

# Improving Customer Service Quality in MSMEs through the Use of ChatGPT

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## ABSTRACT

In the current era of digitalisation, technological developments are accelerating and changing the way humans communicate and interact, including in MSME businesses. This study aims to evaluate the effect of using ChatGPT in improving the quality of customer service in MSMEs. By using ChatGPT technology, it is expected that MSMEs can provide better and effective services to their customers. The focus of this research is qualitative. Methods for gathering information included paying close attention and taking detailed notes, with subsequent analysis including data reduction, visualisation, and conclusions. The results of this study concluded that the use of ChatGPT can help MSMEs in improving the quality of customer service and efficiency in operations. MSMEs need to pay attention to several important things in using this technology, such as customer context and situation, staff training, privacy and security of customer data, and constraints in the use of technology. In the long run, the use of ChatGPT can help MSMEs in gaining better insights into customer preferences and improving customer satisfaction.

**Kata Kunci:** Service, Customer, MSME, ChatGPT

## INTRODUCTION

In this age of digitalization, the pace of technological advancement is quickening, which is changing the way humans communicate and interact with one another, particularly in the context of conducting business (Ausat & Peirisal, 2021); (Supatmin et al., 2022) and (Harahap, Sutrisno, Raharjo, et al., 2023). MSMEs, also known as micro, small, and medium enterprises, are one of the types of businesses that are increasingly turning to technology in order to boost the level of customer satisfaction they provide (Sutrisno et al., 2022) and (Sutrisno et al., 2023). Despite this, there are still a great number of MSMEs that have trouble keeping up with the ever-increasing competition and providing superior services to those of their rivals (Rijal et al., 2023). The utilization of ChatGPT is one type of technology that small and medium-sized businesses (MSMEs) can employ to improve the level of customer care they provide to their clients. ChatGPT is an artificial intelligence system that communicates with customers online in real time and understands human language thanks to deep learning algorithms (Kraugusteeliana et al., 2023) and (Fauzi et al., 2023). ChatGPT may be used to connect with customers online.

The purpose of this research is to determine whether or not the implementation of ChatGPT

results in an increase in the level of customer satisfaction experienced by MSMEs. It is anticipated that micro, small, and medium-sized enterprises (MSMEs) will be able to provide improved and more efficient services to their clients if they use the ChatGPT technology. In addition to that, the results of this research will also include an analysis of how customers feel about MSMEs' utilization of ChatGPT in their communications with them.

It is believed that the findings of this research would provide input for micro, small, and medium-sized enterprises (MSMEs) that are interested in utilizing ChatGPT technology to enhance the level of customer service they provide and provide a positive experience for their consumers. This line of inquiry also has the potential to make significant contributions to the fields of artificial intelligence and marketing research respectively.

## LITERATURE REVIEW

### ChatGPT

ChatGPT is a machine-based natural language model trained by OpenAI using the GPT-3.5 (Generative Pre-trained Transformer 3.5) architecture. This model can be used to build chatbot applications, which can communicate with users in human language, and provide relevant and useful answers to given questions or statements. ChatGPT is trained using deep learning techniques and large corpus data, giving it the ability to recognise and understand complex human language, including vocabulary, grammar, and the context of a sentence or conversation. The model also has the ability to predict the next words in a sentence and generate natural, human-like responses. With its capabilities, ChatGPT can be used for various purposes such as customer service, medical consultation, learning, and many more. In certain contexts, ChatGPT can help facilitate human-machine interaction, thus speeding up and improving the efficiency of various processes that require human-machine interaction.

