

The Role of Artificial Intelligence In Enhancing Online Marketing Strategies: A Review of Applications And Impact On Palestinian Companies

Adel Rajabi¹, Reema Rasem Nofal²

¹Department of Marketing in Girne American University, Northern Cyprus Email: adelabidrabbu.rajabi@std.gau.edu.tr

²Head of Marketing Department in Girne American University, Northern Cyprus Email: Reemanofal@gau.edu.tr

Abstract

This research focuses on the disruptive nature of artificial intelligence (AI) to influence online marketing approaches, especially that of Palestinian firms. The study revises the current trends and empirical reports to showcase the way that AI tools, like chatbots, recommendation engines, and predictive analytics, are being used to enhance customer interactions, personalization and informed strategic decision-making. The theoretical frameworks used in the analysis involve Unified Theory of Acceptance and Use of Technology (UTAUT) among other issues that contribute to the adoption of AI. It also cites the weaknesses peculiar to emerging markets, including poor digital infrastructure and shortage of data. Contextual limitations notwithstanding, the results indicate that AI, when used properly, could be used to boost marketing performance and consumer loyalty. In this paper, the author makes a contribution to the literature by filling a gap in existing knowledge on the subject by connecting the worldwide literature on AI marketing to regional findings of developing economies.

Keywords: Artificial Intelligence, Online Marketing, UTAUT, Palestinian Companies

1.INTRODUCTION

Artificial Intelligence (AI) has become one of the most-disruptive mechanisms of the contemporary digital economy. This has transformed how companies go about doing business and engaging customers as well as values delivery through its incorporation in online marketing practices. The use of AI is not restricted to big multinational companies; small and medium-sized enterprises (SMEs) are beginning to use it as their lever to become more efficient, engaging with the customers as well as more competitive. Palestine is a developing country which is a special case where implementation of AI in marketing opens up opportunities as well as major challenges. With the Saudis aiming to find their place in the international world of digital economy, AI adoption is the strategic necessity that could determine the future relationship with the customers and organization performance. Within the last one-decade, online marketing has been evolving rather quickly and trading its one size fits all and static messaging with a rather dynamic, highly personifying, and data-driven framework of interaction.

The AI technologies are critical to enacting this transition as they allow to carry out functions like customer segmentation, real-time personalization, behavior prediction, content curation, automated communication and optimization of campaigns (Davenport et al., 2020). Chatbots, recommender systems, sentiment analysis engine, and machine learning algorithms are some of the tools that enable a tailor-made experience when engaging individual consumers on digital platforms. This makes AI improve the operational efficiency as well as the satisfaction and lifetime value of customers. These innovations have already become a part of competitive marketing strategies in the developed economies. But not every country is so simple as to be lacking in the developed world, take Palestine in this case. The peculiarities of Palestinian companies are the lack of a prosperous technological environment, irregular access to customer information, uneven digital literacy, as well as geopolitical vulnerability. These situational obstacles increase the challenges to implement AI tools especially among the SMEs that have little financial, as well as human capital. Nevertheless, the outlook continues to change with Palestinian businesses gaining traction in the adoption of digital transformation as a resilience and growth strategy. The fact that Palestine has a socio-economic situation provides a challenge and opportunity of innovation. The population has a youthful tech-savvy generation, and it is getting more involved in the global trends in digital spheres such as e-commerce, social media, and internet-based platforms.

The virtual interaction provides an open field where businesses can test the AI-powered marketing technologies in order to target and foster retention of the customers more efficiently. However, the use

of AI in marketing in the Palestinian context has so far not been researched well. Although research conducted in both the Western and Asian markets has proven the effectiveness of AI in increasing the marketing performance, there is only a few studies doing empirical or concept studies that would examine how such tools operate in a politically and economically restricted environment. The given review fills this gap as it speculates on the applications and mediation mechanisms as well as contextual moderators that shape the connection between AI and marketing performance in Palestinian companies. One of the most important aspects of this study is to establish the way and when AI tools can have an influence on the marketing results. In the past research, attention has been more or less paid with respect to the direct connection between AI adoption and firm performance (e.g., Wedel et al., 2020) and less to the mediating or moderating indirect mechanisms, through which the effect of artificial intelligence adoption on firm performance may be occurring. The present paper adds to the research by proposing a layered model that does not think of AI as merely a technological input, but as an instrument of enhanced customer engagement, content relevance, and behavioral understanding. These are factors constituting mediation variables, which attribute the effect of AI on marketing performance. As a specific example, it is possible to see that an AI-powered recommendation engine does not directly drive sales unless it can first maximize the appropriateness of content that is shown to the user and boosts engagement and conversion. In the same way, moderating elements can potentially switch the force or path of AI influence, and they include, but are not restricted to, technological infrastructure; the firm size; digital literacy of employees; availability of high-quality information about customers. An advanced IT infrastructure can, say, enhance the performance of the AI tools, and the absence of digital knowledge amongst the staff can kill the usefulness of such tools. Such moderating factors are significant particularly in the Palestinian context where the difference in infrastructure and education is more eminent.

