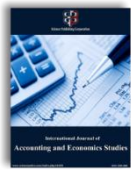
International Journal of Accounting and Economics Studies, 12 (4) (2025) 790-799

International Journal of Accounting and Economics Studies

Website: www.sciencepubco.com/index.php/IJAES
https://doi.org/10.14419/hyym2k22
Research paper



The Influence of Perceived Usefulness of AI within The RACE Framework on Adoption Intention and Digital Marketing Performance: A Comprehensive Literature Review

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Received: July 14, 2025, Accepted: August 24, 2025, Published: August 29, 2025

Abstract

Artificial Intelligence (AI) is changing how businesses run various digital marketing activities. Many studies have explored AI adoption and its benefits. Most of these studies focus on AI perceived usefulness, the influence of AI adoption, marketing results, or RACE as a planning framework. Though there is limited understanding of how perceived AI's usefulness influences the adoption intention of AI, and hence the expected marketing performance. This is especially true in emerging markets such as Saudi Arabia. Understanding AI's perceived usefulness in each stage of the RACE (Reach, Act, Convert, and Engage) framework is also important. This paper reviews previous research on AI adoption and adoption intention, the RACE framework, and marketing performance. It identifies a gap in using the technology acceptance model (TAM) model to explain how perceived usefulness of AI influences adoption intention and, in turn, digital marketing performance. It also highlights the lack of studies that apply a full marketing planning framework while analyzing these relationships. The study calls for empirical research that tests the AI adoption through the lens of an extended TAM version at each stage of RACE. Future work should use data to test this relationship. This will help marketers understand how AI adoption improves results. A stage-by-stage view helps show where AI is perceived as more useful, where it is not.

Keywords: *Saudi Arabia, Artificial Intelligence, Digital Marketing, Marketing Performance, Perceived Usefulness, Adoption Intention*

1. Introduction

Artificial intelligence (AI) is transforming the field of digital marketing. It reshapes how businesses connect with customers across multiple channels (Lewrick & Hatamleh, 2024). AI is a technology that employs a computer program to perform reasoning processes. AI is a broad term that encompasses various technologies such as machine learning (ML) or deep learning (Benkert, 2019; Sanjna et al., 2023). Tools such as chatbots, recommendation engines, predictive analytics, and automated advertising are now common. These tools help marketers improve efficiency, personalization, and performance. To guide these efforts, the RACE framework provides a useful structure. It includes four stages: Reach, Act, Convert, and Engage. This model supports planning and managing digital marketing activities in a systematic way (Chaffey, 2024). Companies adopt AI in digital marketing due to its wide range of usefulness, to name some, cost reduction, time saving, and improved decision making (Gonçalves et al., 2023). Perceived usefulness is a key element of the Technology Acceptance Model (TAM) (Davis, 1989), where perceived usefulness is a key determinant of technology adoption intention (Bryan & Zuva, 2021).
This research seeks to understand the relationship between how marketers perceive AI's usefulness at each stage of the RACE framework and adoption intention and expected marketing outcomes.
Artificial Intelligence (AI) is changing how businesses do marketing. It helps companies understand customers, personalize content, and improve campaign results. The RACE framework (Reach, Act, Convert, Engage) is one of the most widely used models in digital marketing (Chaffey & Ellis-Chadwick, 2019). It gives a clear structure for managing marketing activities across the customer journey. Many big companies are now using AI tools in each stage of RACE. These include chatbots, targeting systems, and smart recommendations. But it is not known whether the adoption intention of AI in digital marketing is affected by how useful marketers think these tools are. This is known as perceived usefulness, a key factor in whether people accept and use new technologies (Arghashi & Yuksel, 2022; Chen & Aklikokou, 2020).
In Saudi Arabia, digital transformation is growing fast. Vision 2030 has pushed businesses to adopt new technologies, including AI (Vision 2030, 2025). SMEs with their limited resources and challenges (Al-Tayyar et al., 2021) compete in a more digital market. Little is known

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about how SMEs view AI in their daily work. Especially when it comes to each stage of the RACE framework. Studies usually look at a snapshot of the marketing process, for example, how AI adoption impacts targeting customers (Bhardwaj et al., 2024) and improves conversion rates (Iyelolu et al., 2024). They don't focus on how marketers view its value in the whole marketing stages and how such views could affect adoption intention and performance (Pereira et al., 2023a; Wamba-Taguimdje et al., 2020). This is especially true in emerging markets such as Saudi Arabia. Understanding AI's perceived usefulness in each stage of the RACE framework is important. AI tools serve different roles at each point in the customer journey, from targeting customers, supporting engagement, improving conversion and purchase decisions, to retention and keeping loyalty (Dilami et al., 2021; Rautela, 2021). A stage-by-stage view helps show where AI is perceived as more useful, where it is not, and what barriers or enablers exist. This insight is vital for better adoption and outcomes in digital marketing. This research is developed to fill that gap. It explores how the perceived usefulness of AI in each RACE stage affects marketers' intention to adopt AI. It also examines how these shape digital marketing performance in Saudi SMEs. The findings can help businesses make smarter choices and use AI more effectively.

To answer the question of 'how does the perceived usefulness of AI within the RACE framework influence adoption intention and digital marketing performance, particularly in the context of Saudi Arabia?' is still unanswered. To provide an answer to this question, the main aim of the current research is to review and synthesize existing literature on the perceived usefulness of AI in the context of the RACE framework, focusing on its influence on adoption intention and digital marketing performance, with special attention to both global trends and the Saudi Arabian SME context. Accordingly, this review has four objectives:

1) to introduce the benefits of AI in digital marketing
2) to identify the useful applications of AI in each stage of RACE
3) To investigate the role of perceived usefulness of AI in shaping adoption intention and its potential impact on marketing outcomes, Saudi context and globally
4) To identify key gaps in the literature and propose directions for future research relevant to Saudi Arabia and similar emerging markets.

