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The Role of Generative Artificial Intelligence as a Financial Assistant in MSME Financial Decision-Making in Gorontalo Province

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Abstract
The study aims to analyze the use of generative artificial intelligence as a financial assistant and its role in supporting the quality of financial decision-making among MSME actors in Gorontalo Province. This research employed a qualitative descriptive approach, with informants selected purposively from MSME actors who had utilized generative AI in their business activities. Data were collected through in-depth interviews, observation, and documentation, and were analyzed using data reduction, data display, and conclusion drawing. The findings indicate that generative AI assists MSME actors in preparing budgets, recording transactions, analyzing cash flow, calculating profits and losses, and generating alternative financial solutions. The use of this technology also improves administrative efficiency and helps business owners understand their financial conditions more systematically. However, its effectiveness depends on digital literacy, financial literacy, the ability to provide clear instructions, and the verification of AI-generated information. Therefore, generative AI should be positioned as a decision-support tool that complements human judgment rather than replacing it. This study implies that strengthening digital and financial literacy is essential to optimize the adoption of generative AI and improve the competitiveness of MSMEs in the digital era.

Keywords: generative artificial intelligence, financial assistant, financial decision-making, MSMEs, digital literacy.

Introduction

The development of digital technology in recent years has brought significant changes to various aspects of life, including in the business world. One of the innovations that is currently growing rapidly is generative artificial intelligence (Generative Artificial Intelligence/Generative AI). In contrast to conventional artificial intelligence technology that generally focuses on classification or prediction, Generative AI is able to generate new information, provide recommendations, compile reports, and assist in the analysis process based on user-entered data (Cao et al., 2023; Gozalo-Brizuela & Garrido-Merchan, 2023). This ability makes Generative AI a technology that has the potential to increase the effectiveness of business management, especially for Micro, Small, and Medium Enterprises (MSMEs) (Laudon & Laudon, 2022).

MSMEs are one of the sectors that have a strategic role in the Indonesian economy. The existence of MSMEs not only contributes to national economic growth, but also serves as a provider of jobs, regional economic drivers, and sources of income for the community (Ministry

of Cooperatives and SMEs of the Republic of Indonesia, 2023). In Gorontalo Province, MSMEs are one of the sectors that continue to grow and receive attention from the local government because they have great potential in improving people's welfare (Central Statistics Agency, 2024). However, behind this important role, most MSME actors still face various obstacles in managing their businesses, especially in the aspect of financial management.

Financial management is one of the main factors that determine the sustainability and development of a business. Decisions related to transaction recording, cash flow management, budget preparation, selling price determination, and investment planning require accurate information and adequate analytical skills. In reality, there are still many MSME actors who run their businesses based on experience, intuition, or habits without being supported by systematic financial analysis (Uno et al., 2019; Rahim et al., 2024). These conditions can cause errors in decision-making, such as inefficient use of capital, difficulty controlling expenses, and low ability to plan business development. In the context of financial reporting, the implementation of SAK EMKM is also still a challenge for some MSME actors, even though these standards are important to improve the quality of financial information (Indonesian Institute of Accountants, 2018; Arini et al., 2025; Pakaya et al., 2025).

On the other hand, limited accounting knowledge, lack of access to financial experts, and low utilization of digital technology are challenges that are still faced by some MSME actors. Although various financial recording applications are available, their use is not fully optimal because some business actors still consider these applications difficult to use or not in accordance with their business needs. This condition shows the need for simpler solutions, which are easily accessible, and able to provide assistance in the financial management process. In the perspective of technology acceptance, ease of use and perception of benefits are important factors that encourage a person to accept and use technology (Davis, 1989; Venkatesh et al., 2003). In addition, the user's behavioral intentions are also influenced by attitudes, subjective norms, and perceptions of control over the use of technology (Ajzen, 1991).

The emergence of Generative AI opens up new opportunities in helping MSME actors overcome these various limitations. By utilizing this technology, business actors can get assistance in compiling simple financial statements, analyzing business financial conditions, making revenue projections, providing recommendations for financial management strategies, and evaluating various alternative decisions more quickly. In this context, Generative AI not only serves as an automation tool, but can also act as a virtual financial assistant that supports the decision-making process. This role is in line with the concept of Decision Support System (DSS), which is an information system designed to assist decision-makers through the provision of information, analytical models, and relevant decision alternatives (Alter, 1980; Turban et al., 2017).