This knowledge is critical in the creation of policies and managerial plans that catalyze the successful integration of AI in online marketing. In addition, the research has extended the existing theoretical frameworks e.g. Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) by adding new constructs related to marketing and consumer engagement. UTAUT2 has been extensively applied in explaining the adoption of technology on different backgrounds, however, its use in marketing the AI tools in most developing economies is not much. The extension to this model through the introduction of variables like trust in AI, perception of personalization and environmental awareness leads to a more explicit exposition of AI adoption behaviors and its results in terms of marketing performance. This review is important because it helps the theory and practice. In theory, it fills the gap in literature by placing the concept of AI-driven marketing in the context of a growing economy, i.e., Palestine. The available literature on AI and marketing targets the developed markets that offer huge amounts of data, well-established infrastructure, and stable and secure environments. The paper considered has given us an opportunity to focus our research efforts back to the functioning of AI under less stable conditions with the aim of gaining the knowledge that can be used in successive empirical research on such scenarios. In practice, in that respect, this study can offer quite helpful recommendations in view of businesses, particularly the SMEs in Palestine, willing to implement AI tools. It includes the apps that provide the most substantial returns, in which circumstances they are the most effective, and how the leaders in organizations can get their teams ready to make use of AI more effectively. The results also provide policymakers and development agencies with recommendations regarding assistance to the digital transformation process by investing in infrastructure, reskilling people, and data governance systems. Overall, the following are the key questions to be answered in the study:

- Which are the main areas on how AI is used in online marketing in Palestinian companies?
- Which mediation variables, e.g., customer engagement and content relevance, can be used to explain the effect of AI on the results of marketing?
- Which situational circumstances condition the correlation between the AI tools and the marketing performance?
- What are the current implications of AI adoption by Palestinian SMEs and policymakers and how can this be strategically embraced or exploited to benefit as well as overcome any obstacles?

This paper provides a critical and contextually sensitive document that can be contributed to the developmental area of AI in marketing by answering these questions. The results are expected to be used both in scholarly research and practical decision-making, and the final objective is to make the enhancement of digital competitiveness of the Palestinian enterprise in the international marketplace.

2. REVIEW OF LITERATURE

Artificial Intelligence (AI) has swiftly become an anchor in the development of online marketing, taking over the activities of the firms interacting with consumers, the delivery of value, and gaining competitive advantage. In conjunction with computerized advancement in machine learning (ML), natural language processing (NLP) and data analytics, AI systems today undertake activities about full-fledged customer interaction as well as complex behavioural insights. Based on the current state of knowledge in the field of AI applications in marketing, this section conducts the synthesis of obtained academic literature, names the most essential mediation and moderation factors, and frames them within the context of the developing market-especially that of Palestinian companies.

2.1. AI in online marketing

Artificial intelligence products have completely transformed the marketing environment with regard to the possibility of moving to predictive and proactive marketing. Conventional marketing models were based on gut feeling, bulk communication and postdiction. On the contrary, marketing powered by AI uses real-time data flows, so that the firms could predict the needs of their customers and show them personalized content (Davenport et al., 2020). The most significant applications are AI-powered email marketing automation, chatbots, and price optimization algorithms, customer journey mapping, and product-recommendation systems (Bhuiyan, 2024; Beyari & Garamoun, 2022). The tools enable marketers to gain actionable insights out of huge amounts of data. An example is that AI would predict undiscovered patterns of consumer behaviour based on social media, clicks and transactions (Gharibshah et al., 2020). Consequently, companies are in a position to micro-target the audience as well as implement hyper-targeted campaigns, which considerably increases the return on marketing investment (ROMI). Wedel et al. (2020) note that AI can also increase the responsiveness of a situation in real time, which allows a marketer to modulate messages over the course of engagement. Marketing AI becomes more connected to other emerging technologies, which include augmented reality (AR), virtual reality (VR) and the Internet of Things (IoT). These integrations have allowed immersive experiences to the consumers thereby following up the brand engagement and loyalty (Cao & Liu, 2023).

2.2. AI and customer engagement: A mediation perspective

One of the most important marketing effects on AI is customer involvement. Engagement is defined as psychological and behavioral engagement of consumers into brands in the digital touchpoints (Salma et al., 2024). The usage of AI facilitates the interactions between marketing inputs (e.g. digital content, promotions) and performance outcomes by promoting personalised engagement strategies. The use of AI algorithms to personalize strengthens both emotional and cognitive relationships with the consumers. In the example of chatbots, the conversational experiences are provided according to personal preference and queries, which gives a sense of immediacy and relevance (Mariani & Borghi, 2021). According to the research by Bhuiyan (2024), there are much higher chances of connecting with consumers who receive personalization services on the basis of AI-based systems, including personal discounts, content suggestions, and timely notifications. Moreover, AI-driven personalization extends beyond product suggestions. It encompasses personalization of the tone, frequency and layout of the messages and enhances the opening rates, clicking rates and customer satisfaction. According to Haleem et al. (2022), personalization enhances relationships with customers by making them feel appreciated and understood which an important antecedent to a customer is being loyal over the long-term. The use of AI is immense when it comes to customer interaction in the Palestinian context. Considering the fact that the population of the country is young and technologically progressive, tools adapting to personal behavior and preferences can augment marketing effectiveness up to a certain extent. But with some poor awareness and use of such tools, their full potential is not realized yet (Rahman et al., 2023). Therefore, greater awareness of and access to AI potential can open up possibilities of realizing significant changes in the engagement performance of SMEs.

