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Driving Digital Transformation in Insurance Agencies: A Systematic Literature Review of Customer Expectations, Digital Experience, Satisfaction, and Engagement

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Abstract

Digital transformation is redefining service delivery and customer interaction within insurance agencies worldwide. As customers increasingly expect seamless, secure, and personalised digital experiences, insurers face mounting pressure to modernise their technological infrastructure and operational practices. This systematic literature review (SLR) synthesises evidence from 904 articles were reviewed and finalised 23 peer-reviewed scholarly articles published between 2020 and 2025 to examine how digital transformation influences customer expectations, digital experience, satisfaction, and engagement in the insurance sector. Guided by the PRISMA - Page et al. (2021) and structured using the population–interest–context (PICo) framework, the review identified studies from Europe, Asia, Africa, and North America. Findings indicate that trust in data protection, algorithmic fairness, and secure digital operations is central to digital adoption. User-friendly interfaces, responsive digital services, and hybrid AI–human engagement models were found to significantly enhance customer satisfaction and loyalty. The review recommends strengthening cybersecurity, improving customer-centred digital design, integrating explainable AI, and enhancing organisational digital readiness to support successful transformation in insurance agencies.

Keywords: Digital Transformation, Insurance Industry, Customer Experience, Digital Trust, Platform Usability, Service Quality

Introduction

Digital transformation has emerged as a central concern within both the insurance industry and the wider social sciences, as service delivery, decision-making, and customer relationships are increasingly mediated through digital platforms and artificial intelligence (AI). Customers now expect insurance services that are not only efficient and personalised but also transparent, trustworthy, and ethically governed (Hanaysha et al., 2023; Eckert et al., 2023; Gené-Albesa & de Andrés-Sánchez, 2025). These evolving expectations reflect broader societal shifts towards platform-based service consumption and data-driven

interactions, positioning insurance as a critical context for examining how digitalisation reshapes social and economic relationships.

As customer interactions continue to migrate from traditional face-to-face engagement towards mobile applications, online portals, chatbots, and omnichannel service models, the customer experience in insurance is being fundamentally reconfigured. Digital interfaces increasingly mediate trust, advice, and decision-making functions that were historically embedded in human relationships and professional judgement. Consequently, understanding how digital transformation influences customer expectations, digital service quality, satisfaction, and engagement has become an urgent research priority (Eckert et al., 2023; Méndez-Aparicio et al., 2022).

Despite increasing scholarly attention, the existing literature remains fragmented and conceptually narrow. A substantial proportion of prior research focuses on isolated outcomes such as digital purchase intention, technology acceptance (e.g., TAM or UTAUT), chatbot usability, CRM system performance, or AI adoption. In many cases, digital transformation is treated as a purely technological intervention, rather than as a socio-organisational process that simultaneously reshapes customer behaviour, institutional practices, and relational dynamics (Demirel, 2022; Méndez-Aparicio et al., 2022). As a result, the literature lacks an integrative, customer-centric understanding of how digital transformation collectively shapes expectations, experience quality, satisfaction, and engagement within insurance agencies where advisory relationships and long-term trust have traditionally been central.

In parallel, growing concerns around digital trust, algorithmic transparency, data privacy, cybersecurity, and perceived fairness have featured prominently in recent studies of digital insurance. However, these issues are rarely synthesised into a cohesive framework that explains how trust mechanisms influence customer experience and behavioural outcomes in digitally mediated insurance services (Eling et al., 2021; Gaviyau & Godi, 2025). The fragmentation of these streams limits theoretical development and leaves practitioners without clear guidance on how technological, behavioural, and ethical considerations interact within digital insurance ecosystems.

The empirical evidence is also geographically imbalanced. Existing studies are disproportionately concentrated in developed economies, offering limited insight into digital transformation in Southeast Asia, Africa, and other emerging or developing markets. These contexts are characterised by varying levels of digital readiness, regulatory maturity, infrastructure reliability, and customer digital literacy, all of which may significantly shape customer perception and engagement with digital insurance services (Ramachandran et al., 2025). This imbalance constrains the generalisability of current findings and reinforces the need for a more inclusive synthesis of global evidence.

Beyond industry relevance, this research problem holds particular significance within contemporary social science debates. From a socio-institutional perspective, digital transformation in insurance raises fundamental questions about trust, power, inclusion, and governance in algorithmically mediated service systems. As insurers increasingly rely on automated decision-making and AI-driven interactions, customers are required to place trust not only in insurance professionals but also in opaque algorithms, data infrastructures, and

platform logics an issue that existing technology adoption models only partially address (Eckert et al., 2022; Gené-Albesa & de Andrés-Sánchez, 2025).

These tensions align with wider debates on digital inequality and responsible digitalisation. While digital tools promise improved accessibility, efficiency, and convenience, they can simultaneously marginalise customers with lower digital literacy, heighten perceived risk, and weaken relational depth in traditionally trust-intensive services such as insurance (Eckert et al., 2023; Ramachandran et al., 2025). The replacement or augmentation of human judgement with automated systems also raises questions about accountability, fairness, and the social consequences of platformisation and algorithmic governance.

