ChatGPT and service: opportunities, challenges, and research directions

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Abstract

Purpose – Since its inception, ChatGPT has been disruptively transforming how businesses operate along the whole value chain. The service sector is no exception from these technological advances. Given its potential and significance, five major areas whereby ChatGPT has great potential in services management are identified and discussed in terms of opportunities, challenges and research agendas: service marketing, customer experience, digital services, cost-effective service excellence, and ethical and corporate digital responsibility.

Design/methodology/approach – By adopting an expert-oriented perspective approach, the study leverages the expertise of 11 knowledgeable contributors from the fields of service and information systems to foresee the implications of ChatGPT in services. The article comprehensively examines the current body of literature and practices in ChatGPT and services and proposes a forward-thinking research agenda for service scholars and practitioners.

Findings – The contributors recognize that ChatGPT has the potential to transform service offerings significantly, enrich customer experiences, optimize service costs, and contribute to societal advantages through improved digital services. However, they also acknowledge the disruption ChatGPT may cause to traditional service practices, including the potential loss of human touch in services, challenges to privacy and security, and the potential negative outcomes affecting service consumers and employees in terms of inequality, biases, and misuse of ChatGPT.

Originality/value – This article introduces a groundbreaking investigation into the use of ChatGPT in services management. The originality is demonstrated by examining the potential and obstacles to applying ChatGPT in different service domains. In addition, this research serves as a guiding light for subsequent studies by suggesting an in-depth research agenda, including understanding the design and optimization of ChatGPT in the customer service journey, the role of ChatGPT in assisting service organizations to promote responsible services, and implications of ChatGPT on service stakeholders.

Keywords ChatGPT, Artificial intelligence, Generative AI, Service marketing, Customer experience, Internet and digital services, Ethics, Security

Paper type Opinion paper

1. Introduction

OpenAI's ChatGPT has significantly enhanced the capabilities of chatbots. This remarkable transformation has been facilitated by the Generative Pre-training Transformer (GPT) framework (Dwivedi *et al.*, 2023). ChatGPT is a sophisticated artificial intelligence (AI) conversational interface driven by Natural Language Processing (NLP), and it is adept at facilitating human interaction-like dialogue in answering users' queries and requests (Dwivedi *et al.*, 2023; Ooi *et al.*, 2023). Within merely five days of its launch, ChatGPT amassed over one million registered users, and in just a month, the count of active users surpassed 100 million (Paul *et al.*, 2023). We are witnessing a great scale of business usage of ChatGPT and conversational AI alike, specifically in empowering chatbots and offering enhanced conversational marketing services.

Apart from chatting, practical and prominent use cases for ChatGPT in services are also manifested in customer support, virtual assistants, content generation, and sentiment analysis. ChatGPT offers functionalities such as topic identification and emotion recognition to facilitate a more comprehensive understanding of one's conversational counterpart during the service process, thereby fostering authentic interactions between the customer and the AI agent. We can probably expect ChatGPT to reduce or even eliminate human intervention in the service process. However, we can also envision the use of ChatGPT to empower marketing staff and augment their human capabilities by using these technologies as a collaborative tool to boost their creativity and productivity. In this vein, human substitution, augmentation, and/or complementary effects can equally and simultaneously be applied to service providers' use of ChatGPT to revolutionize how they design, promote, and deliver hyper-personalized customer service experiences during customer interaction. In this vein, the potential mechanisms, factors and ways in which service operators and staff may decide to adopt and diffuse ChatGPT into their marketing practices, as well as the outcomes and the challenges of these processes still remain unknown.

With the advent of ChatGPT transforming how firms engage with customers and perform their service delivery, the service community needs to explore the potential applications of ChatGPT to enhance service delivery in the AI-powered service landscape. To this end, we aim to address the fundamental research question: what opportunities, challenges, and future research directions are relevant to ChatGPT, within the realms of service theory and practice?

