Artificial Intelligence Service Quality Model in Service Industry: A Chronological Review

Lay Hong Tan[a*], Syaiful Rizal Hamid[b], Boon Cheong Chew[b], Cun Fui Tan[c] ,Yundong Guo[d]

[a] Universiti Teknikal Malaysia Melaka (UTeM), Sekolah Asasi Teknikal dan Pengajian Diploma (STEP), Centre of Technopreneurship Development (CTeD),75450 Ayer Keroh, Melaka, Malaysia

[b]Universiti Teknikal Malaysia Melaka (UTeM),Fakulti Pengurusan Teknologi Dan Teknousahawanan (FPTT),Centre of Technopreneurship Development (CTeD),75450 Ayer Keroh, Melaka, Malaysia

[c]Multimedia University, Faculty of Information Science and Technology (FIST) Jalan Ayer Keroh Lama, Melaka, 75450 Bukit Beruang

[d] Nanjing University of Industry Technology, School Of Aeronautic Engineeringn, Xianlin Campus 1# North Yangshan Road, Xianlin University Town, Nanjing 210023, China

[*]Corresponding Author

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ABSTRACT

This paper presents a chronological review of research on service quality that has been carried out using Artificial Intelligence (AI) as a tool from 2008 to 2026. A systematic identification and analysis of 60 peer-reviewed articles collected from the Scopus database was conducted across three developmental phases: Phase 1 (2008–2019), Phase 2 (2020–2022), and Phase 3 (2023–2026). This review traces the evolution of AI service quality research from initial studies employing computation and prediction models to recent work using deep learning, natural language processing, and the integration of multimodal AI in the hospitality, healthcare, and financial service sectors. The results show marked growth in publication rates and methodological complexity, particularly during the most recent phase. This study provides a structured temporal framework for understanding the type of change that occurred in each AI service quality dimension over time and outlines important themes within each era, with implications for research and service quality practitioners.

Keywords: Artificial Intelligence; Service Quality; AI Service Quality; Service Industry; Chronological Review; Service Quality Model; Digital Service

INTRODUCTION

An Artificial Intelligence is transforming the way service is delivered, moving many service systems from reactive, labour-intensive service contexts towards implementation of data-driven service delivery which is adaptive and is becoming increasingly proactive. From hospitality to banking, e-services to e-commerce, and IT service management to delivery platforms, AI features a blend of automation, prediction, personalisation, and constant monitoring that has a direct impact on responsiveness, reliability, consistency, and customer experience (Ansari, 2025; Hemalatha & D, 2025; M.-H. Huang & Rust, 2020; Lim et al., 2024; Sahu et al., 2026). This is important as service quality continues to play a pivotal role in customer satisfaction and loyalty, and the capacity to deliver swift, precise, customised, and hassle-free experiences through digital and physical channels is becoming more critical to businesses (Gao et al., 2026; Inavolu, 2024; Sardesai et al., 2024). AI is not just a tool for operations; it is a framework for designing service experiences, understanding customer expectations, and creating value on a large scale (Gao et al., 2026; Inavolu, 2024; Sahu et al., 2026).

The importance of AI in service quality escalates in significance as it can handle vast amounts of customer and operational data, analyse these patterns, and act upon them in real time. These studies explain the use of machine

learning, natural language processing, predictive analytics, robotic process automation, sentiment analysis, and recommendation systems to gather and synthesise signals from various channels, enhance the quality of decisions, and assist both front-line and backend service activities (Ansari, 2025; Hemalatha & D, 2025; Inavolu, 2024; Obiki-Osafiele et al., 2024). These capabilities have applications in customer-facing scenarios, such as chatbots, virtual assistants, personalised recommendation systems, and AI-enhanced communication platforms that respond instantly, customise content based on user behaviour, and scale services without compromise (Ansari, 2025; Binlibdah, 2024; Inavolu, 2024; Lim et al., 2024). In more operational contexts, the same technological solutions promise to enhance resource allocation and planning, predictive maintenance, ticket routing, compliance monitoring, and continuity of services,expanding the scope of service quality beyond interpersonal interactions to system reliability and the responsiveness of individuals and organisations (Ansari, 2025; Murugeah, 2024; Obiki-Osafiele et al., 2024).

One of the reasons for the increased interest in AI in service quality studies is its ability to balance efficiency and personalisation, maintaining both in parallel which has proven difficult for service organisations. AI has been utilised in the food and beverage industry to streamline repetitive tasks, manage inventory and kitchen workflow, and enhance service consistency, in addition to providing customised recommendations and customer connections based on tastes and habits. The same trend is displayed with digital services, such as digital recommendation systems and NLP chatbots, which showcase the advantages of AI over conventional e-services by minimising generic interactions, providing customised suggestions, and boosting support speed and scalability (Lim et al., 2024). The findings in the B2B communication research concur, as AI enhances case onboarding and integrates with available data, thereby improving the efficiency of service delivery while enabling an omnichannel approach and accommodation to changing conditions, leading to better engagement outcomes and client service performance (Binlibdah, 2024). However, this efficiency-personalisation melding is not automatic, as reported in the literature. Studies on service robotics have noted that one such asymmetry, close adherence to personal preferences, can be incompatible with efficiency goals. While there exists a philosophical challenge to automated systems ensuring customisation, it is a managerial challenge that has yet to be resolved (Tofangchi et al. 2021).

Overall, the empirical results suggest positive relationships between the utilisation of AI services and customer outcome variables, including satisfaction, trust, customer retention, and customer loyalty. In the hospitality sector, AI- and employee-based service quality account for substantial proportions of the variance in customer satisfaction and loyalty; however, when measuring AI- and employee-based service quality in the same model, AI does not significantly account for any additional variance in customer satisfaction (Prentice et al., 2020), demonstrating a unique contribution of employee-based service quality to the hospitality sector. Other research in the hospitality field has also identified that AI service quality has a positive impact on customer satisfaction, as well as the indirect effect of human service quality on customer satisfaction, highlighting the ongoing role of empathy in service interactions (Sardesai et al., 2024). Within the financial sector, AI has statistically significant positive relationships with elements of service quality, such as tangibility, reliability, responsiveness, assurance, and empathy, which means its use can impact the level of modernity, trustworthiness, and personalised care, in addition to speed and convenience that customers perceive provided by the bank. During the study of chatbots, AI service quality can serve to enhance loyalty via perceptions of value, feelings of trust, and satisfaction, with conversational quality and service recovery quality being particularly significant in relation to satisfaction and core service quality, which are highlighted as important factors in achieving loyalty (Q. Chen et al., 2023; Hsu & Lin, 2022). A more comprehensive survey also revealed that the service quality achieved by AI positively influences customer loyalty and that customer participation and interaction uncertainty play a role in determining the strength of the effects (Gao et al., 2026).

However, the literature also suggests that the effects of AI on service quality are dependent on the way quality is measured, interpreted, and regulated. Although traditional service quality dimensions such as reliability, responsiveness, assurance, empathy, and tangibility continue to be important in AI-infused service settings, researchers have increasingly proposed that the characteristics unique to AI service agents involve efficiency, availability, security, enjoyment, contact, and anthropomorphism (Gao et al., 2026; Noor et al., 2022). In the recommendation service context, information quality and system quality have positive impacts on recommendation quality and user satisfaction; standardization enhances word-of-mouth; and customisation enhances continued use, suggesting the importance of experience design as well as technical performance.For

recommendation services, information quality and system quality influence service quality (Kim & Kim, 2025), with the effect of standardization on word-of-mouth and customisation on continued use. They also found that AI-driven analytics can continuously track service interactions, identify negative trends in customer tone, language, complaints, or wait times, and aid in enforcing compliance in regulated environments, such as healthcare or financial services, thereby rendering service quality more measurable than ever before, following service interactions (Obiki-Osafiele et al., 2024). Predictive maintenance, anomaly detection, automated issue resolution, and proactive staffing are examples of how AI impacts perceived quality by enhancing the underlying infrastructure that supports customer experience in IT service delivery, thus reducing downtime and enhancing reliability. Quantitative data from AI-powered delivery systems corroborate this trend: predicting and personalising were combined, delivering improvements across both operational and experiential metrics, reducing the average delivery time from 31.2 to 25.4 minutes, boosting on-time delivery rates from 92% to 78%, increasing positive sentiment by 80%, and 68%, and achieving a higher Net Promoter Score (85 compared to 68) and higher retention (89% compared to 74%) (Kasoju et al., 2025).