The findings can help businesses make smarter choices and use AI more effectively.

This paper adopts a narrative literature review approach. Unlike systematic reviews, this type of review does not follow strict protocols for literature selection or quality appraisal. Instead, it offers a structured yet flexible synthesis of relevant studies to uncover conceptual gaps and propose directions for future research. The focus is to explore how perceived usefulness of AI within the RACE framework influences adoption intention and digital marketing performance, particularly in the Saudi Arabian SME context.

In this paper, relevant studies were identified using keyword searches. Databases such as Google Scholar and EKB. The keywords were: "AI in digital marketing", "perceived usefulness of AI", "perceived usefulness of AI in Saudi Arabia", "adoption intention", "RACE framework", "TAM model", "digital marketing performance. Backward and forward searches were also done to find more relevant studies. Only peer-reviewed journal articles and high-quality conference papers were included. The time frame was limited to studies from 2020 to 2024.

This paper is organized into several clear sections. After the Introduction, the benefits of AI in digital marketing are discussed. Then, the useful applications of AI in each stage of RACE are discussed. Then, to understand how perceived usefulness of AI according to RACE influences adoption intention and subsequently the expected digital performance, empirical studies were reviewed and grouped under four main themes five themes. Each theme serves an individual purpose; the Saudi Arabia Context highlights local trends; the Global Context shows how the topic fits worldwide; the RACE-Focused Studies reviews how studies employ the RACE model; and Digital Marketing Performance looks at key results and measures. Results and Discussion present the findings and explain them. The paper ends with the Conclusion and Future Work, offering a summary and future directions.

2. Benefits of Artificial Intelligence

AI brings many benefits to digital marketing. These benefits refer to the positive results that come from using AI tools. Marketers turn to AI to better understand what customers want. AI tools help them make smarter choices and improve customer value. In this way, such technologies reduce costs and increase revenue (Gonçalves et al., 2023). One major benefit is improved targeting and personalization. AI helps marketers create more relevant content for each customer (Dwivedi & Mahanty, 2025). AI and machine learning (ML) allow businesses to group customers based on behavior, interests, and demographics (Bhardwaj et al., 2024). This makes it easier to send the right message to the right audience. Smarter segmentation also leads to better engagement. AI helps marketers design campaigns that feel personal and timely. This boosts customer loyalty and improves retention. A good example is Netflix. It uses AI to suggest shows based on what users like to watch (Dwivedi & Mahanty, 2025). AI also enhances marketing performance. It helps optimize campaigns at every step (Shanmugam et al., 2023). ML tools analyze past campaigns and current customer behavior. This helps marketers choose the best strategies. For example, Google DS uses AI to improve targeting and bidding (Kar, 2023; Kumar & Suthar, 2024). Operational efficiency is another key benefit. AI can handle tasks like data analysis and report writing. This saves time and reduces manual work (Olha et al., 2024). Marketers can focus on strategy and creativity instead. Immediate insights, in real-time, also allow quicker decisions (Gonçalves et al., 2023; Kar, 2023). In addition, AI improves customer experience. AI tools can tailor services to match individual preferences. Amazon uses AI to recommend products based on past purchases. H&M offers a chatbot that gives fashion tips based on user style (Krishnan et al., 2022). Such tools make customer interactions smoother and more satisfying (Babatunde et al., 2024). AI supports real-time, data-driven decision-making. Marketers can track behavior and engagement across platforms. AI tools process this data quickly to offer helpful insights. In this way, the marketing team adjusts its strategies as needed (Khosroshahi, 2024). Cost optimization is another advantage. AI reduces the need for manual labor by automating tasks. Tools can create content, manage campaigns, and analyze data. This lowers costs and boosts productivity (Gonçalves et al., 2023; Kar, 2023). AI also helps marketers spend their budgets wisely. It highlights areas with the highest return on investment (Benkert, 2019; Kar, 2023). The rise of digital devices has created huge amounts of data. AI uses this data to improve marketing results. Platforms study customer actions online to offer more targeted messages. Techniques like sentiment analysis and natural language processing help understand preferences (Drydakis, 2022).

In short, digital technologies are changing how businesses do marketing. Among these, AI stands out. AI is now a key tool in digital marketing. It helps marketers understand their audience better. It also supports content personalization and improves campaign performance. The digital space is becoming more competitive. Businesses need fast and smart solutions. AI can reduce costs and save time. It can also improve customer engagement and increase returns.

3. Useful applications of AI in RACE

This section focuses on exploring the useful applications of AI during various RACE marketing stages of digital marketing.

3.1 Usefulness of AI in Plan

AI offers several useful applications during the Plan stage of digital marketing. It helps marketers gather and analyze market data to design informed marketing strategies (Jarek & Mazurek, 2019). AI-powered predictive analytics can forecast market trends, customer needs, and industry changes (Jarek & Mazurek, 2019). Marketers can also use AI tools for customer segmentation based on demographics, behaviors, and interests (Jarek & Mazurek, 2019). Another key application is scenario planning. AI can simulate different market conditions and predict their possible impact on marketing goals. AI also supports setting clear, measurable marketing objectives that align with business goals (Sestino et al., 2023). Historical data can be analyzed using AI to set realistic, data-driven targets. In addition, AI improves resource allocation by predicting the expected return on investment (ROI) across marketing channels (Setiawan et al., 2023). AI algorithms help optimize budget distribution by identifying the most effective digital platforms, such as social media, email, and SEO (Setiawan et al., 2023). Machine learning is particularly useful for predictive analytics and trend analysis at this stage (Noranee & Bin Othman, 2023). Moreover, Natural Language Processing (NLP) can analyze consumer sentiment from social media and online reviews (Noranee & Bin Othman, 2023). These AI applications collectively enhance decision-making and improve planning efficiency for marketers.