### Service Quality

Service quality is a measure or level of customer satisfaction with the services provided by a company or organisation (Tjiptono & Chandra, 2011). Service quality is considered a key factor in maintaining customer satisfaction, maintaining customer loyalty, and improving business reputation (Sharma, 2015). Service quality can be measured based on several dimensions, such as: Responsiveness: the organisation's ability to provide services in a fast and timely manner. Assurance: the organisation's ability to provide trust to customers related to competence, integrity, and professionalism. Tangibles: the physical or visual appearance of the product or service provided, such as cleanliness, design, and physical quality. Empathy: the organisation's ability to understand customers' needs and wants, and to provide services that meet those needs and wants. Reliability: the organisation's ability to provide consistent and reliable services, and avoid errors or inaccuracies. All these dimensions are interconnected and influence each other in determining the overall quality of service. Therefore, organisations need to pay attention to and improve all these dimensions in a balanced manner to achieve optimal service quality (Az-zaakiyyah et al., 2022).

### MSMEs

MSME is a form of business that has a small and medium scale with less than 250 employees, and has maximum assets of IDR 10 billion (for micro enterprises) (Ayodya, 2020). MSMEs usually operate in the informal sector, and play an important role in a country's economy, especially in terms of job creation, local business development, and economic growth (Ausat et al., 2023). MSMEs have various advantages, such as flexibility, innovation, and the ability to adjust to changing market conditions. However, MSMEs also have challenges and constraints, such as limited capital, ineffective management, and intense competition from similar businesses. The government and various organisations in Indonesia continue to strive to strengthen and improve MSMEs, both through the provision of capital, training, and market development, as well as through the development of infrastructure and regulations that support the growth of MSMEs. This is expected to drive more inclusive and sustainable economic growth in Indonesia.

## RESEARCH METHOD

This research utilises a methodology known as a desk study, where the researcher does not collect primary data by conducting direct research in the field. To ensure this research goes well, the researcher consults various references. The research conducted for this study used keywords related to the topic discussed, specifically improving the quality of customer service in MSMEs through the use of ChatGPT, to search for relevant material in digital media and scientific archives. The research approach used by the authors is adaptive, which paves the way for the selection of relevant reference materials without requiring the authors to limit the search to specific journals or digital platforms. The rationale we present is supported by a variety of sources, including the journal sites Emerald Insight, ResearchGate, and Elsevier. The main focus of this academic article is on improving the quality of customer service in MSMEs through the use of ChatGPT. The focus the author gives to certain keywords helps to limit the scope of the discussion and encourages logical coherence. Academic journals, essays, and publications that have been published between 2020 and the present are the main focus of this research. During the search, we used keywords to conduct searches across different publishing platforms. It is important to note that the papers, journals, and publications that were considered highly relevant to the topic of ChatGPT usage and its relationship with improving the quality of MSME services were only those specific papers, journals, and publications. Other papers, journals and publications were considered irrelevant. This scientific paper consists of a total of 21 sources that are quite thorough.

The investigation that is now taking place was categorized as a type of qualitative study. The process of collecting data included the application of a number of different approaches, such as attentive listening and the detailed documentation of all pertinent information. The aforementioned approaches were utilized as a means of facilitating the inspection of the data, which was carried out by way of a process that involved the reduction of the data, the presentation of the data, and the drawing of conclusions. The primary objective of this study was to achieve a more in-depth comprehension of the literature review that was carried out as a component of this research endeavor. During the phase known as "data reduction," the obtained information was methodically organized, categorized, and culled in order to simplify the process of coming to meaningful conclusions and make the development of significant results more manageable. Because the data were so complex and varied, conducting an analysis of them was required even during the phase where they were being reduced. The purpose of the reduction phase was to ascertain whether or not the information was pertinent to the ultimate objective. At the outset, a total of 35 different sources were collected. The initial method resulted in the value of the numerical variable being changed to 21. In addition to that, the data will be provided via graphical illustrations. The current stage is the next step in the process of data reduction, and it is the stage in which the data set is carefully organized in a structured manner in order to promote comprehension and simplify the process of drawing conclusions. Written discourse, more especially in the form of field notes, is the kind of data representation that is utilized in this particular setting. Utilizing this approach to the presentation of data can result in increased productivity when it comes to organizing and arranging data in relational patterns. The process is not complete until the final stage, which is the development of conclusions based on the data acquired. This step marks the completion of the technique that we applied to the analysis of qualitative data. During this stage, we checked the outcomes of data reduction and data presentation to ensure that they were consistent with the intended goal of the research. The objective of this stage is to derive meaning from the obtained data by identifying correlations, similarities, or dissimilarities, in order to build solutions to pre-existing problems that have been identified. The results that were drawn from the sources that were used are deemed to be reliable. The objective of this endeavor is to collect facts that are trustworthy and accurate, with the goal of enhancing comprehension as a result.

