubadala Healthcare System, UAE. Earlier sections established that although AI, marketing automation, and digital marketing are increasingly transforming communication, service delivery, and customer engagement, their actual contribution to organizational performance in healthcare remains insufficiently examined. This concern is consistent with previous studies which argue that digital transformation and AI-driven marketing require further investigation, particularly in relation to organizational outcomes and sector-specific applications (Dwivedi et al., 2021; Kumar, Ramachandran & Kumar, 2021; Verhoef et al., 2021). Therefore, the findings of this study provide useful evidence on how these technology-driven marketing practices influence organizational performance within a healthcare context.

The results of the structural model show that artificial intelligence, digital marketing, and marketing automation jointly explain 74.7% of the variance in organizational performance. This indicates that the proposed framework has strong explanatory power. In PLS-SEM, the R-square value is used to assess the explanatory power of the model and determine how much variance in the endogenous construct is explained by the predictor variables (Benitez et al., 2020). The high R-square value suggests that AI, digital marketing, and marketing automation are important predictors of organizational performance within Mubadala Healthcare. This finding supports the view that digital transformation and technology-enabled marketing capabilities can play a major role in strengthening organizational competitiveness, customer engagement, and operational effectiveness (Herhausen et al., 2020; Verhoef et al., 2021; Melović et al., 2020).

The findings reveal that artificial intelligence has a positive but insignificant effect on organizational performance. The path coefficient for artificial intelligence was positive, but the relationship was not statistically significant. Therefore, H1 was not supported. This result suggests that although AI may have potential value in improving decision-making, personalization, data analysis, automation, and customer insights, its direct contribution to organizational performance in Mubadala Healthcare may still be limited. This finding is important because previous studies have noted that while AI has strong potential to transform marketing, its practical application may be uneven and dependent on organizational readiness, data quality, strategy, and managerial capability (Davenport et al., 2020; Paschen, Kietzmann & Kietzmann, 2019; Stone et al., 2020).

One possible explanation for the insignificant effect of artificial intelligence is that AI adoption within healthcare marketing may still be at an early stage. AI may require adequate technological infrastructure, employee readiness, managerial support, data quality, and strategic alignment before it can produce measurable improvements in organizational performance. This supports the argument that AI alone may not automatically improve performance unless it is integrated with other organizational capabilities and implemented through a clear strategy (Mikalef & Gupta, 2021; Wamba-Taguimdje et al., 2020). In the

context of Mubadala Healthcare, AI may contribute more effectively when combined with digital marketing systems, marketing automation tools, staff training, and performance-oriented implementation strategies. This is consistent with research showing that the business value of AI depends not only on adoption, but also on how well AI capabilities are embedded into organizational processes and decision-making systems (Wamba-Taguimdje et al., 2020; Rajagopal et al., 2022).

In contrast, digital marketing was found to have a positive and significant effect on organizational performance. The result shows that digital marketing has the strongest influence among the three independent variables, with a beta value of 0.519, t-statistic of 6.822, and p-value of 0.000. Therefore, H2 was supported. This finding confirms that digital marketing plays a major role in improving organizational performance within Mubadala Healthcare. It suggests that digital channels such as websites, social media platforms, email communication, personalized online campaigns, and digital service promotion can enhance patient engagement, brand visibility, customer relationships, and service awareness. This finding aligns with Chaffey and Ellis-Chadwick (2019), who explain that digital marketing improves customer communication, engagement, targeting, and relationship management.

This result is also consistent with studies showing that digital marketing capabilities can improve brand promotion, positioning, customer interaction, and overall business performance (Herhausen et al., 2020; Melović et al., 2020). In healthcare, digital marketing can support patient education, appointment awareness, service promotion, feedback collection, and trust-building. Therefore, the significant effect of digital marketing indicates that Mubadala Healthcare can improve its organizational performance by strengthening its digital communication strategies and ensuring that patients and stakeholders are effectively engaged through online platforms. This is supported by Khan and Khan (2021), who emphasized the importance of digital marketing actions among healthcare providers in Dubai.