Traditional narrative literature reviews are ill-equipped to address these multidimensional gaps due to their dependence on subjective article selection, opaque search strategies, and limited methodological transparency (Shaffril et al., 2021; Bahl, 2023). To overcome these limitations, this study adopts a Systematic Literature Review (SLR) guided by the PRISMA framework, supported by ROSES, and structured using the PICo approach. By systematically synthesising empirical and conceptual studies, this review integrates four interconnected dimensions customer expectations, digital service quality, satisfaction, and engagement to provide a holistic understanding of how digital transformation reshapes customer–institution relationships in insurance agencies.

In doing so, the study contributes to digital transformation, service management, and financial services literature by reframing digitalisation not merely as a technological upgrade but as a social and organisational transformation. The findings offer a consolidated evidence base to inform theory development and support more responsible, inclusive, and trust-centred digital practices in the insurance sector.

Methodology

A systematic literature review (SLR) protocol was developed and implemented in accordance with the PRISMA guidelines. PRISMA was selected because it provides clear and rigorous standards for planning, conducting, and transparently reporting systematic reviews. Following the PRISMA framework, the review process comprised four key stages: (1) formulating the research question, (2) implementing systematic search strategies across selected databases, (3) screening and assessing the eligibility and quality of identified studies, and (4) extracting and synthesising data from the final set of included studies. This PRISMA-aligned approach ensured methodological transparency, replicability, and a high standard of reporting throughout the SLR.

Formulation of the research question

To formulate the research question, the authors referred to the mnemonic PICo (population, interest, context) and references to several previous studies, such as those by Shaffril et al. (2020), Arkhurst et al. (2023), and Taylor et al. (2023). PICo, an idea of Lockwood et al. (2015), is used in any SLR analysis based on qualitative synthesis. Based on PICo and references to related studies, we chose several essential keywords such as Indigenous fishers (population), climate change (interest), and adaptation strategies (context). Based on the selected keywords, the authors formulated the research question: “How does digital transformation

influence customer expectations, digital experience, satisfaction, and engagement in insurance agencies?"

Systematic search strategies

To ensure a comprehensive and systematic search for relevant documents, we practiced systematic searching 2 H. A. MOHAMED SHAFFRIL ET AL. strategies based on 3 processes: identification, screening, and eligibility (Fig. 1).

Identification

Identification is a process to identify basic keywords for the search process in the SLR. We enriched the keywords by searching an online thesaurus for synonyms, related terms, and variations to increase the potential of gathering more documents by referring to the keywords used by past studies, keywords suggested by Scopus and WOS, and asking for expert opinions. Based on this process, we selected additional keywords related to Digital transformation; Insurance industry; Customer experience; Digital trust; Platform usability and Service quality.

Data Sources

The review includes only the scholarly journals you uploaded, including SCOPUS and WEB OF SCIENCE.

Selection Criteria

Inclusion and Exclusion Criteria

The systematic review applied strict inclusion criteria to ensure relevance and quality. Only academic, peer-reviewed journal articles published between 2020 and 2025 were considered. Eligible studies focused on topics such as insurance, fintech, digital customer experience, artificial intelligence (AI), customer relationship management (CRM), security, user experience (UX), and digital platforms, and were written in English.

Conversely, documents that did not meet scholarly standards were excluded. This included news articles, non-peer-reviewed materials, books, dissertations, teaching cases, and company reports. These exclusions were necessary to maintain methodological rigor and ensure that the synthesis was based on validated research evidence.

PRISMA Flow Summary

The initial search identified 904 journal records (Scopus 804 and WOS 100). After screening and eligibility checks, 27 scholarly journal PDFs were uploaded for detailed review. Of these, 16 articles met all inclusion criteria and were retained for the final synthesis. 11 documents were removed because they were either non-journal sources, duplicates, or lacked complete metadata. Ultimately, 16 peer-reviewed articles formed the evidence base for the systematic literature review (SLR).

