Research Article

Artificial Intelligence in Digital Marketing: Enhancing Brand Equity and Performance in India's Real Estate Sector

Mohit Agarwal[1] and Dr Nikita Singhal[2]

[1]Research Scholar, School of Commerce and Management, IIMT UNIVERSITY

[2]Associate Professor & HoD-BBA, School of Commerce and Management, IIMT UNIVERSITY

*Corresponding author: Mohit Agarwal

Abstract: In online marketing, artificial intelligence (AI) has proven to be a game-changer for business houses so that they can provide data-driven, predictive, and personalised approaches having significant effects on customer experiences. Opportunities and challenges both are present for AI-powered online marketing in the real estate sector in India, which is characterized by heavy competition, diverse customer expectations, and complex decision-making processes. This research investigates the contribution of AI in optimizing the effectiveness of digital marketing, its impact on firm performance and brand equity, based on theories related to technological adoption and brand equity. The research examines the contribution of AI-related technologies such as chatbots, recommendation systems, predictive analytics, and automated content curation to enhancing customer engagement, brand awareness, and revenue. It does so by polling 500 employees and decision-makers of Indian real estate firms in the country's National Capital Region (NCR). The findings show the most influential drivers of brand equity and customer trust that, in turn, improve business performance being AI-powered personalisation and predictive modelling. The competitive market role of artificial intelligence (AI) is emphasized by structural equation modelling (SEM), which confirms that AI in digital marketing is a significant mediator of the relationship between customer preference and firm performance. The research contributes to the growing literature on artificial intelligence in marketing by offering industry-specific empirical evidence from India, where real estate is technologically developed and economically relevant. Managers who seek to employ AI in digital marketing efforts to enhance brand placement and bring about long-term business development are provided with practical implications.

Keywords: Artificial intelligence, digital marketing, brand equity, firm performance, real estate sector, India, structural equation modeling.

INTRODUCTION

How firms engage with and serve their customers has been totally revolutionized in the past 20 years by the confluence of digital technologies and artificial intelligence (AI). Formerly restricted to websites, email marketing, and banner advertising, digital marketing has rapidly evolved into a very personalized, data-focused environment that maximizes customer interactions through the application of natural language processing (NLP), machine learning (ML), and predictive algorithms (Huang & Rust, 2018; Chintalapati & Pandey, 2022). This revolutionary context has seen artificial intelligence (AI) transform from a helper tool to a primary facilitator of marketing effectiveness, altering the customer experience as well as strategic choice.

One particularly fascinating context for exploring that transformation is the Indian real estate market. One of the largest drivers of the Indian economy, the industry is expected to become USD 1 trillion by 2030 and account for approximately 7–8% of GDP (KPMG, 2023). Yet, the industry is characterized by long purchase cycles, intense competition between companies, and intricate consumer decision-making. The diverse and information-dense requirements of Indian real estate consumers, who more and more depend upon online platforms for the search, comparison, and evaluation of properties, have often not

been fully addressed by conventional promotion strategies. Under such circumstances, AI-driven digital marketing offers a critical tool for surmounting information asymmetry, enhancing lead generation, enhancing customer satisfaction, and establishing long-term brand capital.

Artificial Intelligence in Marketing: A Theoretical Lens

There are a number of theoretical positions available through which the application of AI in marketing can be explained. Businesses' use of digital marketing through AI is determined by perceived utility, user-friendly nature, and conditions that enable, as follows from Technology Acceptance Models (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2012). In the same vein, the Resource-Based View (RBV) posits that predictive algorithms and AI-based data analytics are scarce, valuable, and hard to imitate resources that provide firms with sustainable competitive advantage (Barney, 1991). From the user's point of view, brand equity theory (Keller, 1993) provides a lens through which to analyze how AI-led engagement and personalisation strategies enhance perceived quality, brand loyalty, brand awareness, and brand associations. AI applications like chatbots that offer round-the-clock support, predictive content recommendations, and automated customer

profiling have a direct impact on consumers' perceptions of a brand's responsiveness and dependability in the real estate industry, where credibility and trust are crucial. These theoretical pillars highlight the importance of examining AI as a strategic enabler of brand equity and business performance, in addition to its potential as a technological advancement.