Marketing automation was also found to have a positive and significant effect on organizational performance. The result shows a beta value of 0.361, t-statistic of 5.352, and p-value of 0.000. Therefore, H3 was supported. This finding indicates that marketing automation contributes meaningfully to organizational performance in Mubadala Healthcare. Marketing automation can help the organization streamline repetitive marketing activities, improve customer relationship management, personalize communication, enhance response time, and support more efficient service delivery. This finding is consistent with Järvinen and Taiminen (2016), who found that marketing automation supports content marketing, lead management, and improved marketing efficiency. It also aligns with Buttle and Maklan (2019), who emphasized the role of customer relationship management technologies in improving customer relationships and organizational outcomes.

The significant result of marketing automation suggests that automated marketing systems can improve performance by allowing healthcare organizations to communicate more effectively with patients, manage campaigns efficiently, and use data-driven insights to support service improvement. This is further supported by Chatterjee et al. (2021), who found that AI-based customer relationship management can enhance organizational performance

and competitive advantage. Similarly, Jiang et al. (2022) showed that AI-powered chatbot communication can improve customer satisfaction, engagement, and customer behavior, which are relevant to healthcare service communication and patient relationship management.

The effect size results further support these findings. Artificial intelligence recorded a very weak effect size, while digital marketing and marketing automation recorded stronger effects. In PLS-SEM, the f-square value helps determine the individual contribution of each predictor variable to the endogenous construct (Benitez et al., 2020). This means that digital marketing and marketing automation are more meaningful contributors to organizational performance in the current framework. The finding suggests that while AI may be important as a supporting technology, the more visible performance benefits in Mubadala Healthcare are currently being achieved through digital marketing practices and marketing automation processes.

Overall, the findings show that the main performance drivers in the framework are digital marketing and marketing automation. These results confirm that technology-driven marketing practices are important for improving organizational performance in the healthcare sector. However, the insignificant effect of artificial intelligence shows that AI may not yet be fully developed, effectively implemented, or strategically integrated within Mubadala Healthcare's marketing and performance systems. This finding adds value to the literature by showing that AI should not be viewed as an automatic solution to organizational performance challenges. Instead, its value depends on how well it is supported by organizational readiness, digital infrastructure, employee skills, data management, and strategic implementation (Mikalef & Gupta, 2021; Wamba-Taguimdje et al., 2020; Shaw et al., 2019).

The findings also show that the influence of AI, marketing automation, and digital marketing on organizational performance cannot be assumed to be equal. Digital marketing and marketing automation demonstrated clear and significant effects, while artificial intelligence requires further development and integration before its direct effect can be fully realized. This supports the need for a framework-based understanding of technology-driven marketing in healthcare, particularly in the UAE context. Prior studies have similarly argued that digital transformation should be understood as a strategic and organizational process rather than merely the adoption of advanced technologies (Verhoef et al., 2021; Bharadwaj et al., 2013).

The findings have practical implications for Mubadala Healthcare. First, the organization should continue to strengthen its digital marketing activities because they have the strongest influence on organizational performance. Second, marketing automation should be expanded to improve communication efficiency, patient engagement, and service delivery. Third, AI implementation should be supported by proper training, technological infrastructure, leadership commitment, data governance, and strategic alignment. By doing so, AI may become more effective in contributing to organizational performance in the future.

In summary, the study clarifies how artificial intelligence, marketing automation, and digital marketing influence organizational performance in Mubadala Healthcare. The results show that digital marketing and marketing automation significantly improve organizational performance, while artificial intelligence does not have a significant direct effect. Therefore, the study contributes to the development of a framework that explains the role of

technology-driven marketing practices in enhancing organizational performance within the healthcare sector in the UAE.

5. Applicability of the Framework to Mubadala Healthcare

The proposed framework is applicable to Mubadala Healthcare because it provides a structured approach for understanding how artificial intelligence, marketing automation, and digital marketing influence organizational performance within a healthcare service environment. As healthcare organizations increasingly rely on digital platforms, automated communication systems, and data-driven technologies, the framework helps explain how these tools can contribute to improved patient engagement, service efficiency, brand visibility, and overall organizational effectiveness.