The article identifies and discusses five key areas where ChatGPT can significantly impact the service industry. Section two discusses the impact of ChatGPT on service marketing, while section three explores its effect on customer experience. Furthermore, sections four and five focus on the context of Internet and digital services and the cost-effective service excellence resulting from the adoption of ChatGPT, respectively. Lastly, the issues related to ethics, security, and corporate digital responsibility are discussed in relation to the use of ChatGPT. In alignment with Dwivedi *et al.*'s (2023, 2024) foundational premise to use an expert-oriented perspective approach, a total of 11 key experts from the service and information system domain were invited to elaborate on these topicsand present their viewpoints about opportunities, challenges, and future research agenda (Table 1).

2. ChatGPT and service marketing
2.1 Overview
In today's world, consumers have become increasingly demanding and sophisticated due to their exposure to vast amounts of information. As a result, their expectations regarding service

Contributions	Contributors
Overall contribution	Keng-Boon Ooi
Introduction and conclusion	Garry Wei-Han Tan and Eugene Cheng-Xi Aw
ChatGPT and service marketing	Marianna Sigala and Tat-Huei Cham
ChatGPT and customer experience	Kate Letheren and Rebekah Russell-Bennett
ChatGPT and digital services	Anubhav Mishra and Yogesh K Dwivedi
ChatGPT and cost-effective service excellence	Jochen Wirtz
ChatGPT-ethics, security, and corporate digital responsibility	Werner Kunz
Source(s): Author's work	

Table 1.
Authors' contributions

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consumption have also evolved. This scenario is particularly relevant in the current era, where platforms like social media have provided customers with a space to share their experiences through user-generated content. Given these circumstances, the service providers need to ensure that their customer service and marketing activities are consistent with the customers' expectations. Therefore, whether they like it or not, service providers are compelled to adopt the latest intelligent technologies in their marketing activities and customer relationship management platforms to respond to customer needs effectively.

2.2 Opportunities
Across the available technologies used in service industries, ChatGPT has become the emerging trend for businesses to adopt as an important tool in their marketing strategy development and Customer Relationship Management (CRM) activities. Service firms utilize ChatGPT, a disruptive generative AI innovation, to execute their marketing activities, such as interacting with customers, providing instant customer service, and handling inquiries (Dwivedi *et al.*, 2023; Gursoy *et al.*, 2023). The use of ChatGPT streamlines service delivery and enhances customer experience. ChatGPT is also known to have the people's creativity and capabilities to design hyper-personalized service offerings, execute customized marketing strategies targeting specific segemnts and deliver high-quality experiences by analyzing and interpreting huge amount of data relating to overall customer profiles, customers' ratings/satisfaction levels, requirements and needs (Paul *et al.*, 2023).

2.3 Challenges
Although utilizing ChatGPT in service experience creation and delivery has the potential to be a powerful tool for service providers, there are various shortcomings of the system that need to be addressed before it can be effectively implemented (Dwivedi *et al.*, 2023). For instance, it has been reported that there is a need for a legal framework and ethical standards to be established to govern the utilization of ChatGPT in marketing to prevent issues of manipulation and inappropriate use of customers' personal information (Gursoy *et al.*, 2023). Additionally, the issue of the accuracy of the information associated with ChatGPT remains a major concern that may result in customers receiving false marketing information.

2.4 Research agendas
Although ChatGPT does have drawbacks in its implementation, it cannot be denied that this innovation brings significant benefits to service marketing, provided it is implemented ethically and thoughtfully. However, further research is required to address the impact of ChatGPT in the current service marketing context and investigate the uncertainties surrounding this innovation. Therefore, it is recommended that future researchers focus on the following research agenda:

(1) How can governments regulate and prepare to implement generative AI, such as ChatGPT, in the service industry and its marketing activities?

(2) What are the legal challenges that arise from the adoption of generative AI, such as ChatGPT, in the context of the service industry?

(3) What role does ChatGPT play in service marketing?

