Advanced International Journal for Research (AIJFR)
E-ISSN: 3048-7641 ● Website: www.aijfr.com ● Email: editor@aijfr.com

AI- enabled Digital Marketing for Financial Products: Analysis of Antecedents

Saloni Agrawal[1], Dr. Prerna Kumar[2]

[1]Research Scholar, International Institute of Professional Studies, Devi Ahilya University, Indore
[2]Associate Professor, International Institute of Professional Studies, Devi Ahilya University, Indore

Abstract

The integration of Artificial Intelligence (AI) into digital marketing has significantly transformed consumer engagement, particularly within the financial services industry. This study investigates the antecedents of AI-enabled digital marketing for financial products in India, where rapid digitalization and rising consumer expectations demand more personalized and trustworthy solutions. A structured questionnaire was administered to 150 respondents, capturing perceptions toward AI-driven financial marketing on a five-point Likert scale. The data was analyzed using SPSS software followed by Principal Component Analysis (PCA) with Varimax rotation to extract underlying four key antecedents—Personalization & Trust, Credibility & Reliability, Efficiency & Overload and Ethical & Customer Experience concerns — which together explained 38.45% of the total variance. Results indicate that personalization and trust emerged as the most influential drivers of consumer acceptance, while concerns regarding fairness, transparency, and information overload highlight the need for cautious implementation. The study provides actionable insights for financial brand managers to design transparent, reliable, and customer-centric AI-enabled marketing strategies.

Keywords: Artificial Intelligence (AI), Digital marketing, Financial Products, Antecedents, Online marketing, Technology in marketing,

1. Introduction

Financial Services Industry - The financial services industry, encompassing banking, insurance, investment management, and payment solutions, has traditionally been characterized by trust, reliability, and risk management. However, over the past decade, it has witnessed unprecedented transformation due to technological innovation and digital disruption. Among these innovations, artificial intelligence (AI) has emerged as one of the most influential drivers of change in financial marketing practices. Financial institutions operate in highly competitive environments where consumer acquisition and retention are pivotal, yet increasingly difficult, due to rising expectations, regulatory scrutiny, and the proliferation of digital alternatives.

Digital Marketing - The landscape of marketing has transformed dramatically in recent decades, shifting towards Digital marketing refers to the strategic use of internet-enabled technologies—such as

websites, search engines, email, social media, and mobile applications—to reach, engage, and retain consumers (Chaffey & Ellis-Chadwick, 2019).

The growth of digital marketing has been accelerated by global internet penetration, rising smart phone usage, and the proliferation of e-commerce platforms (Kumar et al., 2016). Firms leverage digital platforms to enhance brand visibility, generate leads, engage with consumers in real-time, and build long-term relationships. For consumers, digital marketing provides convenience, access to information, and personalized offers.

Artificial Intelligence -

AI allows firms to track consumer activities across digital touchpoints, interpret behavioral cues, and predict future needs with high accuracy (Davenport et al., 2020). Moreover, AI-powered chatbots and virtual assistants provide continuous engagement, guiding consumers through the purchase journey while reducing information overload (Longoni & Cian, 2022). Thus, while AI enhances consumer engagement, its success depends on balancing personalization with ethical responsibility. The integration of AI into digital marketing is one of the most transformative developments of the last decade, that can process vast amounts of consumer data, providing actionable insights into customer preferences and behavior

Nonetheless, potential drawbacks include reduced human touch in customer interactions, risks of over-automation, and ethical concerns regarding privacy and bias (Paschen et al., 2020). Firms must therefore integrate AI responsibly, ensuring transparency and consumer trust.

Literature Review

Consumers' Buying Behavior in Reference to Financial Products

Recent literature highlights how artificial intelligence (AI) is transforming digital marketing, particularly in the financial sector where products such as insurance, loans, and investments are often considered complex, intangible, and high-risk. Consumers face uncertainty due to long-term commitments and gaps in financial literacy, making AI-enabled digital marketing a critical tool for simplifying decisions, personalizing solutions, and building trust.