Nevertheless, in light of all these elements, the best way to understand AI in service quality is not as a mere replacement of human service but as a wider reconfiguration of its production, delivery, evaluation, and enhancement. While the promise of AI is consistently held out as the promise of faster response times, more accurate personalisation, proactivity of problem prevention, and scale of service delivery, there will be edge conditions which will indicate the need for human preference, empathy, transparency, and oversight (Ansari, 2025; Inavolu, 2024; Obiki-Osafiele et al., 2024; Sahu et al., 2026). Issues regarding privacy, potential biases, transparency, compatibility with legacy systems, and excessive reliance on automation have been commonly examined in various industries, highlighting that enhancements in service quality are not ensured and depend on sensible execution and robust governance patterns (Ansari, 2025; Inavolu, 2024; Obiki-Osafiele et al., 2024; Sahu et al., 2026).However, the overall trend in the evidence thus points to avoiding complete automation and instead embracing human-AI collaboration for tasks with high-touch, low automation, where relational service emphasising human intelligence and judgment is still key (M.-H. Huang & Rust, 2020; Sardesai et al., 2024) .Therefore, it is essential to start an extended examination of artificial intelligence and service quality from this dual fact: the use of AI can make high-quality service more complex, but if they have the technical capability and are trusted in this regard, the sophistication can also lead to better service, provided customers accept AI's fit with their service interactions and its ability to sustain the personal aspects of service to a meaningful degree (Gao et al., 2026; Sahu et al., 2026; Sardesai et al., 2024).

MATERIALS AND METHODS

Data Collection

The service industries have evolved over time, and the successive paradigm shift around artificial intelligence (AI) has impacted the design, execution, assessment, and enhancement of service experiences. With the shift towards technology-assisted services to more autonomous and intelligent service systems, new dimensions of service quality have arisen regarding the responsiveness, personalisation, and reliability of the service, transparency, interaction, and customer experience. Although a vast amount of research has emerged in the field of AI and service quality, the literature is scattered across various service contexts, technological applications, theoretical lenses, and timeframes of technological development. This fragmentation requires a chronological review tracing the evolution of the conceptualisation and measurement of service quality, which is thus impacted by the adoption of AI over time. Thus, to explore this literature development over time and identify the key points of knowledge development, shifts in the focus of research, new dimensions of service quality, and the conceptual and measurement models for AI-enabled services, the present review is titled Artificial Intelligence Service Quality Model in Service Industry. To develop the relationship and evidence in a transparent and reproducible manner, a one-step data collection procedure was employed in which a search was performed on Scopus, as it covers a wide variety of fields related to business, management, technology, computer science, and service-related areas of research for peer-reviewed journal articles. A literature search was conducted using a structured approach with predefined search terms and relevant combinations of terms related to artificial intelligence, service quality, AI-supported services, intelligent service systems, and related service-industry applications. The retrieved records were then evaluated based on predetermined inclusion and exclusion criteria to arrive at publications relevant and informative enough for chronological analysis. Important parameters such

as publication year, research context, technological emphasis, theoretical background, service quality dimensions, methodology, and proposed or validated models were specifically considered, enabling the evolution of the field's intellectual structure to be interpreted over time. It is especially important that the data used in a chronological review be rigorous and systematic; otherwise, the data might give a false impression of the research timeline, direction, and magnitude if they were collected in such a way that they could not be complete, consistent, or selectively retrieved. A clear retrieval and selection process enhances reliability through uniformity and procedural consistency, and at the same time, the selected literature is in alignment with the objectives of the research, which can help enhance the validity of the research results. For the comparison and identification of the time trend pattern, it helps to make the trend pattern more interpretable. This methodological rigor creates a strong base of credibility to explain the advancement of AI service quality research, when a conceptual turn has taken place, and what theoretical and measurement gaps exist for future model development.

Table 1: The specification for primary data searching.

Keyword	**ARTIFICIAL INTELLIGENCE SERVICE QUALITY MODEL IN SERVICE INDUSTRY**
Inclusion	Article, Journal, English, Business, Management and Accounting, Social Science
Exclusion	Computer Science, Engineering, Decision Science, Review Articles, other languages
Final Search String (Scopus)	TITLE-ABS-KEY (ARTIFICIAL INTELLIGENCE SERVICE QUALITY MODEL IN SERVICE INDUSTRY) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (EXACTKEYWORD , "Artificial Intelligence") OR LIMIT-TO (EXACTKEYWORD , "Service Quality") OR LIMIT-TO (EXACTKEYWORD , "Artificial Intelligence (ai)") OR LIMIT-TO (EXACTKEYWORD , "Quality Of Service") OR LIMIT-TO (EXACTKEYWORD , "Service Sector") OR LIMIT-TO (EXACTKEYWORD , "Service Industry")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "SOCI"))
Number of Primary Article	60

The data collection strategy was designed to build a focused methodology with a solid evidence base to investigate the emergence of artificial intelligence (AI) service quality models in the service sector. This one-step search was performed in the Scopus database based on the keywords “Artificial Intelligence Service Quality Model in Service Industry” in the title, abstract, and keywords sections. The search protocol was based on predetermined inclusion criteria for journal articles published in English that were at the final stage of publication and within the Business, Management, and Accounting (BUSI) and Social Sciences (SOCI) subject areas. Furthermore, the keyword ‘Artificial Intelligence' was tightened by indexing with relevant keywords such as 'Service Quality', 'Artificial Intelligence (AI)', 'Quality of Service', 'Service Sector, and 'Service Industry'. These limitations were deliberately added to keep things conceptually aligned with the studies retrieved and the main objective of the review. The annual limit to journal articles also provides a relatively consistent body of scholarly evidence, and the disciplinary focus on business, management, and social sciences brings a managerial, organisational, service, and customer-related angle on AI to the forefront, rather than just being mainly technically focused on system development. Papers that were essentially computer science, engineering, or decision science papers were filtered out along with review papers and papers in languages other than English. This disciplinary delimitation is significant because technical research might focus on conceptualising service quality primarily as a level of computing performance, network efficiency, algorithmic precision, or optimisation of a system, while the scope of interest of the present review is on how AI contributes to service quality in the context of organisational settings and service industries.

Using these criteria, 60 primary articles from research journals were selected as the final group, which would provide a focused set of literature for the chronological review of studies on a quality model for AI services. This size of the final sample is perhaps a reflection of the narrower field between AI, service quality modelling, and service-industry research, as opposed to the much larger number of publications which deal with AI application in general. Importantly, the lack of review articles guarantees that the chronological development of the analysis is built out of primary empirical or conceptual articles, not on secondary rehashes of already published studies and evidence, minimising the risk of repeated representation of the same findings. This body of literature allows us to identify when specific concepts of AI-related service quality appeared, how the theoretical and measuring dimensions shifted over time, and whether the literature evolved from a traditional description of service quality dimensions in technology-mediated service toward more dimensions related to AI-based interaction, personalisation, automation, responsiveness and trust, and AI-based customer experience. It also enhances methodological reliability because identical selection criteria are applied in a systematic fashion throughout the retrieval process and there is less arbitrary selection of studies and improved validity because the retrieved publications are in congruence with the enquiry scope definition. More importantly, to review the publications in chronological order, the underlying data should be selected using stable and transparent criteria. The 60 selected articles therefore provide a coherent starting point for identifying temporal phases, conceptual transitions, research orientations, and gaps that can be used to elaborate a more integrated AI service quality model for today's service industries.

Data Clustering

The publication time distribution can provide an important analytical foundation for understanding the evolution of research on the Artificial Intelligence Service Quality Model in Service Industry; indeed, publications in the same year may not be very indicative of the entire research development. Based on systematic retrieval from Scopus using predefined keywords and advanced search techniques, the selected literature was sorted by publication year and research output to facilitate the identification of meaningful temporal patterns. Clustering allows us to group years with comparable research productivity and developmental characteristics, and thus to visualise the evolution of scholarly attention in the years as a group. This is especially the case for an emerging, technology-based research area that might have a slow start and then consolidate with increases as the technologies develop and use proliferates. This allows the literature to be categorised into different chronological stages that enable the identification of key stages of transition, changes in the level of publications, and the stages in which the research field increased its force on academia. It also diminishes the risk of the trend being overwhelmed by any year-to-year change, which makes it easier to see the longer-term trend. Chronological clustering can serve as a framework for analysing how growth in publications was related to changes in the thematic area, theoretical approach, service quality dimensions, methodological approach, and whether there were additions or amendments to AI-related service quality models. Therefore, clustering goes further than describing the number of publications and acts as a way to analyse how the research domain has developed and matured intellectually. Characterising the dynamics in the various chronological phases allows for a more coherent picture of the development of AI service quality research and serves as a systematic basis for the comparative analysis of knowledge development across these phases.