3.2 Usefulness of AI in Reach

AI provides valuable applications during the Reach stage of digital marketing. These applications help businesses expand their audience and improve targeting efforts. One key application is smart content curation. AI tools classify, identify, and suggest content based on past data and user behavior. For example, Google's RankBrain uses AI to process search queries and display the most relevant results (Chaudhary, 2024). Programmatic advertising is another common AI application in this stage. It automates ad buying and targets the most relevant audiences efficiently (Noranee & Othman, 2023). Platforms like Gupshup use AI to send personalized campaigns to the right customers (Pereira et al., 2023). AI also supports content creation and recommendation. It suggests suitable content based on target keywords and customer preferences (Puntoni et al., 2020). Tools like Cortex assist marketers by generating optimized content tailored to audience needs (Singh et al., 2023). Natural Language Processing (NLP) further enhances customer reach. It improves how customer searches are understood, whether through text, voice, or digital assistants like Siri. This allows companies to adopt better SEO practices and reach more potential customers. For instance, the Atomic Reach platform uses AI to optimize key content sentences and boost conversion rates. Finally, machine learning techniques can enhance SEO by classifying web pages more effectively (Shaffi & Muthulakshmi, 2022). Together, these AI applications help businesses reach the right audience and improve the efficiency of their digital marketing efforts.

3.3 Usefulness of AI in Act

In the Act stage of digital marketing, AI offers several useful applications that support marketing activities. AI technologies are especially valuable for content marketing. These technologies analyze customer data, such as browsing history and preferences, to recommend personalized content (Ganesh et al., 2024). Machine learning helps predict which content is most relevant for each user. This increases engagement and encourages users to take further action (Broklyn et al., 2024). AI also plays a key role in propensity modelling. These tools use large amounts of customer data to predict the likelihood of specific actions, such as purchases or cancellations (Zhang, 2021). Platforms like SAS Customer Intelligence 360 provide a full view of the customer by combining digital and traditional data. This helps marketers target their efforts and improve retention. Ad targeting is another area where AI proves useful. It predicts which ads will perform best for specific user groups throughout the customer journey (Gao et al., 2023; Singh, 2023). For example, deep learning models like deep factorization machines can estimate click-through rates with high accuracy (Yu et al., 2024). Tools like Albert AI use machine learning to optimize advertising campaigns by analyzing past data. Predictive analytics also supports marketing efforts at this stage. AI tools like SAS forecast customer behavior even before the purchase process begins. Lead scoring is enhanced through AI by ranking business opportunities using predictive data analysis. Applications like Cien incorporate deep learning to improve the accuracy of lead scoring (Sharma et al., 2023). AI also boosts engagement with potential customers. Social media platforms equipped with AI achieve higher engagement rates (Taherdoost & Madanchian, 2023). AI uses NLP and sentiment analysis to track user sentiment in real-time. This helps businesses adapt their social media strategies and respond effectively. AI-powered chatbots further improve customer interactions. These chatbots use NLP to answer questions and guide users towards actions like signing up or requesting a demo (Krishnan et al., 2022). They also assist users in navigating content and finding information quickly. In this way, AI significantly enhances lead generation and increases user engagement during the Act stage of digital marketing.

3.4 Usefulness of AI in Convert

AI offers valuable support for marketing activities in the Convert stage. One key application is dynamic pricing. AI tools help identify customers who may need an extra incentive to complete a purchase. By adjusting prices in real time, businesses can attract more customers and increase conversions (Pereira et al., 2023; Theodoridis & Gkikas, 2019). For example, Vizury's Engage360 Remarketing solution uses AI to calculate the best offer or price to present to users during retargeting. AI also enhances retargeting and remarketing efforts. These technologies analyze user profiles and behavior to determine which content can bring potential customers back to the website. AI makes retargeting ads more personalized and effective. Solutions like Vizury rely on AI to evaluate user activity and optimize remarketing strategies. Similarly, Google Ads Remarketing enables companies to display targeted ads to users who have previously visited their websites. Web and app personalization is another AI application that supports conversion. AI customizes website content and interfaces to better suit individual users (Setiawan et al., 2023). Tools like Evolv help businesses increase conversion rates by providing personalized experiences and conducting website tests, such as A/B testing. AI-powered chatbots also play a role in driving conversions. These systems provide human-like responses, assist with purchases, and help complete orders. For example, Facebook’s Messenger Chatbot can be integrated into company websites to guide customers and offer support. Platforms like Chatfuel make it easy to implement such solutions. Overall, AI applications in the Convert stage help businesses boost conversions by offering personalized, timely, and efficient interactions.

3.5 Usefulness of AI in Engage

AI provides useful applications that support marketers in the Engage stage. One example is predictive customer service. AI helps marketers interact with customers after a purchase by offering suggestions, promotions, or personalized offers (Pereira et al., 2023; Theodoridis & Gkikas, 2019). This strengthens the relationship between customers and the brand. Machine learning (ML) can also predict which customers

are likely to become inactive. With this insight, businesses can take action to retain those customers. A good example is Einstein from Salesforce, which provides predictions and recommendations based on customer data. Marketing automation is another area where AI adds value. It enables businesses to categorize customers and approach them at the right time with optimized content. AI identifies the most suitable phrases, offers, and communication channels. The Conversica digital sales assistant is one such tool. It contacts, engages, classifies, and tracks leads automatically using natural, two-way, multi-channel conversations. AI also supports dynamic email marketing. Tools like Seventh Sense send marketing emails at the optimal time and frequency for each customer. This increases the likelihood of customer engagement and response. Content retargeting is another effective AI application. AI helps deliver retargeting ads to customers who have previously interacted with the brand (Sestino et al., 2021). The use of generative AI, such as deep learning models, makes these ads more personalized and engaging (Lim et al., 2024). AI-generated content ensures that retargeting ads align with individual user preferences, increasing the chances of re-engagement. Finally, AI enhances communication relevance by analyzing large datasets. It enables the creation of tailored messages that resonate with each customer (Durmus Senyapar, 2024). This fosters a stronger connection between the brand and its customers, ultimately boosting engagement.

