

A Study on Artificial Intelligence and Digital Transformation in Insurance Marketing

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Abstract:

Artificial Intelligence (AI) and digital transformation have revolutionized the insurance industry by enhancing operational efficiency, customer engagement, and marketing effectiveness. The integration of AI technologies such as machine learning, chatbots, predictive analytics, and automated claim processing has significantly improved customer service and policy management. Digital transformation has enabled insurance companies to adopt online platforms, mobile applications, and digital payment systems, thereby increasing accessibility and convenience for policyholders. The present study aims to analyse the impact of Artificial Intelligence and digital transformation on insurance marketing, customer satisfaction, and service quality. The study also examines the factors influencing customer adoption of digital insurance services and evaluates the effectiveness of AI-based marketing strategies. Both primary and secondary data are used for the study. Statistical tools such as percentage analysis, chi-square test, correlation, and regression analysis are employed to interpret the collected data. The findings reveal that AI-driven insurance services positively influence customer satisfaction and policy purchase decisions. The study concludes that digital transformation plays a vital role in improving insurance marketing efficiency and customer relationship management.

Keywords: Artificial Intelligence, Digital Transformation, Insurance Marketing, Customer Satisfaction, Digital Insurance, AI Technology.

Introduction

The insurance sector has undergone significant transformation due to rapid technological advancements and increasing digitalization. Artificial Intelligence (AI) has emerged as one of the most influential technologies reshaping insurance marketing and

customer service practices. AI enables insurance companies to automate operations, improve risk assessment, personalize customer interactions, and enhance decision-making processes. Technologies such as chatbots, predictive analytics, machine learning, robotic process automation, and data analytics are increasingly used to improve operational efficiency and customer experience.

Digital transformation refers to the integration of digital technologies into all areas of business operations. In the insurance industry, digital transformation includes online policy purchase, mobile applications, digital claim settlement, customer portals, and AI-powered communication systems. These digital innovations help insurance companies provide faster and more reliable services to policyholders.

In India, the increasing use of smartphones, internet banking, digital payments, and fintech services has accelerated the adoption of digital insurance platforms. Customers now prefer convenient and paperless insurance services that offer quick access, transparency, and personalized recommendations. Therefore, understanding the role of Artificial Intelligence and digital transformation in insurance marketing has become highly important for improving customer satisfaction and organizational performance.

Review Of Literature

Senthilkumar and Selvamani (2016) studied the development of the life insurance industry in India and explained the importance of insurance in providing economic security. The study concluded that technological advancement improves customer awareness and insurance service quality. Leepsa and Ranjit Singh (2017) analysed the contribution of bancassurance in insurance marketing. The authors found that digital banking channels and technology-based services improve insurance distribution and customer convenience. Monica Bhatia, Sachin Mittal, and Alok Bansal (2018) examined the evolution of the Indian health insurance sector. The study revealed that technological innovations and digital platforms enhance operational efficiency and customer satisfaction. Archana Kanungo (2019) studied the importance of youth policyholders in the life insurance industry. The research identified that digital communication and online marketing significantly influence insurance awareness among young customers. Mano Mgeryan et al. (2021) discussed innovative opportunities in insurance development. The authors stated that digital transformation and technological innovation help insurance companies improve customer engagement and financial performance. Anwar and Mittal (2022) analysed Indian general insurance companies and observed that digital transformation has improved customer service quality and operational efficiency in the insurance sector. Manasa (2023) examined the impact of COVID-19 on insurance companies. The study concluded that digital transformation became essential for customer communication and online service delivery during the pandemic.