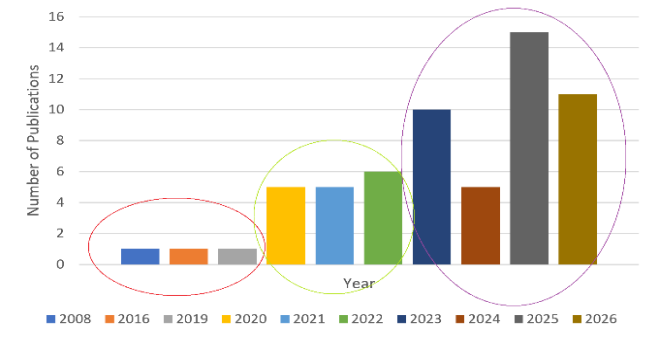

Figure 1. Chronological Evolution of Artificial Intelligence Service Quality Research Across Three Developmental Phases (2008–2026)

Phase I (2008–2019): Emergence and Conceptual Foundation

The first phase (2008-2019) is the stage of research that is in the Emergence and Conceptual Foundation of AI and service quality in the service industry. During this longer period, only three publications were found, published in 2008, 2016 and 2019, respectively. The highly intermittent publication pattern indicates that research on service quality in the context of AI has not yet formed an ongoing research stream. Rather, research was limited to exploration, and there were significant time intervals between various research studies. This low productivity supports a new field where the relationship between intelligent technologies and traditional service quality concepts is still being identified and conceptualized. Thus, this phase may be viewed as a formative episode of literature, the beginning of a more systematic enquiry.

Phase II (2020–2022): Consolidation and Early Development

The second phase (2020–2022) showed a significant rise in publication activity, with 16 articles representing 26.7% of the sample. This expansion is in line with the wider acceleration of AI adoption across service industries during and after the global disruption caused by the COVID-19 pandemic. This phase went beyond early proof-of-concept investigations to explore the potential for the large-scale deployment of AI in complex service environments. Furthermore, a growing trend towards interdisciplinary approaches was identified, with studies increasingly drawing on consumer behaviour theories, organisational management principles, and digital transformation frameworks to contextualise AI service quality outcomes.

Phase III (2023–2026): Acceleration and Model Advancement

The third phase (2023-2026) represents Acceleration and Model Advancement and constitutes the most research-intensive period in the chronological sequence. There was significant growth in 2023, with ten publications compared to six in 2022. The number of publications dipped briefly to five in 2024 but increased sharply in 2025 to 15 publications, the largest annual number in the dataset, and 11 publications in 2026. 41 of the 60 articles selected in this phase, which equals 68.3% of all the literature. More than two-thirds of publications occurred over the past four years, indicating a strong increase in scholarly interest. The year-to-year change is not seen as a steady linear upward trend but rather as a structural change to a much greater level of research activities. Thus, this phase is when the recognition of the presence of AI products and services begins to transform into a deep investigation of service quality dimensions and mechanisms, measurement methods, and model development. The number of recent publications further indicates that AI service quality is an increasingly mature research area, but also opens the possibility of combining disjointed constructs and identifying them as components of larger models suitable for today's AI-based service scenarios.

REVIEW OF STUDY

Emergence and Conceptual Foundation (2008- 2019)

The Emergence and Conceptual Foundation phase (2008,2019) marks the earliest form of AI-related QoS research found in the dataset. The three studies from this period suggest that the first literature still did not consider AI service quality as an independent and integrated research field. Artificial intelligence and intelligent computational methods have been predominantly used to make operations more reliable and accurate, enhance customer support, and increase system efficiency. The conceptual shift from AI being a forecasting tool in operational systems to AI for optimising customer service to AI introducing smart algorithms for safe and productive digital service infrastructures can be seen taking place and has yet more to go over the course of the period. This trajectory indicates that the coordination of service quality and AI started from the technology level of performance and operational quality and then moved towards a more customer-oriented and intelligent service system perspective.

The first contribution was reported by Santos et al. (2008), who used artificial neural networks for short-term load forecasting within medium-voltage electricity distribution. The results indicate that dependable next-hour forecasts are especially important in network management, load dispatch, and network reconfiguration while satisfying quality-of-service requirements. A satisfactory forecasting performance was obtained using artificial

neural networks with regression; however, the performance of this model was highly dependent on how the input vector was built. Specifically, historical load data embedded in the endogenous variables and climatic conditions embedded in the exogenous variables contributed to the forecasting performance. Adding the forecasted average daily temperature was also shown to further help the model's forecasts during times of heightened winter electricity demand. This study has defined intelligent service quality from an operationally oriented perspective from the service quality point of view. AI was used as a mechanism for analysis and was mainly seen to improve forecasting accuracy and ensure reliable service delivery,not as a technology that directly creates customers' perceptions of a company. Thus, the 2008 contribution can be considered an early starting point, in which accuracy, reliability, quality of information, and effectiveness of operations can be viewed as underlying features that relate intelligent technologies with quality-of-service inputs.

One significant conceptual change was seen in Hesamamiri and Bourouni (2016), who shifted the approach from forecasting infrastructure to supporting customers in the provision of ICT services. The results show that customer support is a complex system with multiple service components characterised by dynamic, nonlinear, and asymmetric relationships. The proposed system dynamics simulation and particle swarm optimisation helped service providers analyse the impact of multiple parameters, which in turn facilitated the development of an appropriate strategy to enhance customer support performance. The results obtained from the simulation also suggested a multiparameter modelling and optimisation approach with an artificial intelligence-based solution for dynamically managing customer service (material type) during the operation of an ICT service provider to gain benefits. These results represent a meaningful interface between computational intelligence and service management, indicating that intelligent modelling can help managers understand how service quality components interact and support strategies for service improvement.

Furthermore, the research was extended to an intelligent blockchain-based service environment for new and renewable energy transactions (Huh & Kim, 2019). The performance of intelligent systems is greatly dependent on the quality of the algorithms used in such systems. This study proposed a consensus algorithm named Hyper Delegation Proof of Randomness (HDPoR) and explored its parallel computing performance using simulation. The vision to support blockchain-enabled renewable energy transactions proposes a means to enhance the infrastructure and performance of the transactions while also meeting the needs for efficiency and security. This study introduced the concept of quality in intelligent service systems beyond the accuracy of prediction and optimisation of customer support. The characteristics of digitised services, such as algorithm quality, transaction efficiency, security, information flow, infrastructure performance, and system transparency, have become more significant over the years. This type of development is important for the progress of AI service quality, as service supply in smart environments relies not solely on direct customerservice interactions but also on the reliability and integrity of the technological setup, which provides a basis for the service processes.

Conceptually, the three studies are chronologically ordered in terms of increasingly expanding underpinning ideas regarding AI-driven service quality. One of the main findings of Santos et al. (2008) was the usefulness of artificial neural networks for improving the precision and reliability of the operation. Later, Hesamamiri and Bourouni (2016) extended intelligent methods to customer support management and showed that A-supported simulation and optimisation contributed to improving service and managerial decision-making. Huh and Kim (2019) further augmented the technological basis by stressing the algorithmic quality, security, efficiency, transparency, and performance of infrastructure in intelligent digital service systems. Methodologically, this phase was quite quantitative and computational, moving from forecasting using artificial neural networks to forecasting based on system dynamics, and more recently to algorithm development with simulation. The pattern shows that early studies on AI service quality focused mainly on the technology side. Traditional service quality factors have not yet been incorporated systematically with AI-specific features; quality attributes have become apparent indirectly via operational performance, forecasting accuracy, optimisation capability, security, and system efficiency.

The overall picture of Phase 1 can therefore be read as a “formative phase” wherein the technological and operational bases for AI service quality were laid down prior to the development of more concrete notions of AI service quality. The minimal and intermittent publication record (one publication in 2008, followed by 2016 and 2019) also suggests that the research area was disjointed during this period. However, some conceptual continuity can be attributed to the evolution of these studies. This journey, from subtly leveraging AI to enhance

a particular operational prediction job, to directing past fundamental customer support, to designing intelligent digital architectures to help with secure and effective support transactions, is slowly being documented in the literature. In all these developments, several key and fundamental qualities of services can be identified, such as accuracy, reliability, efficiency, adaptability, optimisation capability, security, information quality, and system performance. These characteristics serve as early conceptual inputs for subsequent studies that aim to understand service quality in progressively AI-enhanced service settings. Phase 1 thus provides an interesting starting point for the chronological development chart, as it is clear that the concept of an AI service quality model was built step-by-step, based on operational and technological quality issues and not based on an independently created service quality concept.