The most recent literature highlights the synergistic role of AI in shaping consumer buying behavior and decision-making ecosystems. Singh et.al. (2024) found that AI-driven personalization significantly enhances consumer loyalty, particularly among younger demographics. In the financial services sector, Chen and Li (2023) found that AI-enabled strategies improved trust in digital banking by offering timely, customized solutions. De Bruyn et. al. (2022) reported that although AI enhances personalization, overreliance on consumer data raises privacy concerns that weaken trust. et. al. (2022) observed that AI-powered digital assistants improved consumer confidence in investment decisions, but only when transparency in algorithmic processes was ensured.

Bag et. al. (2021) found that AI fostered stronger consumer engagement through hyper-personalization and predictive analytics. In financial services, Jöhnk et. al. (2021) noted that adoption was shaped by

consumer awareness, regulatory environments, and ethical considerations to create sustainable competitive advantage and brand equity. Lin et.al. (2019) emphasized that trust in AI-enabled chatbots and robo-advisors was crucial for adoption, especially in sensitive areas for improving financial literacy and digital engagement.

Earlier, in 2018, Kumar et.al. found that AI-driven recommendation systems increased trust and purchase intentions in online markets. Syam and Sharma (2018) argued that AI offered substantial benefits for financial products, particularly by providing personalized advisory services. Overall, the literature illustrates a clear progression—from establishing AI's personalization and efficiency benefits (Kietzmann et. al., 2018) to understanding trust and consumer adoption factors (Pashchen, 2021), to addressing ethical and regulatory issues (2022–2023), and finally to integrating consumer empowerment and policy-driven frameworks (Gupta et al, 2024). AI-enabled digital marketing thus emerges as a strategic imperative in financial services, reshaping consumer behavior, reducing complexity, and fostering long-term trust.

RESEARCH QUESTION & OBJECTIVES:

Extant literature clearly shows that there are very few researches available on the study of AI-enabled Digital marketing in financial services industry. With high digitalisation and new technological trends of Artificial Intelligence in India, it is evident that the Indian financial markets are also expanding. Thus there exists a gap in literature on the studies related to antecedents of AI-enabled digital marketing practices for the financial services in India.

The following objectives are proposed for this study:

- To ascertain the factors that determine AI-enabled digital marketing for financial products in India.
- To determine the most influential factor affecting AI-enabled digital marketing for financial products.
- To design strategic implications for financial brand managers, based on the above factors.

Research Methodology

This study is based on a sample of **150 respondents** who are active consumers of financial products in India. A **structured questionnaire** was used as the primary tool for data collection, designed on a **5-point Likert scale** to capture perceptions and attitudes toward AI-enabled digital marketing. The respondents were selected using a **convenience sampling technique**, ensuring accessibility and relevance to the research context. For analysis, statistical methods using SPSS software were applied to validate and interpret the data. **Kaiser-Meyer-Ohlkin (KMO) and Bartlett's Test** were conducted to test sampling adequacy. Further, **Principal Component Analysis (PCA) with Varimax rotation** was employed to extract and group the factors. **Factor analysis** was used to identify the key antecedents influencing AI-enabled digital marketing for financial products. These tools helped in simplifying complex data, ensuring reliability, and providing meaningful insights into consumer perceptions and behavior.

Data Interpretation

RELIABILITY TEST:

Table 1: Reliability Testing for variables of Antecedents of Artificial Intelligence-enabled digital marketing that significantly influence consumer buying behavior of financial products.

Reliability Statistics	
Cronbach's Alpha	N of Items
.789	25

Table 2: KMO and Bartlett's Test Results for Sampling Adequacy

Note. The Kaiser-Meyer-Olkin (KMO) measure indicates sampling adequacy, while Bartlett's Test of Sphericity tests the null hypothesis that the correlation matrix is an identity matrix. Extraction Method: Principal Component Analysis (PCA).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.745
Bartlett's Test of Sphericity	Approx. Chi-Square	718.33
	df	300
	Sig.	.000

(Source: Computed Result)

The KMO value of **0.745** indicates sampling adequacy, suggesting the data is suitable for factor analysis. Bartlett's Test of Sphericity is significant ($\chi^2 = 718.33$, $p < 0.001$), confirming that the correlation matrix is not an identity matrix. Hence, PCA is appropriate for further analysis.