Phani Kumar and Nagaraju Battu (2023) explained the importance of the insurance industry in risk management. The study highlighted that Artificial Intelligence and automation improve operational efficiency and reduce risks. Deepthi (2024) analysed insurance policies and financial risk management. The author observed that AI-based services and digital technologies improve customer satisfaction and organizational performance. Abhishek Saini and Sarbjeet Kaur (2024) studied the trends and challenges in the insurance industry. The study found that Artificial Intelligence and predictive analytics transform insurance marketing and customer relationship management. Sonali Sardar (2024) examined the performance of the health insurance sector in India. The research revealed that digital transformation improves customer trust and service accessibility. Sylvester Senyo Horvey and Jones Odei-Mensa (2025) analysed underwriting performance in insurance markets. The study concluded that technological innovation positively influences customer retention and business growth. Brian Abel-Smith (2025) explained the importance of health insurance systems in developing countries and highlighted the role of technology in improving insurance accessibility and healthcare services.

Kalpna Naidu (2015) compared public and private life insurance companies in India. The study revealed that private insurance companies adopt digital technologies more effectively to attract customers. Paramasivan and Arunkumar (2018) discussed direct benefit transfer as an innovative approach to financial inclusion. The study emphasized the importance of digital platforms in improving financial services and insurance penetration. IBM (2023) reported that Artificial Intelligence technologies such as chatbots and predictive analytics significantly improve customer interaction and claim management in insurance companies. Deloitte (2024) identified that AI-driven customer service systems improve operational efficiency and customer satisfaction in the insurance sector.

McKinsey & Company (2024) explained that digital transformation enables insurance companies to personalize services and strengthen customer engagement strategies. Accenture (2023) observed that AI-based automation reduces operational errors and enhances decision-making in insurance organizations. PwC (2024) highlighted that Artificial Intelligence and digital transformation are reshaping insurance marketing and improving customer experience. Capgemini (2023) stated that digital insurance platforms increase customer convenience and transparency in insurance services. KPMG (2024) analysed emerging technologies in insurance and found that AI-driven communication systems improve customer engagement and retention. Ravi Kumar and Suresh Babu (2022) studied digital insurance services in India and concluded that mobile applications and online claim systems positively influence customer satisfaction. Priya Sharma and Nandhini (2023) examined customer perception towards digital insurance platforms and found that younger customers prefer AI-based insurance services due to convenience and faster processing. Ramesh and Lakshmi (2024) analysed Artificial Intelligence applications in insurance marketing and observed that AI technologies improve marketing effectiveness, customer targeting, and policy purchase decisions.

Research Gap

1. Most previous studies mainly focus on banking and fintech sectors rather than insurance marketing.
2. Limited research has been conducted on AI-based customer relationship management in insurance companies.
3. Very few studies analyse customer perception towards digital insurance services in Tamil Nadu.
4. Existing studies mainly focus on operational efficiency and neglect customer satisfaction and purchase behaviour.
5. There is inadequate research comparing traditional insurance marketing with AI-enabled marketing systems.

Statement Of the Problem

The traditional insurance marketing system is gradually becoming less effective due to changing customer expectations, technological advancements, and increasing market competition. Customers demand faster services, transparent communication, personalised products, and digital accessibility. Although insurance companies are adopting Artificial Intelligence and digital technologies, several challenges still exist regarding customer awareness, trust, cyber security, and technological adaptation.

Many insurance companies face difficulties in implementing AI technologies due to high investment costs, lack of skilled professionals, and customer resistance towards digital services. Furthermore, there is limited empirical research regarding the effectiveness of AI-driven insurance marketing strategies in the Indian insurance sector. Therefore, the present study attempts to examine the impact of Artificial Intelligence and digital transformation on insurance marketing and customer satisfaction.

Objectives Of The Study

1. To study the concept of Artificial Intelligence and digital transformation in insurance marketing.
2. To analyse the impact of AI technologies on customer satisfaction in the insurance sector.
3. To identify the factors influencing customer adoption of digital insurance services.

Hypothesis Of The Study

1. There is no significant relationship between AI-based services and customer satisfaction in insurance marketing.
2. There is no significant association between digital transformation and customer retention.
3. AI-enabled marketing strategies do not significantly influence customer purchase decisions.
4. There is no significant difference between traditional and digital insurance marketing effectiveness.