Consolidation and Early Development (2020–2022)

The technology-focused underpinnings of foundational research in previous phases move into a deeper understanding of artificial intelligence (AI) as part of service quality creation, customer experience, technology acceptance, and organisational transformation during the Consolidation and Early Development phase (2020 - 2022). As early as 2020, the literature showed how developing an AI-based service to be successful was not just a matter of technological infrastructure. Brunetti et al. (2020) found that the three cornerstones of digital transformation are digital culture and skills, infrastructure and technologies, and ecosystems, while positioning AI as one of the technological areas in addition to information and interaction. The findings suggest that there is a need for isolated technological interventions and, more crucially, digital capabilities, partnerships, long-term thinking, and stakeholder cooperation are essential to achieve sustainable transformation. With hospitality, this view of the organisation was extended by associating AI implementation with employee engagement, retention, productivity, service quality, customer satisfaction, profitability, and growth ((Ruel & Njoku, 2020). Thus, AI service quality is linked to technological service performance and human resource performance. A similar trajectory was found in the field of senior services related to health care, where AI-driven remote sensing, diagnostics, sensors, and predictive technologies could play a role in senior cohousing services, but success would rely on service networks, organisational, and contextual factors ((Angioni & Musso, 2020). These contributions suggest that in the early stages of consolidation, the field has moved from a perception of looking at AI as a stand-alone technical competency to looking at AI as a component of the larger service ecosystem, shared between employees, organisational capabilities, service users, and institutional stakeholders.

The customer-oriented direction was also more visible and developed in 2020 and was connected to hospitality services. The results of de Kervenoael et al. (2020) revealed that aspects of technology acceptance and service quality that are conducive to perceived value were connected to intentions to use social robots, while empathy and information sharing added human-robot interaction characteristics in the valuation of robotic service. This finding was crucial because service quality in an AI setting was not just about the performance of the system itself but also about the realm of relational aspects traditionally linked with human service encounters. Similarly, Zhong et al. (2020) revealed that attitudes, perceived usefulness, and perceived value were significant factors in hotel service robot acceptance, with some variations depending on demographic and previous robot-use features. Overall, the results indicate that the success of AI-assisted services depends on how useful the technology is from the customer's perspective. The focus on customers continued through transportation, banking, fashion retail, hospitality, and supply chain environments in 2021. Employees and managers, AI supported workforce optimisation resulted in better urban mobility performance, service quality, and positive customer experiences ((J. Chen et al., 2021). Based on their results, Nguyen et al. (2021) concluded that continued use of banking chatbots was driven by satisfaction, trust, and perceived usefulness, of which perceived usefulness and trust exerted the greatest impact. The role of information quality, system quality, service quality, and expectation confirmation also varied across post-adoption responses. These findings are significant for whether the focus shifts in the literature toward evaluating the success of AI service quality, on the one hand, or via satisfaction, trust, customer experience, and usage, on the other.

In 2021, research expanded the behavioural and managerial aspects of AI-enabled service quality. Song and Kim (2021) concluded that aspects of service quality, enjoyment, usefulness, and trust predicted consumers' willingness to provide personal information to fashion sales robots. Service quality and enjoyment seem especially relevant in the context of strategic implementation, indicating that AI service encounters should be, at the very least, functional and experience positive reactions. Similarly, Vitezić and Perić (2021) showed that

the influence of hedonic motivation on emotions and willingness to use AI devices had the highest coefficient, while the usage of smartphones moderated the impact of perceived effort on emotions. The rising importance of enjoyment, emotions, trust, and willingness to interact with AI indicates a conceptual shift from the traditional functions of a service. The organisational level ((Khalifa et al., 2021) revealed that opportunities for productivity, logistics, warehousing, collaboration, and supply chain management were created by AI and machine learning, but their implementation in emerging economies was limited due to a lack of skills, financial resources, and labour market conditions. The combined data from 2021 show a two-pronged trend. AI service quality increasingly integrates experiential, relational, and behavioural factors at the customer interface, while at the organisational level, the realisation of AI-based service benefits is still dependent on factors such as resources, workforce readiness, and implementation conditions. This trend further supports the growing understanding of multidimensional service quality for AI systems, which is not solely defined by their technological performance.

The literature in 2022 revealed a greater level of conceptual maturity and a greater push towards explicitly defined technology-oriented dimensions and models of service quality. Under a quality of service and resource-constrained scenario, De Filippo et al. (2022) proved that a combined decision-making method which matches algorithms, processing time, hardware resources, budget, and solution quality requirements can help support AI performance. This discovery continued the strain of AI research that views technical reliability from the previous one, additionally highlighting versatility and usage of resources. At the institutional level, Polyakova et al. (2022) pointed to the concerns of trust, regulatory gaps, information pressure, individual rights, and protection from unwanted digitalisation as significant issues related to AI and digital technologies in general, taking the quality discussion one step further in the direction of governance and societal safeguards. More specifically, congeneric with the conceptualisation of quality of service, Wong et al. (2022) introduced 5-S from the smart servicescape, smart assurance, smart responsiveness, smart reliability, and smart empathy angles. This is significant because smartness has been embedded in the conceptualisations of quality in service and in prior thinking about services; it has been viewed as something that supports the service operationally. This development was reinforced by evidence from various sectors. Zheng (2022) highlighted the importance of the computational capabilities of healthcare services and continuous technological learning. Ju (2022) revealed that economic feasibility, ease of use, safety, and responsiveness in big data-based aviation services affected satisfaction and then reuse intention, with satisfaction being a crucial mediating factor. Omoge et al. (2022) also found favourable relationships between the constructs of technology use, service quality, customer satisfaction, and buying behaviour in AI-driven banking and that technology downtime had unfavourable relationships with significant customer-related constructs. Consequently, the literature for 2022 is growing and links AI service quality with aspects such as reliability, responsiveness, assurance, empathy, usability, security, satisfaction, trust, technological continuity, and behavioural outcomes.

The Consolidation and Early Development phase (2020,2022) in general indicates that the shift from large-scale organisational digital transformation to more customer-focused and conceptually grounded AI service quality research is happening. The 2020 studies reached the significance of organisational ecosystems, employee results, technological proficiency, perceived value, empathy, and customer reception. In 2021, the behavioural lens was reinforced with customer experience, trust, satisfaction, enjoyment, usefulness, emotional response, information sharing, and continuance intention, and included some focus on organisational constraints to implementing AI. Until 2022, there has been a noticeable rise in smart technology in service quality dimensions, and other smart models have emerged, such as the 5-S smart service quality conceptualisation, as well as sector-specific evidence in banking, aviation, healthcare, and smart AI-supported systems. The chronological pattern thus suggests that the process progresses from AI adoption and organisation readiness to customer acceptance and relation experience to explicit conceptualisation of AI- and smart-technology service quality. This evolution serves as a solid basis for establishing an AI service quality model that adds technological performance to reliability, responsiveness, security, usefulness, empathy, trust, satisfaction, customer experience, and system continuity as a way of evaluating and improving AI services instead of as an independent technical entity.

Acceleration and Model Advancement (2023–2026)

The Acceleration and Model Advancement phase (2023-2026) signifies a shift in the activity of Artificial Intelligence (AI) service quality studies, with research activity in 2023 transitioning from technology adoption to how AI generates value for service, affects customer responses, and improves organisational performance. In

an IT service organisation, relationship management and project management capabilities improved service quality, which in turn facilitated the transition towards higher-value services, as identified by ((Mahendramohan et al. (2023). This discovery placed the concept of service quality within the ambit of an organisation's capabilities, linking technological change with a move for competitive improvement. Deeper insights into the wider impact in a service-system context (Han et al., 2023) demonstrated that digital technologies supported the fulfilment of circular economy goals and enabled product-service systems to deliver high-value and personalised services. AI has become increasingly apparent in the customer-facing realm of hospitality. (B. Huang and Sénécal (2023) found that higher perceptions of warmth in virtual voice assistants resulted in greater emotional reactions and repatronage intentions after service failure, especially when dynamic speech was coupled with emotionally expressive verbal communication. Generative AI tools such as ChatGPT-4 can now be used for service recovery by creating quick and effective responses to customers' complaints, thus demonstrating a novel use of AI in service recovery (Koc et al., 2023). The AI-powered sentiment analysis conducted by Choi and Kang (2023) further validated that the overall service quality and dimensions of SERVQUAL had significant effects on customer satisfaction with hotels, although the moderating effect varied across each dimension. The latter was expanded upon by other studies in 2023. Ali et al. (2023) noted the benefits of AI in healthcare, such as accurate diagnostics, efficient resource utilisation, timely execution, efficient treatment and diagnosis, consultation, and health monitoring. Bui and Nguyen (2023) linked the benefits of AI with analytics to customer engagement and operational efficiency, highlighting the importance of regulatory alignment. (S. Li et al., 2023) showed that the organisational structure governing who owns the data could impact the quality of services and consumers' outcomes based on provider revenue structures, compensation mechanisms, and adapting services to data ownership. Investigating an optimised method to improve the accuracy and precision of advertising recognition based on a neural network, Shi and Wang (2023) found significant results. Orchard and Tasiemski (2023) also reported that generative AI offers standardised and premium service opportunities and raises workforce and cybersecurity challenges. Taken together, the evidence from 2023 indicates a shift from using AI as an enabling technology to AI as a frontline technology in service encounters, recovery, personalisation, quality measurement, and value creation.

