

# Application of Accounting Information Systems in Micro, Small and Medium Enterprises

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**ABSTRACT** – Micro, Small and Medium Enterprises (MSMEs) are a form of business that is growing rapidly. The ability of MSMEs to survive difficult economic downturns has led various parties to develop MSMEs. The government helps by providing policies that benefit MSME entrepreneurs. The weakness of MSMEs that disrupts business continuity is the absence of information from the accounting system. The absence of special business reports makes it difficult for MSME owners to analyse accounting information systems. Implementation of an Accounting Information System (AIS) in MSMEs has a significant impact on operational efficiency and business sustainability. This article identifies the benefits, challenges and potential solutions associated with implementing AIS in MSMEs. The benefits of AIS include more efficient management of financial transactions, improved decision making, and compliance with tax and reporting requirements. However, MSMEs also face challenges such as limited resources and data security. Solutions to these challenges include support from governments, educational institutions, and business organizations through training, mentoring, and access to necessary technology. With the right support, MSMEs can harness the full potential of SIA to improve their business performance and maintain sustainability in a competitive business environment.

**Keywords:** accounting information systems, micro, small and medium enterprises, operational efficiency, financial reports, management strategy.

## A. INTRODUCTION

The development of Micro, Small and Medium Enterprises (MSMEs) is getting better over time. The lack of job opportunities provided by large companies makes people choose to open businesses to meet their daily needs. Apart from that, some people may choose to open their own business because they feel uncomfortable

working for a large company that has a high workload. MSMEs have been proven to be a form of business that can survive economic downturns (Enright et al., 2001; Darmawan, 2016). In addition, in several countries, MSMEs are quite large contributors to state income. MSMEs are also one solution to reduce the number of unemployed in developing countries. This makes governments in almost all developing countries provide policies to improve MSMEs.

MSMEs are an important part of the economy of a country or region. MSMEs are stand-alone productive business units, which are carried out by individuals or business entities in all economic sectors (Grande et al., 2011). MSMEs play an important role in development and economic growth, not only in developing countries, but also in developed countries (Gimede, 2004). In developing countries, especially in Asia, Africa and Latin America, MSMEs also play a very important role, especially from the perspective of employment opportunities and sources of income for the poor, income distribution and poverty reduction (Fumo, 2011).

Several countries have started to provide policies that support the development of MSMEs. The ability of MSMEs to survive global economic shocks has also attracted people's attention to opening small businesses. Several studies have shown that opening a small business is better than working as an employee in a large company (Grande et al., 2011).

The government provides various policies in terms of business establishment permits, business capital, and provides training for opening small businesses. This government policy was welcomed by the private sector. Educational institutions and business groups provide training to open new business opportunities. Apart from that, state-owned and private banks also contribute to the development of MSMEs. Soft credit assistance is provided to help MSMEs have business capital (Ajanthan et al., 2013).

Capital to open a small business can be obtained from your own capital or borrowed capital. Currently, several state-owned and private banks provide capital assistance to small businesses (Dyt & Halabi, 2007). The requirements given are also not difficult to fulfil. However, some small business entrepreneurs do not know information about the ease of obtaining capital (Ghobakhloo, 2011).

The conditions given to obtain business capital are quite easy. For example, having a business license (Sinambela et al., 2022). With government policy, it is not difficult for business people to obtain a business permit. One other requirement is to have financial reports. This requirement is often not fulfilled by MSME players.

Some MSMEs do not have specific financial reports for the business they run. This is due to the lack of separation between personal finances and business finances. Financial reports for MSMEs are important to be able to provide the necessary accounting information for business owners, internal parties and interested external parties.

The financial reports used in small businesses are quite simple. Financial reports are needed in small businesses to find out how business capital is used. Apart from that, by having financial reports, business owners can find out profits so they can evaluate the business they run. Financial reports also function to separate business finances from personal finances.

MSMEs should have an accounting system that records all transactions related to business activities. An accounting system is a system that handles all matters related to accounting. The accounting system in the company is useful for collecting and storing data regarding activities that occur in the company as well as reliable information that can be used for consideration in decision making for the company's progress (Sinambela & Darmawan, 2020). According to Laudon and Laudon (2010), an accounting system is a component that works with each other to collect, manage, store, and disseminate some information to support activities in an organization, such as decision making, coordination, control, and analysis of problems in the organization. So, in short, an accounting system means a structured system that can help users in a company to enter economic transactions (Dalci & Tanis, 2000).