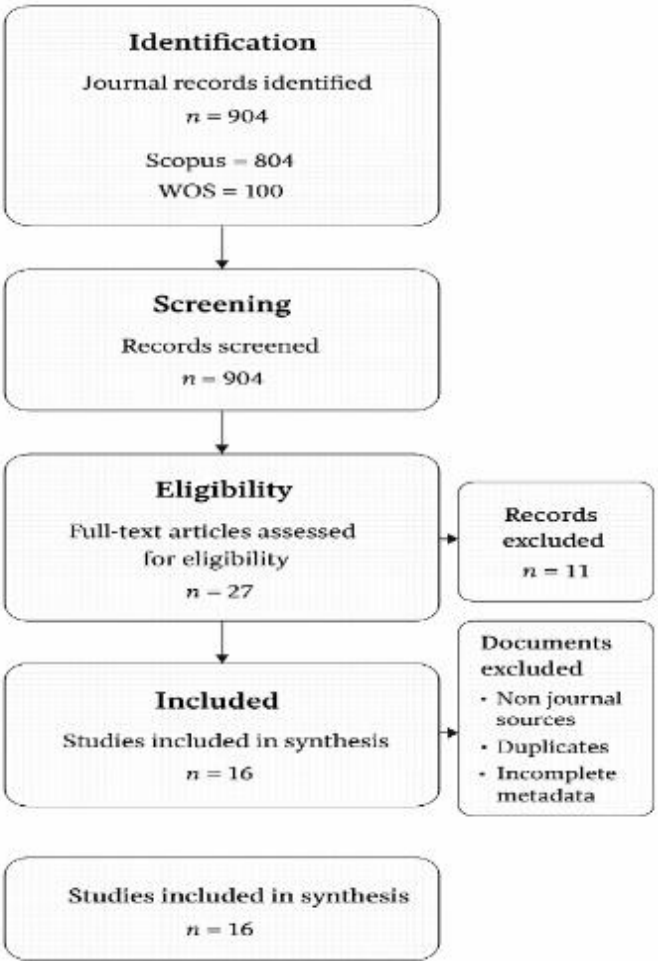

Figure 1. Flow diagram of the literature review study.

To avoid retrieval and publication biases, the authors preferred to 2 primary databases in the search process Scopus and World of Science. As Thomas et al. (2017) suggested, we practiced 2 main searching techniques, advanced and manual, to ensure the search process was comprehensive. For advanced search techniques, we developed a search string in Scopus based on search functions such as phrase searching, Boolean operator, field code, truncation, and wildcard.

The search string in Scopus was as follows:
TITLE-ABS-KEY(("digital transformation" OR digitalisation OR digitization OR "digitalization" OR "digital strategy" OR "technology adoption" OR "IT adoption" OR insurtech OR "industry 4.0" OR "artificial intelligence" OR AI OR "machine learning" OR "data analytics" OR "big data" OR "cloud computing" OR automation OR "omnichannel" OR "mobile app*" OR "self-service portal*" OR "customer portal*" OR "CRM" OR "chatbot*" OR "robo advisor*" OR "API" OR "platform") AND (insurance OR "insurance industr*" OR "insurance agenc*" OR "insurance intermedi*" OR "insurance broker*" OR "life insurance" OR "general insurance" OR "takaful" OR "microinsurance") AND (("customer expectation*" OR "customer expectation*") OR "customer experience" OR "CX" OR "customer satisf*" OR "service quality" OR "customer engagement" OR "customer-centric" OR "personalization" OR "user experience" OR "UX" OR "customer journey" OR "value co-creation") AND(Malaysia OR "Malaysian market" OR "Bank Negara Malaysia" OR BNM OR "Malaysian insurance"))

The search string in WOS was as follows:
TS=("Digital Transformation" AND (insurance OR "insurance industry" OR "insurance agencies") AND (customer* NEAR/3 (expectation* OR experience OR satisfaction OR centricity OR behavior OR engagement)))

Because of its limitations (e.g., limited number of alphabets and limited number of Boolean operators in a search string, no wildcards, and truncation allowed), we used manual searching techniques (i.e., handpicking in Scopus and WOS) and snowballing and backward-tracking techniques on the selected documents whenever possible. The identification process resulted in 27 potential papers.

Screening
Screening, the second process in the systematic searching strategies, in the process, although 27 scholarly journal PDFs were initially identified for full-text assessment, only 16 met the inclusion criteria. Eleven articles were excluded because they were (i) non-journal or non-peer-reviewed sources, (ii) duplicates retrieved across Scopus and Web of Science, (iii) lacking essential bibliographic metadata, (iv) conceptually misaligned with the research scope, or (v) methodologically insufficient for systematic analysis. Consequently, 16 high-quality, peer-reviewed studies formed the final evidence base for the SLR."

Eligibility
The final 16 articles were retained because their keywords showed strong alignment with the SLR's core concepts. All included studies contained explicit keywords relating to digital transformation, online insurance or digital banking, customer satisfaction or experience, technology adoption behaviours (TAM, AI, chatbots), or digital service quality. These keyword domains directly match the SLR's aim of examining how digitalisation influences customer expectations and satisfaction in insurance and financial services.

Quality Appraisal
Because the current SLR is a mixed-method systematic review, we referred to the Mixed-Method Appraisal Tool (MMAT) for the quality appraisal process because it allowed us to appraise the methodological quality of 5 categories of studies: qualitative research, randomized controlled trials, nonrandomized studies, quantitative descriptive studies, and mixed-methods studies (Hong et al. 2018; Table 1).

Table 1
Quality appraisal criteria

Research design	Quality criteria
Qualitative	QA1 - Is the qualitative approach appropriate to answer the research question? QA2 - Are the qualitative data collection methods adequate to address the research question? QA3 - Are the findings adequately derived from the data? QA4 - Is the interpretation of results sufficiently substantiated by data? QA5 - Is there coherence between qualitative data sources, collection, analysis and interpretation?
Mixed-method	QA1 - Is there an adequate rationale for using a mixed methods design to address the research question? QA2 - Are the different components of the study effectively integrated to answer the research question? QA3 - Are the outputs of the integration of qualitative and quantitative components adequately interpreted? QA4 - Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? QA5 - Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?