The Indian Real Estate Context

One of South Asia's most dynamic and competitive property markets is the National Capital Region (NCR) of India, comprising Delhi, Noida, Gurugram, Ghaziabad, and Faridabad. The market is highly fragmented and yet opportunity-laden, with a diverse range of customer groups, from middle-class end-users to high-net-worth investors. Developers and companies in the NCR region have to deal with challenges such as changing consumer tastes towards online content, fluctuating patterns of demand, and regulatory changes like RERA. Websites, smartphone applications, and social media are some of the online channels that Indian property firms have increasingly employed during recent years in order to interact and win new customers. Compared to industries such as banking or e-commerce, the sector's move towards AI-based digital marketing is a fledgling effort. Top players have begun to test the waters using AI instruments in customer profiling, lead scoring, and predictive pricing, but no systematic knowledge exists about how these instruments impact financial performance and brand equity (Simion & Popescu, 2023).

Although global studies have already demonstrated how AI is transforming marketing, there are not many sector-based research studies in India, particularly in the real estate sector, which is both economically and culturally significant. The available literature usually concerns customer-facing industries such as retail and hospitality (Lee et al., 2019) or the overall use of AI in marketing (Verma et al., 2021; Ziakis & Vlachopoulou, 2023). Conversely, this research bridges a huge research gap by considering only real estate firms in the NCR. Most prior studies are conceptual or qualitative in nature. Few have employed data-driven, empirical techniques such as structural equation modelling (SEM) to measure the impacts of AI-powered digital marketing on firm performance outcomes and brand equity factors. By plugging this research gap, the present study is both theoretically (by relating AI adoption with real estate brand equity) and practically relevant (by consulting companies on strategic AI adoption). This is the way the paper proceeds.

Research gap and rationale are identified in the next section, which is followed by clearly formulated research goals and hypotheses. As it focuses on SEM-based mediation analysis, the methodology outlines the sample design, measurement scales, and analytic methods. The results and analysis, such as model fit indices, mediation results, and descriptive statistics, are given in the subsequent sections. The managerial and theoretical implications, limitations, and avenues of future research are ultimately emphasized in the conclusion and discussion.

By doing so, the research presents an overall framework for understanding how AI-powered digital marketing strategies enhance firm performance and brand value within India's real estate sector, presenting valuable information for both practitioners and academics.

RESEARCH GAP

As one of the prime facilitators of marketing today, artificial intelligence (AI) allows companies to foresee future actions, streamline campaigns, and tailor customer interactions (Verma et al., 2021; Chintalapati & Pandey, 2022).

AI-facilitated solutions such as chatbots, recommendation systems, and predictive analytics have been shown to be effective in enhancing customer interactions and business performance across various industries (Ziakis & Vlachopoulou, 2023). Despite that, there are still several key gaps in the literature. On the first point, despite booming marketing AI research, there are limited sector-specific findings, especially in industries such as real estate that have long decision horizons and high information asymmetry. Most existing studies focus on financial services, e-commerce, or consumer goods (Haleem et al., 2022; Montoya et al., 2024). Though possessing unique complexities—high-value transactions, trust-building necessity, and segmented customers—it has not drawn much attention for studies in the Indian real estate sector, particularly in the NCR region. Secondly, existing work often stresses potential benefits without empirical validation and is qualitative or conceptual in nature. Only a few have quantitatively measured the impact of digital marketing supported by AI on business performance and brand equity. More comprehensive empirical insights are essential for scholars as well as practitioners.

Thirdly, the impact of mediation in this context has not been extensively researched. While scholars concur that AI influences brand performance, its mechanism by which AI-powered digital marketing translates consumer interaction into brand equity and subsequently into firm performance is unknown. Conceptional frameworks of technology adoption and brand value can be significantly advanced through the discovery of AI as a mediating variable between customer tastes and company performance. Finally, studies on the Indian organisational setting continue to remain under-represented in global scholarship. India's fast urbanisation and digital uptake in the real estate sector create a wealth of learning ground for understanding how emerging economy firms utilize AI to achieve a competitive advantage. Being a hub of real estate activity, the NCR region provides the ideal backdrop for the generation of context-relevant evidence that contributes to both local practice and global literature. The present research, in its attempt to empirically examine the role of AI in digital marketing, more specifically enhancing brand equity and firm performance in Indian real estate companies, is warranted by these gaps combined.