This accounting system can be optimally realized if it is realized in the form of an accounting information system. According to Halabi et al. (2010), information systems in MSMEs can provide valuable information about the finances of the business being run. Information about costs incurred while running a business, such as operational costs, expenses for purchasing goods, and other expenses, can be known by using the right information system. With this information, management functions can be carried out more effectively, namely by supervising expenses and controlling cash flow. In addition, with accurate accounting information, business people can implement better business competitive strategies from a business financial perspective, such as determining competitive prices, managing finances to be more efficient, and allocating resources optimally (Ernawati et al., 2022).

Previous research on the importance of financial reports and accounting information has been conducted by several researchers such as Assefa et al. (2020); Harash et al. (2014); Aswadi et al. (2012). The results of this research show that MSMEs that implement accounting information systems tend to have better performance and are able to survive in increasingly tight business competition. However, unfortunately, there are still many MSMEs that have not implemented accounting information systems optimally, thus hampering the development and growth of MSMEs as a whole.

Accounting information system applications that have not been widely implemented by MSMEs are one of the main factors slowing down the development of MSMEs. This is caused by several factors, such as a lack of knowledge and understanding about the importance of accounting information for business continuity, limited resources to implement appropriate information systems, and lack of access to the necessary information technology.

Therefore, this study aims to determine the application of accounting information systems in MSMEs. By conducting this study, it is hoped that it can provide a better understanding of the importance of accounting information systems for MSMEs and encourage MSME entrepreneurs to increase the use of accounting information systems in their business operations.

## B. METHOD

This study adopts a qualitative approach with a focus on literature studies to explore the application of AIS in MSMEs. There is a stage of identifying literature sources by searching and collecting articles, journals and other academic publications related to the study topic. Then, in the literature selection stage, relevant and high-quality literature is selected that is appropriate to the research topic, including articles that discuss the benefits, challenges and solutions for implementing AIS in MSMEs.

Next, analysis is carried out by reading, summarizing and analysing the contents of selected literature. In this process, the main findings, key concepts, and arguments put forward by the author are carefully considered. After that, theme and pattern identification were carried out by identifying the main themes that emerged from the literature, such as the benefits of AIS, challenges in implementation, and proposed solutions.

The process of synergy and interpretation is then carried out by comparing and contrasting findings from various literature sources to produce a holistic understanding of the application of AIS to MSMEs. In addition, interpretation of the findings is carried out to develop a coherent and in-depth narrative. Finally, the preparation of the narrative is carried out based on analysis of the literature, which includes a summary of findings, identification of main themes, and reflection on research implications.

By using a qualitative approach, literature study will provide the advantage of gaining deep and nuanced insight into the application of AIS to MSMEs through exploration of various perspectives and findings in the literature. By using this framework, the study is expected to produce a rich and comprehensive understanding of the application of AIS to MSMEs. This understanding can be the basis for policy recommendations and best practices to support MSMEs to face challenges and take advantage of opportunities in the digital era.

## C. RESULTS AND DISCUSSION

### Accounting Information System

A business that wants to progress and develop requires a good accounting system, so that financial reports are produced that are good and trustworthy (Rasheed & Siddiqui, 2019). Financial decisions in every business are truly based on valid data which ultimately benefits

the company. The elements of an accounting system include: transactions (documents), journals, ledgers, subsidiary ledgers, and financial reports. Accounting Information Systems are a collection of organizational activities that are responsible for providing information obtained from transaction data for internal reporting purposes to managers for use in controlling and planning current and future operations as well as external reporting to shareholders, government and other parties (Butkevicius, 2009; Darmawan, 2022).

According to Bodnar and Hopwood (2001), an accounting information system is a variety of resources such as equipment and people that are arranged to convert data into information. The accounting information system is a subsystem of the Management Information System (SIM) which provides financial information, as well as other information obtained in the routine process of accounting transactions. An accounting information system is a part of an organization that collects, categorizes, processes, analyses and communicates financial information for decision making to parties outside the company (government, tax authorities and potential shareholders) and parties within the company, in this case shareholders. shares (Oh & Ko, 2018).