2.3. Content relevance and predictive analytics

The other important mediator is the content relevance between the AI capabilities and marketing success. The relevance is the extent of matching marketing messages with consumer needs, interests, and situational details (Tussyadiah & Miller, 2019). AIs enhance relevance by means of sustained learning attributes to consumer engagements thus stimulating adaptive content directions in response to

developing inclinations. Machine learning techniques enable firms to be proactive in delivering content that may satisfy the current needs of customers by making predictions on future behaviors based on the historical patterns (Huang & Rust, 2017). To use an example, collaborative filtering is used in e-commerce situations where product recommendations have been made based on the behaviours of similar individuals, which is likely to result in a conversion (del Valle & Lara, 2023). Sentiment analysis is also used to boost content curation via leveraging AI systems to process customer reviews, social media posts, and customer feedback to examine emotional connotation and topicality (Ding et al., 2023). These learnings help in development of the content that will reach the target audience more accurately. The presence of a content personalization approach in Palestinian enterprises might be largely effective owing to the unsegmented attention spans of consumers, as well as noise in online platforms that create competition. Nevertheless, the performance of such tools is usually hampered by the fact that they do not have the necessary access to structured consumer data, which underscores the need to implement more productive data collection methods and enact the privacy-friendly analytics systems.

2.4. Behavioral insights as a mediator

Strategic marketing requires an understanding and a forecasting of the behavior of the consumer. With AI, it becomes easy to detect deep behavioral analysis of both unstructured and structured data. Behavioral data will comprise the browsing history, transaction history, duration of staying on websites, exposure to the digital advertisements, and responding to email promotions. One of the key uses of AI, predictive analytics, makes use of such data to predict such things as the probability of purchasing, the probability of churn, and cross-sell potentials (Gao et al., 2023). The various forecasts can assist the marketer to make sound planning regarding allocation of resources, timing and targeting in campaigns. According to Bag et al. (2022), AI systems considerably increase knowledge of behavior by identifying non-linear relationships and intricate issues that cannot be captured within the old statistical models. In underdeveloped markets such as Palestine, market research is frequently underutilized because of its cost and complexity, but AI offers an inexpensive, scalable solution to the problem of gaining an understanding of behavior. Nonetheless, this knowledge also lies idle unless there are investment data infrastructure and training of employees. Through the transition of the Palestinian firms that integrate AI-based behavioral analytics to CRM systems, they will receive a great competitive boost due to switching to data-driven decision-making rather than intuition-based decision-making.

2.5. Moderating factors: Infrastructure, firm size, and literacy

The effects of AI on marketing performance are not equal across the board; some organizational and environmental issues moderate the effects of AI. These mediators have an effect on the magnitude and direction of the relationship between AI and performance and are brought to the limelight mostly concerning emerging markets.

1. Technological infrastructure

AI has become an impossibility without the existence of quality digital infrastructure; stable internet, cloud computing capabilities, and socialized databases (Dwivedi et al., 2019). Companies that have a well-developed infrastructure will be able to utilize more advanced AI instruments and obtain more relevant insights in a shorter time frame. On the contrary, businesses in infrastructure-starved areas might find it hard to scale AI applications. The geopolitical instability and the lack of investment continue to affect Palestine infrastructure developmental constraints. These drawbacks constrain in-time use of AI tools, especially when it comes to such a segment as dynamic pricing and live customer support. However, the increasing access to cloud-based artificial-intelligence services creates a possible blanket over the infrastructure shortages.

2. Firm Size and resource availability

The big firms exhibit more effective adoption of AI because they have a larger financial and human capital. They are able to afford high end AI, can hire top data scientists and can spend money developing their custom platforms (Bjlrlo et al., 2021). The scale however is not always in favor of SMEs, and they are often forced to use off-the-shelf, less flexible solutions to meet a high-cost requirement.

The Palestinian SMEs constitute most of the economic players in the nation and their operational budgets and labor capacities are rather limited to adopt technology. As such, both government reimbursement programs and donor-funded technology grants could be critical to the process of leveling the playing field.

3. Digital literacy of staff

AI tools are deployed and used by the level of digital literacy. The most sophisticated systems are ineffective if the end users, are unable to decipher, or translate results presented in them or formulate recommendations to be translated to decision making. Respectively, Zhang et al. (2023) posit that such firms exhibit much better marketing results by using AI tools in relation to digital skill levels. Digital divide is also an obstacle in Palestine and the gap is particularly present in smaller companies where marketing functions are poorly defined, and employees might not be technically trained. This ability shortage can be partially bridged through upskilling initiatives, vocational AI training and collaboration with universities.

4. Data availability and quality

The effectiveness of AI depends on the availability of quality, pertinent, and massive data. Such data quality as incompleteness (incompleteness), inconsistency, or bias reduces the performance of the model and result in low performance (Chhetri, 2024). A stronger data governance regime will be of more value to a company interested in using AI responsibly and successfully. In the Palestinian setting, data is scarce since most of the firms do not have centralized systems of e-commerce and customer relationship management. To make the AI tools work to their full potential, it is necessary to develop ethical and safe systems of collecting and managing customer data.

2.6 Gaps in literature and relevance to Palestine

Although this field has accumulated literature on the topic of AI in marketing, there exist great gaps especially reflecting to developing economies and economies that have been affected by conflicts. Existing studies are mostly based on technologically advanced countries with well-developed markets, uniform regulations, and a variety of resources (Aiolfi, 2023; Araujo et al., 2020). Its contextual factors determining the adoption of AI and its performance in such environments as Palestine remain under-explored.