Research Objectives

Based on the identified gaps and theoretical foundations, the study sets the following objectives:

1. To examine the factors driving the adoption of AI-enabled digital marketing strategies in the Indian real estate sector.
2. To analyze the role of AI-enabled digital marketing in enhancing brand equity dimensions (brand awareness, brand associations, perceived quality, and brand loyalty).
3. To investigate the impact of AI-driven digital marketing on firm performance, including customer acquisition, revenue generation, and competitive positioning.
4. To test the mediating role of AI-enabled digital marketing between customer engagement preferences and firm outcomes.

Hypotheses Development
Drawing from the Resource-Based View (RBV) and Brand Equity Theory (Keller, 1993), the study develops the following hypotheses:
**H1:** Demographic factors of customers (age, income, education) significantly influence the adoption of AI-enabled digital marketing in real estate firms.
H2: Customer preference for digital engagement positively influences the adoption of AI-enabled digital marketing strategies.
H3: AI-enabled digital marketing has a significant positive impact on brand equity in real estate firms.
H4: AI-enabled personalized marketing campaigns positively influence brand awareness and customer trust.
H5: Among AI-enabled digital marketing modes, predictive analytics and personalized content recommendation are the most preferred by real estate firms.
H6: The adoption of AI-enabled digital marketing strategies has a significant positive impact on the performance of real estate firms.
H7 (Mediation Hypothesis): AI-enabled digital marketing mediates the relationship between customer engagement preferences and firm performance outcomes.

Conceptual Framework
Conceptual framework of this research amalgamates customer engagement preferences, AI-powered digital marketing, brand equity, and firm performance. Developing on RBV and Brand Equity theory, it supposes that AI adoption fosters one-of-a-kind capabilities that increase brand-related results and eventually convert into better firm performance.

Model Components:
1. Independent Variables: Customer demographics and customer engagement preferences.
2. Mediator: AI-powered digital marketing adoption.
1. Dependent Variables: Brand equity (composite construct: awareness, associations, perceived quality, loyalty) and firm performance (revenue growth, lead generation, market competitiveness).
2. Mediation Path: Customer engagement → AI-enabled digital marketing → Firm performance.
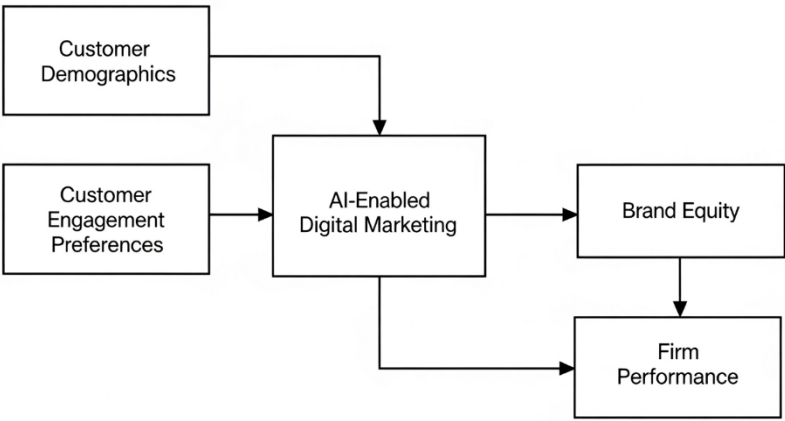
Figure 1: Conceptual Framework

This framework posits that AI-enabled digital marketing not only has direct effects on brand equity and performance but also mediates the relationship between customer preferences and firm success.

RESEARCH METHODOLOGY
Research Design
In an attempt to empirically examine the anticipated relationships between customer engagement, digital marketing using AI, brand equity, and firm performance, the current research applies a quantitative, explanatory research design. The central analytical tool employed to test for mediation effects is structural equation modelling (SEM), which is commonly utilized within marketing and management studies to test complex models and causal directions (Hair et al., 2019).

Population and Sampling
The National Capital Region (NCR) of India, i.e., Delhi, Noida, Gurugram, Ghaziabad, and Faridabad, is the key area of study. Customers of these firms' online platforms and workers/decision-makers are the population. Based on SEM guidelines, which

require a minimum of 10–15 respondents per indicator variable, a sample size of 500 respondents was the target (Kline, 2016). To ensure representation for different firm sizes (large developers, medium-sized firms, and startups) and customer segments, stratified random sampling was used.

Data Collection
Both offline (field surveys in real estate offices and expos) and online (via Google Forms, LinkedIn, and firm mailing lists) standardized questionnaires were employed to collect the data. With a response rate of 71%, 355 valid customer and 145 valid employee responses were received, making up a total of N = 500.