(4) What potential solutions could generative AI (e.g. ChatGPT) offer from a service marketing and operation perspective?

(5) What are the major factors that influence customers' service consumption behavior based on the use of generative AI (e.g. ChatGPT)?

(6) How do service firms engage customers and partners through generative AI (e.g. ChatGPT)?

(7) What are the potential usage scenarios and implications of ChatGPT on the job tasks, role descriptions and skills of service marketing staff?

(8) What are the negatives associated with ChatGPT for the service industry and its marketing activities?

(9) What are the operational and business challenges that service firms face when adopting and integrating generative AI (e.g. ChatGPT) into their marketing activities?

3. ChatGPT and customer experience

3.1 Overview
Customer experience consists of six dimensions: sensorial (related to senses), relational (social aspects), pragmatic (functional aspects), lifestyle (reflecting values), emotional (affective responses), and cognitive (mental processes) (Gentile *et al.*, 2007). While ChatGPT has been designed with a focus on the output rather than the experience, an experience is produced nonetheless. The "No-UI" (minimization of interaction) design principle of ChatGPT (Blagic, 2022) offers a simplicity that reduces customer effort cognitive) and incorporates "sensory deprivation by design" (sensorial). Simultaneously, excitement (emotional) is created through novelty and connects people with others (relational) in this shared grand experiment. Arguably, it is all about our values (lifestyle).

3.2 Opportunities
Three global consumer trends (Euromonitor, 2023) offer potential opportunities for improving the customer experience with ChatGPT: authentic automation, thriving, revived routines. Authentic automation (humans and machines working in sync): When augmenting services with ChatGPT, service organizations should identify which tasks are well-suited to ChatGPT and which are suited to human employees. Thriving (need to balance life): ChatGPT should support thriving rather than adding burdens to service customers, and may also reduce burdens through augmenting service recovery efforts from technologies like service robots. Service customer engagement needs to be "enough" to support customers in setting boundaries without overwhelming them with additional effort. Revived routines (getting our life back post-pandemic): ChatGPT can help people establish new routines in work and play, such as providing an optimal commuting schedule that incorporates office and home-office time, or suggesting a music playlist that uplifts and motivates.

3.3 Challenges
There are three key challenges for implementing ChatGPT to enhance customer service experience. The first challenge is the paradoxical trade-off between reducing effort and making time for social interaction. While technology can simplify tasks, relying on it might actually decrease social engagement and weaken social bonds while simultaneously offering low perceived authenticity in ChatGPT interactions, ultimately impacting the social aspect of customer experience. The second challenge is novelty waning. The novelty of ChatGPT as a new technology will wear off, and competitors will enter the market. ChatGPT will need to continuously innovate to keep users engaged and loyal as well as maintain a positive emotional experience. Thirdly, there is the challenge of accuracy. Maintaining the accuracy of

responses through credibility and currency of the content is needed for consumers to have confidence in ChatGPT and a positive cognitive customer experience.

3.4 Research agendas

Examining the level of organizational risk and change along with the opportunities and challenges, we propose three scenarios for future research. One solution is to ask questions not about the present but different future scenarios. In the following, we use education services to illustrate each scenario.

3.4.1 Scenario 1: augmenting current customer experiences (low risk, low change). In this scenario, we might see ChatGPT integrated as a plug-in to existing educational services, for instance, offering course-specific answers in an existing university chatbot. Maintaining true functionality (better than existing alternatives) and supporting the "thrivers" through trusted engagement will be key. Two research questions are proposed: RQ1: How might AI-augmented services complement core services to ensure a truly pragmatic experience with credible content? And RQ2: How might we achieve the minimum viable balance of cognitive load to support frictionless but engaging novel experiences?