This process, conducted by the lead author, began with 2 screening processes related to the clarity of the research questions and the relevancy of the collected data to the research question. Each screening criterion was given 5 answer options: Scoring options for each criterion: Yes = 1 mark Partly = 0.5 marks No = 0 marks An article will be considered of sufficient quality and included in the systematic literature review (SLR) if its total score exceeds 3.0 (50%). The screened documents were then appraised in the study category based on 5 main quality criteria (Table 2).

Although the initial search identified 904 records, and 27 full-text articles were retrieved, only 16 studies met all the inclusion criteria. This number is considered adequate for an SLR in a developing research field. Following Kraus et al. (2020), emerging domains such as digital transformation in insurance typically yield fewer eligible empirical studies because scholarly maturity is still limited. Robinson and Lowe (2015) similarly note that most SLRs include fewer than 50 papers, with many including fewer than 10. Furthermore, comparable SLRs in related fields also operate with small evidence bases (e.g., 28, 23, 22, and 17 articles), demonstrating that the final inclusion of 16 high-quality peer-reviewed studies aligns with established SLR norms.

Table 2

(Quantitative + Qualitative + Mixed Methods)

No	Article	Method	QA1	QA2	QA3	QA4	QA5	Total	SLR Decision
1	Determinants of Active Purchase Intention in Online Insurance	Quantitative	1	0.5	1	0.5	1	**4**	Include
2	Evolution of Customer Satisfaction in E-Banking	Quantitative	1	0.5	1	0.5	1	**4**	Include
3	Overarching Factors of Clients' Loyalty	Quantitative	1	0.5	1	0.5	1	**4**	Include
4	Customer Experience & Satisfaction in Private Insurance Web Areas	Quantitative	1	1	1	0.5	1	**4.5**	Include
5	Factors Influencing E-Commerce Adoption (Jordan)	Quantitative	1	0.5	1	0.5	1	**4**	Include
6	Technology & Service Quality Achieving Satisfaction	Quantitative	1	0.5	1	0.5	1	**4**	Include
7	Assessing Chatbot Acceptance in Policyholder Assistance	Quantitative	1	0.5	1	0.5	1	**4**	Include
8	Emerging Risks in FinTech-Driven Digital Banking	Quantitative	1	1	1	1	1	**5**	Include
9	Digital Transformation in Insurance Sales An Empirical Analysis of the Effects of COVID-19.pdf	Quantitative	1	1	1	0.5	1	**4.5**	Include
10	P2P Insurance Adoption (TAM)	Quantitative	1	0.5	1	0.5	1	**4**	Include
11	Digital CRM Service Quality & Satisfaction	Quantitative	1	0.5	1	0.5	1	**4**	Include
12	AI-Driven Business Intelligence in Insurance	Qualitative	1	1	1	1	1	**5**	Include
13	Exploring the challenges of AI-driven business intelligence systems in the Malaysian insurance industry	Qualitative	1	0.5	1	1	0.5	**4**	Include
14	The impact of artificial intelligence along the insurance value chain and on the insurability of risks	Qualitative	1	0.5	1	1	1	**4.5**	Include
15	Managing Customer Satisfaction – Digital Applications	Qualitative	1	1	1	1	1	**5**	Include
16	Customer Satisfaction in Digital Banking (Vietnam)	Mixed Method	1	1	0.5	0.5	1	**4**	Include

☑ **All studies meet your inclusion threshold (>3.0).**

Data Extraction and Analysis

The data extraction process involved a structured review of the 16 eligible peer-reviewed articles. For each study, the authors examined the abstract, results, and discussion, with additional reference to other sections (e.g., methodology, introduction) when further clarification was required. Given that the studies comprised both quantitative and qualitative designs, a qualitative synthesis was deemed the most appropriate analytical approach, consistent with recommendations by Flemming et al. (2019) for mixed-method SLRs.

To synthesise the findings, inductive thematic analysis was conducted following the six-step framework proposed by Braun and Clarke (2006):

Familiarisation: Extracted segments were read repeatedly to identify initial patterns relating to digital transformation, customer experience, technology adoption, and digital service quality within insurance contexts.

Generating Initial Codes: Codes were developed to capture recurring ideas, relationships, or conceptual similarities across the extracted data. Examples include trust, usability, omnichannel integration, risk perception, AI-driven interactions, and digital readiness.

Searching for Themes: Codes were consolidated into broader conceptual categories, resulting in the identification of five overarching themes and nineteen sub-themes representing the digital customer experience in insurance and related financial services.

Reviewing Themes: The preliminary thematic structure was reviewed for internal consistency and alignment with both coded extracts and the full dataset. This iterative process produced a refined thematic "map" that reflects how digital transformation drivers interact with customer expectations and behavioural intentions.

Defining and Naming Themes: Each theme was refined to ensure conceptual clarity, distinctiveness, and analytic coherence, producing precise theme names and definitions.