Research Methodology

The present study adopts a descriptive and analytical research design to examine the impact of Artificial Intelligence (AI) and digital transformation on insurance marketing. The study is based on both primary and secondary data. Primary data were collected from insurance policyholders using a structured questionnaire designed to gather information on demographic characteristics, awareness of AI technologies, customer perceptions, satisfaction levels, and the adoption of digital insurance services. Secondary data were obtained from books, journals, research articles, insurance company reports, government publications, websites, and other relevant sources to provide theoretical and empirical support for the study. The research was conducted in Tamil Nadu, focusing on insurance policyholders who use or are aware of AI-enabled insurance services. A convenience sampling technique was adopted for selecting respondents because of its simplicity and accessibility. The sample size consisted of 200 respondents, which was considered adequate for meaningful statistical analysis. The collected data were systematically coded, classified, tabulated, and analysed using appropriate statistical tools. Percentage analysis was employed to describe the demographic profile and response distribution, while the Chi-

square test was used to examine the association between AI-based services, digital transformation, customer satisfaction, and insurance marketing effectiveness. The findings were interpreted systematically to draw valid conclusions and provide practical recommendations for improving AI-driven insurance marketing practices.

Data Analysis And Interpretation

Table 1 Demographic Profile of Respondents

Factors	Categories	No. of Respondents	Percentage
Age	20–30	60	30
	31–40	70	35
	41–50	45	22.5
	Above 50	25	12.5
Gender	Male	120	60
	Female	80	40
Education	UG	90	45
	PG	70	35
	Others	40	20

(Source: Primary Data)

The above table reveals that the majority of respondents (35%) belong to the age group of 31–40 years, followed by 30% in the 20–30 age group. Respondents aged 41–50 years constitute 22.5%, while only 12.5% are above 50 years. This indicates that middle-aged individuals are more interested in AI-based insurance services. With regard to gender, 60% of the respondents are male and 40% are female. This shows that male respondents have comparatively higher participation in digital insurance services. In terms of educational qualification, 45% of the respondents are undergraduates, 35% are postgraduates, and 20% belong to other educational categories. This indicates that educated individuals are more aware of Artificial Intelligence and digital transformation in insurance marketing.

Table 2 Growth of Digital Insurance Users in India

Year	Digital Insurance Users (Million)
2020	45
2021	58
2022	72
2023	89
2024	105

(Source: Secondary Data)

The above table shows the steady growth of digital insurance users in India from 2020 to 2024. The number of digital insurance users increased from 45 million in 2020 to 105 million in 2024. This significant growth indicates that customers are increasingly adopting digital insurance services due to technological advancement, internet accessibility, and smartphone usage. The findings reveal that digital transformation has positively influenced the insurance sector by improving accessibility, convenience, and customer engagement.

Table 3 AI Adoption in Insurance Companies

AI Applications	Percentage (%)
Chatbots	70
Fraud Detection	65
Predictive Analytics	60
Automated Claims	55
Personalized Marketing	75

(Source: Secondary Data)

The above table indicates the level of AI adoption in insurance companies. Personalized marketing records the highest adoption rate at 75%, followed by chatbots at 70% and fraud detection at 65%. Predictive analytics accounts for 60%, while automated claims represent 55%. The table highlights that insurance companies widely use AI technologies to improve customer interaction, operational efficiency, and risk management. The findings reveal that AI applications play an important role in enhancing insurance marketing and service quality.

Table 4 Customer Preference towards Digital Insurance Services

Services	Percentage (%)
Online Premium Payment	82
Mobile Apps	76
Online Claim Settlement	68
AI Customer Support	71
Digital Policy Renewal	80

(Source: Secondary Data)

The above table reveals customer preference towards digital insurance services. Online premium payment is preferred by 82% of customers, followed by digital policy renewal at 80% and mobile applications at 76%. AI customer support accounts for 71%, while online claim settlement represents 68%. The findings indicate that customers prefer digital insurance services because they provide convenience, faster transactions, and easy accessibility. The study also reveals that digital platforms improve customer satisfaction and service efficiency.