3.4.2 Scenario 2: designing near-future experiences (moderate risk, moderate change). In scenario two, educational services such as "personalized tutor" may emerge – offering assistance as students view lecture slides and attempt tutorial activities. This change to the core product may inadvertently damage relational and lifestyle experiences by offering "inauthentic automation". Two questions are proposed: RQ3: How might AI-augmented services prompt, remind and suggest assistance in a personalized way? and RQ4: How might authentic AI automation personalize experiences in alignment with individual values?

3.4.3 Scenario 3: exploring speculative customer experiences (high risk, high change). Finally, scenario three brings educational experiences such as entirely personalized courses where students learn according to strengths, past experience, and future uses of the content. In a world where a shared educational experience looks different for everyone, supporting a sense of solid routines will be important. Two research questions are proposed: RQ5: How might the five senses be engaged in a digital environment to support personalized routines? And RQ6: How AI be designed to perceive and proactively manage positive and negative emotional experiences in times of high change and low familiarity?

4. ChatGPT and digital services

4.1 Overview

Today's consumers are always "online and connected" and have strong preferences toward convenience and speed to fulfill their needs, irrespective of the identity of the delivery agent (human or AI). Businesses are committed to digital transformation, integrating digital technologies to meet and satisfy the demands of "digital natives" (Nambisan *et al.*, 2017). Moreover, technology-driven fierce competition has forced businesses to utilize AI-based innovations (e.g. conversational chatbots and process optimization) to build a sustainable competitive advantage, including improved operational efficiency and cost-effective delivery of high-value digital services to consumers (Kshetri *et al.*, 2023).

4.2 Opportunities

ChatGPT has immense potential in digitalizing and improving existing services' performance. Many firms have started experimenting with ChatGPT to support (or replace) the online customer-facing services (e.g. explaining features of products in more than one language). The high-quality linguistic capabilities of ChatGPT can overcome the clinical tone of existing chatbots with a more human touch while conversing with consumers. For

example, as indicated in Figure 1, when asked, "Can you help me?", ChatGPT answers like a person eager to help (i.e. "Of course! I'll do my best to assist you"). Companies can replace the monotonous (and boring) chatbots with ChatGPT to add the much-needed yet missing "human touch". Digital marketers offering services like content creation, email marketing, SEO, and search advertising can utilize ChatGPT to provide personalized and cost-effective services. ChatGPT continuously learns from the massive amount of data, and hence, it can be a disruptive force for digital services such as video streaming, recommendation agents on e-commerce platforms, online financial and banking services, education, legal, and health care services. Businesses providing content moderation services can train ChatGPT to identify and flag misinformation (fake news) on social media and the Internet. Furthermore, Governments can take advantage of the translation and text-to-speech capabilities of ChatGPT to substantially increase the reach of their digital services.
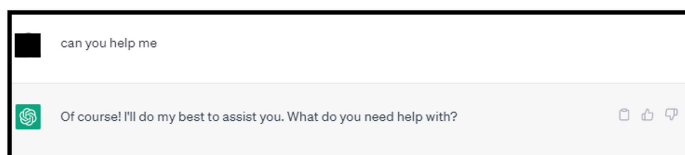
4.3 Challenges
ChatGPT has attracted a fair share of criticism and concerns within a short period of its existence due to the potential misuse of copyright issues, privacy, accuracy and authenticity of responses, ethics, inherent biases in data, misinformation, and data leaks. Firms may train AI tools on biased data to generate personal recommendations (banking or health-related services) that suit their business goals better than the consumers' objectives. The issue of digital-divide and unequal access to these advanced tools may violate the fundamental principles of equity and equality. Furthermore, increasing automation will impact jobs, forcing companies to manage employee dissatisfaction and reskill their employees.

4.4 Research agendas
The rapid user growth offers exciting research opportunities to investigate how ChatGPT can assist companies in digitizing their services and providing value-addition to their consumers. Future studies may explore the following research avenues:

(1) How can ChatGPT enhance efficiency and contribute to the growth of the digital services industry?

(2) Can ChatGPT be used as a tool to enhance students' learning and skills in the education industry?