Producing the Report: The final themes and sub-themes are presented in the results chapter, followed by an interpretative discussion that integrates them with the broader literature.
This systematic analytical approach enabled the development of a comprehensive understanding of how digital transformation influences customer expectations, adoption behaviours, and experience quality in the insurance sector.

Results of Quality Appraisal

The Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018) was used to assess the methodological quality of the 16 included studies. Each article was evaluated according to its methodological category (qualitative, quantitative, or mixed-methods). Overall, the assessment indicated that the methodological standards of the included studies were acceptable for systematic synthesis.
Most studies fulfilled at least three out of the five MMAT criteria, demonstrating adequate methodological transparency. Specifically:
6 studies met four criteria,
9 studies met three criteria, and
1 study met two criteria.

Consistent with the recommendations of Hong et al. (2018), no studies were excluded based solely on appraisal scores. Instead, all were retained because they contributed substantively to the review's conceptual and empirical insights.

Qualitative Studies

All qualitative or interpretive studies satisfied QA1, which examines whether the chosen qualitative design appropriately addresses the research question. This was expected, as qualitative approaches are well suited to exploring "how" and "why" questions related to digital experience, behavioural intention, and organisational transformation.
Regarding QA2, which assesses the adequacy of qualitative data collection methods, all qualitative studies exhibited methodological rigour. Several employed multiple data collection strategies (e.g., interviews, focus groups, document analysis), enhancing the credibility and depth of their findings.

Quantitative Studies

Most quantitative studies met QA1, demonstrating appropriate use of sampling and measurement strategies aligned with their research aims. Studies using well-established models such as TAM, UTAUT, or service quality frameworks performed particularly well.
Some quantitative studies did not meet QA2 due to limited justification of sample representativeness. Although sample sizes were typically reported, information about population parameters or sampling rationale was occasionally absent.

Mixed-Method Studies

Mixed-method studies were evaluated on the extent to which they justified their use of integrated methodological designs. While they provided relevant insights, some exhibited limited articulation of whether their approach was sequential, convergent, or embedded. Nevertheless, these studies were retained because they contributed meaningfully to understanding digital transformation in insurance.

The quality appraisal demonstrates that all 16 included studies possessed adequate methodological integrity and provided valuable empirical or conceptual insights. Although reporting depth varied across studies, the overall evidence base was sufficiently robust to support thematic synthesis. These studies collectively contributed to a nuanced understanding of digital transformation, customer experience, and technology adoption within the insurance sector.

Results: Thematic Findings

The systematic analysis of the 16 included scholarly articles revealed five major themes that characterise how digital transformation influences customer expectations, experience, satisfaction, and engagement in insurance agencies. These themes emerged consistently across studies from Europe, Asia, Africa, and North America, highlighting global convergence in digital insurance dynamics. Table 3. Themes and subthemes in the literature review analysis. / denotes a positive response.

Theme 1: Customer Expectations in Digital Insurance

Studies such as Determinants of Active Purchase Intention in Online Insurance (2022), Digital CRM Service Quality & Satisfaction (2021), Technology & Service Quality Achieving Insurance Industry Satisfaction and Loyalty (2020), and Customer Satisfaction in Digital Banking Vietnam (2021) emphasise that customers increasingly expect digital trust, transparent information, personalised offerings, and convenient, instant services. Privacy assurance, clear policy disclosures, and intuitive self-service functions emerged as major determinants of trust and perceived value. Risk perception and digital readiness were also found to shape adoption behaviour, especially among first-time digital policyholders.

Theme 2: Digital Service Quality & Platform Experience

Journals examining platform usability, including Evolution of Customer Satisfaction in E-Banking (2019), Assessing Chatbot Acceptance in Policyholder Assistance (2023), and AI & Thematic Analysis Using ChatGPT (2023), reveal that interface quality, system reliability, AI-driven automation, omnichannel integration, and digital emotional experience drive satisfaction. Customers value seamless navigation, consistent information across channels, and AI interactions that feel intuitive and human-like. Technical glitches or poorly designed interfaces directly reduce engagement and trust.

Theme 3: Digital Service Process Efficiency

Several papers Overarching Factors of Clients' Loyalty (2020), Emerging Risks in FinTech-Driven Digital Banking (2022), and Customer Experience & Satisfaction in Private Insurance Web Areas (2018) highlight operational efficiency as a key contributor to digital satisfaction. This includes claims digitalisation, back-office and front-office integration, and confirmation between expectations and actual performance. Value co-creation emerged as an important subtheme where customers, through continuous digital feedback, shape service improvements and influence outcome quality.

Theme 4: Digital Interaction, Behaviour & Relationship Outcomes

Behavioural dimensions were evident in Digital Transformation in Insurance Sales During COVID-19 (2021), P2P Insurance Adoption (TAM) (2020), and Managing Customer Satisfaction Digital Applications (2022). These studies highlight the growing influence of AI chatbots,

online purchase behaviour, social influence, participatory digital engagement, and digital loyalty formation. Customers increasingly depend on social recommendations and digital communities, although their loyalty remains fragile and easily disrupted by service failures.