4. Empirical Studies

This section reviews empirical related studies separated into subheadings, including global context, Saudi Arabia Context, RACE-focused studies, and Digital marketing performance.

4.1 Global Context

This section reviews recent empirical studies from regions outside Saudi Arabia. These studies explore how AI affects marketing strategy and performance. The studies examine factors like AI adoption, chatbot use, digital marketing, and customer satisfaction. The research also highlights various theories like TAM, TOE, RBV, and dynamic capability. Despite regional and methodological differences, the findings offer valuable insights into AI's global role in marketing.

Acatrinei (2025) noticed that AI is reshaping marketing. It changes both operations and strategic planning. Yet, adoption is uneven across businesses. This study explores AI use in marketing in Romania. It uses qualitative research with 28 in-depth interviews. Participants included CEOs, general managers, and marketing experts. About one-third had adopted AI. Most had not, which allowed comparisons between adopters and non-adopters. The study identifies both drivers and barriers. Participants saw AI as useful for efficiency and personalization. It also supports data-driven strategies. Still, many expressed concerns. They worried about complexity, privacy, regulations, and the loss of human touch. Findings suggest balance is essential. Technology must align with human creativity. Ethical rules and skill development are also critical. AI can save time and optimize resources. But its use requires strategy and awareness of context. The research concludes that AI will not replace humans. Instead, it will complement them. Future marketing will rely on synergy between tools and human insight. This can enable smarter, more responsive, and more meaningful marketing

Salah and Ayyash (2024) studied e-commerce adoption in SMEs. The TOE framework was extended with AI Integration, Innovation Culture, and Tech-Savviness. Data was collected from 305 SMEs via an online survey. PLS-SEM was used for analysis. Results showed all added variables influenced e-commerce adoption. E-commerce adoption improved marketing performance. The study suggests more work on long-term effects and broader adoption contexts. Hasan Emon et al. (2023) explored why Bangladeshi professionals adopt ChatGPT. They used a modified UTAUT model. The sample included 350 knowledge workers. Data was collected via questionnaires and analyzed using PLS-SEM. The study found key factors like performance benefits, trust, and supportive conditions drive adoption. It stressed the need to build behavioral intentions. However, the study only focused on Bangladeshi professionals. It also relied on self-reported data, which may limit accuracy. Wang et al. (2023) studied how AI can support e-commerce. They used TAM to explain AI acceptance. An online survey gathered data from e-commerce users. Data were analyzed using PLS-SEM with SmartPLS. The study showed subjective norms influence both perceived usefulness (PU) and ease of use (PEOU). Trust improved PEOU but did not affect PU or attitudes. PEOU influenced both PU and AI usage attitudes. PU and attitudes directly affected intention. Intention led to actual AI use. Trust showed no link with PU or intention. The use of self-reported online data may introduce bias. Al Khaldy et al. (2023) looked at AI and predictive analytics in digital marketing. They studied effects on engagement, conversions, and ROI. A mixed-method approach was used. A survey was done with 32 experts (21 from SMEs, 11 from large firms). Results showed AI boosts ROI and campaign success. As a cross-sectional study, it lacks insight into long-term changes. Future work should include longitudinal and industry-wide analysis. Ifekanandu et al. (2023) examined AI's impact on Nigerian manufacturing firms. Focus was on sales and market share growth. Innovation Diffusion Theory guided the study. A survey was conducted with analysis via Spearman's rho. Findings showed AI helps improve marketing performance. AI capabilities strongly relate to firm success. The correlational design limits causal claims. The study also faced response bias. More robust designs are recommended for future research. Panigrahi et al. (2023) explored chatbots in supply chains. The focus was on supply chain visibility and innovation. Dynamic Capability Theory was used. 246 responses were analyzed using SMARTPLS. Findings showed AI chatbots support sustainability. Partial mediation was found. Technological readiness was not considered. Results may differ across SMEs. Bias may exist from self-reporting. Future studies should combine methods and explore industries. Wijayanto et al. (2023) studied chatbots and customer satisfaction in Indonesia. No specific theory was used. A mixed-method design was applied. 325 participants were surveyed. Regression analysis and thematic analysis were used. Results showed chatbots improve satisfaction. Long-term impacts need further study. Future work should explore cross-industry differences and user preferences. Aloufi et al. (2021) studied how AI is shaping marketing. They focused on e-transactions, consumer analysis, and business models. The study used a literature review method. It evaluated past research and studies. This method offers broad insights but lacks new data. It does not include direct input from businesses or users. Findings showed that AI transforms marketing processes. AI improves e-transactions and helps analyze customer needs. It also enhances efficiency and saves time. AI supports better access to customer data. The study sees AI as a key force in future marketing. Chatterjee et al. (2021) explored how AI-CRM affects firm performance. They used institutional theory and RBV as the framework. The study tested hypotheses using PLS-SEM. Results showed AI-CRM improved firm performance. The shift from traditional to AI-CRM is gradual. CRM was seen as a strategic tool. The sample was from India. Generalizability is limited. Future work should include more industries and firm traits. Suleiman et al. (2021) studied AI's effect on website interactivity. They used Amazon, Alibaba, and Uber as case studies. Structured interviews were done, and NVivo was used for analysis. Findings showed AI improved usability and engagement. Users felt websites were easier to use. Safety concerns were raised. The study advises companies to add more security. However, results may be biased due to site selection and user perceptions. Giri et al. (2019) studied AI in retail stores in West Bengal, India. They aimed to find out how AI helps shape marketing strategies. The study focused on employees in organized retail outlets. They used Multiple Regression Analysis. Findings