In the context of Mubadala Healthcare, digital marketing can be applied to strengthen communication with patients and stakeholders through websites, social media platforms, email campaigns, online service information, and personalized digital content. These channels can improve patient awareness of available services, enhance trust, support health education, and increase patient interaction with the organization. Since the findings showed that digital marketing has the strongest influence on organizational performance, Mubadala Healthcare can use the framework to prioritize digital marketing strategies that improve service visibility, patient satisfaction, and competitive positioning.

Marketing automation is also highly applicable to Mubadala Healthcare because it can support more efficient and personalized communication with patients. Automated systems can be used for appointment reminders, follow-up messages, patient feedback collection, health campaign communication, and targeted service promotion. By reducing repetitive manual tasks and improving communication speed, marketing automation can enhance operational efficiency and patient relationship management. The significant effect of marketing automation in the framework indicates that Mubadala Healthcare can benefit from expanding automated marketing processes to support service delivery and organizational performance.

Artificial intelligence is applicable as a supporting capability within the framework, although the findings showed that its direct effect on organizational performance was not significant. This suggests that AI may not yet be fully integrated into Mubadala Healthcare's marketing and performance systems. However, AI can still support future improvement by enabling predictive analytics, patient segmentation, chatbot communication, service demand forecasting, and data-driven decision-making. For AI to become more effective, Mubadala Healthcare should strengthen its digital infrastructure, employee readiness, data governance, and strategic alignment.

The framework is also useful for managerial decision-making. It allows managers at Mubadala Healthcare to identify which technology-driven marketing practices currently have the strongest influence on performance and which areas require further development. Based on the results, digital marketing and marketing automation should be treated as immediate performance-enhancing tools, while AI should be developed gradually through investment,

training, and integration with existing digital systems.

Furthermore, the framework can support performance monitoring by linking technology-driven marketing activities to key organizational outcomes such as patient satisfaction, service quality, brand reputation, operational efficiency, and organizational growth. This makes the framework practical for healthcare administrators, marketing managers, IT departments, and strategic decision-makers who seek to improve the effectiveness of digital transformation initiatives.

Overall, the framework is applicable to Mubadala Healthcare because it provides both theoretical and practical guidance for improving organizational performance through technology-driven marketing practices. It shows that digital marketing and marketing automation are currently the most influential drivers of performance, while artificial intelligence has future potential if supported by appropriate infrastructure, skills, and strategic implementation.

6. Conclusion

This study developed and examined a framework for assessing the influence of artificial intelligence, marketing automation, and digital marketing on organizational performance in the Mubadala Healthcare System, UAE. The study was motivated by the growing use of technology-driven marketing practices in healthcare and the need to understand how these practices contribute to performance outcomes such as operational efficiency, patient engagement, brand positioning, service quality, and organizational growth.

The findings show that the proposed framework has strong explanatory power, as artificial intelligence, marketing automation, and digital marketing jointly explained 74.7% of the variance in organizational performance. This indicates that technology-driven marketing practices play an important role in shaping organizational performance within the healthcare sector. However, the findings also reveal that the three variables do not influence organizational performance equally.

Digital marketing was found to have the strongest positive and significant effect on organizational performance. This suggests that digital platforms, online communication, social media engagement, website-based interaction, and personalized digital campaigns are important tools for improving patient engagement, service visibility, brand awareness, and organizational competitiveness in Mubadala Healthcare. Therefore, digital marketing represents a key driver of performance in the proposed framework.

Marketing automation also had a positive and significant effect on organizational performance. This indicates that automated marketing processes can improve communication efficiency, customer relationship management, patient engagement, and service delivery. The finding confirms that marketing automation is an important organizational capability that can support performance improvement in healthcare institutions.

In contrast, artificial intelligence had a positive but insignificant effect on organizational performance. This suggests that although AI has potential benefits, its direct contribution to

organizational performance in Mubadala Healthcare may not yet be fully realized. The insignificant result may be due to limited implementation, inadequate infrastructure, employee readiness, data challenges, or the need for stronger strategic alignment. Therefore, AI should not be viewed as an automatic driver of performance, but as a capability that requires proper integration, investment, training, and organizational support.