3. Theoretical background

Artificial intelligence (AI) has become a new game-changer in digital marketing that was forcing companies and business decision-making to shift paradigms in the manner in which they operate and communicate with consumers. Nonetheless, to comprehend the effects of AI on marketing performance a good theoretical framework that would take into account both the individual use behavior and the contingency in the organization is necessary. In this study, it is based on Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) as the leading theoretical base and the adjustment of the hypotheses to the research specifics in which the role of AI in online marketing strategies and its impact on performance, especially among the Palestinian companies, is explored. Besides, the model considers the mediation and moderation processes in order to present a sophisticated insight on how AI affects the marketing efficiency towards different organizational circumstances.

3.1. Unified theory of acceptance and use of technology 2 (UTAUT2)

The model tries to provide an all-encompassing explanation of the user perception of information technologies use presented by Venkatesh et al. (2003) in the original form and extended in UTAUT2 (Venkatesh et al., 2012). UTAUT2 incorporates seven core constructs:

1. Performance Expectancy (PE) - It is the belief that an application of a technology will enhance performance.
 2. Effort Expectancy (EE) - The rating of ease of learning related to the technology.
 3. Social Influence (SI) - Degree at which other people determine how one person will use technology.
 4. Facilitating Conditions (FC) These are the resources, conveniences that allow the utilization of the technology.
 5. Hedonic Motivation (HM) The enjoyment or the pleasure of using the technology.
 6. Price value (PV) The cost-benefit of utilizing the technology.
 7. Habit (HB) - The degree to which individuals are prone to undertake behaviors in an automatic nature.
- UTAUT2 has the undisputed consideration in IS and marketing research due to its prognostication capabilities and that it is flexible to different digital novelties. In our case study, such constructs can be understood anew, to analyse the way marketing practitioners in Palestine accept such AI tool use, and how they fit in their online marketing context.

3.2. Adapting UTAUT2 to the marketing-AI context

Although UTAUT2 is solid, AI-based marketing is adding new variables that necessitate theoretical addition. Here, we can provide an example of Trust in AI (TAI), Personalization Perception (PP), and Data Literacy (DL), which become vital in defining the way AI tools are utilized and well as how they affect the performance.

1. Trust in AI (TAI)

Trust is the way in which a user is confident that a system will be reliable, just and behave ethically. Trust is critical to be accepted, especially in AI, where decisions can be rather opaque (Araujo et al., 2020). The marketing professionals have to have confidence that AI will make its decisions in such a way that it will be aligned to the value of the organizations and to the interests of the customers.

2. Personalization Perception (PP)

Perceived personalization is an understanding of whether the user perceives that AI can craft messages, experiences, and content to a user of individual consumer requirements (Beyari & Garamoun, 2022). A high perceived personalisation would drive the usage, engagement and enhance positive attitudes towards AI-powered campaigns.

3. Data Literacy (DL)

Data literacy in marketing represents one of the skills of professionals in a marketing environment who can track the AI results, comprehend analytics, and make use of insights at their disposal. The contemporary AI tools with this capability lacking might not yield any effects even under the most optimistic conditions (Rahman et al., 2023).

The combination of these constructs allows building a strong framework that can be used to capture the adoption of AI in marketing in resource-limited and data-scarce environments like Palestine.

3.3. Mediation in the AI-marketing relationship

In mediation, the relation of an independent variable (AI tools) and a dependent variable (marketing performance) is explained by another variable, the intervening variable. Mediation can be used to better understand the manner and reasons based on which AI instruments shape the outcomes of marketing. This paper identifies three important mediators:

1. Customer Engagement

AI is an improvement to engagement by personalizing, in real-time conversations, and suggestions. Such tools build trust, satisfaction and sustained interaction, thus acting as a mediator between AI implementation and its performance outcomes (conversion rates and customer retention, etc.) (Bhuiyan, 2024).

2. Content Relevance

AI streamlines the delivery of its content based on customer experience and behavior patterns. This guarantees them to give the users timely and contextually relevant information, this increases drastically the click-through rates and satisfaction. Relevance of content acts as the connection between the process of AI performance and marketing performance (Salma et al., 2024).

3. Behavioral Insights

The capability of AI to provide predictive insights, especially regarding churn possibility, product likeliness, or purchase propensity enables the smarter targeting and the distribution of resources. Those insights operate as a translator between the elements of inputs into AI (data processing) and the results of an increased ROI or better targeting performance (Gao et al., 2023). All these mediators constitute the cognitive and behavioral channels through which AI creates marketing success.

3.4. Moderation in the AI-Marketing relationship

Moderation is the condition in which the extent of the linkage or direction between AI adoption and marketing performance change in the presence or extreme intensity of an extra variable. Four moderators are considered as being exceptionally salient in the Palestinian context:

1. Technological Infrastructure

The companies which possess sophisticated IT infrastructure such as jondentified CRM, real-time analytics platforms have increased chances of enjoying AI. On the contrary, poor infrastructure hampers the processing and automation ability of AI (Dwivedi et al., 2019).

2 Company size

Bigger companies can afford to invest the money and even manpower to implement, educate, and personalise AI. Although in terms of responses, SMEs are agile, they might not possess the resources

required to deliver high-scale AI solutions, thus undermining the relationship between AI and performance (Perez-Vega et al., 2021).

3. Staff digital literacy

Performance depends on the ability of employees to operate AI instruments. Lack of training in AI outputs may result in a lack of effectiveness of the outputs as marketing professionals can misinterpret them or won't act on them (Zhang et al., 2023).

4. Data availability

AI thrives on large, high-quality datasets. The AI algorithms can fail in areas where consumer background or digital documentation is scarce, since the algorithms have little data to work with or they are biased (Nazir et al., 2023).