Accounting information systems are very important for company operations, because accounting information systems are systems that collect, record, store and process data so as to produce information for decision makers. Accounting information systems produce information that can be used to: support routine activities, support decisions, and plan and control. Implementation of internal controls which include policies and procedures as well as information systems used to protect company assets from loss or loss and are useful for maintaining the accuracy of financial data (Darmawan, 2024).

According to Assefa et al. (2020), implementing an accounting system in a managed business will allow interested parties to obtain a lot of data from systematic financial reports, for example how much profit is earned, how much additional capital is achieved, what is the condition of the company's assets and liabilities. The existence of such information will influence every decision that will be taken based on accurate financial conditions contained in the financial reports resulting from the accounting system implemented (Dastgir et al., 2003).

According to Romney and Steinbart (2012), there are five components in an accounting information system, namely people, procedures, data, software and information technology infrastructure. The accounting information system contains control elements so that it greatly influences the management function to implement internal control. The function of the accounting information system plays a very important role in the control carried out by the company.

### **Benefits of SIA for MSMEs**

Implementing an accounting information system in MSMEs can provide several significant benefits. First, with an integrated accounting information system, MSMEs can manage and track their financial transactions more efficiently. This will help in better decision making and enable business owners to optimize expenses and identify new growth opportunities.

Second, the accounting information system will also help MSMEs to meet tax and financial reporting requirements. By using the right accounting information system, MSMEs can produce accurate and detailed financial reports, which are necessary for tax compliance and reporting to the authorities.

In addition, accounting information systems can help MSMEs to improve relationships with external parties, such as investors, lenders and business partners. By providing transparent and reliable financial information (Rojak & Issalillah, 2022), MSMEs can gain the trust of external parties and open the door to better funding and partnership opportunities.

However, to successfully implement an accounting information system, MSMEs need to overcome several challenges. One of them is limited resources, both in terms of finance and human resources. Many MSMEs may not have sufficient budgets to invest in sophisticated information systems or lack sufficient skills and knowledge to manage such systems effectively.

Apart from that, there are also challenges related to data security and privacy. MSMEs need to ensure that the accounting information systems they use are secure and reliable, and that their sensitive data is protected from unauthorized access or misuse.

To overcome this challenge, the government, educational institutions and business organizations can provide support and

assistance to MSMEs to implement accounting information systems. This can be done through providing training and guidance on the use of accounting information systems, as well as providing access to the necessary resources and technology (Munir et al., 2022).

In addition, MSMEs can also take advantage of more affordable and easy-to-use technology solutions, such as online accounting software or mobile applications, which can help them manage their finances more efficiently without incurring huge costs.

Research conducted by Gimede (2004); Mardikaningsih et al. (2022) shows that AIS provides useful information for businesses to implement management strategies used to win business competition. Furthermore, Dasewicz et al. (2020) explained in their research that using AIS as a consideration for decisions can prevent business owners from losses. By running a book recording system, business owners can find out how financial resources are processed in the business (Rasheed & Siddiqui 2019). Not only to find out the benefits, with SIA, business owners can monitor and control management to avoid employee fraud (Kunttu & Torkkeli, 2018). In addition, AIS can provide information about business procedures that use large costs to find solutions to existing problems (Amidu, 2005). SIA can provide opportunities for MSMEs not to experience losses and operate in the long term (Whah & Shiang, 2018).

The implementation of an accounting information system can provide significant benefits for MSMEs, including increased operational efficiency, tax and reporting compliance, and the ability to improve relationships with external parties. However, to successfully implement this system, MSMEs need to overcome several challenges, such as limited resources and data security. With the right support from the government and other organizations, MSMEs can harness the full potential of accounting information systems to support the growth and success of their businesses.

### **Factors That Influence the Implementation of Accounting Information Systems in Msmes**

The implementation of accounting information systems in MSMEs is influenced by various factors, including management needs, data quality, technological capabilities, reporting needs, supervision needs, training needs, funding needs, communication needs, compliance needs, and innovation needs.