Overall, the study concludes that digital marketing and marketing automation are significant predictors of organizational performance in the Mubadala Healthcare System, while artificial intelligence requires further development and strategic integration before its performance benefits can be fully achieved. The study contributes by providing a framework that explains how technology-driven marketing practices influence organizational performance in a healthcare context. It also provides practical guidance for healthcare managers by highlighting the need to strengthen digital marketing strategies, expand marketing automation systems, and improve the organizational readiness required for effective AI implementation.

Based on these findings, Mubadala Healthcare should continue investing in digital marketing and marketing automation as immediate performance-enhancing tools, while also developing the infrastructure, skills, leadership support, and strategic planning necessary to maximize the long-term benefits of artificial intelligence. Future studies may extend this framework by including additional variables such as employee readiness, technology infrastructure, patient trust, service innovation, or strategic alignment to provide a more comprehensive understanding of technology-driven performance in healthcare.

References

- Abubakar, A. M., Elrehail, H., Alatailat, M. A., & Elçi, A. (2019). Knowledge management, decision-making style and organizational performance. *Journal of Innovation & Knowledge*, 4(2), 104–114. <https://doi.org/10.1016/j.jik.2017.07.003>
- Aldoseri, A., Al-Khalifa, K., & Hamouda, A. (2023). *A roadmap for integrating automation with process optimization for AI-powered digital transformation*. <https://doi.org/10.20944/preprints202310.1055.v1>
- AlQahtani, D. M. S. (2023). Artificial Intelligence and its influence on digital transformation, development, and productivity in Saudi Arabian organizations: A critical evaluation. *Arab Journal of Administration*, 1–14. <https://doi.org/10.21608/aja.2023.233880.1518>
- Baabdullah, A. M., Alalwan, A. A., Slade, E. L., Raman, R., & Khatatneh, K. F. (2021). SMEs and artificial intelligence (AI): Antecedents and consequences of AI-based B2B practices. *Industrial Marketing Management*, 98, 255–270. <https://doi.org/10.1016/j.indmarman.2021.09.003>
- Bawack, R., Wamba, S., Carillo, K., & Akter, S. (2021). Artificial intelligence in E-commerce. *Journal of Business Research*, 129, 283–296.
- Benitez, J., Henseler, J., Castillo, A., & Schuberth, F. (2020). How to perform and report an impactful analysis using partial least squares: Guidelines for confirmatory and explanatory IS research. *Information & Management*, 57(2), 103168.

<https://doi.org/10.1016/j.im.2019.05.003>

Buttle, F., & Maklan, S. (2019). *Customer Relationship Management: Concepts and Technologies*. Routledge. <https://doi.org/10.4324/9781351016551>

Campbell, C., Sands, S., Ferraro, C., Tsao, H. Y. J., & Mavrommatis, A. (2020). From data to action: How marketers can leverage AI. *Business Horizons*, 63(2), 227–243. <https://doi.org/10.1016/j.bushor.2019.12.002>

Campbell, S. et al. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652–661. <https://doi.org/10.1177/1744987120927206>

Casteel, A., & Bridier, N. L. (2021). Describing populations and samples in doctoral student research. *International Journal of Doctoral Studies*, 16(1). <https://doi.org/10.28945/4766>

Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital Marketing* (7th ed.). Pearson.

Chaffey, D., & Smith, P. R. (2022). *Digital Marketing Excellence: Planning, Optimizing and Integrating Online Marketing*. Routledge. <https://doi.org/10.4324/9781003009498>

Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The effect of AI-based CRM on organization performance and competitive advantage: An empirical analysis in the B2B context. *Industrial Marketing Management*, 97, 205–219. <https://doi.org/10.1016/j.indmarman.2021.07.013>

Chintalapati, S., & Pandey, S. K. (2022). Artificial intelligence in marketing: A systematic literature review. *International Journal of Market Research*, 64(1), 38–68. <https://doi.org/10.1177/14707853211018428>

Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48(1), 24–42. <https://doi.org/10.1007/s11747-019-00696-0>

Dwivedi, Y. K. et al. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994. <https://doi.org/10.1016/j.ijinfomgt.2019.08.002>

Dwivedi, Y. K. et al. (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, 59, 102168. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>

Gaur, P. S., Zimba, O., Agarwal, V., & Gupta, L. (2020). Reporting survey-based studies: A primer for authors. *Journal of Korean Medical Science*, 35(45), e398. <https://doi.org/10.3346/jkms.2020.35.e398>