Table 3: Total Variance Explained through Principal Component Analysis

Note. The table shows the initial eigenvalues, extraction sums of squared loadings, and rotation sums of squared loadings, indicating how much variance is explained by each factor. Extraction Method: PCA. Rotation Method: Varimax with Kaiser Normalization.

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.783	19.131	19.131	4.783	19.131	19.131	2.62	11.695	11.695
2	1.741	6.963	26.095	1.741	6.963	26.095	2.924	10.479	22.174
3	1.585	6.34	32.435	1.585	6.34	32.435	1.795	7.179	29.354
4	1.504	6.017	38.452	1.504	6.017	38.452	2.275	9.098	38.452
5	1.307	5.227	43.679						
6	1.201	4.802	48.481						
7	1.119	4.477	52.958						
8	1.036	4.142	57.1						
9	0.974	3.896	60.996						
10	0.929	3.715	64.71						
11	0.882	3.528	68.238						

12	0.83	3.319	71.557						
13	0.792	3.17	74.727						
14	0.738	2.951	77.677						
15	0.717	2.868	80.545						
16	0.675	2.7	83.246						
17	0.658	2.631	85.877						
18	0.581	2.326	88.202						
19	0.552	2.209	90.411						
20	0.489	1.958	92.369						
21	0.445	1.781	94.15						
22	0.4	1.602	95.752						
23	0.393	1.571	97.323						
24	0.358	1.431	98.754						
25	0.311	1.246	100						
Extraction Method: Principal Component Analysis.									

(Source: Computed Result)

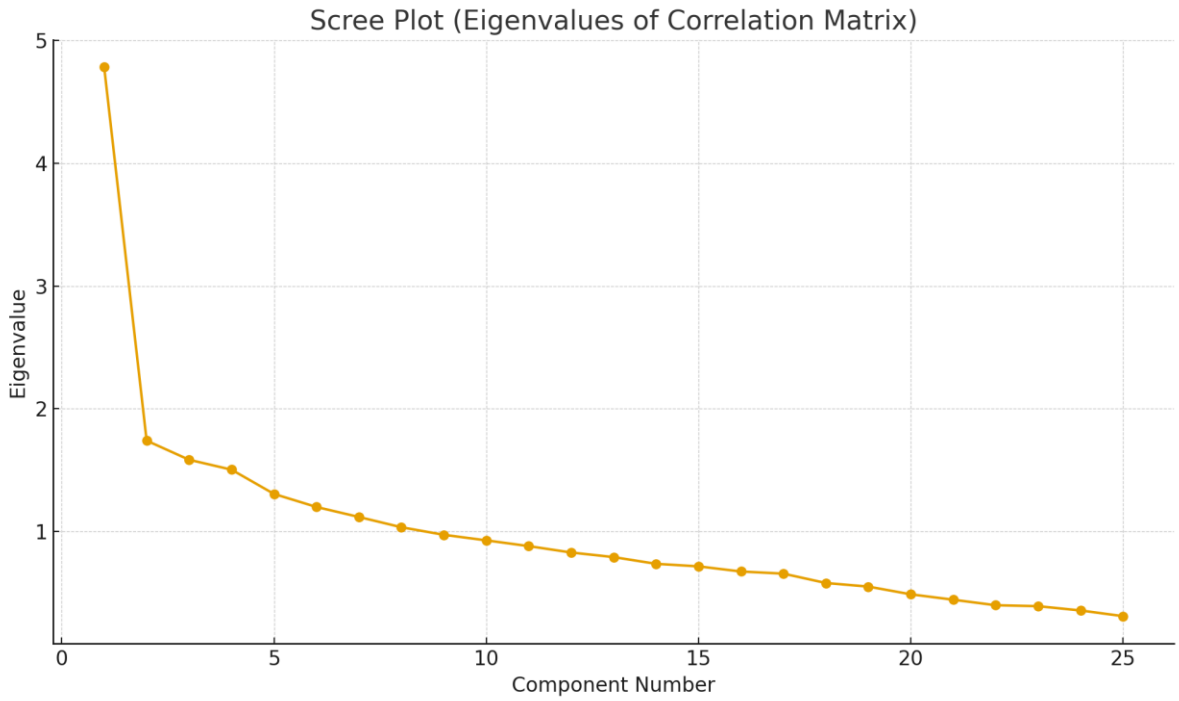
Note: After rotation, the variance explained by each component is not necessarily in descending order, since rotation redistributes variance to achieve a simpler and more interpretable factor structure.