## RESULTS AND DISCUSSION

Customers in this day and age pay attention not just to the goods or services that a company has to offer, but also to the experience that they have when engaging with the company (Ferine et al., 2023); (Hopia et al., 2023) and (Ausat et al., 2022). As a result, elevating the level of quality of

service provided to customers is of utmost significance for businesses of all sizes, including MSMEs (Subagja et al., 2022) and (Kamar et al., 2022). Utilizing technology like ChatGPT is one strategy for enhancing the quality of customer service provided by MSMEs. ChatGPT is a technology that makes use of artificial intelligence (AI), which enables it to provide replies that are both more accurate and quicker when responding to messages or inquiries posed by clients. When applied to micro, small, and medium-sized enterprises (MSMEs), the application of ChatGPT on chat platforms can help to expedite the process of providing customer support, increase operational efficiency, and maximize contacts with customers. In this case, the use of ChatGPT can help MSMEs in several aspects, including:

1. *Speed up response time*: By using ChatGPT, MSMEs can provide fast and accurate responses to customer queries or complaints. This will increase customer satisfaction as they feel valued and listened to by the business.
2. *Improve operational efficiency*: In a small scale like MSMEs, there are usually limited human resources and time. By utilizing ChatGPT technology, MSMEs can save time and cost in processing customer requests. Since ChatGPT can help serve multiple customers at once, it improves the operational efficiency of MSMEs.
3. *Provide a better customer experience*: With the use of ChatGPT, customers will find it easier and more convenient to interact with MSMEs. This will enhance positive customer experience and increase customer loyalty to the business.

However, using ChatGPT is not easy. MSMEs need to pay attention to several important things so that the use of ChatGPT technology runs well and effectively. Some things that need to be considered are:

1. *Have a complete and accurate answer database*: A complete and accurate answer database is very important in using ChatGPT. MSMEs need to ensure that their answer database contains the right and relevant answers to customer queries or complaints.
2. *Maintain consistency of answers*: Consistency of answers is critical to providing a positive customer experience. Therefore, MSMEs need to ensure that the answers provided by ChatGPT are always consistent with the values and image of the business.
3. *Paying attention to customer context and situation*: MSMEs need to pay attention to the context and situation of the customer when using ChatGPT. In some cases, customers may require further assistance that cannot be answered by ChatGPT. In this case, MSMEs must be ready to provide additional assistance.
4. *Provide training for staff responsible for using ChatGPT*: Staff responsible for using ChatGPT should receive training in the use of this technology. They should understand how ChatGPT works and how to handle situations that cannot be answered by this technology. This training will ensure that ChatGPT is used properly and effectively.
5. *Pay attention to customer data privacy and security*: MSMEs need to ensure that customer data obtained through the use of ChatGPT is safe and private. MSMEs must ensure that customer data is not misused or disseminated without the customer's permission.

