

Experiences of MSMEs in Using Digital Payments for Cash Flow Efficiency and Financial Planning: A Case Study in Palu City

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ABSTRACT

This study aims to examine the experiences of micro, small, and medium enterprises (MSMEs) in Palu City in adopting and utilising digital payment systems to improve cash-flow efficiency and strengthen business financial planning. This study uses a qualitative approach with a case study design. A total of five MSMEs in the food and beverage sector were analysed through semi-structured interviews and non-participatory observation. Thematic analysis yielded four main findings: (1) the adoption of digital payment systems was mainly driven by perceptions of convenience and consumer demands; (2) digital transactions improved the accuracy of cash flow records and accelerated transaction processes; (3) data from digital payment systems is increasingly being utilised for inventory management and small-scale investment planning; and (4) there are still obstacles in terms of network stability, transaction tax burdens, and digital literacy. Overall, the results show that digital payment systems not only simplify transactions but also encourage data-driven financial management practices among MSMEs. Improvements in digital infrastructure, adjustments to fiscal policy, and the strengthening of sustainable digital literacy programmes are important factors in supporting inclusive and sustainable financial transformation in eastern Indonesia.

Keywords: MSMEs, digital payments, cash flow efficiency, financial planning.

1. INTRODUCTION

The city of Palu is undergoing an economic transformation that warrants study, in which thousands of micro, small, and medium-sized enterprises (MSMEs) are the backbone of economic recovery after disasters and pandemics. Data from the Palu City Cooperative and MSME Office (2024) records 33,935 active business units, reflecting the dynamics of economic recovery after the disaster and pandemic (Palu City MSME Office, 2024). Despite this momentum, most businesses still face classic problems such as inefficient cash-flow management, poor financial record-keeping, and immature long-term financial strategies.

These issues are increasingly crucial given their relevance to the national MSME sector. Nationally, MSMEs are dominated by the Trade sector (14.4 million units) and the Provision of Accommodation, Food and Beverages sector (6.4 million units) (Kadin Indonesia, 2024). These sectors, which also dominate the business landscape in Palu, are highly dependent on the speed and efficiency of daily cash flow.

The emergence of digital payment technologies such as QRIS, GoPay, OVO, and DANA has begun to transform local economic transactions. Digital payments not only facilitate transactions but also enhance transparency and accuracy in financial management, two crucial elements for maintaining cash-flow efficiency. Research indicates that SMEs that adopt digital payments experience faster cash turnover and improved financial control (Nurchayati et al., 2024). However, the adoption of this technology in the field faces significant challenges related to digital literacy (Pratama & Nurwani, 2023) and infrastructure gaps, especially in Eastern Indonesia (Saragih, 2025).

Against this backdrop, this study aims to gain an in-depth understanding of how MSMEs in Palu City adopt and utilise digital payment systems, and how these practices contribute to the efficiency of their cash flow and business financial planning. A qualitative case study approach was chosen to capture real experiences, social contexts, and the meaning behind the digital transformation process at the business level.

2. LITERATURE REVIEW

This section reviews the theoretical foundations and relevant empirical findings on the role of digital payment adoption in cash-flow efficiency and long-term financial strategies of MSMEs. The review begins with a discussion of the concept of digital payments in the context of MSMEs, followed by a literature review of cash-flow efficiency and long-term financial

strategies. Finally, this chapter will identify gaps and challenges in technology adoption to position this research within both academic and practical contexts.

Digital payments are non-cash transactions conducted electronically via devices such as *e-wallets*, QR codes, and digital transfers. In the context of MSMEs, this system plays an important role in accelerating transactions, reducing operational costs, and increasing financial transparency.

According to Nurchayati et al. (2024), the adoption of digital payment systems not only promotes operational efficiency but also strengthens customer trust in MSMEs. Meanwhile, Sutrisno & Nainggolan (2025) explain that the adoption of financial technology in MSMEs is influenced by two central constructs in the Technology Acceptance Model (TAM): perceived usefulness and perceived ease of use.

The transformation of payment systems in Indonesia has accelerated since Bank Indonesia launched QRIS in 2019, which has now become the backbone of digital transactions in the SME sector. This trend marks a shift towards an inclusive digital economy ecosystem. The acceptance of technology based on ease and usefulness is an important first step. However, the real impact will only be evident when digital payments begin to transform core business processes, particularly with respect to cash-flow efficiency, as discussed in the next section.