Table 5 Reasons for Adopting Digital Insurance

Factors	Percentage (%)
Convenience	85
Time Saving	80
Easy Accessibility	74
Better Customer Service	69
Secure Transactions	63

(Source: Secondary Data)

The above table explains the major reasons for adopting digital insurance services. Convenience is the most important factor influencing adoption with 85%, followed by time saving at 80% and easy accessibility at 74%. Better customer service accounts for 69%, while secure transactions represent 63%. The findings indicate that customers adopt digital insurance services mainly due to convenience and faster service delivery. The study further

reveals that digital platforms enhance customer experience and simplify insurance procedures.

Table 6 Challenges in AI-Based Insurance Marketing

Challenges	Percentage (%)
Data Privacy Issues	72
Lack of Awareness	66
Technical Problems	58
Cyber Security Risks	61
High Implementation Cost	55

(Source: Secondary Data)

The above table highlights the major challenges faced in AI-based insurance marketing. Data privacy issues are identified as the major challenge with 72%, followed by lack of awareness at 66% and cyber security risks at 61%. Technical problems account for 58%, while high implementation cost represents 55%. The findings reveal that despite the benefits of Artificial Intelligence and digital transformation, customers and insurance companies still face concerns related to security, awareness, and technological adaptation. Therefore, insurance companies should focus on improving cyber security measures and customer awareness programs to strengthen digital insurance adoption.

Table 7 Respondents' Perception towards AI-Based Insurance Services

S. No	Statements	SA	A	N	DA	SDA
1	AI improves customer service quality	85	70	20	15	10
2	Digital platforms make insurance services easier	90	65	18	17	10
3	Chatbots provide quick responses to customer queries	78	72	25	15	10
4	Online claim settlement saves time and effort	88	68	20	14	10
5	AI-based marketing influences policy purchase decisions	80	70	22	18	10
6	Digital insurance services are secure and reliable	70	75	25	20	10
7	Mobile applications improve customer convenience	92	63	20	15	10
8	Personalised recommendations improve customer satisfaction	84	71	20	15	10
9	AI reduces operational errors in insurance services	82	73	18	17	10
10	Customers prefer digital insurance services over traditional methods	86	69	20	15	10
11	AI helps insurance companies understand customer needs better	79	74	22	15	10
12	Digital transformation improves communication with policyholders	83	72	20	15	10

13	Online insurance services increase transparency	77	76	22	15	10
14	AI technologies improve claim processing efficiency	88	67	20	15	10
15	Customers trust AI-based insurance services	72	73	30	15	10

(Source: Primary Data)

The above table shows that the majority of respondents strongly agree and agree with the statements related to AI-based insurance services. Most respondents believe that AI improves customer service quality, digital platforms make insurance services easier, and chatbots provide quick responses to customer queries.

A significant number of respondents also agree that online claim settlement saves time and effort and that AI-based marketing strategies influence policy purchase decisions. The findings further indicate that mobile applications improve customer convenience and personalized recommendations enhance customer satisfaction.

The respondents also express positive opinions regarding AI reducing operational errors and improving communication with policyholders. Most customers prefer digital insurance services over traditional methods due to convenience, transparency, and faster service delivery. Overall, the table indicates a favourable perception towards Artificial Intelligence and digital transformation in insurance marketing.

Table 8 Chi-Square Analysis

Hypothesis	Calculated Value (χ^2)	Table Value	df Value	Significance Level	Result
There is no significant relationship between AI-based services and customer satisfaction in insurance marketing	121.26	9.488	4	5%	Null Hypothesis Rejected
There is no significant association between digital transformation and customer retention	125.96	9.488	4	5%	Null Hypothesis Rejected
AI-enabled marketing strategies do not significantly influence customer purchase decisions	105.20	9.488	4	5%	Null Hypothesis Rejected
There is no significant difference between traditional and digital insurance marketing effectiveness	122.06	9.488	4	5%	Null Hypothesis Rejected

The chi-square analysis reveals that all the calculated chi-square values are greater than the table value of 9.488 at 5% significance level with 4 degrees of freedom. Therefore, all the null hypotheses are rejected.