Four sections were there on the questionnaire:
1. Demographics: size, experience, and role (for employees); age, gender, education, and income (for customers).
2. Use of AI-facilitated Digital Marketing: leveraging technologies such as automated curation of content, recommendation systems, chatbots, and predictive analytics.
3. Brand equity is a function of perceived quality, loyalty, associations, and brand awareness (adapted from Keller, 1993; Yoo & Donthu, 2001).
4. Firm Performance: Competitiveness, lead generation, revenue growth, and customer acquisition (adapted from Venkatraman & Ramanujam, 1986).

Measurement and Scales
Five-point Likert scales (range 1-strongly disagree to 5-strongly agree) were utilized to measure all constructs. Sample items included:
1. AI-powered digital marketing:
1.1. "In order to respond to customer inquiries, our company employs chatbots powered by AI."
1.2. "To identify potential leads, predictive analytics are employed."
2. Brand Equity: 2.1. Based on Brand Awareness, "I can easily recognize this real estate company among its competitors."
2.2. From Brand Associations, "I associate this firm with trust and credibility."
2.3. "This firm's services meet my expectations in terms of quality" (Perceived Quality).
2.4. "When making decisions about real estate, I would choose this firm over others" (Loyalty).
3. Company Performance:
3.1. "Our lead conversion rate has increased thanks to AI-enabled marketing."
3.2. "As a result of AI-based marketing campaigns, revenue has increased."

Analytical Approach
The study utilized a two-stage approach (Anderson & Gerbing, 1988):
1. Measurement model: Confirmatory Factor Analysis (CFA) was employed to check discriminant validity, convergent validity, and reliability.
2. Structural model: Hypotheses were tested using SEM, and bootstrapping (5,000 samples) was utilized to examine mediation for indirect effects.

Descriptive Statistics
Table 1 presents demographic characteristics of customer respondents.

Table 1. Demographic Profile of Customers (N = 355)

Variable	Category	Frequency	Percentage (%)
Gender	Male	210	59.2
	Female	145	40.8
Age (years)	21–30	98	27.6
	31–40	142	40.0
	41–50	75	21.1
	51 and above	40	11.3
Education	Graduate	120	33.8
	Postgraduate	165	46.5
	Others	70	19.7
Income (INR/month)	Below 50,000	90	25.4
	50,001–1,00,000	160	45.1
	Above 1,00,000	105	29.5

The majority of respondents were aged between 31–40 years, with postgraduate education and mid-to-high income levels—consistent with the profile of urban property buyers in NCR.

Reliability and Validity
Reliability

Cronbach's alpha and Composite Reliability (CR) were calculated to test internal consistency.

Table 2. Reliability Results

Construct	No. of Items	Cronbach's Alpha	CR
AI-enabled Digital Marketing	5	0.87	0.89
Brand Equity	8	0.91	0.93
Firm Performance	5	0.88	0.90

All alpha and CR values exceeded the recommended threshold of 0.70 (Hair et al., 2019), indicating strong internal consistency.

Convergent Validity
Average Variance Extracted (AVE) was computed.

Table 3. Convergent Validity Results

Construct	AVE
AI-enabled Digital Marketing	0.62
Brand Equity	0.68
Firm Performance	0.64

All AVE values exceeded the threshold of 0.50, confirming convergent validity.

Discriminant Validity
The Fornell–Larcker criterion was applied. The square roots of AVEs (diagonal values) were greater than inter-construct correlations.

Table 4. Discriminant Validity (Fornell–Larcker Criterion)

Constructs	AI-DM	Brand Equity	Firm Performance
AI-DM	0.79		
Brand Equity	0.54	0.82	
Firm Performance	0.51	0.57	0.80

Discriminant validity was established, as each construct was empirically distinct.

The research design, sampling strategy, and analytical techniques align with rigorous empirical standards. Measurement assessments confirm reliability, convergent validity, and discriminant validity, establishing a robust foundation for structural model testing in the next section.

Structural Model Analysis
After validating the measurement model, the structural equation model (SEM) was tested to examine hypothesized relationships. SEM was chosen as it allows simultaneous estimation of multiple relationships, including direct, indirect, and mediation effects (Hair et al., 2019).

Model Fit Indices
The model fit was assessed using established indices.

