

Implementation of Fintech Use as a Financial Information System for the Progress of MSMEs: Case Study in Semarang City

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Abstract. The study focuses on the implementation of fintech as a financial information system that can encourage the progress of MSMEs in Semarang City, amidst various conveniences and obstacles faced by business actors. The purpose of this study is to analyze the extent to which the use of financial technology such as QRIS, e-wallet, and financial information systems supports business efficiency, recording accuracy, and the success of MSMEs in developing capacity and achieving market opportunities. This study uses a qualitative method with a case study approach through in-depth interviews with MSME actors who have utilized fintech services. The results of the study show that the use of fintech contributes positively to ease of transactions, acceleration of data processing, and ease of access to financial information. In addition, the financial information system also helps in efficient financial recording and timely reporting, although there are still obstacles such as human error, technical errors, and lack of digital literacy. This study shows that the integration of fintech and financial information systems can significantly encourage MSMEs, as long as it is supported by adequate education and assistance for business actors.

Keywords: Fintech; Financial Information System; MSMEs

INTRODUCTION

The development of fintech in Indonesia is very rapid. This is marked by an increase in the number of users, transactions, and service diversification. In addition, the increasing level of internet penetration and increasingly mature regulations, fintech has great potential to continue to support financial inclusion, increase economic efficiency, and empower MSMEs in Indonesia (Rustan, 2025). Fintech also contributes to broader economic growth and innovation in the financial sector. With continued support from the government and industry, fintech has great potential to continue to grow and provide benefits to the wider community.

Micro, Small, and Medium Enterprises (MSMEs) have a very vital role in the Indonesian economy. Based on Law of the Republic of Indonesia No. 20 of 2008, Micro, Small, and Medium Enterprises or MSMEs are productive business activities owned by individuals or business entities that meet the criteria for a certain amount of assets or turnover. The presence of fintech as a solution to the classic challenges faced by MSMEs, such as limited access to capital, difficulties in payment systems, and unorganized financial management (Amrin Elva et al., 2022). With the maximum implementation of fintech, MSMEs have a great opportunity to grow, innovate, and expand their market reach digitally.

In Semarang City, many MSMEs have used fintech services such as digital payments and application-based financial records. Many business actors realize that fintech can facilitate transactions, increase efficiency, and expand market access. However, behind this progress, there are still many obstacles in implementing fintech. One example is the inconsistency of digital transaction evidence with manual records, which causes inaccurate financial reports. Although fintech offers many conveniences, integrating technology with

conventional financial practices is still a real challenge (Saffanah & Amir, 2022). The risk of recording errors and delays still often occurs, especially for MSMEs that do not yet have an integrated financial information system.

Fintech is defined by The National Digital Research Center (NDRC), in (Rizal et al., 2019) in Dublin, Ireland, defining fintech as "innovation in financial services" or "innovation in fintech financial services" which is an innovation in the financial sector that has a touch of modern technology. Fintech is a technology-based innovation that aims to simplify, accelerate, and improve the quality of financial services. In practice, fintech includes various services such as digital payments, online loans, and insurance. The development of fintech is related to financial information systems, where digital payments facilitate financial recording and analysis. The challenges in utilizing fintech by MSMEs emphasize the importance of integrating affordable and easy-to-use financial information systems.

Although there is a lot of literature discussing fintech in general, research on the implementation of fintech in MSMEs in Semarang City is still limited. Previous studies tend not to explore in depth how MSMEs optimize the use of fintech to create competitive advantages amid market dynamics (Saffanah & Amir, 2022). In addition, the obstacles faced have not been discussed thoroughly in existing research.

Based on the gap, this research is important to be conducted in order to explore more deeply how the implementation of fintech as a financial information system for the progress of MSMEs. This research is expected to contribute to the literature as well as become a material for evaluation and consideration for policy makers, as well as service providers in designing services that are more responsive to the actual needs of MSME actors.

METHOD

This study focuses on MSMEs that have used fintech services such as QRIS. This aims to understand how the implementation of fintech as a financial information system is carried out by MSME actors, and how it can contribute to business progress. The research was conducted using a qualitative method. According to Sugiyono (2018) in (Rosanty et al., 2024) the qualitative research method is an approach that is based on a certain philosophical foundation and is used to examine a phenomenon in scientific conditions. This method uses descriptive data collection techniques, such as observation and in-depth interviews. This can dig up information directly from data sources. Interviews in this study were conducted using a source triangulation approach, namely by involving 3 respondents who had different perspectives on the progress of MSMEs, namely business owners, employees, and customers.

This approach is used to obtain an overview of fintech implementation, financial information systems and business development from various perspectives. The author conducted interviews with reference to fintech variables, which were analyzed using four main indicators, namely: 1) Understanding of digital payment systems, 2) The role of digital wallets in supporting business activities, 3) External influences on decisions to use digital wallets, 4) Obstacles faced by MSMEs in utilizing fintech services (Saffanah & Amir, 2022). The four indicators as a whole are used to see how the level of adoption and utilization of fintech impacts the progress of MSMEs. This study also highlights the financial information system variable which is measured into five indicators according to (V. Palit Randi et al., 2015), namely: 1) Efficiency, 2) Accuracy, 3) Speed of data processing, 4) Ease of access to

information, and 5) Ability to produce complete and timely reports. These indicators provide a comprehensive picture of how MSME progress can be influenced by the adoption of technology, especially financial information systems integrated with fintech services. MSME variables that highlight the progress of MSMEs measured through three main indicators, namely: 1) Increasing business capacity, 2) Developing competitive products, and 3) Success in achieving market opportunities both regionally and globally (Landong et al., 2019). This indicator provides an overview of the extent to which MSMEs have experienced real growth, both in terms of increasing production, product quality, and market reach. By linking MSME progress to the use of fintech services and financial information systems, this study aims to understand how technology can drive MSMEs towards higher sustainability and competitiveness.