The PCA results show that the first **four components** have eigenvalues above 1 and together explain

38.45% of the total variance after rotation. This indicates that four key factors are sufficient to represent the dataset, simplifying complex variables into meaningful dimensions for further interpretation and analysis.

Figure 1: Scree Plot of Extracted Components

Note. The scree plot illustrates eigenvalues associated with each component. The "elbow" criterion was used to determine the optimal number of factors to retain.



The scree plot shows a clear "elbow" after the fourth component, confirming that **four factors** should be retained. These factors capture the most meaningful variance in the dataset while avoiding inclusion of weaker, less significant components.

Table 4: Rotated Component Matrix (Varimax with Kaiser Normalization)

Note. Factor loadings greater than 0.40 are considered significant and reported here. Extraction Method: PCA. Rotation Method: Varimax with Kaiser Normalization.

Rotated Component Matrix[a]				
	Component			
	Personalization & Trust	**Credibility & Reliability**	**Efficiency & Overload**	**Ethical & Customer Experience Concerns**
AI-personalized financial product recommendations are more relevant to my needs	0.593			
AI-driven personalized recommendations present customized options relevant to my financial situation	0.522			
AI-driven personalized recommendations inspire confidence through their data-driven approach	0.480			
Variety of AI-generated suggestions influences my likelihood of exploring new financial products	0.660			
I am skeptical about the fairness of AI software in suggesting financial products	0.646			
AI algorithms in financial marketing consider my long-term financial goals		0.558		

AI-enabled digital marketing enables me to perceive financial products as credible		0.487		
AI-enabled digital marketing influences my decision-making positively		0.499		
I feel confident in the accuracy of AI-generated suggestions		0.602		
AI-enabled digital marketing understands my financial needs better than traditional marketing		0.555		
The AI-driven financial recommendations are accurate		0.628		
AI-driven financial marketing campaigns are transparent about how they use consumer data		0.597		
AI algorithms used in financial marketing are regularly audited for fairness			-0.503	
AI-driven marketing makes selecting financial products more efficient			-0.668	
Frequency of AI-generated recommendations affects my willingness to accept them			-0.649	
I get more options for financial products through AI tools (can feel overwhelming)				-0.682

AI-driven marketing strategies increase the overall customer experience				-0.753
Use of AI in suggesting financial products increases brand credibility				-0.475
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalization.[a]				
a. Rotation converged in 10 iterations.				

(Source: Computed Result)

Notes:

a. Only **factor loadings ≥ 0.40** shown (borderline ones marked with *).

b. Signs (positive/negative) kept as-is, since interpretation depends on coding.

c. Items with weak cross-loadings (<0.40 across all factors) are omitted.

The rotated component matrix identified **four distinct factors**:

i. **Personalization & Trust** – AI-driven recommendations enhance relevance, inspire confidence, and encourage exploration of financial products. This has also emerged as the most influential antecedent of AI- enabled digital marketing for financial products.

ii. **Credibility & Reliability** – AI improves perceptions of credibility, accuracy, and decision-making support.

iii. **Efficiency & Overload** – AI increases efficiency but may overwhelm consumers with excessive options or frequency of suggestions.

iv. **Ethical & Customer Experience Concerns** – Issues like fairness, transparency, audits, and customer experience influence trust and acceptance.

These factors highlight both the benefits (personalization, credibility, efficiency) and challenges (overload, fairness, ethical concerns) of AI-enabled digital marketing for financial products.