In using ChatGPT, MSMEs also need to pay attention to several things that become obstacles in using this technology, including:

1. *Not all customer queries or complaints can be answered by ChatGPT*: Although ChatGPT technology has become more sophisticated, there are still some customer queries or complaints that cannot be answered by ChatGPT. In this case, MSMEs need to ensure that there are staff who can provide additional assistance for customers.
2. *Possibility of errors in answers*: The possibility of errors in answers is also an obstacle in the use of ChatGPT. Therefore, MSMEs need to ensure that staff responsible for using ChatGPT monitor and review the answers provided by ChatGPT regularly.
3. *Not all customers are comfortable in interacting with ChatGPT*: Not all customers are comfortable interacting with ChatGPT. Some customers may prefer to interact directly with MSME staff. In this case, MSMEs need to provide options to customers in choosing how they want to interact.



In a nutshell, the application of the ChatGPT technology can assist MSMEs in enhancing the level of customer service they provide. However, in order to make the most of this technology, micro, small, and medium-sized businesses (MSMEs) need to pay attention to a few key aspects, such as the context and situation of their customers, the training they provide for their employees, and the privacy and security of their customers' data (Harahap, Ausat, et al., 2023): (Rustiawan et al., 2023); (Nur'aeni et al., 2022) and (Harahap, Sutrisno, Fauzi, et al., 2023). Nevertheless, utilizing ChatGPT is not an ideal solution, and micro, small, and medium-sized enterprises (MSMEs) need to be aware of the limitations that may arise from utilizing this technology.

Last but not least, the adoption of ChatGPT can also assist MSMEs in increasing their level of customer service productivity and efficiency. The timeliness of customer service can be improved for MSMEs by utilizing this technology (Gadzali, 2023) and (Ausat, 2023), which eliminates the need for those businesses to considerably boost the number of employees they employ (Ausat & Suherlan, 2021) and (Sahtoni et al., 2023). The usage of ChatGPT technology can, over the course of time, assist micro, small, and medium-sized enterprises (MSMEs) in collecting data and acquiring a deeper understanding of the preferences of their customers. It is possible to process and evaluate the data collected from interactions with consumers through ChatGPT in order to develop a deeper understanding of the behaviors and preferences of those customers. With this information, MSMEs are able to optimize their marketing strategy and improve the level of pleasure experienced by their customers.

For micro, small, and medium-sized enterprises (MSMEs), the utilization of technology such as ChatGPT is not an option in today's rising digital world; rather, it is a need for them to be able to compete and thrive in a market that is becoming increasingly competitive. Small and medium-sized businesses (MSMEs) have the opportunity to boost the quality of their customer service and achieve greater success in the future by making intelligent and efficient use of technology.

## CONCLUSION

The adoption of ChatGPT can assist micro, small, and medium-sized enterprises (MSMEs) in enhancing the quality of their customer service and the efficiency of their operations. When utilizing this technology, micro, small, and medium-sized enterprises (MSMEs) need to pay attention to a number of important things, including customer context and situation, staff training, privacy and security of customer data, and constraints in the use of technology. Utilizing ChatGPT can, in the long run, assist micro, small, and medium-sized enterprises (MSMEs) in gaining better insights into customer preferences and improving customer satisfaction.

Suggestions that can be given in the results of this study include: Firstly, MSMEs need to consider using ChatGPT as an alternative in customer service and periodically evaluate the effectiveness and efficiency of its use. Second, MSMEs must ensure that the use of ChatGPT is done wisely and still pay attention to a comfortable and effective customer experience. Third, MSMEs need to provide training for staff responsible for using ChatGPT so that they can optimise its use and provide good customer service. Fourth, MSMEs must pay attention to the privacy and security of customer data by ensuring that customer data is not misused or disseminated without the customer's permission. Fifth, MSMEs need to regularly monitor and review the answers provided by ChatGPT to ensure that the answers provided are accurate and in line with customer needs. Finally, MSMEs should give customers the option to choose how they want to interact. MSMEs can utilise the data obtained from using ChatGPT to gain better insights into customer preferences and improve customer satisfaction.