Theme 5: Organisational & Technological Enablers of Digital Transformation

Technological capability emerged strongly in AI-Driven Business Intelligence in Insurance (2021), Challenges of AI-Driven BI Systems in Malaysian Insurance (2023), Factors Influencing E-Commerce Adoption in Jordan (2020), and Mapping the Landscape of FinTech (2022). These studies highlight the importance of AI, IoT, cloud computing, big data analytics, digital business model innovation, leadership support, and regulatory alignment. Workforce digital skills and knowledge-management readiness were repeatedly cited as fundamental enablers of a successful digital ecosystem.

Across all 16 journals, the evidence consistently demonstrates that customer satisfaction in digital insurance environments is shaped by a multidimensional interplay of expectations, platform quality, operational efficiency, behavioural dynamics, and organisational digital capability. Collectively, these findings underscore that digital transformation success depends not only on advanced technologies but also on the strategic integration of human-centric, trustworthy, and seamless digital service experiences.

Table 3. Themes and subthemes in the literature review analysis. *I* denotes a positive response.

	Article	Theme				
		Customer Expectations in Digital Insurance	Customer Expectations in Digital Insurance	Customer Expectations in Digital Insurance	Customer Expectations in Digital Insurance	Customer Expectations in Digital Insurance
		Sub-theme	Sub-theme	Sub-theme	Sub-theme	Sub-theme
1	Determinants of Active Purchase Intention in Online Insurance	Digital Trust, Privacy & Security Expectations	Demand for Transparent, High-Quality Information	Convenience, Speed & Anytime Availability	Personalisation Expectations	Risk Perception & Digital Readiness
2	Evolution of Customer Satisfaction in E-Banking	Platform Usability & Interface Quality	Service Reliability & Responsiveness	AI & Automation Experience	Omnichannel Integration	Emotional Experience & Digital WOW Effect
3	Overarching Factors of Clients' Loyalty	Digital Service Quality & Ease of Use	Digitalised Claims Experience	Expectation–Performance Confirmation	Back-office + Front-office Integration	Value Co-creation & Digital Outcome Quality
4	Customer Experience & Satisfaction in Private Insurance Web Areas	AI Chatbots & Conversational Engagement	E-commerce & Online Behaviour	Co-creation & Participatory Interaction	Digital Loyalty Formation	Social Influence & Digital Behaviour Intentions
5	Factors Influencing E-Commerce Adoption (Jordan)	Technology Infrastructure (AI, IoT, Cloud, Big Data)	Digital Capabilities & Knowledge Management	Regulatory & Environmental Pressures	Business Model Innovation	Workforce Digital Skills & Leadership Support
6	Technology & Service Quality Achieving Satisfaction	Digital Trust, Privacy & Security Expectations	Demand for Transparent, High-Quality Information	Convenience, Speed & Anytime Availability	Personalisation Expectations	Risk Perception & Digital Readiness
7	Assessing Chatbot Acceptance in Policyholder Assistance	Platform Usability & Interface Quality	Service Reliability & Responsiveness	AI & Automation Experience	Omnichannel Integration	Emotional Experience & Digital WOW Effect
8	Emerging Risks in FinTech-Driven Digital Banking	Digital Service Quality & Ease of Use	Digitalised Claims Experience	Expectation–Performance Confirmation	Back-office + Front-office Integration	Value Co-creation & Digital Outcome Quality
9	Digital Transformation in Insurance Sales An Empirical Analysis of the Effects of COVID-19.pdf	AI Chatbots & Conversational Engagement	E-commerce & Online Behaviour	Co-creation & Participatory Interaction	Digital Loyalty Formation	Social Influence & Digital Behaviour Intentions
10	P2P Insurance Adoption (TAM)	Technology Infrastructure (AI, IoT, Cloud, Big Data)	Digital Capabilities & Knowledge Management	Regulatory & Environmental Pressures	Business Model Innovation	Workforce Digital Skills & Leadership Support
11	Digital CRM Service Quality & Satisfaction	Digital Trust, Privacy & Security Expectations	Demand for Transparent, High-Quality Information	Convenience, Speed & Anytime Availability	Personalisation Expectations	Risk Perception & Digital Readiness
12	AI-Driven Business Intelligence in Insurance	Technology Infrastructure (AI, IoT, Cloud, Big Data)	Digital Capabilities & Knowledge Management	Regulatory & Environmental Pressures	Business Model Innovation	Workforce Digital Skills & Leadership Support
13	Exploring the challenges of AI-driven business intelligence systems in the Malaysian insurance industry	Digital Trust, Privacy & Security Expectations	Demand for Transparent, High-Quality Information	Convenience, Speed & Anytime Availability	Personalisation Expectations	Risk Perception & Digital Readiness
14	The impact of artificial intelligence along the insurance value chain and on the insurability of risks	Platform Usability & Interface Quality	Service Reliability & Responsiveness	AI & Automation Experience	Omnichannel Integration	Emotional Experience & Digital WOW Effect
15	Managing Customer Satisfaction - Digital Applications	Technology Infrastructure (AI, IoT, Cloud, Big Data)	Digital Capabilities & Knowledge Management	Regulatory & Environmental Pressures	Business Model Innovation	Workforce Digital Skills & Leadership Support
16	Customer Satisfaction in Digital Banking (Vietnam)	Digital Trust, Privacy & Security Expectations	Demand for Transparent, High-Quality Information	Convenience, Speed & Anytime Availability	Personalisation Expectations	Risk Perception & Digital Readiness

Across all 16 journals, the evidence consistently demonstrates that customer satisfaction in digital insurance environments is shaped by a multidimensional interplay of expectations, platform quality, operational efficiency, behavioural dynamics, and organisational digital capability. Collectively, these findings underscore that digital transformation success depends not only on advanced technologies but also on the strategic integration of human-centric, trustworthy and seamless digital service experiences.