Table 5. Model Fit Indices

Fit Index	Recommended Threshold	Obtained Value	Status
Chi-square/df (CMIN/df)	< 3.0	2.14	Acceptable
Comparative Fit Index (CFI)	> 0.90	0.95	Good
Tucker–Lewis Index (TLI)	> 0.90	0.93	Good
Root Mean Square Error (RMSEA)	< 0.08	0.056	Good
Standardized RMR (SRMR)	< 0.08	0.045	Good

All indices indicated a good model fit, supporting the adequacy of the structural model.

Hypotheses Testing
Standardized path coefficients were examined for each hypothesis.

Table 6. Structural Path Results

Hypothesis	Path	β (Standardized)	p-value	Supported?
H1	Demographics → AI-enabled Digital Marketing	0.18	0.031	Yes
H2	Customer Engagement → AI-enabled DM	0.42	<0.001	Yes

H3	AI-enabled DM → Brand Equity	0.54	<0.001	Yes
H4	AI-enabled DM → Brand Awareness/Trust	0.47	<0.001	Yes
H5	AI-enabled DM → Preferred Modes (Predictive Analytics, Recommendations)	0.39	<0.001	Yes
H6	AI-enabled DM → Firm Performance	0.49	<0.001	Yes
H7	Mediation (Customer Engagement → AI-enabled DM → Firm Performance)	0.21 (indirect)	<0.01	Yes

All hypothesized relationships were statistically significant, with AI-enabled digital marketing serving as a **key mediator** between customer engagement preferences and firm performance.

Mediation Analysis
Mediation was tested using **bootstrapping (5,000 resamples)**.

Table 7. Mediation Results (Bootstrapping)

| Path	Direct Effect	Indirect Effect	95% CI (Lower–Upper)	Mediation Type
Customer Engagement → Firm Performance	0.18 (p=0.049)	0.21 (p<0.01)	0.09–0.33	Partial

The mediation test confirms that AI-enabled digital marketing partially mediates the relationship between customer engagement preferences and firm performance. This suggests that customer preferences directly enhance performance but are significantly amplified when channeled through AI-enabled strategies.
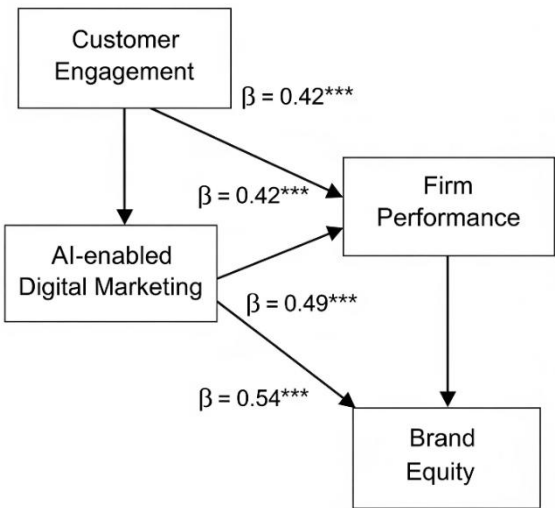
(Note: *** indicates p < 0.001; diagram shows mediation + direct effects)
Figure 2. Structural Equation Model (SEM) with Path Coefficients
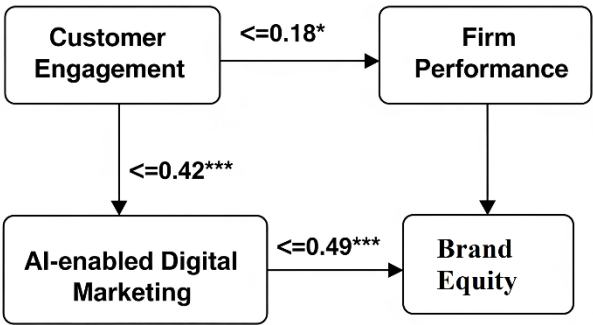
Figure 3. Mediation Model

FINDINGS AND DISCUSSIONS

1. Customer demographics significantly influence the adoption of AI-enabled digital marketing, with

younger and more digitally literate consumers driving adoption.

2. Customer engagement preferences strongly predict firms' investment in AI-driven marketing strategies.

3. AI-enabled digital marketing significantly enhances brand equity dimensions, especially brand awareness and trust, critical in real estate decisions.