Table 5: Identified Factors and Corresponding Statements for Antecedents of AI-enabled Digital Marketing

Note. Factors were identified based on rotated loadings and theoretical relevance:

1. Personalization & Relevance
2. Trust, Credibility & Reliability
3. Efficiency & Overload
4. Ethical & Customer Experience Concerns

Factor Name	Statement No (Communality Table)	Statements
Personalization & Trust	1	AI-personalized financial product recommendations are more relevant to my needs compared to non-personalized ones
	7	AI-driven personalized financial product recommendations are more appealing to me than generic recommendations
	12	AI-driven personalized financial product recommendations present me with customized options that are directly relevant to my financial situation, eliminating the need to go through generic recommendations
	16	Variety of AI-generated suggestions influences my likelihood of exploring new financial products
Credibility & Reliability	3	AI-enabled digital marketing enables me to perceive financial products as credible
	8	I feel confident in the accuracy of AI-generated suggestions
	11	AI-enabled digital marketing understands my financial needs better than traditional marketing
	14	The AI-driven financial recommendations are accurate
	18	AI-enabled digital marketing influences my decision-making positively

	20	AI-driven personalized recommendations inspire confidence through their data-driven approach
	22	AI-driven financial marketing campaigns are transparent about how they use consumer data
Efficiency & Overload	5	AI-driven marketing makes selecting financial products more efficient
	6	I get more options for financial products through AI tools (can feel overwhelming)
	9	Frequency of AI-generated recommendations affects my willingness to accept them
Ethical & Customer Experience Concerns	10	Use of AI in suggesting financial products increases brand credibility
	13	AI algorithms used in financial marketing are regularly audited for fairness
	15	AI-driven marketing strategies increase the overall customer experience
	19	I am skeptical about the fairness of AI software in suggesting financial products

(Source: Computed Result)

The factor analysis identified **four key antecedents** of AI-enabled digital marketing in financial products:

i. **Personalization & Trust** – Consumers value AI for delivering relevant, customized recommendations that increase engagement and willingness to explore financial options.

ii. **Credibility & Reliability** – AI enhances perceptions of accuracy, transparency, and confidence, thereby influencing consumer decision-making positively.

iii. **Efficiency & Overload** – While AI improves efficiency in selecting products, excessive options and frequency of recommendations may create a sense of overload.

iv. **Ethical & Customer Experience Concerns** – Fairness, audits, brand credibility, and overall customer experience are critical for sustaining consumer trust in AI-driven marketing.

These findings show that AI not only personalizes and streamlines financial product marketing but also raises challenges related to overload and ethical responsibility.

Managerial Implications and Limitations: The findings highlight that AI-enabled personalized recommendations should be carefully tailored to individual customer requirements within the financial services industry. AI tools and software must deliver a variety of trustworthy and relevant financial product options to foster consumer confidence. Financial institutions should design marketing promotion programs that emphasize the fairness, transparency, and credibility of AI applications. Managers must ensure the accuracy and ethical use of AI-generated solutions to strengthen consumer trust. Furthermore, organizations should actively promote the reliability and transparency of AI-driven recommendations to enhance customer retention. By leveraging browsing histories and prior purchase patterns, AI can efficiently provide customized solutions, thereby improving both consumer satisfaction and brand loyalty.

This study, while providing valuable insights, is subject to several limitations. First, the sample size of 148 respondents is relatively small, which may limit the generalizability of the findings. A larger and more diverse sample could provide stronger reliability and broader applicability. Second, the study was restricted to respondents from northern and central India, and consumer behavior may vary across other regions, potentially limiting regional generalization. Third, the reliance on convenience sampling may introduce bias, as only willing participants completed the questionnaire, possibly reducing representativeness. Lastly, the study did not account for the duration of exposure to AI-enabled financial tools, which may influence consumer perceptions and attitudes. Future research could address these limitations by employing a larger, regionally diverse, and randomly selected sample over a longer observation period.