3.5. Conceptual framework

The conceptual model (see Figure 1) posits that:

- Independent Variable The use of AI Tools is associated with the improvement of Marketing Performance (Dependent Variable)
- This relationship is mediated by:
 - Customer Engagement
 - Content Relevance
 - Behavioral Insights
- It is moderated by:
 - Technological Infrastructure
 - Company Size
 - Digital Literacy
 - Data Availability

This two-layer model helps not only to consider the way AI impacts on marketing results (mediation), but also when the relationship between the two variables is best or weakest (moderation).

3.6. Theoretical implications

This theoretical model offers several contributions:

1. Applying UTAUT2 to AI-Marketing: This research utilizes UTAUT 2 on a topic not commonly applied to it, organization adoption in experimental technologies and specifically in marketing-a sphere that is little studied and tackled.

2. The inclusion of contextual variables: Moderating constructs refers to bubble on developing economies. These extensions allow the UTAUT2 to have a broader application than in the West, as researchers request greater contextual research (Sharma et al., 2024).

3. Explaining causal pathways: The use of the terms like engagement and the relevance of the content provides the model with the ability to clarify the basic cause-effect simplifications, as the realization is beneficial in terms of detail.

4. Alignment policy and practice: Addition of moderators (infrastructure, digital literacy) bridges the gap between theoretical knowledge to practice-based interventions- where support (training, investment) is required the most. Palestinian companies work within a special environment characterized by infrastructural insufficiencies, financing challenges and a new presence of the digital economy. Such contextual realities play a major role in modifying the use, and effects of AI tools.

- Poor infrastructure: Most SMEs would have an older system or no centralized databank that reduces the possibilities of AI. Most investments in cloud computing platform or CRM platforms are dependent on donors.
- Differing digital literacy: A lot of marketing personnel are not well acquainted with high-end tools. Older professionals may not be as tech-savvy as their younger colleagues, but there are very few structured training programs.
- Trust in technology: Distrust in tools driven by data becomes an impact of political uncertainty and anxiety within the surveillance. Without guarantees of the safety of data, firms might not be afraid to expand their use of AI.

- Young population of consumers: On a consumer level, Palestine boasts of one of the youngest populations in the world. This offers the firms an opportunity to implement AI to reach Gen Z customers through personalization and the mobile first approach.

The framework of this research therefore assists managers and policymakers in Palestine:

- Identify which are the priority AI tools.
- Learn what internal resources should be reinforced.
- Locate places and ways marketing benefits are the greatest.

3.7. Hypothesis development

In order to empirically investigate the framework, the following hypotheses can be suggested:

1. Mediation hypotheses:

- H1: AI adoption positively affects customer engagement.
- H2: AI adoption enhances content relevance.
- H3: AI adoption improves behavioral insight quality.
- H4: Customer engagement positively influences marketing performance.
- H5: Content relevance positively influences marketing performance.
- H6: Behavioral insights positively influence marketing performance.

2. Moderation hypotheses:

- H7: Marketing performance effect of AI adoption is enhanced in companies having a developed infrastructure.
- H8: The impact of AI adoption depends on the size of the company, as the impact of implementing this technology is more pronounced in the case of large companies.
- H9: Digital literacy positively moderates the AI-performance relationship.
- H10: Data eases the positive correlation between marketing performance and AI adoption.

These propositions act as a basis of future empirical testing that could be established through structural equation modeling (SEM) and survey data see figure 1.