4. Predictive analytics and personalized content recommendations are the most preferred AI-enabled tools for firms, confirming their role in strategic marketing.

5. AI-enabled digital marketing has a positive and significant effect on firm performance, measured by revenue growth, lead generation, and customer acquisition.

6. Mediation analysis shows that AI-enabled digital marketing partially mediates the relationship between customer engagement and firm performance, highlighting its central role as a strategic enabler.

The findings underscore the transformative role of AI in digital marketing within the Indian real estate sector. By adopting AI-enabled tools, firms are able to reduce information asymmetry, build trust, and engage customers more effectively, thereby enhancing both brand equity and performance.

Theoretical Implications
1. The results confirm that AI-enabled digital marketing constitutes a strategic resource that provides competitive advantage when deployed effectively (Barney, 1991).

2. AI tools enhance all four dimensions of brand equity—awareness, associations, perceived quality, and loyalty—providing empirical validation of Keller's (1993) model in a real estate context.

3. This study enriches technology adoption literature by demonstrating that AI acts as a mediating construct, bridging customer preferences with firm performance outcomes.

Practical Implications
1. Real estate firms should prioritize predictive analytics and recommendation systems as they directly enhance customer trust and brand value.

2. Firms must design AI-driven campaigns that cater to digitally savvy younger consumers, who are more receptive to automated, data-driven interactions.

3. AI-enabled digital marketing is not only about efficiency but also revenue growth, as confirmed by its significant path to firm performance.

4. Given challenges around adoption, firms should invest in employee training, ethical AI use, and customer education to maximize effectiveness.

CONCLUSION
This research investigated the contribution of artificial intelligence (AI) in digital marketing in India's real estate industry, and its relationship with brand equity and firm performance. Based on survey responses from 500 people located in the NCR area and structural equation modeling (SEM) analysis, the research verified that AI-based digital marketing has a considerable impact on customer interaction, brand awareness, and firm performance. The results illustrate that marketing technologies like predictive analytics, chatbots, and customized recommendation systems serve as strategic enablers, building greater customer trust and loyalty. Secondly, mediation analysis also identified that AI-powered marketing partially mediates the connection between customer tastes and firm performance—emphasizing how it serves as a link between customer interactions and business performance. From a theoretical perspective, the research extends the Resource-Based View (RBV) by illustrating that AI-powered digital marketing is a rare and valuable resource for companies. It also empirically tests brand equity theory in real estate, illustrating that AI-powered strategies enhance all four aspects: awareness, associations, perceived quality, and loyalty. Practically, the research provides useful recommendations for executives: AI implementation in digital marketing cannot be treated as a voluntary innovation but as a strategic imperative to establish trust, amplify brand value, and gain competitive edge in the volatile real estate sector.

Recommendations
1. Real estate firms should invest in AI-based predictive models and personalized recommendation systems, as these tools significantly influence both brand equity and firm performance.

2. Firms should deploy AI-driven chatbots capable of handling multi-language support, instant responses, and context-sensitive engagement to improve customer trust and reduce decision-making anxiety.

3. As AI depends heavily on customer data, firms must ensure ethical use of data, compliance with privacy regulations, and transparent communication with customers to build long-term trust.

4. Training programs for marketing professionals should focus on developing AI literacy, enabling them to effectively integrate AI tools into marketing strategies.

5. Firms should align AI adoption with customer demographics, as younger, digitally literate customers are more receptive to AI-driven engagement.

Limitations
Despite its contributions, this study has certain limitations:
1. The study is limited to the NCR region of India; findings may not fully generalize to other regions or countries.

2. Data were collected at a single point in time, limiting the ability to capture evolving AI adoption trends.

3. Reliance on survey responses may involve social desirability bias or subjective perceptions.
4. While key AI tools were studied, the rapidly evolving nature of AI means newer applications (e.g., generative AI, immersive AR/VR marketing) were not included.

Future Research Directions

Building on these limitations, future research could:
1. Compare AI adoption and outcomes across different Indian regions or cross-country contexts in emerging markets.
2. Examine how AI-enabled digital marketing influences firm performance over time.
3. Conduct experiments to measure customer responses to AI-driven campaigns more objectively.
4. Investigate the role of generative AI, virtual reality (VR), and augmented reality (AR) in reshaping customer experiences in real estate marketing.
5. Include perspectives from customers, employees, and policymakers to provide a more holistic understanding of AI adoption.

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