## REFERENCES

- Ausat, A. M. A. (2023). The Application of Technology in the Age of Covid-19 and Its Effects on Performance. *Apollo: Journal of Tourism and Business*, 1(1), 14–22. <https://doi.org/10.58905/apollo.v1i1.8>

- Ausat, A. M. A., Al Bana, T., & Gadzali, S. S. (2023). Basic Capital of Creative Economy: The Role of Intellectual, Social, Cultural, and Institutional Capital. *Apollo: Journal of Tourism and Business*, 1(2), 42–54. <https://doi.org/10.58905/apollo.v1i2.21>
- Ausat, A. M. A., & Peirisal, T. (2021). Determinants of E-commerce Adoption on Business Performance : A Study of MSMEs in Malang City , Indonesia. *Journal On Optimizations Of Systems At Industries*, 20(2), 104–114. <https://doi.org/10.25077/josi.v20.n2.p104-114.2021>
- Ausat, A. M. A., Siti Astuti, E., & Wilopo. (2022). Analisis Faktor Yang Berpengaruh Pada Adopsi E-commerce Dan Dampaknya Bagi Kinerja UKM Di Kabupaten Subang. *Jurnal Teknologi Informasi Dan Ilmu Komputer (JTIK)*, 9(2), 333–346. <https://doi.org/10.25126/jtiik.202295422>
- Ausat, A. M. A., & Suherlan, S. (2021). Obstacles and Solutions of MSMEs in Electronic Commerce during Covid-19 Pandemic: Evidence from Indonesia. *BASKARA: Journal of Business and Entrepreneurship*, 4(1), 11–19. <https://doi.org/10.54268/BASKARA.4.1.11-19>
- Ayodya, W. (2020). *UMKM 4.0 Strategi UMKM Memasuki Era Digital* (D. Putri, Ed.; 1st ed.). PT Elex Media Komputindo.
- Az-zaakiyyah, H. K., Hidayat, F., Almaududi Ausat, A. M., & Suherlan, S. (2022). Islamic Rural Bank Employee Performance: Role of Motivation, Compensation, and Work Environment. *EkBis: Jurnal Ekonomi Dan Bisnis*, 6(1), 44–58. <https://doi.org/10.14421/EkBis.2022.6.1.1551>
- Fauzi, F., Tuhuteru, L., Sampe, F., Ausat, A. M. A., & Hatta, H. R. (2023). Analysing the Role of ChatGPT in Improving Student Productivity in Higher Education. *Journal on Education*, 5(4), 14886–14891. <https://doi.org/10.31004/joe.v5i4.2563>
- Ferine, K. F., Ausat, A. M. A., Gadzali, S. S., Marleni, & Sari, D. M. (2023). The Impact of Social Media on Consumer Behavior. *Communnity Development Journal: Jurnal Pendidikan Masyarakat*, 4(1), 843–847. <https://doi.org/10.31004/cdj.v4i1.12567>
- Gadzali, S. S. (2023). Determinants of Consumer Purchases in the Perspective of Business Psychology. *Apollo: Journal of Tourism and Business*, 1(1), 23–28. <https://doi.org/10.58905/apollo.v1i1.9>
- Harahap, M. A. K., Ausat, A. M. A., & Suherlan, S. (2023). Analysing the Role of Religious Education in Improving the Work Ethic of MSME Owners. *Journal on Education*, 5(4), 15050–15057. <https://doi.org/10.31004/joe.v5i4.2591>
- Harahap, M. A. K., Sutrisno, S., Fauzi, F., Jusman, I. A., & Ausat, A. M. A. (2023). The Impact of Digital Technology on Employee Job Stress: A Business Psychology Review. *Jurnal Pendidikan Tambusai*, 7(1), 3635–3638. <https://jptam.org/index.php/jptam/article/view/5775>
- Harahap, M. A. K., Sutrisno, S., Raharjo, I. B., Novianti, R., & Ausat, A. M. A. (2023). The Role of MSMEs in Improving the Economy in Ramadan. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(2), 1907–1911. <https://doi.org/10.31004/cdj.v4i2.13794>
- Hopia, N., Maryam, N., Saiddah, V., Gadzali, S. S., & Ausat, A. M. A. (2023). The Influence of Online Business on Consumer Purchasing in Yogya Grand Subang. *Journal on Education*, 5(3), 10297–10301. <https://jonedu.org/index.php/joe/article/view/1925>
- Kamar, K., Lewaherilla, N. C., Ausat, A. M. A., Ukar, K., & Gadzali, S. S. (2022). The Influence of Information Technology and Human Resource Management Capabilities on SMEs Performance. *International Journal of Artificial Intelligence Research*, 6(1.2), 1. <https://doi.org/https://doi.org/10.29099/ijair.v6i1.2.676>
- Kraugusteeliana, K., Indriana, I. H., Krisnanik, E., Muliawati, A., & Irmanda, H. N. (2023). Utilisation of ChatGPT's Artificial Intelligence in Improving the Quality and Productivity