showed that AI helps with data collection, analysis, and marketing. Exactly 127 responses were gathered through convenience sampling. The results showed strong AI use in key retail tasks. However, the small sample size and regional focus limit generalizability.
In the global context, the reviewed studies show a strong interest in AI and marketing. Most surveys or literature reviews are used. Many applied quantitative methods. Some used qualitative or mixed methods. AI improves marketing performance. It helps with CRM, customer satisfaction, and digital strategy. Chatbots and analytics are common tools. Most studies focused on SMEs and retail. Many studies had small samples. Some focused on one country or sector. This limits the general use of the findings. Some lacked theory or long-term analysis. Self-reported data may cause bias.

4.2 Saudi Arabia Context

The Saudi Vision 2030 promotes digital transformation initiatives, which in turn drive the AI adoption in Saudi businesses (Vision 2030, 2025). The 2030 vision also aims to increase the contribution of SMEs to the GDP, as they are a key focus of the plan's economic diversification efforts (Vision 2030, 2025). AI adoption is becoming a key driver in improving marketing strategies and business performance (Helmold, 2022). However, the level of AI use, its perceived usefulness, and how perceived usefulness influences adoption intention vary across countries and sectors. Several studies have examined how AI and digital marketing tools are used in Saudi SMEs, highlighting opportunities and limitations. This section reviews key research conducted in the Saudi context, focusing on AI adoption, perceived usefulness, and the impact on digital marketing performance.
Mashat and Mahmoud (2020) investigated AI usage in small businesses in Saudi Arabia. The study focused on how AI use and knowledge impact entrepreneurial development. A quantitative approach was adopted, using a sample of 204 small businesses and startups across three major Saudi cities. These included technology, service, and manufacturing sectors, with 45% from technology-related fields. Findings revealed limited actual use of AI and a general lack of knowledge about AI technologies. This deficiency was found to hinder entrepreneurship and innovation within local markets. The study was limited by its sample size and geographic scope. The authors recommended further research to explore the underlying reasons behind the low AI adoption among small businesses in Saudi Arabia. Basri (2020) studied the impact of AI-assisted social media marketing (AISMM) on SME performance in Saudi Arabia. The study also examined the mediating role of effective business management. No theoretical framework was used. Data were collected through a survey of SME owners and employees. Only 78 valid responses were analyzed. The study used Partial Least Squares Structural Equation Modeling (PLS-SEM). Results showed that AISMM adoption is increasing in Saudi startups and SMEs. Its use was linked to more customer engagement, higher profitability, and better performance. Effective business management mediated these effects. The study had a clear structure and sound methods. However, it was limited by a small sample and a lack of theoretical foundation. Future research should explore AI tools in wider digital marketing contexts. Alqasa and Afaneh (2022) aimed to identify the most suitable marketing strategy for Saudi SMEs. They also examined factors influencing strategy choice and its effect on SME performance. The study used the TAM to test relationships between variables. Data was collected from 210 SMEs. Structural Equation Modeling (CB-SEM) using AMOS 16 was applied. This reflects a quantitative approach to studying complex relationships. The sample size was adequate, but details on industry type or geographic location were missing. This limits the study's external validity. Findings showed that social media marketing (SMM) was the most relevant strategy for SMEs. E-marketing orientation, perceived usefulness, and perceived ease of use had a positive effect on SMM. In turn, SMM positively influenced SME performance. The study also highlighted the mediating role of SMM. However, it lacked details about which social media platforms were used. It also did not consider external influences such as economic or policy changes. These omissions reduce the depth and generalizability of the findings. The cross-sectional design further limits causal interpretation. The study focused only on Saudi SMEs, which restricts its broader application. Ahmed (2023) examined the impact of modern AI techniques on promoting sports tourism services. The study used a descriptive survey method. Data were collected from employees of the Saudi Ministry of Tourism, the Saudi Tourism Development Fund, the Saudi Tourism Authority, and several tourism businesses. Two questionnaires were used. A total of 480 participants were purposefully selected. They represented various stakeholder groups in the tourism sector. Results showed a strong correlation between AI use and the marketing of sports tourism services. AI tools improved efficiency and reduced time and labor in marketing tasks. However, the study focused only on tourism employees in Saudi Arabia. This limits the generalizability of the findings across countries or sectors. No theoretical framework was applied. The exclusive use of surveys may have introduced response bias. Participants might have offered socially desirable answers or had varying levels of AI awareness. While surveys provide useful insights, combining methods could offer a deeper understanding. A mixed-method approach may reduce bias and enhance validity. Alnajim and Fakieh (2023) studied the influencing factors on tourists' intentions to use social media for travel planning. They focused on identifying key influencing factors. A machine learning classification model was developed to support Saudi tourism SMEs in digital marketing. The study extended to the Technology Acceptance Model (TAM). It included perceived usefulness (PU), perceived ease of use (PEOU), satisfaction (SAT), marketing-generated content (MGC), and user-generated content (UGC). These factors were tested for their impact on tourists' intentions to use social media. A Design Science Research (DSR) approach was used. Data was collected from 573 tourists. The LinearSVC algorithm was applied to develop the classification model. Findings showed that PU, PEOU, SAT, MGC, and UGC all significantly affected tourists' intentions. Tourists' and visit characteristics influenced the use of MGC but not UGC. This suggests content type preferences vary among tourist groups. The authors recommend that Saudi SMEs create content that is useful, easy to use, and satisfying. MGC should be prioritized in social media campaigns. Strategies should align with tourists' characteristics. The study contributes to tourism marketing and social media literature. It shows the value of AI-generated content in shaping user behavior. However, the findings may not generalize widely. Survey-based data may introduce bias. Participants might offer socially desirable answers. The cross-sectional design limits causal conclusions. Tourists' preference for MGC over UGC is noted but not fully explored. External factors such as travel trends or economic shifts were not considered. These may also affect tourists' social media behavior. Ben Khalifa et al. (2023) examined the use of AI in developing e-marketing in Saudi Arabia. The study focused on major dairy companies, including Almarai, Nadec, and Al Safi. It did not apply a theoretical framework, which limits its depth and academic grounding. The study used a descriptive approach. This was suitable for exploring the current state of AI applications in e-marketing. Data was collected through a questionnaire. A sample of 202 individuals was selected using stratified random sampling. The analysis presented results as percentages. It showed that AI is highly used in various e-marketing areas. Achievement levels ranged between 80% and 82%. This reflects the strong adoption of AI tools in these companies. However, the study has limitations. The sample size was small and focused only on the dairy sector. The absence of qualitative data limited deeper insight. Also, the lack of a theoretical foundation weakened interpretive power. The authors recommend further research. They suggest enhancing AI's role in marketing, supporting scientific studies, and creating dedicated AI departments in e-marketing units. Badghish and Soomro (2024) studied factors influencing AI adoption by SMEs for sustainable business performance in Saudi Arabia. They used the Technology–Organization–Environment (TOE) framework. A quantitative method was applied by surveying managers from six sectors. Firm size was tested as a moderate factor. SMEs were split into small and medium groups. Multi-group analysis (MGA) was conducted to explore