(3) How can ChatGPT transform consumer experiences for digital entertainment services?

(4) What are the implications of adopting ChatGPT for frontline consumer-facing services on consumers and employees?

(5) How can firms utilize ChatGPT to shift their focus from low to high-value services?

(6) How can Governments adopt ChatGPT to build digital services for the masses?

Source(s): ChatGPT output: asking for assistance

Figure 1.
Conversation with ChatGPT

(7) What are the ethical challenges associated with using ChatGPT to offer digital services (e.g. data privacy, fraud, and security threats)?

(8) How should Governments prepare and plan for the misuse of ChatGPT?

(9) How can the misuse of generative tools be minimized in sensitive services (e.g. healthcare and legal services)?

5. ChatGPT and cost-effective service excellence
5.1 Overview
ChatGPT will have massive implications for the delivery of customer services (Bock *et al.*, 2020; Bornet *et al.*, 2021; Dwivedi *et al.*, 2023, 2024; Wirtz *et al.*, 2018). Together, these technologies are expected to bring unprecedented improvements in both service quality and productivity (Huang and Rust, 2018; Wirtz *et al.*, 2018; Wirtz and Zeithaml, 2018).

5.2 Opportunities
ChatGPT is expected to power service robots and substitute human service employees in contexts ranging from barista services to sushi restaurants (Pitardi *et al.*, 2022; Wirtz *et al.*, 2018). Utilizing ChatGPT-based solutions enables the expansion and scaling of services while maintaining efficiency. Information processing-oriented services (e.g. services accessible through phone calls, emails, apps, or in-person information counters) will increasingly move towards comprehensive end-to-end automation, eliminating the need for human employees. A case in point is Google, which engages minimally with human service employees for customer interactions. This approach enables Google to provide high-value offerings such as Google Maps, Gmail, and Google Scholar at minimal cost to the end-users. The low operating expenses enable services to be primarily supported by advertisements for free or, at most, a small fee. In future, we can expect that ChatGPT is set to position end-to-end automated services as the standard approach for many more data-processing-oriented services, which encompasses sectors such as finance and insurance, as well as many education and healthcare services due to its negligible marginal costs (e.g. Wirtz *et al.*, 2023).

ChatGPT is likely to offer the opportunity of a quantum leap in terms of interaction capabilities and quality of automated service provided by physical service robots and "digital people" in the frontline (e.g. holograms, virtual agents, and chatbots) alike. ChatGPT, when combined with rules built upon pre-existing training data and frequently asked questions (FAQs) will be able to serve an organization's customers at unprecedented quality. It can be anticipated that generative AI will be incorporated into the customer interfaces of numerous existing providers, not just ChatGPT (imagine future versions of Siri or Alexa). In other words, ChatGPT and similar, holistic AI systems have the capacity to upgrade chatbots and service robots, equipping them with a semblance of "general intelligence". In essence, this implies delivering services on par with the understanding and adaptability of human service. Thus, ChatGPT is likely a game-changer across service sectors. It is expected that customers will prefer the utilization of ChatGPT-powered digital agents over traditional call centers. These digital agents have the advantage of being available instantly, which minimizes wait times for telephone-based assistance. Additionally, they provide 24/7 service and can communicate in the customer's preferred language.

The metaverse is another exciting context where ChatGPT offers exciting opportunities for vastly enhanced service experiences (Dwivedi *et al.*, 2023). For example, learning a foreign language through ChatGPT-powered digital people who interact with students in the metaverse seems entirely possible. Mandarin classes can be set in realistic Chinese settings such as shopping environments and business meetings. Such training will be highly

immersive and personalized and can be offered at a low cost, as marginal costs are likely to be negligible.