- of Lecturers' Work. *Jurnal Pendidikan Dan Konseling (JPDK)*, 5(2), 3245–3249. <https://doi.org/10.31004/jpdk.v5i2.13650>
- Nur'aeni, Ausat, A. M. A., Purnomo, Y. J., Munir, A. R., & Suherlan. (2022). Do Motivation, Compensation, and Work Environment Improve Employee Performance: A Literature Review. *International Journal Of Artificial Intelligence Research*, 6(1.2), 1–9. <https://doi.org/https://doi.org/10.29099/ijair.v6i1.2.678>
- Rijal, S., Ausat, A. M. A., Kurniawati, R., & Suherlan, S. (2023). Opportunities and Challenges for MSMEs in Indonesia in the Face of Ramadan. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(2), 2035–2039. <https://doi.org/10.31004/cdj.v4i2.13936>
- Rustiawan, I., Ausat, A. M. A., Gadzali, S. S., Suherlan, & Azzaakiyyah, H. K. (2023). Determinants of Employee Dedication to the Company as a Whole. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(1), 708–712. <https://doi.org/10.31004/cdj.v4i1.12454>
- Sahtoni, S., Hati, N., Kurniati, N., Ausat, A. M. A., & Gadzali, S. (2023). Analyzing the Self-Pay Benefits of Starting a Small Business. *Journal on Education*, 5(3), 10291–10296. <https://jonedu.org/index.php/joe/article/view/1924>
- Sharma, S. K. (2015). Adoption of e-government services The role of service quality dimensions and demographic variables. *Transforming Government: People, Process and Policy*, 9(2), 207–222. <https://doi.org/10.1108/TG-10-2014-0046>
- Subagja, A. D., Ausat, A. M. A., & Suherlan. (2022). The Role of Social Media Utilization and Innovativeness on SMEs Performance. *Jurnal IPTEK-KOM (Jurnal Ilmu Pengetahuan Dan Teknologi Komunikasi)*, 24(2), 85–102. <https://doi.org/https://doi.org/10.17933/iptekkom.24.2.2022.85-102>
- Sapatmin, S., Paeno, P., & Sutrisno, S. (2022). The Role of Analysis Financial Report Management in Increasing MSMES Incomes. *Jurnal Ekonomi*, 11(3), 1815–1819.
- Sutrisno, Cakranegara, P. A., Asri, F., Yusuf, M., & Sahala, J. (2022). Strategi for MSME Development Using Financial Technology to Increase Capital and Consumers. *Jurnal Darma Agung*, 30(2), 677–686.
- Sutrisno, S., Ausat, A. M. A., Permana, R. M., & Santosa, S. (2023). Effective Marketing Strategies for MSMEs during Ramadan in Indonesia. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(2), 1901–1906. <https://doi.org/10.31004/cdj.v4i2.13792>
- Tjiptono, F., & Chandra, Gregorius. (2011). *Service, Quality & Satisfaction*. Andi.