RESULTS AND DISCUSSION

1. Utilization of Financial Technology

From the research that has been conducted on respondents, namely business owners, employees, and customers, it can be seen that the implementation of fintech has become an integral part of the transaction activities of the MSMEs studied. This innovation is considered to provide a significant contribution to efficiency and convenience in the payment process. Business owners stated that the use of fintech such as QRIS has increased the ease of transactions while supporting the financial recording process. This shows that MSME actors choose tools that are in accordance with the need for control and convenience of use. The implementation of fintech is seen as a form of adaptation to digital developments and is a response to external pressure. Employees provide similar views, emphasizing that the use of fintech makes transactions easier, especially when there are many buyers. In addition to reducing obstacles in the process of returning incorrect cash, this also reduces the potential for the circulation of counterfeit money.

From the customer side, the use of fintech is very practical and in accordance with the increasingly digitalized lifestyle of society. This system is considered to speed up the transaction process compared to cash payments. However, what often becomes an obstacle for business owners and employees is the existence of evidence of transactions that do not match, failed transactions, and nominal input errors that occur due to inaccuracy in the transaction process. This problem is often exacerbated by unstable internet network conditions, which cause delays in fund transfers and system disruptions in verifying payments in real time.

The fast and practical use of fintech also increases customer loyalty satisfaction (Lilhaq Ahmad Ghazy & Salehudin Imam, 2024). Consumers feel more comfortable shopping in places that support non-cash methods. This has the potential to increase purchase frequency and expand the customer base.

Thus, MSMEs gain benefits in expanding market reach through integration with digital platforms. The ability to adapt to digital trends reflects the readiness of MSMEs to face economic transformations connected to technology. The implementation of financial technology provides a positive contribution in increasing transaction efficiency, payment security, and convenience for all parties.

2. Implementation of Financial Information Systems

Financial information systems are systems used to manage, process, and present financial information efficiently and accurately, which supports decision-making and financial management in organizations (Sayekti Fran & Putarta Pulasna, 2016). Financial information systems play an important role in the financial management of MSMEs, as reflected in the results of interviews with various informants. Business owners stated that the recording system that was initially done manually has developed using Excel to digital recording applications. This innovation is considered capable of accelerating the reporting process, making it easier to know the flow of cash flow, and supporting data-based decision making.

However, employees consider that the existing financial information system is still not fully automated. In practice, the process of recording daily sales reports is often delayed, especially when operational conditions are busy. Although daily reports can be prepared, the accuracy and consistency of recording are challenges. Customers view that the transaction process in MSMEs has been running efficiently. Requests for proof of transactions or purchase notes can be fulfilled by the seller, although the process takes longer due to manual recording.

3. Progress of MSMEs

MSMEs are a strategic sector that plays a role in driving economic growth, creating jobs, and maintaining the economic stability of a country (Muzdalifa et al., 2018). In the research, informants stated that MSMEs have experienced significant development. Business owners explained that this progress was marked by an increase in the number of products, expansion of production capacity, addition of employees, and strengthening of the financial management system. With structured financial reports, decision-making becomes more systematic and data-based. This has a direct impact on increasing the efficiency of operational spending and the ability to adapt to market dynamics. With good efficiency, MSMEs are able to allocate resources on target, while adaptation to market changes allows products to remain relevant and in demand by consumers (Solin Ncihur Fronika & Gea Ibelala, 2023)

From the perception of employees and customers, MSME products have experienced development in terms of quality and the addition of product variations. Employees also added that there was an increase in sales volume and continuous innovation carried out by business owners to follow market trends. Adjusting products and competitive prices to customer demand is the main strategy in maintaining competitiveness. MSMEs are considered capable of competing with similar business actors, because there are still minimal competitors in the operational area. Positive responses from customers to product innovation indicate that MSMEs have succeeded in meeting market needs well.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the implementation of fintech and financial information systems has a positive impact on the progress of MSMEs in Semarang City, especially in terms of operational efficiency, accuracy of financial records, and improved services.

1. Fintech has been proven to facilitate transactions, accelerate the payment process, and support more orderly financial records, adaptation to digitalization expands market access and increases the competitiveness of MSMEs. However, technical

obstacles such as inconsistencies in transaction evidence, unstable networks and late mutations are still real challenges that need to be considered.

2. Financial information systems play an important role in data-based planning and decision making. Although digitalization has been carried out through simple applications, the recording process that is not yet fully automated makes it difficult for fast and accurate reporting.
3. The progress of MSMEs is reflected in the increase in production capacity, product variety, to a more professional managerial system. This advantage is strengthened by the support of technology that helps business owners understand financial conditions systematically.

Based on this description, it is recommended that the government and fintech service providers improve digital infrastructure, especially the stability of the internet network, in order to support smooth transactions. Service providers also need to develop more responsive and user-friendly features, such as nominal verification and real-time notifications, to minimize technical errors. Training and mentoring for MSMEs are also needed to improve digital and financial literacy, both for owners and employees. In the future, further research is needed by collaborating between the government, business actors, and service providers to support adaptive policies for MSME digitalization.

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