Cash flow efficiency is the ability of a business to manage cash inflows and outflows so that cash flow remains stable, timely, and measurable. In the context of MSMEs, cash flow efficiency determines liquidity and operational sustainability, particularly in sectors with high cash turnover, such as the culinary and retail sectors.

Rosyidiana et al. (2025) found that the use of QRIS and digital payment systems accelerates transaction processes while strengthening automated record-keeping systems. Thus, MSMEs can monitor cash flow in *real time*, minimise manual errors, and improve financial control. This is reinforced by Saragih (2025), who emphasises that digital financial inclusion can reduce transaction costs and increase production efficiency among Indonesian MSMEs.

In addition, Harun et al. (2025) emphasise the importance of digital literacy and basic accounting records in strengthening cash-flow efficiency. Good literacy enables business entrepreneurs to understand financial data in a structured manner and make informed decisions. Thus, the literature shows that cash-flow efficiency generated through financial

digitalisation is not only beneficial for day-to-day operational activities but also provides a foundation for long-term financial strategy formulation, as will be described in the next section.

Long-term financial strategies for MSMEs encompass cash management, investment planning, and financial risk mitigation. Nurhaedha (2025) states that digitalisation in financial management enables entrepreneurs to make data-driven decisions, thereby enabling more rational and sustainable economic strategy formulation.

Furthermore, Kurniasih et al. (2025) emphasise that smart cash flow management is key to building business resilience. With digital payments, MSME players can assess financial trends, manage liquidity, and optimise fund allocation for business expansion. However, the effectiveness of digital-based financial strategies is greatly influenced by external factors such as literacy, user trust, and infrastructure readiness. These aspects will be discussed further in the following sub-chapter on the gaps and challenges of technology adoption.

Several factors remain major obstacles to the implementation of digital payments among MSMEs. Pratama & Nurwani (2023) found that low digital financial literacy makes some businesses reluctant to transition from cash to non-cash systems. Meanwhile, highlights the infrastructure and digital access imbalances in eastern Indonesia as a barrier to accelerating financial inclusion.

Within the framework of Diffusion of Innovation Theory (Rogers), social factors, institutional support, and risk perception play a major role in determining the speed of innovation adoption. Harun et al. (2025) add that, without training and infrastructure support, most MSMEs utilise digital payment features only as transaction tools, not as strategic financial planning instruments.

This situation creates a clear research gap: while most studies focus on factors that hinder adoption (pre-adoption), very few examine how MSMEs that have successfully adopted digital payments subsequently utilise transaction data for cash-flow efficiency and long-term strategies. Moreover, research on the specific context of Palu City, which presents unique challenges, remains very limited.

Overall, this literature review confirms that the adoption of digital payments (as explained by TAM) has significant theoretical potential to improve cash flow efficiency and strengthen the long-term financial strategies of MSMEs. However, the realisation of this potential in the field (as explained by the Theory of Innovation Diffusion) is hampered by

literacy and infrastructure challenges, which in turn create a research gap regarding the strategic impact of post-adoption.

3. METHOD

This study uses a qualitative approach with a small-scale exploratory case study design. This approach was chosen to gain an in-depth understanding of the experiences of micro, small, and medium enterprises (MSMEs) in Palu City in adopting *digital payments* as part of their cash flow management and business financial planning. Palu City was 33,935 active selected as the research location because it is one of the economic growth centres in eastern Indonesia, with the number of MSMEs recorded in 2024 (Palu City MSME Office, 2024).

The research focused on the food and beverage sector, which has high daily cash turnover and is highly dependent on the efficiency of digital transactions. The research was conducted over a period of one month, from October to November 2025, involving five MSMEs who were selected *purposively* based on the following criteria: (1) have been operating for at least one year, (2) actively use one or more *digital payment* systems such as QRIS, GoPay, OVO, or DANA, and (3) are willing to participate in in-depth interviews.