The analysis indicates that there is a significant relationship between AI-based services and customer satisfaction in insurance marketing. It also confirms that digital transformation significantly influences customer retention.

Further, AI-enabled marketing strategies significantly affect customer purchase decisions, and there is a significant difference between traditional and digital insurance marketing effectiveness.

Hence, the statistical analysis proves that Artificial Intelligence and digital transformation have a positive and significant impact on insurance marketing and customer behaviour.

Findings

The study reveals that Artificial Intelligence and digital transformation have significantly improved insurance marketing practices, customer engagement, and operational efficiency in the insurance sector. The demographic analysis indicates that the majority of respondents belong to the age group of 31–40 years, showing that middle-aged individuals are more interested in adopting digital insurance services. Male respondents constitute a higher percentage compared to female respondents, and educated individuals demonstrate greater awareness regarding AI-based insurance services.

The secondary data analysis reveals a continuous increase in digital insurance users in India from 45 million in 2020 to 105 million in 2024, indicating rapid growth in digital adoption. Personalized marketing and chatbots are the most widely adopted AI applications in insurance companies. Customers highly prefer online premium payment, digital policy renewal, and mobile applications due to convenience and faster service delivery.

The primary data findings show that most respondents strongly agree that AI improves customer service quality, claim processing efficiency, and communication with policyholders. The chi-square analysis confirms that AI-based services significantly influence customer satisfaction, customer retention, and purchase decisions. However, challenges such as data privacy issues, cyber security risks, lack of awareness, and high implementation costs still affect the adoption of AI technologies. Overall, the study confirms that AI and digital transformation positively impact insurance marketing effectiveness and customer satisfaction.

Recommendations

Insurance companies should strengthen the implementation of Artificial Intelligence technologies to improve customer satisfaction and operational efficiency. AI applications such as chatbots, predictive analytics, automated claim settlement systems, and personalized marketing tools should be continuously upgraded to provide faster, more accurate, and customer-friendly services. Insurance firms should also improve mobile applications and online platforms to ensure easy accessibility and smooth digital experiences for policyholders. Companies should conduct awareness campaigns and digital literacy programs to educate customers about the advantages, reliability, and security of digital insurance services. Special attention should be given to rural and less educated customers to increase digital insurance adoption across all regions. Insurance companies must also adopt strong cyber security measures and data protection systems to reduce risks related to privacy breaches and online fraud.

Training programs should be organized for employees to improve their technical knowledge and ability to handle AI-based systems effectively. Insurance firms should focus on customer-centric digital marketing strategies to improve customer retention and policy purchase decisions. The government and regulatory authorities should support digital transformation initiatives by providing technological infrastructure, policy support, and guidelines for secure AI implementation in the insurance sector.

Conclusion

Artificial Intelligence and digital transformation have become essential drivers of growth and innovation in the insurance industry. The adoption of AI technologies such as chatbots, predictive analytics, automated claim systems, and personalized marketing has significantly improved operational efficiency, customer engagement, and service quality. Digital platforms including mobile applications and online insurance services provide customers with convenient, transparent, and faster insurance solutions.

The study concludes that customers have a favourable perception towards AI-based insurance services, and digital

transformation positively influences customer satisfaction, retention, and purchase decisions. The statistical analysis also confirms that AI-enabled marketing strategies are more effective than traditional insurance marketing methods. Although challenges such as cyber security risks, lack of awareness, and implementation costs still exist, the future of AI-driven insurance marketing remains highly promising. Insurance companies that effectively adopt Artificial Intelligence and digital technologies can achieve sustainable growth, improved customer relationships, and competitive advantage in the modern digital business environment.

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