Ghasemaghaei, M. (2021). Understanding the impact of big data on firm performance: The necessity of conceptually differentiating among big data characteristics. *International Journal of Information Management*, 57, 102055. <https://doi.org/10.1016/j.ijinfomgt.2019.102055>

- Haleem, A., Javaid, M., Qadri, M. A., Singh, R. P., & Suman, R. (2022). Artificial intelligence (AI) applications for marketing: A literature-based study. *International Journal of Intelligent Networks*, 3, 119–132. <https://doi.org/10.1016/j.ijin.2022.08.005>
- Haseeb, M., Hussain, H. I., Kot, S., Androniceanu, A., & Jermisittiparsert, K. (2019). Role of social and technological challenges in achieving a sustainable competitive advantage and sustainable business performance. *Sustainability*, 11(14), 3811. <https://doi.org/10.3390/su11143811>
- Herhausen, D., Miočević, D., Morgan, R. E., & Kleijnen, M. H. (2020). The digital marketing capabilities gap. *Industrial Marketing Management*, 90, 276–290. <https://doi.org/10.1016/j.indmarman.2020.07.022>
- Huang, M. H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49(1), 30–50. <https://doi.org/10.1007/s11747-020-00749-9>
- Huang, M. H., & Rust, R. T. (2022). A framework for collaborative artificial intelligence in marketing. *Journal of Retailing*, 98(2), 209–223. <https://doi.org/10.1016/j.jretai.2021.03.001>
- Järvinen, J., & Taiminen, H. (2016). Harnessing marketing automation for B2B content marketing. *Industrial Marketing Management*, 54, 164–175. <https://doi.org/10.1016/j.indmarman.2015.07.002>
- Jiang, H., Cheng, Y., Yang, J., & Gao, S. (2022). AI-powered chatbot communication with customers: Dialogic interactions, satisfaction, engagement, and customer behavior. *Computers in Human Behavior*, 134, 107329. <https://doi.org/10.1016/j.chb.2022.107329>
- Kaur, S. et al. (2020). Medical diagnostic systems using artificial intelligence algorithms: Principles and perspectives. *IEEE Access*, 8, 228049–228069. <https://doi.org/10.1109/ACCESS.2020.3042273>
- Kaydos, W. (2020) *Operational Performance Measurement: Increasing Total Productivity*. CRC Press. <https://doi.org/10.4324/9780367802103>
- Khan, N., & Khan, B. (2021). Digital marketing actions: Healthcare providers of Dubai. *Journal of Research in Marketing*, 12(1), 896–904.
- Kotler, P., Kartajaya, H., & Setiawan, I. (2021). *Marketing 5.0: Technology for Humanity*. John Wiley & Sons.
- Kumar, V., Ramachandran, D., & Kumar, B. (2021). Influence of new-age technologies on marketing: A research agenda. *Journal of Business Research*, 125, 864–877. <https://doi.org/10.1016/j.jbusres.2020.01.007>
- Melović, B., Jocović, M., Dabić, M., Vulić, T. B., & Dudic, B. (2020). The impact of digital transformation and digital marketing on brand promotion, positioning and electronic business. *Technology in Society*, 63, 101425. <https://doi.org/10.1016/j.techsoc.2020.101425>
- Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization,

measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management*, 58(3), 103434. <https://doi.org/10.1016/j.im.2021.103434>

Nguyen, T. M., Le, D., Quach, S., Thaichon, P., & Ratten, V. (2021). The current trends and future direction of digital and relationship marketing: A business perspective. In *Developing Digital Marketing: Relationship Perspectives* (pp. 191–200). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80071-348-220211011>

Oribhabor, C. B. & Anyanwu, C. A. (2019). Research sampling and sample size determination: A practical application. *Journal of Educational Research*, 2(1), 47–57.