differences. Data were analyzed using SmartPLS 3. Results showed that several TOE dimensions affect AI adoption. These include relative advantages, compatibility, sustainable human capital, market and customer demand, and government support. AI adoption significantly influenced operational and economic performance. The MGA revealed that relative advantage had a stronger impact on AI adoption in medium-sized firms than in small ones. The findings offer guidance for SMEs aiming to adopt AI to improve sustainability and economic contribution. However, the study has limitations. It used a cross-sectional survey and focused only on manufacturing SMEs. Broader sectoral and longitudinal research is recommended.

In the Saudi context, the reviewed studies offer useful insights on AI use in Saudi SMEs. Most adopt quantitative methods, often based on TAM or TOE. For instance, Basri (2020) and Badghish & Soomro (2024) show positive links between AI use and SME performance. Alqasa & Afaneh (2022) and Alnajim & Fakieh (2023) extend TAM to include new factors like UGC and MGC. However, many studies face limits. Small sample sizes, sector-specific focus (e.g., tourism, dairy), and lack of theoretical grounding reduce generalizability. Few explain AI's role across full digital marketing cycles. None applies structured models like RACE (Reach, Act, Convert, Engage). This leaves a gap in understanding AI's perceived usefulness at each stage. Cross-sectional designs dominate. They give only a snapshot, not long-term trends. Self-reported data may carry response bias. Most do not explore external factors (e.g., economy, policy shifts), which may influence adoption.

Saudi Vision 2030 has created strong momentum for digital transformation. AI adoption is central to these goals, especially for SMEs. These firms play a key role in economic diversification (Vision 2030, 2025). Despite this push, studies show that AI adoption in Saudi SMEs is still limited and uneven. Globally, AI is seen as a driver of marketing efficiency and innovation (Helmold, 2022). In Saudi Arabia, however, the results are mixed.

Mashat and Mahmoud (2020) found that SMEs in Saudi Arabia have low levels of AI use. They also reported weak knowledge of AI applications. This limits innovation and entrepreneurship. In contrast, studies from developed countries show more advanced adoption. The gap suggests that knowledge and capability remain major barriers in Saudi Arabia. Basri (2020) found that AI-assisted social media marketing improved SME performance. However, the study had a small sample and lacked theory. This makes the results hard to generalize. It also raises questions about whether adoption is widespread or limited to a few firms.

Research methods differ across Saudi studies. For instance, Alqasa and Afaneh (2022) used TAM and SEM. They linked perceived usefulness and ease of use with the adoption of social media marketing. Their findings showed strong performance outcomes. Yet, they ignored contextual factors such as economic volatility and cultural attitudes. They also overlooked policy incentives. Without these factors, the results may seem too optimistic. By contrast, Badghish and Soomro (2024) applied the TOE framework. They included environmental factors like government support. Their study showed that adoption depends strongly on institutional backing and firm size. This difference shows the need for more integrated models that mix technological, organizational, and environmental factors.

Sectoral studies add more complexity. Tourism studies (Ahmed, 2023; Alnajim & Fakieh, 2023) stress AI's role in marketing and customer engagement. Ben Khalifa et al. (2023) studied large dairy firms. They reported high AI use in e-marketing. These examples suggest rapid adoption. Yet, these sectors involve resource-rich firms, unlike most retail SMEs. The lack of cross-sector or longitudinal studies makes it unclear if adoption is widespread. It may be limited to specific industries with more resources and institutional support.

Overall, Saudi studies highlight the usefulness of AI in marketing. But they also show clear barriers. These include small samples, weak theory, and a reliance on cross-sectional surveys. Global research, in contrast, often uses longitudinal and mixed methods. It also shows AI integrated across the whole digital marketing cycle. Saudi studies remain fragmented, focusing mainly on social media or narrow sectors. This gap explains why AI adoption among Saudi SMEs still lags international benchmarks. This is true even with strong policy support under Vision 2030.