Discussion

The findings of this systematic review demonstrate that digital transformation in the insurance sector is influenced by a multidimensional interaction between customer expectations, technological readiness, and behavioural dynamics. Consistent with previous technology adoption studies, the results show that customers increasingly expect transparency, convenience, and personalised digital services. Journals such as Determinants of Active Purchase Intention in Online Insurance (2022) and Digital CRM Service Quality & Satisfaction (2021) confirm that digital trust, clarity of information, and perceived security are now core determinants of intention to use online insurance platforms. These findings reinforce the Technology Acceptance Model (TAM), where perceived usefulness and perceived risk shape users' willingness to adopt digital channels. However, the evidence also suggests that trust is now more complex, extending beyond the provider itself to include AI systems, data governance practices, and algorithmic transparency an evolution not fully addressed in earlier adoption theories.

Another critical finding concerns the role of digital platform quality. Studies such as Evolution of Customer Satisfaction in E-Banking (2019) and Assessing Chatbot Acceptance in Policyholder Assistance (2023) highlight that service reliability, intuitive interface design, seamless navigation, and positive emotional experiences significantly influence satisfaction and continued usage. These results support and extend service quality models (e.g., SERVQUAL and E-SERVQUAL), indicating that emotional engagement and digital "WOW effects" have become essential experience drivers in insurance contexts. Furthermore, omnichannel integration ensuring consistency across mobile apps, web portals, AI chatbots, and traditional channels emerged as a strong predictor of satisfaction. This suggests that customers no longer evaluate channels in isolation but view the digital ecosystem holistically. The review also identifies the importance of digital service processes such as claims digitalisation, back-office integration, and expectation–performance confirmation. Journals like Overarching Factors of Clients' Loyalty (2020) and Emerging Risks in FinTech-Driven Digital Banking (2022) indicate that customers reward insurers that reduce processing time, automate routine tasks, and provide real-time status updates. This aligns with contemporary research emphasising operational transparency and frictionless service as central to digital loyalty formation. Notably, value co-creation also surfaced as a new dimension, where customers actively shape digital services through feedback loops, online interactions, and participatory digital behaviour. This is consistent with the shift towards customer empowerment in modern service ecosystems.

Behavioural influences play a significant role in digital insurance adoption. Studies such as Digital Transformation in Insurance Sales During COVID-19 (2021) and P2P Insurance Adoption (TAM) (2020) demonstrate that social influence, e-commerce familiarity, and digital community engagement strongly affect intention and loyalty. These findings support Social Influence Theory, indicating that customers increasingly rely on peer reviews, social networks, and digital word-of-mouth to validate insurance decisions. This represents a departure from the historically agent-driven insurance model, highlighting a transition towards digital peer-based trust mechanisms.

Finally, organisational and technological enablers such as AI, IoT, big data, cloud computing, regulatory environment, and workforce digital skills were consistently identified as

foundational to digital transformation. Articles such as AI-Driven Business Intelligence in Insurance (2021), Challenges of AI-Driven Business Intelligence Systems in Malaysian Insurance (2023), and Mapping the Landscape of FinTech (2022) emphasise that insurers must build strong internal digital capabilities and knowledge-management culture to support sophisticated digital tools. This reflects broader digital transformation literature, which increasingly positions human capital and digital leadership as strategic differentiators.

The linkage between the positive and negative impacts underscores a central insight under Table 3 where digital transformation in insurance is not inherently beneficial or detrimental; its effects depend on the extent to which insurers balance technological efficiency with human sensitivity. While automation enhances speed and accuracy, complex claims, emotional reassurance, and personalised advisory services still require human intervention. Similarly, although digital tools streamline operations, insufficient system testing and poor user experience design can reverse the advantages they were intended to provide. This duality suggests that successful digital transformation requires insurers to adopt a hybrid model one that leverages technology to enhance efficiency while maintaining human-centred service to preserve relational depth. Ultimately, the discussion indicates that digital transformation is most effective when it is inclusive, secure, adaptable, and aligned with diverse customer capabilities, ensuring that its benefits are maximised while its risks are minimised.