Overgoor, G., Chica, M., Rand, W., & Weishampel, A. (2019). Letting the computers take over: Using AI to solve marketing problems. *California Management Review*, 61(4), 156–185. <https://doi.org/10.1177/0008125619859318>

Özoğlu, B., & Topal, A. (2020). Digital marketing strategies and business trends in emerging industries. In *Digital Business Strategies in Blockchain Ecosystems: Transformational Design and Future of Global Business* (pp. 375–400). https://doi.org/10.1007/978-3-030-29739-8_18

Panayides, A. S. et al. (2020). AI in medical imaging informatics: Current challenges and future directions. *IEEE Journal of Biomedical and Health Informatics*, 24(7), 1837–1857. <https://doi.org/10.1109/JBHI.2020.2991043>

Páramo, Á. J. L., García, Á. H., & Peláez, J. C. (2021). Modelling e-mail marketing effectiveness: An approach based on the theory of hierarchy-of-effects. *Cuadernos de Gestión*, 21(1), 19–27. <https://doi.org/10.5295/cdg.191094ah>

Paschen, J., Kietzmann, J., & Kietzmann, T. C. (2019). Artificial intelligence (AI) and its implications for market knowledge in B2B marketing. *Journal of Business & Industrial Marketing*, 34(7), 1410–1419. <https://doi.org/10.1108/JBIM-10-2018-0295>

Petrescu, M., Krishen, A. S., Kachen, S., & Gironda, J. T. (2022). AI-based innovation in B2B marketing: An interdisciplinary framework incorporating academic and practitioner perspectives. *Industrial Marketing Management*, 103, 61–72. <https://doi.org/10.1016/j.indmarman.2022.03.001>

Rajagopal, N. K. et al. (2022). Future of business culture: An artificial intelligence-driven digital framework for organization decision-making process. *Complexity*, 2022, 1–14. <https://doi.org/10.1155/2022/7796507>

Richards, G., Yeoh, W., Chong, A. Y. L., & Popovič, A. (2019). Business intelligence effectiveness and corporate performance management: An empirical analysis. *Journal of Computer Information Systems*, 59(2), 188–196. <https://doi.org/10.1080/08874417.2017.1334244>

Rosário, A., & Raimundo, R. (2021). Consumer marketing strategy and E-commerce in the last decade: A literature review. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(7), 3003–3024. <https://doi.org/10.3390/jtaer16070164>

- Shaw, J., Rudzicz, F., Jamieson, T., & Goldfarb, A. (2019). Artificial intelligence and the implementation challenge. *Journal of Medical Internet Research*, 21(7), e13659. <https://doi.org/10.2196/13659>
- Shiyyab, F. S., Alzoubi, A. B., Obidat, Q. M., & Alshurafat, H. (2023). The impact of artificial intelligence disclosure on financial performance. *International Journal of Financial Studies*, 11(3), 115. <https://doi.org/10.3390/ijfs11030115>
- Steinhoff, L., Arli, D., Weaven, S., & Kozlenkova, I. V. (2019). Online relationship marketing. *Journal of the Academy of Marketing Science*, 47, 369–393. <https://doi.org/10.1007/s11747-018-0621-6>
- Stone, M. et al. (2020). Artificial intelligence (AI) in strategic marketing decision-making: A research agenda. *The Bottom Line*, 33(2), 183–200. <https://doi.org/10.1108/BL-03-2020-0022>
- Tiitola, R. (2022). *The Impact of Marketing Automation Software on International Marketing Efficiency*.
- Tuten, T. L. (2023). *Social Media Marketing*. Sage Publications.
- Van Esch, P., & Stewart Black, J. (2021). Artificial intelligence (AI): Revolutionizing digital marketing. *Australasian Marketing Journal*, 29(3), 199–203. <https://doi.org/10.1177/18393349211037684>
- Verhoef, P. et al. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Verma, S., Sharma, R., Deb, S., & Maitra, D. (2021). Artificial intelligence in marketing: Systematic review and future research direction. *International Journal of Information Management Data Insights*, 1(1), 100002. <https://doi.org/10.1016/j.jjime.2020.100002>
- Wamba-Taguimdje, S. L., Wamba, S. F., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: The business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893–1924. <https://doi.org/10.1108/BPMJ-10-2019-0411>
- Wang, X., Lin, X., & Shao, B. (2022). How does artificial intelligence create business agility? Evidence from chatbots. *International Journal of Information Management*, 66, 102535. <https://doi.org/10.1016/j.ijinfomgt.2022.102535>

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