In 2024, a more critical and organisation-oriented interpretation of AI-driven quality service was developed. With responsible technology integration, negative consequences, and conditions of implementation becoming the focus, the assumption that greater AI deployment automatically generates better service outcomes has been increasingly questioned. The results presented in (Cannas et al., 2024) demonstrated that AI applications in operations and supply chain management can lead to cost reduction and shorter lead times along with higher service levels, quality, safety, and sustainability. Such gains were tempered by inadequate data quality, a lack of skills, investment needs, unclear economic returns, and project evaluation experience. Belanche et al. (2024) pushed the debate further toward the potential side effects and social impact of AI-powered services by identifying different matters into three themes: service design, customers, and service encounters, concluding that societal and moral aspects are inevitable necessities for the advancement of services. For hotel marketing, Bulchand-Gidumal et al. (2024) observed a wide-ranging change in the industry that encompasses mass personalisation, empowered staff, proactive customer service, sustainability, data management, and predictive service design. These discoveries point to a growing integration of AI service quality into the service architecture of the organisation, and not just with one particular customer-facing technology. Studies in healthcare are oriented towards caution. While Shalko et al. (2024) noted the potential benefits of large language models, they also highlighted some inconsistencies in the information AI systems provide regarding diagnosis and treatment history, which makes it essential to improve systems, prepare medical staff, have effective management mechanisms, have more resources, and protect patient data. Similarly, Shardeo et al. (2024) found several interconnected enablers of the adoption of the metaverse in healthcare services provision. This means that the 2024 literature added a key twist to previous tech-positive views that have been significant: service quality with AI requires organisational readiness, data quality, human skills, ethical governance, and proper tech design; without these prerequisites, service innovation using AI can introduce new quality and trust issues.

The literature expanded considerably in 2025, as 22 of the 41 Phase 3 articles were published that year, suggesting an acceleration in both the volume and scope of AI service quality research. Research from this period reflects the maturation of the field, with more attention being paid to the finer-grained issues of implementation, ethical governance, and long-term service quality sustainability. The use of large language models and generative

AI as topics of service quality enquiry is especially noteworthy, as it broadens the scope of the field and introduces new dimensions of evaluation.

The literature shows additional progress in the direction of integrated, explainable, and empirically measurable AI service quality systems in the future, specifically in 2026. In the context of the hospitality industry, Lili et al. (2026) integrated generative and explainable AI, generating automated responses and explanations tailored to customer requirements to enhance customer confidence and operational efficiency. Building further on the models, Mishra and Singh (2026) included perceived service quality and transformational leadership within the framework of technology acceptance and planned behaviour paradigm; perceived service quality was found to be a significant predictor of attitudes and behavioural intention to use AI powered B2B platforms. In the financial services sector, Almatarneh et al. (2026) indicated that the latter effects occurred both directly and indirectly via the internal controller's effectiveness, thus suggesting that internal control effectiveness is an important channel linking the effects of AI capability to service information outcomes. Five more characteristics, namely accuracy, ease of use, completeness, convenience, satisfaction, responsiveness, and accessibility,were also identified by Thaker et al. (2026) as important for this study that affect the adoption of chatbots in Takaful services. There was also increased contextual specificity in the sectoral evidence. Qizi et al. (2026) linked innovation intensity in tourism transport to punctuality, safety, environmental performance, convenience, satisfaction, and operational efficiency. Technologies such as AI personalisation and blockchain integration were found to have positive links with service quality, perceived value, and guest experience, whereas IoT applications resulted in low or negative relationships, highlighting the need for appropriate technology implementation to foster service quality. Through their study, "Implementing machine-learning recommendation systems in interior design services for a better personalisation, accessibility, customer satisfaction and efficiency", (Karmaakar et al., 2026) proved that machine-learning technology could be applied to make interior design services more effective and efficient. To further develop service quality measurement by NLP, aspect-based sentiment analysis and multi-criteria decision were proposed by ((Liou et al. (2026)) who processed large amounts of unsolicited airline feedback to provide service quality. Zanetta et al. (2026) introduced contextual sensitivity, where service attributes differ by context; utilitarian attributes are more significant in weekday and delivery contexts, while hedonic attributes are more significant in dine-in and weekend contexts. In addition to enriching the service if applied directly, Villegas Vargas et al. (2026) indicated that AI-assisted FinTech automation has the potential to streamline processing and cut down operational expenses, enhance financial access, and manage record-keeping, despite the influence of infrastructure quality, regulatory frameworks, and the ease of the platforms. A valuable counterpoint was offered by a recent paper written by Shen et al. (2026), which showed a "GenAI integration trap",an additional technical integration cost that might benefit consumer experience while being very challenging, if not impossible, for multiple stakeholders. The results of the 2026 evidence indicate that advanced AI service quality is now perceived as a conditional phenomenon, as it is shaped by the interplay of technological capacity, explainability, personalisation, functional reliability, information quality, governance, customer context, human role, and implementation expenses.

Phase 3 (2023,2026). Chronological evidence indicates that everything related to AI-assisted service interaction, personalisation, service recovery, customer response, operational performance, and the initial effects of generative AI was a primary focus in 2023. In 2024, implementation barriers, responsible deployment practices, data quality, organisational readiness, and potential negative consequences were introduced as research focuses. Substantial growth in 2025 will close the gap between AI-specific measurements, explainability, human–AI complementarity, accepted service quality theories, customer value, and ethical issues. By 2026, service quality research had started making essential use of XAI, generative AI, NLP, machine learning, personalisation, governance mechanisms, and context-sensitive models. From these developments, a few common elements have been described: accuracy, reliability, responsiveness, information quality, personalisation, convenience, efficiency, empathy/warmth, perceived value, satisfaction, trust, transparency, security, privacy, explainability, accessibility, and human-AI complementarity. The convergence of elements implies that an up-to-date Artificial Intelligence (AI) Service Quality Model should be more inclusive than the established Service Quality dimensions and include attributes specifically related to technology and governance while still maintaining the relational and experiential aspects of service encounters. However, what matters equally is that it is not fully technology determinist: AI can enhance service quality when technological capabilities, human support, organisational readiness, governance, and customer needs are aligned; however, poorly designed and lacking

proper governance of AI integration can lead to loss of trust, diminished experience, or even new areas of services that are lacking.

CONCLUSION

This study is an exploratory study which is chronological in nature, dealing with the development of research on the Artificial Intelligence Service Quality Model in Service Industry from 2008 to 2026. The review was restricted to 60 primary journal articles obtained through a systematic search and selection procedure using the Scopus search database in business, management, and social sciences, reflecting diverse aspects of the area. A chronological approach was adopted to identify the evolution of the artificial intelligence and quality of services in terms of research intensity, conceptual approach, dimensions of quality of services, technological applications, and models developed. Overall, the systematic selection of primary studies provided a unified starting point for marking the changes that occurred from a relatively narrow research domain of technological applications to a broader research domain of service management.

Chronological evidence shows that there were three different stages of development. Phase I (Emergence and Conceptual Foundation) 2008,2019 had only three publications and represented a formative period in which issues of technology and operations prevailed. The main themes regarding AI applications at this stage are accuracy, reliability, efficiency, optimisation, security, information quality, and system performance. Phase II, Consolidation and Early Development (2020-2022) contained 16 publications, accounting for 26.7% of the dataset, and showed a shift in the use of continuous scholarly attention. Studies have begun to provide new models for smart service quality as well as include concepts of customer acceptance, perceived value, responsiveness, empathy, trust, satisfaction, customer experience, and organisational readiness in research. A total of 41 publications (68.3% of the total corpus) were included in Phase III, Acceleration, and Model Advancement (2023-2026), demonstrating significant acceleration and progression in the field.