## **1. Management Needs**

Accounting information systems play an important role in management decision making. MSMEs that have adopted accounting information systems can identify business trends and patterns, predict the future, and make better decisions. This is supported by quotes from Hall (2013); Darmawan et al. (2023) which states that accounting information systems enable MSMEs to have a better understanding of their operations and assist in strategic decision making.

## **2. Data Quality**

The quality of data produced by an accounting information system is very important. Accurate and up-to-date data allows MSMEs to make the right decisions. This factor includes the quality of data input, the quality of data processing, and the quality of data output. MSMEs that have good accounting information systems usually have efficient processes to ensure high data quality. This is supported by a quote from Jones and Dasaratha (2008) which states that an effective accounting information system allows MSMEs to have accurate and up-to-date data.

## **3. Technological Capabilities**

MSME technological capabilities also influence the implementation of accounting information systems. MSMEs that have access to sophisticated and up-to-date technology tend to more easily adopt accounting information systems. These factors include the ability to use accounting software, the ability to access the internet, and the ability to utilize other relevant technology. This is supported by a quote from Satzinger et al. (2011) which states that an effective accounting information system requires sophisticated technological capabilities.

## **4. Reporting Requirements**

Accurate and timely financial reporting is another important factor. MSMEs that have a good accounting information system can usually meet these financial reporting needs. This factor includes the ability to produce financial reports that are accurate, timely, and in accordance with applicable standards (Sinambela & Darmawan, 2011). This is supported by a quote from the Indonesian Accountants Association (2002) which states that an effective accounting information system enables MSMEs to meet strict financial reporting needs.

## **5. Supervision Needs**

Effective supervision is an important factor in the implementation of accounting information systems. MSMEs that have good accounting information systems usually have effective monitoring mechanisms to ensure data accuracy and reliability. These factors include the ability to identify and resolve errors in data, as well as the ability to ensure that data is updated in a timely manner. This is supported by a quote from Otley (2008) which states that an effective accounting information system requires a strong monitoring mechanism.

## **6. Training Needs**

Adequate training is an important factor in the implementation of accounting information systems. MSMEs that have a good accounting information system usually have employees who have received adequate training in using the system. These factors include the ability to operate accounting software, the ability to analyse data, and the ability to interpret analysis results. An effective accounting information system requires adequate training for employees.

## **7. Funding Requirements**

Sufficient funding is an important factor in implementing an accounting information system. MSMEs that have a good accounting information system usually have sufficient funding to adapt and maintain the system. These factors include software costs, maintenance costs, and training costs. This is supported by a quote from Stair and Reynolds (2011) which states that an effective accounting information system requires sufficient investment.

## **8. Communication Needs**

Effective communication is an important factor in implementing accounting information systems. MSMEs that have a good accounting information system usually have effective communication between various departments and between the accounting information system and other systems. This factor includes the ability to share data and information efficiently, as well as the ability to integrate accounting information systems with other systems. This is supported by a quote from Laudon and Laudon (2000) which states that an effective accounting information system requires effective communication between various departments.

## 9. Compliance Requirements

Compliance with applicable regulations and standards is an important factor in implementing accounting information systems. MSMEs that have good accounting information systems usually have mechanisms to ensure compliance with applicable regulations and standards. These factors include the ability to comply with accounting regulations, tax regulations and other relevant regulations. This is supported by quotes from Romney et al. (2012); Gardi and Sinambela (2022) state that an effective accounting information system requires compliance with applicable regulations.

## 10. Need for Innovation

Innovation in accounting information systems is an important factor in the implementation of these systems. MSMEs that have a good accounting information system usually have innovations in using the system. This factor includes the ability to adapt accounting information systems to technological developments, as well as the ability to develop innovative solutions to overcome the challenges faced.

MSMEs need an Accounting Information System (AIS) to be able to implement appropriate management strategies (Berk, 2017). Through AIS, business owners can find out business expenses and income so that they can control them regularly (Deaconu & Buiga, 2015). Implementing an accounting information system in small businesses can integrate operational elements into long-term strategic planning so that they can compete with other MSMEs (Burch, 2018). AIS also plays an important role in small business development (Choi, 2003). One of the weaknesses of small businesses is not implementing an adequate financial recording system or the absence of an accounting system. There are still many MSMEs who do not understand the importance of implementing AIS in financial reports, even though it has great benefits for business development.