4.3 RACE-Focused Studies

The RACE model (Reach, Act, Convert, Engage) is a practical tool for planning and measuring marketing strategies. RACE helps businesses structure their digital efforts. Researchers have used it to assess AI adoption, digital marketing impact, social media use, and strategy evaluation across industries and regions. This section reviews studies that applied the RACE framework in digital marketing research.

For example, Papastefanou and Papaioannou (2024) examined AI use in marketing in Greece. It used the TAM and RACE frameworks. The focus was on marketing executives, regardless of company size. AI tools like ChatGPT and Canva AI help with personalized marketing and customer service. The survey included 157 executives, with 71 valid responses. Most had a positive view of AI in marketing. Perceived ease of use influenced usefulness and intention to use AI tools. The study found a lack of empirical evidence on AI adoption in marketing. It confirmed AI's strong impact on marketing strategy. Future work should explore AI's long-term effects across sectors. The RACE model's simplicity makes it popular among researchers for digital strategy planning. Patel (2024) looked at digital marketing's effect on consumer behavior in the UK mobile industry. Data were collected using a survey of 50 marketers. Analysis included regression, chi-square, and Pearson correlation in SPSS. The study found a strong link between digital marketing and consumer behavior. It emphasized that marketers must observe and respond to consumer actions. Digital marketing influences both consumer perception and behavior. This research filled a gap in digital marketing evidence. Rautela (2021) focused on social media use in launching new products. It applied the RACE framework to structure digital marketing activities. The author identified the best social media tools for each stage of RACE. The framework helps make digital marketing more organized during product launches. Dilami et al. (2021) evaluated digital marketing strategies of mining companies in Bushehr, Iran. It uses the RACE model. Data came from 172 companies through surveys and interviews. Analysis was done using SPSS and SmartPLS. The findings showed weak digital marketing strategies. Companies scored poorly in Plan, Reach, Act, and Engage dimensions. The study urged modernization of digital practices in these firms.

The reviewed studies show the value of the RACE framework; it helps structure digital marketing activities. These studies show RACE is simple and practical. However, most of them used small samples. Many focused on one sector only. This limits the findings. More studies with larger samples are needed. Broader industry coverage is also important.

4.4 Digital marketing performance

This section reviews studies that focus on how technologies, especially AI, improve digital marketing effectiveness and outcomes. Clicks, website visits, and conversion rates are all indicators of digital marketing performance.

Joshi et al. (2025) observed that generative AI (GAI) is an emerging field. Its impact on marketing is clear, with limited academic evidence on its use in Digital Marketing. This study fills the gap by exploring drivers and barriers of GAI in DM. Using Behavioral Reasoning Theory (BRT), it validates earlier findings and builds a conceptual model. The model shows factors shaping attitudes toward GAI adoption to improve customer experience. The study used a qualitative inductive approach. Expert interviews were conducted to explore "reasons

for" and "reasons against" using GAI in DM. Transcripts were coded manually. A thematic analysis was then carried out using BRT as the framework. Findings reveal four adoption themes: innovation, creative content, speed and efficiency, and personalization with predictive analytics. Five barriers were also found: ethical and intellectual property issues, security risks and deepfakes, weak learning ecosystems, poor data quality, and reduced manpower needs. The study shows how GAI shapes customer experience in DM. It contributes by proposing a conceptual framework, examining adoption drivers and challenges, and offering a research agenda. These insights help researchers, marketers, and academics understand the fast-changing role of GAI in DM.

Li et al. (2024) examined how AI-powered recommendations affect click behavior. Three experiments were done with college students. The results showed that AI recommendations increase click rates. Perceived benefits influence user behavior. Privacy concerns reduce the effect of AI on clicks. AI personalization also affected how users responded to the recommendations. Purnomo (2023) studied how digital marketing boosts e-commerce sales conversions. It was qualitative research. Data came from listening and recording sessions. The analysis used data reduction and interpretation. The findings showed that digital marketing strategies increase traffic and sales. Key methods include SEO, content marketing, social media, paid ads, personalization, UX design, video, and reviews. Iyelolu et al. (2024) explored AI's role in personalized marketing and conversion. The study reviewed past literature, case studies, and data. Findings showed AI improves targeting and timing. This leads to higher engagement and conversions. AI's ability to analyze data in real time supports strategy updates. It helps optimize campaigns and saves marketing costs.

The studies show clear benefits of using AI in marketing. Li et al. (2024) confirmed that AI recommendations increase user clicks. Purnomo (2023) showed that various DM techniques can raise traffic and conversions. Iyelolu et al. (2024) found that AI improves targeting, boosts engagement, and saves costs. Together, the studies show that personalized and data-driven marketing strategies can produce strong results. However, most of the evidence is based on simulations or case studies. More empirical and diverse data could further strengthen these findings.

5. Results and Discussion

On the one hand, some of the reviewed studies offer insights into how AI perceived usefulness (PU) influences AI adoption intention. On the other hand, some others focused on the influence of using and adopting AI on marketing performance.

Many studies confirmed that AI helps marketers in the Saudi Arabian context (Mashat & Mahmoud, 2020; Basri, 2020; Ahmed, 2023; Ben Khalifa et al., 2023; Badghish & Soomro, 2024) and globally (e.g., Salah & Ayyash, 2024; Wang et al., 2023; Al Khaldy et al., 2023). It enhances personalization, automates tasks, increases efficiency, and thus increases the willingness to adopt such AI tools. Most of the studies used TAM, UTAUT, or other acceptance models. They found that PU, ease of use, and trust influence AI adoption intention. However, most of the evidence remains context-specific. For example, some focused only on professionals in Bangladesh (e.g., Hasan Emon et al., 2023) or consumers in India (e.g., Giri et al., 2019). Additionally, there is a clear gap. No observed studies have extended the TAM to explain how adoption intention affects digital marketing performance. This connection remains under-researched, especially in the Saudi Arab context. More empirical work is needed to understand how the intention to adopt AI tools is related to the expectation of better marketing outcomes.