Across these phases, a crucial shift in the conceptual and methodological structure of AI service quality studies was observed. Initial research was heavily based on quantitative and computational methods, including artificial neural networks, optimisation, algorithms, and simulation as proxy measures for service quality, mainly using technological performance. Later studies expanded this focus to include behavioural, experiential, organisational, and relational views. Recent studies have also included the use of generative AI, explainable AI, natural language processing, machine learning, sentiment analysis, personalisation, and context-sensitive methods for assessing service quality. Thus, AI service quality has gradually evolved from being simply technology-focused to being a multi-faceted construct that encompasses accuracy, reliability, responsiveness, information quality, efficiency, personalisation, convenience, empathy, perceived value, satisfaction, trust, transparency, security, privacy, explainability, accessibility, and human–AI complementarity. This evolution shows that, in today's service world, technological competence is not sufficient to measure quality.

The chronological arrangement of the literature contributes further by showing the time and manner in which these conceptual changes occurred. Unlike a purely thematic synthesis eliminating the crossing of studies conducted in different technological eras, temporal stratification highlights the evolution of operational AI applications to customer-centred service technologies, up to personalised, integrated, explainable, and governed AI service systems. These findings serve as a foundation for extending “old” service quality thinking to AI scenarios. Older criteria, such as reliability, responsiveness, assurance, empathy, and service environment, are still valid; however, their values are increasingly related to those of intelligent technologies. This theoretical direction creates the basis for a new Artificial Intelligence Service Quality Model that, within the scope of the relational and experiential approaches, considers techno- or AI-specific governance attributes as well as other techno properties. This integration provides an appropriate conceptual basis for assessing service quality in a scenario where service provisioning is increasingly transformed into a joint responsibility among people and smart technologies.

The observed evolution has both practical and research implications. When investing in AI, organisations in the service industry should not evaluate AI investment solely based on automation capability, operational efficiency, or cost reduction. There needs to be alignment between technological reliability, customer expectations, personalisation, trust, human interaction, organisational readiness, data quality, privacy, transparency, and

governance to ensure effective AI-enabled service quality. The findings largely argue for a complementary versus a substitution approach to human and artificial intelligence, pointing to the continued need for human characteristics such as empathy, judgment, and emotionality in technologically efficient services. Therefore, future research on models should explore the interaction between conventional service quality dimensions and AI-specific dimensions and whether these interactions vary depending on the type of service. Empirical results in other industry sectors (such as hospitality, banking, healthcare, transportation, tourism, retail, professional services, or AI-intensive sectors) would help ensure the generalisability and contextual sensitivity of the integrated AI service quality model.

The review is limited to one bibliographic database, Scopus, which has broad coverage but may not capture all papers indexed in other databases, such as the Web of Science or Google Scholar. This limitation introduces the possibility of selection bias, in which studies published in journals not indexed by Scopus may be systematically excluded from the analyses. Future reviews should consider adopting a multi-database search strategy to ensure more comprehensive coverage of the available literature.

Finally, the trajectory of conceptual emergence, consolidation, acceleration, and model advancement reveals that AI service quality is now a unique and maturing research area. With intelligent systems directly involved in service production, interaction, evaluation, or recovery processes, the transformation of the concept of service quality is not just the increased use of AI in services but the essence of service quality. Chronological review has added interest in showing this change, as a time-based analysis differentiates the core concepts from the changes and the new dimensions that might seem as unconnected findings. The evidence obtained provides a structured basis for creating a multidimensional Artificial Intelligence Service Quality Model that includes technological, relational, experiential, and governance characteristics. This view can inform future theoretical development, empirical validation, and evidence-based design of responsible and quality AI systems for services.

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REFERENCES

1. AAhmad, S., Khan, M. N., Desai, K., Islam, M. M., Rabbani, M. M., & Snigdha, E. Z. (2025). Optimizing IT Service Delivery with AI: Enhancing Efficiency Through Predictive Analytics and Intelligent Automation. The American Journal of Engineering and Technology. https://doi.org/10.37547/tajet/volume07issue02-08
2. Al-Araj, R., Haddad, H., Raymond, I., Hasan, E., & Nawaiseh, M. (2022). The Effect of Artificial Intelligence on Service Quality and Customer Satisfaction in Jordanian Banking Sector. WSEAS TRANSACTIONS ON BUSINESS AND ECONOMICS. https://doi.org/10.37394/23207.2022.19.173
3. Ali, O., Abdelbaki, W., Shrestha, A., Elbasi, E., Alryalat, M. A. A., & Dwivedi, Y. K. (2023). A systematic literature review of artificial intelligence in the healthcare sector: Benefits, challenges, methodologies, and functionalities. Journal of Innovation and Knowledge, 8(1). https://doi.org/10.1016/j.jik.2023.100333
4. Almatarneh, Z., Alawneh, N. F., AL-Jarrah, M. M., Jarah, B. A. F., & Abuirmilah, B. (2026). Artificial Intelligence Capabilities in Digital Financial Service Systems: The Role of Internal Control Effectiveness as an Information Governance Mechanism in Enhancing Information Quality in Islamic Banks. International Review of Management and Marketing , 16(5), 505–513. https://doi.org/10.32479/irmm.24301
5. Angioni, M., & Musso, F. (2020). New perspectives from technology adoption in senior cohousing facilities. TQM Journal, 32(4), 761–777. https://doi.org/10.1108/TQM-10-2019-0250
6. Ansari, M. (2025). "AI-Driven Service Delivery Optimization in IT: Techniques and Strategies." INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT. https://doi.org/10.55041/ijsrem50381

7. Begu, T. M., Soica, S., & Nedelcu, A. (2025). The Impact of AI on Digital Quality and Technical Sustainability of Travel Websites. Sustainability (Switzerland), 17(21). https://doi.org/10.3390/su17219879
8. Belanche, D., Belk, R. W., Casaló, L. V, & Flavián, C. (2024). The dark side of artificial intelligence in services. Service Industries Journal, 44(3–4), 149–172. https://doi.org/10.1080/02642069.2024.2305451
9. Binlibdah, S. (2024). Investigating the Role of Artificial Intelligence to Measure Consumer Efficiency: The Use of Strategic Communication and Personalized Media Content. Journalism and Media. https://doi.org/10.3390/journalmedia5030073
10. Brunetti, F., Matt, D. T., Bonfanti, A., De Longhi, A., Pedrini, G., & Orzes, G. (2020). Digital transformation challenges: strategies emerging from a multi-stakeholder approach. TQM Journal, 32(4), 697–724. https://doi.org/10.1108/TQM-12-2019-0309
11. Bui, T. H., & Nguyen, V. P. (2023). The Impact of Artificial Intelligence and Digital Economy on Vietnam's Legal System. International Journal for the Semiotics of Law, 36(2), 969–989. https://doi.org/10.1007/s11196-022-09927-0
12. Bulchand-Gidumal, J., William Secin, E., O'Connor, P., & Buhalis, D. (2024). Artificial intelligence's impact on hospitality and tourism marketing: exploring key themes and addressing challenges. Current Issues in Tourism, 27(14), 2345–2362. https://doi.org/10.1080/13683500.2023.2229480
13. Cannas, V. G., Ciano, M. P., Saltalamacchia, M., & Secchi, R. (2024). Artificial intelligence in supply chain and operations management: a multiple case study research. International Journal of Production Research, 62(9), 3333–3360. https://doi.org/10.1080/00207543.2023.2232050
14. Chen, J., Shi, W., Wang, X., Pandian, S., & Sathishkumar, V. E. (2021). Workforce optimisation for improving customer experience in urban transportation using heuristic mathematical model. International Journal of Shipping and Transport Logistics, 13(5), 538–553. https://doi.org/10.1504/IJSTL.2021.117278
15. Chen, Q., Lu, Y.-B., Gong, Y., & Xiong, J. (2023). Can AI chatbots help retain customers? Impact of AI service quality on customer loyalty. Internet Res., 33, 2205–2243. https://doi.org/10.1108/intr-09-2021-0686
16. Chesterman, S. (2025). Good models borrow, great models steal: Intellectual property rights and generative AI. Policy and Society, 44(1), 23–37. https://doi.org/10.1093/polsoc/puae006
17. Choi, B., & Kang, S.-H. (2023). Measuring Hotel Service Quality Using Social Media Analytics: The Moderating Effects of Brand of Origin. Asia Pacific Journal of Information Systems, 33(3), 677–701. https://doi.org/10.14329/apjis.2023.33.3.677
18. De Filippo, A., Borghesi, A., Boscarino, A., & Milano, M. (2022). HADA: An automated tool for hardware dimensioning of AI applications. Knowledge-Based Systems, 251. https://doi.org/10.1016/j.knosys.2022.109199
19. de Kervenoael, R., Hasan, R., Schwob, A., & Goh, E. (2020). Leveraging human-robot interaction in hospitality services: Incorporating the role of perceived value, empathy, and information sharing into visitors' intentions to use social robots. Tourism Management, 78. https://doi.org/10.1016/j.tourman.2019.104042
20. Ergash Qizi, A. M., Anvarovich, Q. A., & Bakhriddinovna, U. D. (2026). Evaluating transport service quality metrics in tourism: a technological innovation-driven approach. Frontiers in Future Transportation, 7. https://doi.org/10.3389/ffutr.2026.1797151
21. Escala, M. S. D., Secretaria, N. M., Narvios, L. E., Jesus, J. B., & Bastida, T. A. (2026). Revolutionizing Customer Experiences Through Technology Business Tools in the Cebu City Hospitality Sector. Human Behavior, Development and Society, 27(1). https://doi.org/10.62370/hbds.v27i1.280014
22. Gao, H., Liu, H., Zhang, H., & Xu, W. (2026). Artificial Intelligence Service and Customer Loyalty: A Moderated Mediation Role of Satisfaction and Contextual Factors in Human-AI Interaction. SAGE Open, 16. https://doi.org/10.1177/21582440261416217
23. Goktas, P., & Dirsehan, T. (2025). Using PLS-SEM and XAI for causal-predictive services marketing research. Journal of Services Marketing, 39(1), 53–68. https://doi.org/10.1108/JSM-10-2023-0377
24. Han, Y., Shevchenko, T., Yannou, B., Ranjbari, M., Shams Esfandabadi, Z., Saidani, M., Bouillass, G., Bliumska-Danko, K., & Li, G. (2023). Exploring How Digital Technologies Enable a Circular Economy of Products. Sustainability (Switzerland), 15(3). https://doi.org/10.3390/su15032067
25. Hemalatha, B., & D, S. (2025). AI and Machine Learning for Evaluating and Enhancing Service Quality