Some MSMEs have difficulty obtaining SIA because they do not have adequate resources. Hiring workers who can provide information systems requires quite high costs. Computer-based AIS also requires relatively high costs. The lack of available resources makes MSME owners not use financial reports as AIS in their business.

MSMEs need three financial reports as a source of accounting information. These financial reports are the balance sheet, profit and loss statement, and cash flow. Obtaining an AIS can be done manually at low cost. A manual accounting information system is carried out by recording every transaction related to business activities. The standard covers all transactions related to cash, purchases, sales, receivables and payables. According to Hong and Sullivan (2009), the work system carried out for the book recording system in MSMEs for a certain period of time includes (a) recording transactions. Transaction recording is the activity of recording every transaction related to business activities; (b) proof of original transaction. Original evidence that can support each transaction, including: receipts, invoices, and other forms such as: receipts, sales or purchase invoices, other evidence, journal entries, ledgers, subsidiary books, worksheets.

The implementation of accounting information systems in MSMEs is influenced by various factors, including management needs, data quality, technological capabilities, reporting needs, supervision needs, training needs, funding needs, communication needs, compliance needs, and innovation needs. MSMEs that have good accounting information systems usually have effective mechanisms to overcome these factors, so they can make better decisions and maximize their business potential.

## Implementation Challenges

Implementing an Accounting Information System (AIS) in MSMEs will encounter various challenges. Following are some of the main challenges faced:

### 1. Limited Resources

MSMEs often face limited resources, including human, financial and technological resources. This makes it difficult for them to adopt sophisticated and complex AIS. These limited resources include the difficulty of adapting accounting software, learning how to use the system, and having a trained workforce to manage the system.

### 2. Lack of Knowledge and Skills

Lack of knowledge and skills in financial management and use of accounting information systems are other challenges faced by MSMEs. Many MSMEs do not have formal education in accounting or management, so they may not have an adequate understanding of how to use AIS to support their operations.

### 3. Difficulties in System Procurement

Procuring and maintaining an effective accounting information system can be a challenge for MSMEs. Software costs, maintenance costs and employee training costs can be a heavy burden for MSMEs with limited business capital. Additionally, MSMEs may not have access to the technology necessary to operate the system.

### 4. Resistance to Change

Resistance to change is a challenge often faced by MSMEs when adopting AIS. They may be comfortable with existing financial management methods and fear the risks that may arise from using a new system. This resistance can hinder the process of adapting and implementing AIS.

### 5. Dependence on Old Systems

Many MSMEs still rely heavily on old and manual financial management systems. They may feel that they do not need a sophisticated accounting information system because they feel that the old system is sufficient to meet their needs. This creates barriers to adopting AIS.

### 6. Difficulty in Integration with Other Systems

MSMEs often have several systems operating in parallel, such as sales systems, inventory systems and accounting systems. Integrating AIS with these systems can be a significant challenge, especially if the systems are incompatible or have different standards.

The implementation of AIS in MSMEs encounters various challenges, including limited resources, lack of knowledge and skills, difficulties in procuring and maintaining systems, resistance to change, dependence on old systems, and difficulties in integration with other systems. Overcoming these challenges requires joint efforts from MSMEs, government and related parties to provide adequate support and training, as well as create conditions that support the adoption of AIS.

### Implementation of AIS in MSMEs

The application of accounting information systems (AIS) in Micro, Small and Medium Enterprises (MSMEs) is becoming increasingly important to face business challenges and technological developments. An effective accounting information system not only helps MSMEs to manage their finances better but also improves operational efficiency and supports business growth. To explain the strategy for accelerating the implementation of AIS in MSMEs effectively, here is a review:

### 1. Understanding Business Needs and Goals

MSMEs need to understand their business needs and goals thoroughly. It is important to design and implement an AIS that suits the specific needs of MSMEs. According to research by Abdullah et al. (2018), understanding the needs and objectives of SMEs is crucial for the successful implementation of accounting information systems.

### 2. Selection of an appropriate accounting information system

After understanding business needs, the next step is to choose the appropriate AIS. MSMEs must consider factors such as business scale, operational complexity and available budget. Research by Kassim et al. (2019) suggest that the selection of appropriate accounting information systems is essential for SMEs to ensure effective implementation and utilization.