Despite its great potential, the use of Generative AI as a financial assistant for MSMEs is still relatively new. Not all business actors have the same level of digital literacy, so the effectiveness of using this technology in supporting the quality of financial decision-making still needs to be studied further. In addition, the quality of financial decisions is not only influenced by the availability of information, but also by the ability of users to understand, evaluate, and utilize the recommendations provided by artificial intelligence systems. Because Generative AI outputs

still require human verification and consideration, this technology needs to be placed as a supporting tool, not a substitute for decision-makers (Megahed et al., 2023). Therefore, research is needed that can explain whether the use of Generative AI really affects the quality of financial decision-making in MSME actors.

Gorontalo Province is a relevant research location because the local government continues to encourage digital transformation in the MSME sector as part of efforts to increase business competitiveness. Regional data and regional economic development show that MSMEs are an important part of the economic activities of the Gorontalo community (Central Statistics Agency, 2024). On the other hand, the digitalization of MSMEs in Gorontalo is also beginning to be directed to expand access to financing and increase business capacity, although the level of technology adoption among business actors is still diverse (Nasila et al., 2024). The characteristics of MSMEs in Gorontalo, which are dominated by micro and small businesses, provide an opportunity to examine the extent to which Generative AI can be used as a support for financial management. The results of the study are expected to be able to provide an overview of the level of use of this technology as well as be the basis for formulating strategies to increase digital literacy and financial management of MSMEs.

Previous studies have discussed financial recording, the implementation of SAK EMKM, the quality of financial information, and MSME digitalization in Gorontalo. However, these studies have not specifically examined the role of generative artificial intelligence as a financial assistant in supporting the quality of financial decision-making among MSME actors. This indicates a research gap, particularly in understanding how MSME actors use generative AI to prepare budgets, analyze cash flow, calculate profits and losses, and consider alternative financial decisions.

Based on this gap, the problem addressed in this study is how generative artificial intelligence is used as a financial assistant and how it supports the quality of financial decision-making among MSME actors in Gorontalo Province. The novelty of this research lies in its focus on generative AI as an interactive financial assistant for MSMEs, not merely as a general digital technology or financial recording application. Therefore, this study aims to analyze the use of generative artificial intelligence as a financial assistant and its contribution to improving the quality of financial decision-making among MSME actors in Gorontalo Province.

Method

This study uses a qualitative approach with a descriptive type of research. The qualitative approach was chosen because it aims to deeply understand the experiences, perceptions, and ways of Micro, Small, and Medium Enterprises (MSMEs) in Gorontalo Province to utilize generative artificial intelligence as a financial assistant in supporting financial decision-making. The research does not focus on measuring the relationship between variables through numbers, but on revealing the meaning, process, and dynamics of the use of technology in business practice. This approach is in accordance with the characteristics of qualitative research that emphasizes an in-depth understanding of social phenomena based on the perspective of the research subject (Moleong,

2021; Sugiyono, 2023). In addition, research that examines the process of using technology in a particular context can be understood through contextual study designs that take into account the limitations of cases, informants, and research environments (Yin, 2018).

The research was carried out in Gorontalo Province by involving MSME actors from various business sectors, such as trade, culinary, services, and household industries. The location selection is based on the increasing development of MSME digitalization in Gorontalo and the beginning of the use of various artificial intelligence-based applications in business activities. Socioeconomic conditions and the development of the Gorontalo region are important contexts in understanding the characteristics of MSME actors who are research informants (Central Statistics Agency, 2024). The selection of informants is carried out purposively, which is based on the consideration that the informant has experience using Generative AI in business financial management, so that he is able to provide information relevant to the focus of the research (Sugiyono, 2023). Data was analyzed through the stages of data reduction, data presentation, and conclusion drawing (Miles et al., 2014), while the validity of the data was tested through triangulation of sources, techniques, and time (Moleong, 2021).

The informants in this study were MSME actors in Gorontalo Province who had experience using generative artificial intelligence in their business activities, particularly in supporting financial management. The informants were selected using purposive sampling because they were considered to have relevant knowledge, experience, and involvement in the use of generative AI as a financial assistant. The criteria for selecting informants included MSME actors who actively managed their businesses, had used generative AI to assist financial activities such as budgeting, transaction recording, cash flow analysis, profit and loss calculation, or financial planning, and were willing to provide information related to their experiences. The informants represented general MSME characteristics, including business actors from trade, culinary, service, and household industry sectors. This selection was intended to obtain in-depth and relevant data in accordance with the focus of the research.

Results and Discussion

Results

Based on the results of interviews, observations, and documentation, the use of generative artificial intelligence by MSME actors in Gorontalo Province can be grouped into four main themes: financial planning, financial recording and cash flow analysis, financial decision-making support, and limitations in the use of AI.