in E-Commerce. 2025 7th International Conference on Innovative Data Communication Technologies and Application (ICIDCA), 920–928. https://doi.org/10.1109/icidca66325.2025.11280580
26. Hesamamiri, R., & Bourouni, A. (2016). Customer support optimization using system dynamics: a multi-parameter approach. Kybernetes, 45(6), 900–914. https://doi.org/10.1108/K-10-2015-0257
27. Hsu, C.-L., & Lin, J. C.-C. (2022). Understanding the user satisfaction and loyalty of customer service chatbots. Journal of Retailing and Consumer Services. https://doi.org/10.1016/j.jretconser.2022.103211
28. Huang, B., & Sénécal, S. (2023). How should voice assistants be heard? The mitigating effect of verbal and vocal warmth in voice assistant service failure. Service Industries Journal, 43(11–12), 806–826. https://doi.org/10.1080/02642069.2023.2208522
29. Huang, M.-H., & Rust, R. (2020). Engaged to a Robot? The Role of AI in Service. Journal of Service Research, 24, 30–41. https://doi.org/10.1177/1094670520902266
30. Huh, J.-H., & Kim, S.-K. (2019). The blockchain consensus algorithm for viable management of new and renewable energies. Sustainability (Switzerland), 11(11). https://doi.org/10.3390/su11113184
31. Inavolu, S. M. (2024). Exploring AI-Driven Customer Service: Evolution, Architectures, Opportunities, Challenges and Future Directions. International Journal For Multidisciplinary Research. https://doi.org/10.36948/ijfmr.2024.v06i03.22283
32. Ju, S.-W. (2022). A Study on the Influence of Big Data-based Quality on Satisfaction and Repurchase Intention. Journal of System and Management Sciences, 12(3), 286–317. https://doi.org/10.33168/JSMS.2022.0315
33. Karmaakar, P., Jarwar, M. A., Wahid, J. A., & Hasan, N. U. (2026). IDBspRS: An Interior Design-Built Service Package Recommendation System Using Artificial Intelligence. Sustainability (Switzerland), 18(7). https://doi.org/10.3390/su18073605
34. Kasim, I., Amidu, A.-R., & Levy, D. (2025). Drivers and implications of digital transformation in property valuation practice in New Zealand. Journal of Property Research, 42(4), 380–413. https://doi.org/10.1080/09599916.2025.2498971
35. Kasoju, A., Vishwakarma, T., & Kasoju, A. (2025). The role of AI-enhanced fast delivery services in strengthening customer retention and loyalty in competitive markets. Frontiers in Artificial Intelligence, 8. https://doi.org/10.3389/frai.2025.1612772
36. Khalifa, N., Abd Elghany, M., & Abd Elghany, M. (2021). Exploratory research on digitalization transformation practices within supply chain management context in developing countries specifically Egypt in the MENA region. Cogent Business and Management, 8(1). https://doi.org/10.1080/23311975.2021.1965459
37. Kim, S. Y., & Kim, J. (2025). The impact of AI recommendation quality on service satisfaction: the moderating roles of standardization and customization. Journal of Services Marketing. https://doi.org/10.1108/jsm-05-2024-0214
38. Koc, E., Hatipoglu, S., Kivrak, O., Celik, C., & Koc, K. (2023). Houston, we have a problem!: The use of ChatGPT in responding to customer complaints. Technology in Society, 74. https://doi.org/10.1016/j.techsoc.2023.102333
39. Le, B. N., Tran, X., & Au, N. (2025). Impacts of artificial intelligence on hotel operations: face recognition in Vietnam. Anatolia, 36(4), 806–821. https://doi.org/10.1080/13032917.2025.2487548
40. Li, H., & Gao, L.-F. (2025). Character is fate: How tourism entrepreneurs' extraversion and agreeableness affect their market exit in the sharing economy. Tourism Management, 106. https://doi.org/10.1016/j.tourman.2024.105029
41. Li, S., Liu, Y., & Feng, J. (2023). Who Should Own the Data? The Impact of Data Ownership Shift from the Service Provider to Consumers. Journal of Management Information Systems, 40(2), 366–400. https://doi.org/10.1080/07421222.2023.2196775
42. Li, S., Younas, M. W., Maqsood, U. S., & Zahid, R. M. A. (2025). Tech for stronger financial market performance: the impact of AI on stock price crash risk in emerging market. International Journal of Emerging Markets, 20(10), 4005–4030. https://doi.org/10.1108/IJOEM-10-2023-1717
43. Lili, I., Kosta, A., Xhina, E., & Mele, R. (2026). INTEGRATING EXPLAINABLE AI (XAI) INTO CHATBOTS FOR AUTOMATED DECISION-MAKING IN HOSPITALITY. Geojournal of Tourism and Geosites, 65(2), 719–729. https://doi.org/10.30892/gtg.65209-1714
44. Lim, K., Sa'uadi, A. N., Idros, N. A. N. M., & Jamil, N. S. (2024). Optimizing Personalized Recommendation in E-Services Platforms Using AI. 2024 5th International Conference on Artificial