### 3. HR Training and Development

Training and development of human resources (HR) is the key to increasing the effectiveness of AIS use in MSMEs. MSMEs need to invest time and resources to train their employees to use the system well. According to research by Iqbal and Alnaser (2020), training and development of human resources are crucial for SMEs to maximize the benefits of accounting information systems.

### 4. Implementation of Cloud and Mobile Systems

Implementing cloud-based and mobile AIS can increase accessibility and flexibility for MSMEs, especially in an ever-changing environment. A system that can be accessed online from anywhere allows MSMEs to manage their finances more efficiently. Research by Li et al. (2017) found that cloud-based accounting information systems offer significant advantages for SMEs in terms of accessibility, scalability, and cost-effectiveness.

### 5. Information Systems Integration

Integrating AIS with other systems used in a business, such as an inventory management system or sales system, can improve overall operational efficiency. This allows smooth data flow between departments and reduces data redundancy. According to research by Wang et al. (2018), integration of accounting information systems with other business systems enhances efficiency and decision-making capabilities for SMEs.

## **6. Information Security**

Information security is very important in implementing AIS in MSMEs. MSMEs must ensure that their financial data is safe from security threats such as hacking or identity theft. Using security solutions such as data encryption and two-factor authentication is a recommended step. According to research by Alshamaila et al. (2016), ensuring the security of financial information is essential for SMEs to build trust and credibility with stakeholders.

## **7. Continuous Monitoring and Evaluation**

Implementing SIA is not a process that just ends. MSMEs need to continue to monitor and evaluate the performance of their systems periodically (Putra et al., 2016). This makes it possible to identify areas that require improvement or improvement, as well as to ensure that the AIS remains relevant to business needs. According to research by Soomro et al. (2016), continuous monitoring and evaluation are essential for SMEs to ensure the effectiveness and efficiency of accounting information systems over time.

To implement these steps, MSMEs can effectively accelerate the implementation of AIS and be ready to face business challenges and technological advances. Integrating theoretical knowledge with industry best practices is the key to successful AIS implementation in MSMEs.

## **D. CONCLUSION**

From this description, it can be concluded that the application of Accounting Information Systems (AIS) in Micro, Small and Medium Enterprises (MSMEs) has a crucial role in facilitating financial management, decision making and business growth. Even though MSMEs have been proven to be a form of business that can survive in difficult economic conditions, there are still many who have not adopted AIS optimally.

Implementing AIS can provide significant benefits for MSMEs, including increased operational efficiency, tax compliance and reporting, and the ability to improve relationships with external parties such as investors and lenders. However, there are several challenges that need to be overcome, including limited resources, lack of knowledge and skills, and data security issues.

To overcome these challenges, support is needed from the government, educational institutions and business organizations.

Training and guidance on the use of AIS, as well as providing access to the necessary technology, can help MSMEs to better adopt AIS. Additionally, more affordable and easy-to-use technological solutions, such as online accounting software or mobile applications, can also be an effective alternative for MSMEs.

The factors that influence the implementation of AIS in MSMEs include management needs, data quality, technological capabilities, reporting needs, supervision needs, training needs, funding needs, communication needs, compliance needs and innovation needs. MSMEs that are able to overcome these factors will be more likely to successfully adopt AIS and utilize it for their business growth.

It can be recommended that MSMEs be more active in adopting AIS as part of their financial management and business development strategy. The right training, support and technology solutions can help them overcome challenges and harness AIS' full potential to achieve greater success in an increasingly competitive marketplace. The government and related organizations must continue to provide support in the form of training, guidance and access to capital to help MSMEs implement accounting information systems.

MSMEs need to increase awareness of the importance of accounting information systems and invest in training to develop the necessary knowledge and skills. Affordable and easy-to-use technology solutions, such as online accounting software or mobile applications, can help MSMEs overcome technology obstacles and start implementing accounting information systems at an affordable cost. Efforts need to be made to ensure the security and privacy of MSME data by implementing appropriate security measures. MSMEs need to collaborate with educational institutions and business consultants to obtain guidance and support to implement accounting information systems that suit their needs and capacities. By taking these steps, it is hoped that MSMEs can overcome challenges and utilize the full potential of accounting information systems to improve business performance and compete in an increasingly complex market.

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