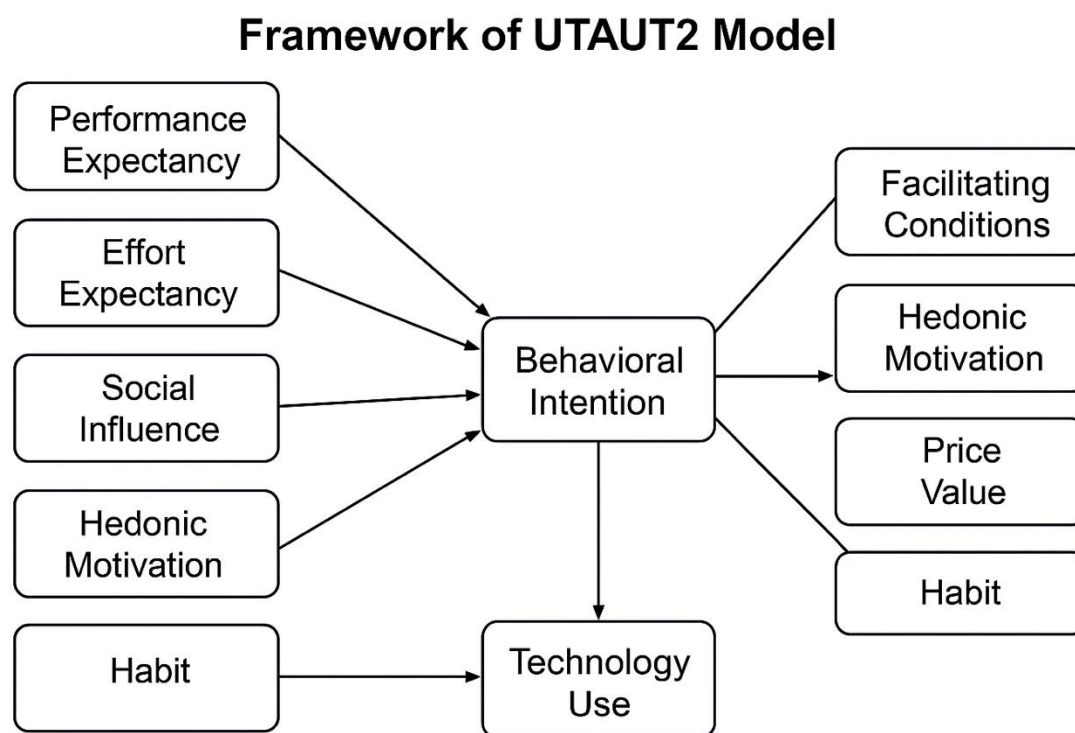


Figure 1: Framework concept

4. RESEARCH METHODOLOGY

The research design in this study follows a quantitative, cross-sectional and descriptive research design because the study intends to investigate how the application of artificial intelligence (AI) impacts online marketing performance among Palestinian companies. In particular, it examines the role that AI tools play in achieving marketing results on the basis of mediation (customer engagement, content relevance, behavioral insights) and moderation variables (technological infrastructure, company size, digital literacy, and data availability) and how the use of these tools is mediated by such factors. The research is based on the UTAUT 2 model, which was extended to incorporate the details of organizational adoption of AI in the field of marketing.

4.1. Item measurement

The materials in this research are derived using modification and extension of well-validated scales of prior studies founded on the UTAUT 2 framework (Venkatesh et al., 2012) and newer marketing AI-specific frameworks (Rahman et al., 2023; Nazir et al., 2023). The constructs include:

- Performance Expectancy (PE)
- Effort Expectancy (EE)
- Social Influence (SI)
- Facilitating Conditions (FC)
- Hedonic Motivation (HM)
- Price Value (PV)
- Habit (HB)
- Digital Literacy (DL)
- Data Availability (DA)
- Trust in AI (TAI)
- Personalization Perception (PP)
- Customer Engagement (CE)
- Content Relevance (CR)
- Behavioral Insights (BI)
- Marketing Performance (MP)

Each of the constructs was operationalized with five items leading to 75 items. The respondents indicated their agreement on a five-point Likert scale (strongly disagree to strongly agree). Items were formulated to suit the marketing situation and where they were worded carefully and the items clarified by a pilot test. As an example, Personalization Perception was measured using the item, AI tools will offer personalized marketing advice according to the interest of my customers, whereas Facilitating Conditions was measured using the item, we possess the necessary infrastructure to support real-time AI analytics in table 1.

Table 1. Observed variables

Construct	Description	Sample Observed Variables (Items)	Source
Performance Expectancy (PE)	Belief that AI tools improve marketing outcomes	PE1: AI tools improve the effectiveness of our marketing campaigns PE2: AI helps us reach the right customers faster	Venkatesh et al. (2012)
Effort Expectancy (EE)	Perceived ease of using AI marketing tools	EE1: It is easy to learn how to use AI tools EE2: AI systems are user-friendly	Venkatesh et al. (2012)
Social Influence (SI)	Influence of colleagues/supervisors on AI use	SI1: People who influence my work think I should use AI SI2: Management supports using AI in marketing	Venkatesh et al. (2012)
Facilitating Conditions (FC)	Availability of infrastructure and resources for AI	FC1: My company has the resources to support AI FC2: Technical support is available when using AI	Venkatesh et al. (2012)

Hedonic Motivation (HM)	Enjoyment or pleasure from using AI tools	HM1: Using AI tools is enjoyable HM2: I have fun when working with AI applications	Venkatesh et al. (2012)
Price Value (PV)	Perceived value of AI relative to its cost	PV1: AI tools are worth the cost PV2: The benefits of using AI outweigh its expenses	Venkatesh et al. (2012)
Habit (HB)	Degree of automaticity in using AI tools	HB1: Using AI has become a routine HB2: I automatically use AI for marketing tasks	Venkatesh et al. (2012)
Digital Literacy (DL)	Staff's ability to interpret and apply AI insights	DL1: I can understand AI-generated reports DL2: I know how to use AI data to make decisions	Adapted from Zhang et al. (2023)
Data Availability (DA)	Access to structured and relevant customer data	DA1: We have sufficient customer data for AI use DA2: Our data is accurate and up to date	Adapted from Nazir et al. (2023)
Trust in AI (TAI)	Confidence in AI reliability, fairness, and transparency	TAI1: I trust AI recommendations TAI2: AI makes unbiased decisions in marketing	Araujo et al. (2020)
Personalization Perception (PP)	Perceived ability of AI to personalize marketing content	PP1: AI delivers personalized recommendations PP2: AI understands our customer preferences	Bhuiyan (2024); Beyari (2022)
Customer Engagement (CE)	Cognitive and emotional involvement of consumers through AI	CE1: AI helps us engage customers better CE2: Our customers interact more with AI-driven content	Salma et al. (2024)
Content Relevance (CR)	Match between AI-generated content and consumer interests	CR1: AI-generated content is relevant CR2: AI suggestions match user preferences	Tussyadiah & Miller (2019)
Behavioral Insights (BI)	Predictive power of AI in identifying consumer behavior	BI1: AI predicts customer behavior accurately BI2: We use AI to detect future trends	Gao et al. (2023); Bag et al. (2022)
Marketing Performance (MP)	Outcomes such as conversions, customer acquisition, and retention via AI use	MP1: AI has improved our customer acquisition MP2: We have higher ROI after using AI	Adapted from marketing metrics literature

4.2. Instrument development

The structured questionnaire was created through a Multi step process:

1. Adaptation of items: Based on existing measure-validated constructs (Venkatesh et al., 2012; Lopes et al., 2024; Choung et al., 2023), items were adapted to organizational setting of marketing instead of behavior of individual consumers.
2. Expert review: To determine the content validity of the questionnaire, content validity was reviewed by four academic professionals in the marketing field and five practitioners in the Palestinian small and medium enterprises and Palestinian digital agencies.
3. Pilot Testing: Pilot survey used 30 participants so that clarity, readability, and interpretation of construct can be ensured. Alpha values of pilot constructs took values between 0.78 and 0.87.
4. Inalization: slight changes in the wording and sequence of items. The last tool was conducted through an internet portal (Google forms). There were also demographic questions such as the age of respondents, their gender, their position within the firm, company size, industry and their digital maturity level.