Intelligence and Data Sciences (AiDAS), 422–429. https://doi.org/10.1109/aidas63860.2024.10730288
45. Ling, E. C., Tussyadiah, I., Liu, A., & Stienmetz, J. (2025). Perceived Intelligence of Artificially Intelligent Assistants for Travel: Scale Development and Validation. Journal of Travel Research, 64(2), 299–321. https://doi.org/10.1177/00472875231217899
46. Liou, J. J. H., Liu, H.-L., Lin, Y.-H., Hsu, C. C., & Chuang, Y.-C. (2026). An integrated data mining and multi-criteria decision models for assessing service quality in the airline industry. Journal of Air Transport Management, 135. https://doi.org/10.1016/j.jairtraman.2026.103018
47. Magadán-Díaz, M., Cabezas-Clavijo, Á., Sidorenko-Bautista, P., & Rivas-García, J. I. (2025). Audiobooks and Artificial Intelligence: Tools for Synthetic Audiobook Creation and Implications for the Publishing Industry. Publishing Research Quarterly, 41(3–4), 405–422. https://doi.org/10.1007/s12109-025-10049-1
48. Mahendramohan, B., Kannabiran, G., & Sridevi, P. (2023). Antecedents of Indian information technology service organisations moving up the value chain: a mediation model. International Journal of Business Excellence, 30(4), 507–531. https://doi.org/10.1504/IJBEX.2023.133496
49. Mattila, A. S., Wu, L., & Wang, P. (2025). Closing the Gap: Advancing service management in the hospitality and tourism industry amidst the AI revolution. Journal of Hospitality and Tourism Management, 62, 237–245. https://doi.org/10.1016/j.jhtm.2025.01.017
50. Min, J., Xie, Q., & Liu, Y. (2025). Impact of Artificial Intelligence on Spectator Viewing Behavior in Sports Events: Mediating Role of Viewing Motivation and Moderating Role of Player Identification. Behavioral Sciences, 15(12). https://doi.org/10.3390/bs15121702
51. Mishra, R., & Singh, R. K. (2026). Exploring AI-enabled digital service platform adoption in industrial business-to-business firms through a mixed-method approach. Industrial Marketing Management, 135, 279–298. https://doi.org/10.1016/j.indmarman.2026.04.003
52. Murugeah, M. K. (2024). Enhancing efficiency and Personalization in Food and Beverage Service through AI: Future Trends and Challenges. International Journal for Multidimensional Research Perspectives. https://doi.org/10.61877/ijmrp.v2i7.162
53. Nguyen, D. M., Chiu, Y.-T. H., & Le, H. D. (2021). Determinants of continuance intention towards banks' chatbot services in vietnam: A necessity for sustainable development. Sustainability (Switzerland), 13(14). https://doi.org/10.3390/su13147625
54. Noor, N., Hill, S. R., & Troshani, I. (2022). Developing a service quality scale for artificial intelligence service agents. European Journal of Marketing. https://doi.org/10.1108/ejm-09-2020-0672
55. Obiki-Osafiele, A. N., Agu, E. E., & Chiekezie, N. R. (2024). Leveraging artificial intelligence to enhance customer service analytics and improve service delivery. International Journal of Management & Entrepreneurship Research. https://doi.org/10.51594/ijmer.v6i8.1412
56. Omoge, A. P., Gala, P., & Horky, A. (2022). Disruptive technology and AI in the banking industry of an emerging market. International Journal of Bank Marketing, 40(6), 1217–1247. https://doi.org/10.1108/IJBM-09-2021-0403
57. Orchard, T., & Tasiemski, L. (2023). The rise of Generative AI and possible effects on the economy. Economics and Business Review, 9(2), 9–26. https://doi.org/10.18559/ebr.2023.2.732
58. Polyakova, T. A., Naumov, V. B., & Minbaleev, A. V. (2022). TRUST IN THE LAW DURING THE DIGITAL TRANSFORMATION. Gosudarstvo i Pravo, 2022(11), 139–147. https://doi.org/10.31857/S102694520022767-4
59. Prentice, C., Lopes, S. D., & Wang, X. (2020). The impact of artificial intelligence and employee service quality on customer satisfaction and loyalty. Journal of Hospitality Marketing & Management, 29, 739–756. https://doi.org/10.1080/19368623.2020.1722304
60. Ruel, H., & Njoku, E. (2020). AI redefining the hospitality industry. Journal of Tourism Futures, 7(1), 53–66. https://doi.org/10.1108/JTF-03-2020-0032
61. Saduov, R. T., Ganeeva, E. R., & Syrovatskaya, M. P. (2025). Technological impact on the translation industry and beyond: perspectives of Russian translation professionals. Research Result. Theoretical and Applied Linguistics, 11(1), 26–49. https://doi.org/10.18413/2313-8912-2025-11-1-0-2
62. Sahu, V., Ahmad, A., Gajalakshmi, R., Subhavathi, V., & Rana, A. (2026). The Role of Artificial Intelligence in Transforming Management Practices and Customer Service Excellence: A Review Study. International Journal on Research and Development - A Management Review. https://doi.org/10.65521/ijrdmr.v15i1.2585

63. Santos, J. P., Gomes, M. A., & Pires, A. J. (2008). Next hour load forecast in medium voltage electricity distribution. International Journal of Energy Sector Management, 2(3), 439–448. https://doi.org/10.1108/17506220810892964
64. Sardesai, S., D'Souza, E., & Govekar, S. (2024). Analysing the impacts of artificial intelligence service quality and human service quality on customer satisfaction and customer loyalty in the hospitality sector. Turizam. https://doi.org/10.5937/turizam28-45450
65. Shalko, M., Domina, O., Korobko, I., Melnyk, D., & Andriushchenko, A. (2024). THE TRANSFORMATIVE IMPACT OF LARGE LANGUAGE MODELS IN HEALTHCARE. Technology Audit and Production Reserves, 6(4(80)), 32–42. https://doi.org/10.15587/2706-5448.2024.319006
66. Shardeo, V., Sarkar, B. D., Mir, U. B., & Kaushik, P. (2024). Adoption of Metaverse in Healthcare Sector: An Empirical Analysis of its Enablers. IEEE Transactions on Engineering Management, 71, 8671–8685. https://doi.org/10.1109/TEM.2024.3400401
67. Shen, B., Sun, Y., & Zhang, J. (2026). Integrating generative artificial intelligence into the smart device ecosystem. International Journal of Production Economics, 295. https://doi.org/10.1016/j.ijpe.2026.109969
68. & Wang, H. (2023). An AI-enabled approach for improving advertising identification and promotion in social networks. Technological Forecasting and Social Change, 188. https://doi.org/10.1016/j.techfore.2022.122269
69. Song, C. S., & Kim, Y.-K. (2021). Predictors of consumers' willingness to share personal information with fashion sales robots. Journal of Retailing and Consumer Services, 63. https://doi.org/10.1016/j.jretconser.2021.102727
70. Thaker, H. B. M. T., Lacheheb, Z., Lelchumanan, B., Duasa, J., & Taghizadeh-Hesary, F. (2026). Examining factors influencing chatbot adoption in Takaful industry: Malaysian evidence. International Journal of Islamic and Middle Eastern Finance and Management, 19(3), 614–637. https://doi.org/10.1108/IMEFM-01-2025-0056
71. Tofangchi, S., Hanelt, A., Marz, D., & Kolbe, L. (2021). Handling the Efficiency–Personalization Trade-Off in Service Robotics: A Machine-Learning Approach. Journal of Management Information Systems, 38, 246–276. https://doi.org/10.1080/07421222.2021.1870391
72. Villegas Vargas, J. L., Osorio Cano, J. M., Ruiz, L. E., García Arango, D. A., Montoya Escobar, C. M., & Acosta Agudelo, L. C. (2026). FinTech-Driven Business Process Automation and Its Impact on Microenterprise Productivity in Emerging Economies. Enterprise Development and Microfinance, 36(1), 275–292. https://www.scopus.com/pages/publications/105038664207?origin=resultslist
73. Vitezić, V., & Perić, M. (2021). Artificial intelligence acceptance in services: connecting with Generation Z. Service Industries Journal, 41(13–14), 926–946. https://doi.org/10.1080/02642069.2021.1974406
74. Wong, I. A., Huang, J., Lin, Z. C. J., & Jiao, H. (2022). Smart dining, smart restaurant, and smart service quality (SSQ). International Journal of Contemporary Hospitality Management, 34(6), 2272–2297. https://doi.org/10.1108/IJCHM-10-2021-1207
75. Xu, R. (2025). Recent Advances in Generative Artificial Intelligence for Smart Finance. International Journal of Crowd Science, 9(4), 213–220. https://doi.org/10.26599/IJCS.2024.9100037
76. Zanetta, L. D., Hakim, M. P., Cherfan, C. D., de Araújo, R. d. C. F., Stedefeldt, E., Zanin, L. M., Medeiros, C. O., & da Cunha, D. T. (2026). What matters when and where: contextual dynamics of restaurant selection in everyday dining. Consumer Behavior in Tourism and Hospitality, 21(3), 461–480. https://doi.org/10.1108/CBTH-06-2025-0151
77. Zhang, Y., Wang, Y., Ji, Y., & Du, X. (2025). A Machine Learning Approach to Examine Impacts of Customer Satisfaction on Financial Performance of Firms via Online Reviews. Journal of Cases on Information Technology, 27(1). https://doi.org/10.4018/JCIT.385600
78. Zheng, Y. (2022). The application of task-driven model in adult computer technology teaching in healthcare sector. Journal of Commercial Biotechnology, 27(5), 50–66. https://doi.org/10.5912/jcb1095
79. Zhong, L., Zhang, X., Rong, J., Chan, H. K., Xiao, J., & Kong, H. (2020). Construction and empirical research on acceptance model of service robots applied in hotel industry. Industrial Management and Data Systems, 121(6), 1325–1352. https://doi.org/10.1108/IMDS-11-2019-0603