Several studies have explored the link between AI adoption and marketing performance. They show that using AI can improve marketing results. In Saudi Arabia, Basri (2020) found that AI-assisted social media marketing impacts SME performance, while Badghish and Soomro (2024) confirmed that AI adoption influences SMEs' sustainable business performance. Worldwide, Ifekanandu et al. (2023) showed that AI impact on sales and market share growth in Nigerian manufacturing firms. Wijayanto et al. (2023) assured that chatbot adoption affects customer satisfaction in Indonesia. Chatterjee et al. (2021) indicated that AI-CRM affects firm performance in India.

The RACE framework was also used in several studies (Papastefanou & Papaioannou, 2024; Patel, 2024; Rautela, 2021; Dilami et al., 2021). Researchers applied RACE to plan, analyze, or assess marketing strategies. Studies showed that RACE supports structured digital marketing. Just one study combined PU of AI with RACE (e.g., Papastefanou & Papaioannou, 2024). They examined how AI tools, specifically ChatGPT or Canva AI, fit within RACE stages. However, they did not fully explain how PU of AI in RACE leads to adoption intention. Nor did they test how that affects performance.

The reviewed studies have two streams. First, some studies show how perceived usefulness and perceived ease of use influence AI adoption intention, which shapes the actual adoption. The other stream shows how AI adoption improves marketing performance. However, the two streams are not fully integrated. An extended TAM within the RACE framework is still missing. A conceptual model can address this gap. It can show how adoption intentions mediate the link between perceived usefulness and marketing outcomes. By extending the TAM model to involve marketing performance (see Figure 1) and integrating the extended model with RACE, this would add to theory. It would also make the practical implications clearer. In the Reach stage, PU of AI in the target supports the adoption of segmentation tools. In the Act stage, PU of AI in personalization increases the adoption of automation systems. In the Convert stage, PU of AI in predictive analytics drives adoption that improves conversion rates. In the Engage stage, PU of AI in chatbots and CRM systems enhances adoption that supports customer loyalty. A conceptual model, when developed, will show how extended TAM connects with each RACE stage. This will clarify the path from adoption intention to digital marketing performance.

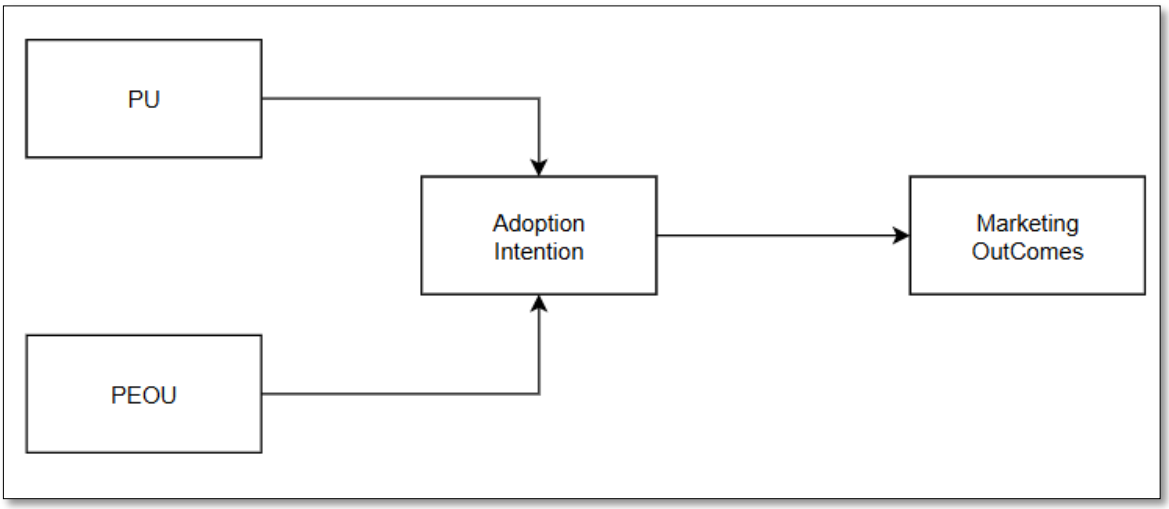


Fig. 1: Extended TAM model

Note: this framework can be applied to each stage of RACE; each stage has its corresponding usefulness and outcomes

The study has Policy Implications. SMEs in Saudi Arabia face barriers in AI adoption. Government support can reduce these barriers. Financial incentives are important. Grants or tax breaks can lower adoption costs. Training is also key. National programs can improve managers' AI skills. Innovation hubs can help. They provide spaces to test AI and share knowledge. Clear guidelines are needed. Rules on ethics, data, and trust will build confidence. These actions will support SMEs. They also align with Vision 2030 goals.

6. Conclusion and Future Work

The literature shows that AI plays a key role in digital marketing. It helps with personalization, customer engagement, and improving results. Many studies have found a link between AI adoption and better marketing performance. They do not test the full link from AI usefulness to adoption and performance. No studies were found to extend TAM to explain this path clearly. The role of adoption intention or marketing performance is often missing. Also, the RACE framework is rarely combined with TAM in these studies. This leaves a gap in the research, especially in the context of Saudi Arabia. Future work should test these links using empirical data. Researchers can use surveys and analyze the results with SEM. This will help show how AI usefulness leads to adoption intention. It can also prove how this intention boosts marketing performance. The results will help businesses use AI more effectively.

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