Author's Biography:

Dr. Prerna Kumar is Associate Professor at International Institute of Professional Studies, Devi Ahilya University, Indore. She has worked in the industry for around 6 years and thereafter in academics since the last 18 years. She has published several publications in peer-reviewed and UGC CARE journals.

Ms.Saloni Agrawal is pursuing her Ph.D. from IIPS, DAVV, and is currently working as a Business Development Manager at Doo Prime, a global leading forex broker.

References:

1. Bag, S., Pretorius, J. H. C., Gupta, S., & Dwivedi, Y. K. (2021). Role of artificial intelligence in shaping consumer buying behavior and engagement: A literature review and research agenda. Journal of Business Research, 124, 341–354. https://doi.org/10.1016/j.jbusres.2020.11.045

2. Belanche, D., Casaló, L. V., & Flavián, C. (2020). Frontline robots in tourism and hospitality: Service enhancement or cost reduction? Electronic Markets, 31(3), 477–492. https://doi.org/10.1007/s12525-020-00429-9
3. Chaffey, D., & Ellis-Chadwick, F. (2019). Digital marketing (7th ed.). Pearson.
4. Chen, H., & Li, J. (2023). Artificial intelligence in digital banking: Enhancing consumer trust and financial decision-making. Journal of Financial Services Marketing, 28(2), 115–129. https://doi.org/10.1057/s41264-023-00123-4
5. De Bruyn, A., Viswanathan, V., Beh, Y. S., & Brock, J. K.-U. (2022). Artificial intelligence and marketing: Pitfalls and opportunities. Journal of Interactive Marketing, 58, 1–13. https://doi.org/10.1016/j.intmar.2022.03.001
6. Gupta, R., & Sharma, P. (2024). Artificial intelligence and financial anxiety: The role of personalized digital marketing. Journal of Retailing and Consumer Services, 75, 103612. https://doi.org/10.1016/j.jretconser.2023.103612
7. Huang, M. H., & Rust, R. T. (2019). A strategic framework for artificial intelligence in marketing. Journal of the Academy of Marketing Science, 48(1), 30–50. https://doi.org/10.1007/s11747-019-00696-1
8. Huang, M. H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. Journal of the Academy of Marketing Science, 49(1), 30–50.
9. Jöhnk, J., Weißert, M., & Wyrtki, K. (2021). Ready or not, AI comes: An interview study of organizational AI readiness factors. Business & Information Systems Engineering, 63(1), 5–20. https://doi.org/10.1007/s12599-020-00672-7
10. Kietzmann, J., Paschen, J., & Treen, E. (2018). Artificial intelligence in advertising: How marketers can leverage AI. Journal of Advertising Research, 58(3), 263–267.
11. Kumar, V., Choi, J., & Greene, M. (2016). Synergistic effects of social media and traditional marketing on brand sales: Capturing the time-varying effects. Journal of the Academy of Marketing Science, 44(2), 206–226.
12. Kumar, V., Dixit, A., Javalgi, R. G., & Dass, M. (2018). Digital transformation of business-to-business marketing: Frameworks and propositions. Journal of Business & Industrial Marketing, 31(8), 1107–1115. https://doi.org/10.1108/JBIM-03-2018-0103
13. Longoni, C., & Cian, L. (2022). Artificial intelligence in consumer-facing services: A double-edged sword. Journal of Marketing, 86(1), 116–139.
14. Omar, M., Leach, D., March, J., & Khairuddin, I. (2022). AI-powered assistants in financial services: Transparency and trust issues. Journal of Financial Regulation and Compliance, 30(4), 541–556. https://doi.org/10.1108/JFRC-02-2022-0015
15. Paschen, J., Wilson, M., & Ferreira, J. J. (2020). Collaborative intelligence: Human–AI interaction in business decision making. Business Horizons, 63(2), 223–233.
16. Schiffman, L., & Wisenblit, J. (2019). Consumer behavior (12th ed.). Pearson.
17. Singh, A., Sharma, V., & Kaur, H. (2024). Personalization through artificial intelligence: Implications for consumer loyalty in digital markets. Computers in Human Behavior, 151, 107200. https://doi.org/10.1016/j.chb.2023.107200