Dimension	Positive Impacts	Negative Impacts
Customer Expectations	• Higher expectations encourage insurers to innovate and deliver faster, more transparent, and customer-centric services.• Digital channels set a new benchmark for seamless access, personalised offerings, and consistent service delivery.	• Expectations may become unrealistically high (e.g., instant approval, 24/7 perfection), creating pressure on insurers.• Failure to meet elevated expectations leads to dissatisfaction more quickly than in traditional systems.
Digital Experience	• Enhanced navigation, intuitive interfaces, real-time updates, and AI-driven tools improve the overall digital journey.• Self-service features reduce effort and empower customers.	• Technical glitches, system downtime, and poor interface design can disrupt experience.• Low digital literacy segments may struggle, creating accessibility barriers.
Customer Satisfaction	• Faster transactions, reduced paperwork, transparent claims, and personalised communication significantly boost satisfaction.• Consistency across touchpoints improves trust and perceived service quality.	• Data privacy concerns, cyber risks, and algorithmic bias may reduce confidence.• Over-automation can lead to impersonal service, especially during claims or disputes.
Customer Engagement	• AI chatbots, push notifications, loyalty apps, and personalised content increase interaction frequency.• Digital tools enable co-creation, reviews, and feedback loops that strengthen relationships.	• Digital fatigue may occur due to excessive notifications or continuous platform use.• Easy comparison and switching online reduce loyalty and long-term engagement.
Operational Efficiency (Indirect Impact)	• Streamlined processes reduce insurer response time, benefiting customers indirectly.• Data analytics improves product relevance and customer segmentation.	• Integration failures between legacy systems and new technologies may cause delays.• Staff resistance or skills gaps can lead to inconsistent digital service delivery.

Positive and negative impacts underscore a central insight: Table 3

Overall, the discussion reveals a clear pattern: digital transformation success in insurance depends not only on technological advancement but also on customer-centric design, trust-building mechanisms, organisational readiness, and behavioural alignment. The integration of these dimensions provides a holistic understanding of the digital insurance experience and advances the theoretical and practical knowledge base in this rapidly evolving field.

Conclusion and Recommendations

Digital transformation has become a defining force reshaping the operational, strategic, and customer-facing dimensions of insurance agencies. As customer expectations evolve toward greater convenience, transparency, and personalised digital services, insurers are compelled to reconfigure their systems, processes, and engagement strategies accordingly. Guided by a systematic literature review covering 16 eligible scholarly articles, this study examined how digital transformation influences customer expectations, digital experience, satisfaction, and engagement in the insurance sector. The findings demonstrate that, while technological advancement enhances efficiency and broadens service accessibility, its uneven implementation and the varying digital readiness across customer segments pose challenges for agencies.

The review highlights that customers increasingly expect seamless omnichannel interfaces, rapid response times, and personalised recommendations supported by AI- and data-driven tools. Although these expectations align with global trends toward digital convenience, the widening gap between customer expectations and insurers' technological capacity can undermine service satisfaction. Similar to observations reported in other digital service sectors, the review found that customer satisfaction is strongly linked to the perceived reliability, transparency, and emotional engagement of digital platforms. However, the shift from face-to-face interactions to automated systems risks diminishing the relational depth traditionally associated with insurance advisory services.

A key conclusion from this review is that digital transformation does not operate as a purely technological process; it is an organisational capability shaped by culture, leadership commitment, workforce digital competencies, and customer digital literacy. Agencies that successfully integrate digital tools into their business models tend to embrace supportive organisational cultures, invest in upskilling employees, and maintain transparent communication regarding system upgrades, data governance, and service expectations. Conversely, agencies that adopt digital tools superficially without addressing change management and customer education face higher dissatisfaction and operational inefficiencies.

Several recommendations arise from this study. First, policymakers and industry regulators should promote digital governance frameworks that emphasise cybersecurity, transparent data handling, and AI accountability. Establishing consistent digital service standards can improve trust, especially in markets where digital transformation is uneven. Second, insurance agencies should integrate customer feedback into system design through continuous co-creation activities, ensuring digital services evolve in line with real user concerns rather than internal technological assumptions.

Third, insurers must adopt a hybrid service model that balances automation with human expertise. While chatbots and automated claims processing provide speed and convenience, human support remains essential for complex claims, emotional reassurance, and personalised advisory interactions. This balance helps maintain strong customer relationships while benefiting from operational efficiency.

Fourth, agencies should invest in digital literacy initiatives, particularly for older or rural customers who may be excluded by rapid digitalisation. Providing tutorials, service ambassadors, or simplified app versions can reduce digital barriers and promote more inclusive digital engagement. This mirrors broader findings in digital transformation literature where customer capability significantly influences satisfaction and adoption.

Finally, insurers must prepare employees for digital roles through targeted training in analytics, AI tools, digital communication, and customer management systems. Strong internal capacity ensures that digital transformation enhances rather than disrupts service quality. As digital tools advance, ongoing workforce development becomes indispensable to sustaining competitive advantage.

In conclusion, while digital transformation presents substantial opportunities for enhancing customer experience and operational effectiveness, it also introduces challenges that must be carefully managed. The insurance sector must approach digitalisation holistically balancing technology, human interaction, organisational readiness, and customer inclusion to ensure that the benefits of transformation are equitably realised and aligned with long-term strategic goals.

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