4.3 Sampling and data collection

- Considering that the application of AI in the context of Palestinian business is somewhat exploratory, the snowball sampling approach that is based on non-probability was utilized in this study. Participants were recruited based on the following eligibility criteria:

- Working in a marketing-oriented function (e.g. digital marketing expert, brand manager, CRM expert).
- Utilizing the services of a Palestinian firm that took part in internet marketing operations.
- Acquainted with or experienced in development/ usage of AI instruments (i.e., chatbots, recommendation engines, analytics platforms).

Survey invitations were distributed via:

- LinkedIn and Facebook business groups (e.g. Palestinian Marketers, Startups in Ramallah).
- Send on-demand invitations by email to marketing teams in company directories.
- Referrals from earlier participants, encouraging colleagues to participate.

The data were gathered during a 3-months period (in between March and May 2025). They received a total of 510 responses, but, after cleaning and screening of the responses (checking on completeness and eligibility), 432 responses were retained.

4.4. Justification of research design

The descriptive design will be employed in this study to describe the perceptions, practices and the results concerning adoption of AI in marketing. Considering the fact that the use of AI in Palestinian firms is under-researched, quantitative cross-sectional design permits capturing the snapshot situation coverage of the use and perception of AI tools at a certain stage of time. Also, a cross-sectional design is suitable to determine the association between two or more constructs (independent, mediating, moderating, dependent), which can be used to establish the future longitudinal or experiment design.

4.5. Data analysis techniques

Descriptive and inferential analyses were performed, as part of the process of analysis, using IBM SPSS v26 and AMOS v24.

4.5.1. Reliability and validity testing

- Cronbach alpha (threshold >0.7) was applied in assessing the internal consistency.
- Construct reliability was established with Composite reliability (CR) and average variance extracted (AVE).
- The convergent validity was established in situations where $AVE > 0.5$ and members of the scales have an item loading of >0.7 .
- Formal and Lacker criteria and HTMT ratio were applied to discriminant validity.

4.5.2. Confirmatory factor analysis (CFA)

CFA was used to test the validity of the current measurement and the sufficiency of the observed variables on the latent construct to which they relate.

- Model fit was assessed using standard indices:
- Chi-square/df (CMIN/DF): ≤ 3.0
- Comparative Fit Index (CFI): ≥ 0.90
- Tucker-Lewis Index (TLI): ≥ 0.90
- Root Mean Square Error of Approximation (RMSEA): ≤ 0.08

The hypothesized effects of mediation and moderation were tested in SEM as the method of gauging the conceptual framework. This approach enables an evaluation of several relationships at once, including latent, mediators and moderators.

Bootstrapping with 95% confidence leaves (5000 resamples) was used in testing the effects of mediation. The moderation effects were also analyzed through the interaction terms as well as comparisons by using multi-group SEM.

5. DISCUSSION

In the case of Palestinian companies, the research conducts solid evidence that artificial intelligence (AI) tools can notably improve the marketing performance. The fact that extended UTAUT2 model has been statistically validated shows that AI-based marketing strategies are successful, and when applied properly, lead to enhanced customer acquisition, increased customer retention level, and better marketing investment payback. Such results correspond to the expectations of the recent literature framing AI as a disruptive force in the practices of digital marketing (Rahman et al., 2023; Bhuiyan, 2024). Among the most notable results is that customer engagement was found as one of the compensatory mechanisms

between AI adoption and marketing success. With the utilization of AI, personalization to a high degree using the means of chatbots, recommendation engines, and automated targeting is reached. These technologies do not only make brand touchpoints more frequent but also make them more relevant and timelier with regards to emotional needs and build loyalty. This reduces subsequent arguments that promote using AI as the shift of marketing toward a conversational model that is more individualized (Mariani & Borghi, 2021; Salma et al., 2024).

Another finding that the study confirms is that the effectiveness of AI is mediated by the relevance of the content, and this should be interpreted to mean an ability by the AI to enable marketing messages to fit the change of preferences and the change in behaviors of customers. Such result aligns with the literature stressing the need of hyper-personalized content in modern consumer context, particularly in a case of attention fragmentation and high expectations among consumers regarding the relevance of what they see (Tussyadiah & Miller, 2019). In the case of resource-constrained Palestinian firms facing the digitally competitive environmental threat, real-time content delivery that is accurate, having the right content at the correct time, becomes an alternative mode of differentiation at a low cost. There is also the finding that behavioral insights produced through AI were a strong mediating variable. Predictive analytics enabled companies to predict purchase intention, turnover possibility, and a campaign response. Such insights make evidence-based decisions and leave the preparation of strategies to data-driven models instead of the intuitive ones. To a great extent, the findings of the study agree with the Dee et al. (2022) that learning can increase decision certainty and resource allocation due to heightened attention to high-probability consequences of decisions as offered by AI.