First, generative artificial intelligence is used by MSME actors to support financial planning. Informants stated that AI helps them prepare simple budgets, estimate business capital needs, make sales projections, and calculate operational costs. This assistance makes it easier for MSME actors to organize financial information that was previously managed manually or based only on experience.

Second, generative artificial intelligence supports financial recording and cash flow analysis. MSME actors use AI to help record income and expenses, calculate profits and losses,

and understand the movement of cash in their businesses. The information generated by AI is considered easier to understand because it can be presented in simple language and adjusted to the needs of each business actor.

Third, the use of generative AI helps MSME actors make financial decisions more efficiently. Before using AI, some business actors found it difficult to determine selling prices, allocate capital, and identify business profits. After using AI, they were able to obtain financial information more quickly and use it as a basis for consideration before making decisions. One informant stated, “Before using AI, I calculated the costs and profits myself, so it often took a long time. Now I use AI to help calculate the selling price and estimate profits. I will use the results as a consideration before making a decision” (Informant 3, Culinary MSME Owner, interview results, 2026).

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Fourth, this study found that the use of generative AI still has several limitations. Some MSME actors still have limited digital literacy, so they cannot fully utilize the available features. In addition, the accuracy of AI-generated information depends on the completeness of the data entered and the clarity of the instructions given by users. Therefore, most informants stated that the results provided by AI still need to be rechecked before being used as the basis for financial decisions.

Discussion

The findings of this study show that generative artificial intelligence provides practical benefits for MSME actors in managing business finances. The use of AI in budgeting, transaction recording, cash flow analysis, profit calculation, and financial projections indicates that this technology functions as a digital assistant that helps business actors process financial information more quickly and systematically. These findings are in line with the concept of Decision Support System, which explains that information systems can support decision-makers by providing relevant, accurate, and timely information.

The role of generative AI in supporting financial decision-making can also be understood through the Technology Acceptance Model. MSME actors tend to use AI because it is considered useful, easy to access, and able to simplify financial administration activities that were previously considered complicated. The ease of obtaining explanations, calculations, and financial recommendations encourages business actors to continue using AI in their daily business activities.

In addition, the findings indicate that generative AI contributes to improving financial understanding among MSME actors. Through interaction with AI, business actors can obtain explanations related to budgeting, profit and loss calculation, cash flow management, and financial planning. This shows that AI not only has an operational function but also an educational function in helping MSME actors understand basic financial management concepts.

However, the use of generative AI cannot fully replace the role of human judgment in financial decision-making. The final decision remains influenced by business experience, market

conditions, customer characteristics, capital availability, and the ability of MSME actors to verify the information generated by AI. If the data entered are incomplete or the instructions are unclear, the recommendations produced by AI may not fully match the actual business conditions.

Overall, the use of generative artificial intelligence as a financial assistant contributes positively to the quality of financial decision-making among MSME actors in Gorontalo Province. Its benefits can be seen in more systematic financial planning, more efficient financial recording, better understanding of cash flow, and more rational consideration of business alternatives. Nevertheless, the effectiveness of AI utilization still depends on digital literacy, financial literacy, and the ability of users to evaluate the information generated. Therefore, generative AI should be positioned as a decision-support tool that complements the experience and judgment of MSME actors, not as a substitute for human decision-making.

Conclusion

This study concludes that the use of generative artificial intelligence as a financial assistant provides benefits for MSME actors in Gorontalo Province, particularly in supporting budgeting, transaction recording, cash flow analysis, profit and loss calculation, financial planning, and financial decision-making. Generative AI helps MSME actors process financial information more quickly, understand business conditions more systematically, and consider alternative decisions more rationally. However, the effectiveness of this technology depends on the users' digital literacy, financial literacy, ability to provide clear instructions, and capacity to verify the information generated by AI. Therefore, generative AI should be positioned as a decision-support tool that complements business experience and human judgment, rather than replacing the role of MSME actors in making financial decisions.

Based on these findings, MSME actors are encouraged to use generative AI responsibly by combining AI-generated recommendations with accurate financial records and real business conditions. Local governments and MSME support institutions need to strengthen digital and financial literacy programs, especially training related to the use of AI for financial recording, budgeting, cash flow analysis, and business planning. Universities and business communities can also contribute through continuous mentoring programs to help MSME actors adopt technology effectively. Future researchers are advised to expand the scope of the study by involving different regions, business sectors, or research approaches, such as quantitative or mixed methods, to measure the broader impact of generative AI on MSME financial performance, productivity, and business sustainability.

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