5.3 Challenges
Furthermore, ChatGPT carries ethical, fairness, and privacy risks (Dwivedi *et al.*, 2023). These challenges in ethical risks extend far beyond the unsettling depiction of surveillance society, in which they could potentially lead to situations where customers are evaluated, forecasted, and influenced, frequently without their knowledge and agreement (Gawer, 2022; Wirtz *et al.*, 2023). Additionally, risks such as loss of autonomy and dignity, dehumanization, social isolation, and addiction will become even more apparent with the use of ChatGPT-powered digital entities (e.g. by virtual digital agents in a metaverse or physical service robots in elderly care (c.f. Lobschat *et al.*, 2021; Wirtz *et al.*, 2023). Hence, we need to better understand ChatGPT's risks in customer service and how they can be mitigated.

5.4 Research agendas
As we are only at the beginning of using ChatGPT in service, there are vast research opportunities. Interesting research questions include: (1) what is the optimal means to develop, implement, expand, and manage ChatGPT-driven customer experiences and comprehensive service offerings; (2) how can ChatGPT be designed to effectively navigate customers in their service journeys; (3) how to tailor ChatGPT to be as tolerant to customer errors as human staff; and (4) how can it be programmed to execute service recovery progresses?

6. ChatGPT-ethics, security, and corporate digital responsibility
6.1 Overview
The recent emergence of powerful AI tools such as ChatGPT has a major advancement for businesses but raises several ethical and security concerns. To consider this, Wirtz *et al.* (2023) introduced corporate digital responsibility (CDR) as "the principles underpinning a service firm's ethical, fair, and protective use of data and technology when engaging with customers within their digital service ecosystem." (p. 173). Yet, businesses often face conflicts between CDR and their objectives, leading to trade-offs in profitability and ethics (referred to as CDR calculus).

6.2 Opportunities
Generative AI like ChatGPT presents exciting opportunities for businesses to enhance operations, lower costs, and provide better customer service. Moreover, it can be utilized to enhance all business operations in a more cost-effective manner. For example, applied ethically, ChatGPT has the potential to increase security. ChatGPT can generate secure passwords, identify potential code vulnerabilities, and automate other security-related tasks. Additionally, with careful selection and adjustment of datasets, ChatGPT and other generative AI models can help reduce harmful biases. In the future, ChatGPT may even provide explanations for its responses, which can help establish trust in AI systems by clarifying its reasoning and limitations.

Moreover, intelligent automation enables companies to offer personalized and customized services to a wider population, resulting in a favorable outcome for more people in our society. This means that high-quality service is no longer limited to a small group of wealthy individuals. With the aid of systems such as ChatGPT, every customer has access to a personal assistant who can assist them with various tasks. In the past, hiring a personal assistant was considered a luxury service, but with ChatGPT chatbots, customer support is

available 24/7. ChatGPT can also take on repetitive and mundane tasks, freeing up human workers to concentrate on more meaningful and strategic work, thereby improving productivity and employee satisfaction.

6.3 Challenges

The advent of generative AI, such as ChatGPT, leads to new challenges and questions for good CDR. For instance:

Bias and accuracy: Language models such as ChatGPT learn from massive amounts of text data, which may inadvertently incorporate biases present in the data. It is critical to mitigate bias and ensure the fairness of ChatGPT responses across different demographics and cultural contexts. Developers should use rigorous protocols to identify and correct for biases in the training data and actively involve diverse teams in the development process to avoid perpetuating existing biases. In addition, ChatGPT is not always accurate in its output (i.e. AI hallucination) and can sometimes produce incorrect, misleading, or harmful responses. This could result in users making decisions based on inaccurate information, which could violate the user's trust or safety.

Privacy and intellectual property: Privacy is critical when dealing with large-scale language models such as ChatGPT. As the model interacts with users, it collects and processes large amounts of personal data. It is imperative to prioritize user privacy and protect their personal information. Developers should adhere to strong privacy practices, such as data anonymization and encryption, and obtain informed consent from users regarding data collection and storage. Furthermore, ChatGPT should respect others "intellectual property and creativity. It is common for it to copy or plagiarize existing content from the Internet or other sources without proper attribution or consent. This may violate the original authors" or creators' rights and interests and undermine their reputation and recognition. To avoid this problem, ChatGPT must be aware of the provenance and ownership of the content it generates or uses and acknowledge it accordingly.