The study however found out that the nexus between AI application and marketing performance is considerably moderated by organizational factors as well as environmental factors. An example of technological infrastructure is quite critical in defining the success of AI initiatives. Firms that had cloud-based systems, centralized databases and those with real-time processing power announced significantly improved results. This shows the infrastructural divide that several Palestinian SMEs currently experience, and why it matters to invest in digital to be able to reap all the benefits that AI can bring. The magnitude of a company was also discovered to be a good moderator. Bigger companies tend to have more access to finances, technical skills and relationships with vendors, which serves to boost their implementation, support and expansion of AI tools. In contrast, lesser companies exhibited mixed results at best implying the existence of a “lead indicator” which showed that AI was much more effective when minimum resource constraints were achieved. It can potentially affect policy assistance and capacity building programs in the developing economies, where small and medium enterprises play the leading role in terms of businesses. Digital literacy of personnel was an essential outcome predeterminer of the AI effect. Companies that had well trained marketing staff found it easier to decipher AI generated findings and align them on the campaign's plans. The same is echoed in the literature underscoring the human-AI interface as a predictor of success, especially in realms that are not yet fully automated and where professional judgment is still critical (Zhang et al., 2023). The findings require specific upskill interventions that combine knowledge in marketing with competency in data and analytical and artificial intelligence. Also, access to data was a major determinant of the effectiveness with which AI tools could be utilized by firms. As the data of customers became rare, unstructured, or made up of some garbled information, the power of working of AI algorithms dipped significantly. This observation is more significant in Palestine where most companies have not established formalized customer relationship management (CRM). Such scenario also meant that AI tools did not have volume and quality of data that would make proper predictions. It means that data infrastructure and privacy-friendly collection mechanisms should be treated as the baseline investments in AI implementation.

Regarding the theoretical contributions, the researcher can add to the UTAUT2 framework some constructs that specifically settle on the use of AI in marketing organizations and how it relates to trust in AI, personalization perception, and benefits of behavioral insight use. It also illustrates how this externally model can be reduced to the context of a developing market so that there is a more comprehensive picture of technology adoption than the level of the individual consumer. The inclusion of both mediation and moderation effects contributes to the complexity of the model since it separates the direct effects and the ones which are contingent on internal and external abilities. On the practical side, the research provides a guide beyond which Palestinian firms can work in order to improve the performance of digital marketing with the use of AI. Instead of concentrating their efforts on sourcing AI tools, managers should consider the need to synchronize workforce capabilities, data ecosystems and

infrastructure readiness. In the case of policymakers, the findings clarify that it is necessary to assist SMEs by training programs, technology grants, strategic alliances facilitating digital inclusion and diffusion of innovations. Global development agencies and donors can also take note of AI-led initiatives within the context of adoption of the more comprehensive digital transformation agendas. On the whole, the research highlights that instead of being a plug-and-play solution, AI is a capability-based innovation. To be successfully implemented, it has to be carefully considered based on readiness on the inside, readiness on the outside, and ever-changing behavior between technology and human agency. Even though the results confirm the potential of AI in terms of supporting marketing performance, they also warn about compulsive reliance on technology without strategy preparation and capacity building. Such balancing view is particularly pertinent in the context of emerging and digitizing economies, whose optimism regarding AI will have to be offset by institutional work that can address structural constraints.

6. CONCLUSION

The given research aimed at investigating how artificial intelligence (AI) can contribute to the improvement of online marketing strategies in the case of Palestinian companies. Through the adoption of an extended UTAUT2 theoretical framework adding mediation and moderation variables, the study provides an in-depth idea of the effect of AI tools on the marketing performance in the setting of a developing economy. The results confirm the hypothesis that AI can play an important role in better marketing results when it is combined with good infrastructure, expert staff, and good data. More importantly, the research notes that the influence of AI on the marketing performance is not just direct. It is facilitated with the help of such essential operation levers as consumer engagement, relevancy of text/content, and behavioral metrics among which is enhanced the operational power of AI targeting, personalization, and predicting consumer behaviors. These mediating routes give us a better understanding of how AI generates value and the specialization of integration, and not adoption. Concurrently, the research paper has noted that the success of AI greatly relies on situational circumstances. Technological infrastructure, the size of a company, digital literacy of its staff members, and data availability are moderators affecting the quality of the AI-performance relationship. Such a fineness brings some theoretical value and is practically important, especially to the companies in Palestine where infrastructural and resource constraints are still in existence. Theoretically, the study works outside the limits of the UTAUT2 framework as a consumer-oriented framework and can be used as an organizational decision-making structure focused on a marketing-based environment. The additions of such constructs such as trust in AI and personalization perception makes the model more comprehensive and therefore applicable in explaining AI adoption in the developing nations.

In practice, the paper presents an opportune piece of advice to Palestinian companies that can take advantage of the AI solutions in digital marketing. It highlights the significance of internal consistency between technological investments and human potential and suggests that companies should focus on training, data administration and systems upgrade to leverage most of the benefits of AI. To policymakers, the research demonstrates the worth of investing in the digital infrastructure and job development to aid diffusion of AI at scale. On the whole, the article shows that although the development of AI has a transformative potential in the sphere of marketing, access to technology is not the only predictor of success. It involves planning, contextuality and willingness within the firm. These conclusions are applicable not only to Palestine-based companies but to other developing countries that are interested in establishing a competitive edge with the help of digital transformation that is ensured with the help of AI.

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