Malicious use: ChatGPT is intended to prevent its misuse or abuse by malicious actors. ChatGPT can be used for nefarious purposes such as spamming, phishing, trolling, or spreading misinformation or propaganda. In addition, ChatGPT could be used to impersonate real people, which could lead to identity theft or other forms of fraud. Further, ChatGPT may reveal personal or sensitive information or suggest inappropriate or illegal actions. These activities can damage the reputation or well-being of individuals or organizations or negatively influence public opinion or behavior. ChatGPT must be secured and regulated by appropriate measures and policies to prevent these threats. For example, ChatGPT must have authentication and verification mechanisms to ensure its identity and integrity. It could also be monitored and evaluated by human experts and users who can provide feedback and guidance to the system. In addition, ChatGPT must have ethical and legal guidelines and standards to govern its use and distribution.

Transparency: Transparency is essential to building trust in ChatGPT. OpenAI should be transparent about the limitations of the system and clearly communicate its capabilities to users. In addition, they should disclose the underlying training data and the algorithm used. Providing understandable explanations for the model's responses and disclosing the limitations of its knowledge can help users make informed decisions and avoid potential misunderstandings. This will help build trust between users and the organizations using the technology.

Accountability: OpenAI should be accountable for the actions of ChatGPT. This means that OpenAI should take steps to ensure that ChatGPT is not used to generate harmful content or access sensitive user data. OpenAI should actively monitor and evaluate the impact of the system, promptly address any unintended consequences, and develop mechanisms to receive user feedback and effectively address concerns.

6.4 Research agendas

Given the challenges of new AI approaches for CDR, several research opportunities arise. To address bias in AI, we should explore ways to prevent it in algorithms and data. We also need to assess ChatGPT's accuracy, considering AI hallucination. Additionally, it's important to develop systems that protect intellectual property and user data privacy.

As ChatGPT plug-ins become prominent, AI will autonomously play a bigger role in various business processes. We must learn how to responsibly automate these processes and ensure companies using AI are accountable and transparent. Additionally, we need to prevent the misuse of these systems for malicious purposes. As more companies adopt generative AI like ChatGPT, the role of human service workers becomes uncertain. We need to consider the value they can bring to future organizations (see also Wirtz *et al.*, 2018). Can an organization with only top management and frontline service workers be sustainable if middle management disappears? There are also calls for the establishment of a legal framework and ethical standards to regulate the use of ChatGPT in marketing. This prevents issues such as manipulating customers' personal information (Gursoy *et al.*, 2023). This brief discussion of research opportunities reiterates the importance of researching, understanding, and practicing good CDR, considering the emerging capabilities of AI.

7. Conclusion

It is evident that ChatGPT indeed presents an enormous opportunity in the service industry. Given the ongoing evolution and growth of ChatGPT, service businesses must stay updated with the latest advancements and leverage the technology to gain a competitive edge and sustain in the market. This paper suggests that ChatGPT has the potential to elevate the overall performance of service businesses by explaining how the technology can benefit firms in various aspects, including marketing and operational service activities. More specifically, the paper presents the opportunities, challenges, and future research agenda for adopting ChatGPT from the perspective of service theory and practices. Despite highlighting various opportunities and challenges associated with ChatGPT, additional attention is needed to study this innovation's revolution and potentially disruptive nature in the service industry. In summary, ChatGPT represents a new frontier in service theory and practices, and future researchers can refer to this work as a guideline to better understand this promising technology and uncover its potential areas for research. Considering the substantial impact of ChatGPT in the current demanding and competitive service landscape, this paper is expected to lay a foundation in the academic and practical perspectives of these domains.

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