Data were collected through semi-structured interviews and non-participatory observation at the business locations. The interview guidelines focused on four main aspects, namely: (1) patterns of adoption and use of digital payments, (2) impact on cash flow efficiency, (3) utilisation in long-term financial planning, and (4) challenges and reflections of business entrepreneurs. Each interview lasted 30-45 minutes and was recorded with the informants' permission. In addition, the researchers documented transaction activities, cash recording systems, and supporting evidence such as daily cash reports or screenshots of digital transactions.

All interview data were transcribed verbatim and analysed using thematic analysis (Miles et al., 2014), which included three stages: (1) data reduction to identify initial themes, (2) presenting the data in a thematic matrix to find relationships between categories, and (3) iteratively drawing and verifying conclusions until credible patterns were obtained. The analysis was conducted concurrently with data collection, following the principle of constant comparison (Miles et al., 2014).

Data validity was maintained through triangulation of data sources (Denzin, 2017), by comparing results from interviews, observations, and documentation across informants, as well

as through member checking, which involves confirming interpretation results with business entrepreneurs to ensure that the meaning is consistent with their experiences.

4. RESULTS

This section presents the results of qualitative research on five culinary MSMEs in Palu City, namely Kantin Ma'e, Kantin Al-Barru, Dune Coffee, Pelipur Lapar, and Warung Makan Madika. The analysis was conducted using a thematic approach that focused on four main themes: (1) digital payment adoption patterns, (2) the impact on cash flow efficiency, (3) influence on long-term financial behaviour, and (4) challenges and reflections of business entrepreneurs.

The results show that all respondents have adopted digital payment systems, especially QRIS, due to factors such as convenience, efficiency, and suitability for young consumer behaviour. Four of the five business entrepreneurs started using QRIS in the last two years (2023–2024), while one business, Kantin Al-Barru, has implemented it since 2019 at the urging of student consumers.

Informants described ease of use as the main reason for choosing digital payment systems. The owner of Dune Coffee stated that since opening the business, he *"has been using QRIS because it is simple and only requires scanning."* A similar view was expressed by the owner of Pelipur Lapar, who explained that *"Many Gen Zers now use QRIS, as it is faster and avoids counterfeit money."*

These statements indicate that technical convenience and customer habits are social factors that reinforce MSMEs' decisions to adopt digital payment systems. These findings also confirm that usefulness plays an important role, as the use of digital payment systems not only provides transactional convenience but also enhances perceptions of professionalism and increases security in business management. In other words, in the early stages of implementation, the convenience and tangible benefits of technology are the main factors that encourage businesses to adopt it.

The analysis results indicate that the use of digital payment systems increases the speed of cash flow, recording accuracy, and transaction security. All informants confirmed that transactions are now recorded automatically through the application, making cash flow more organised and transparent.

The owner of Kantin Ma'e explained that he *"no longer needs to carry cash, because*

every transaction goes directly into his account and is recorded every day." The owner of Warung Madika echoed this sentiment, saying that "*digital payments are more organised and there is no need to worry about counterfeit money.*"

These findings show that digital systems help reduce the need for cash and speed up daily transactions, which ultimately improves financial management efficiency. Several business owners, including the owner of Dune Coffee, also emphasised that automated record-keeping makes it easier to monitor daily finances. Thus, digital payments not only serve as a transaction tool but also as a means of micro-financial control, reducing the risk of cash loss and improving the accuracy of financial reporting.

Thematic analysis indicates a shift in the financial behaviour of MSMEs from daily cash management to data-driven financial planning. Three of the five informants, namely Dune Coffee, Pelipur Lapar, and Warung Madika, have used transaction data to manage raw material stocks and plan medium-term investments.

The owner of Dune Coffee explained that "*the data is complete, can be viewed immediately, and helps with long-term financial strategies and plans towards going cashless.*" A similar view was expressed by Pelipur Lapar, which uses transaction data to adjust raw material needs and daily expenses, emphasising that "*the data is all organised and can be used to ensure future stock and investments.*"

These findings show that some MSME players have utilised digital payment systems not only for transactions, but also as a basis for more strategic financial decision-making. Meanwhile, Kantin Ma'e and Kantin Al-Barru still use it only for monitoring daily cash flow. This variation illustrates the different levels of digital maturity among MSMEs in Palu City, reflecting their respective capacities and needs.

Although the benefits of digital payments are widely recognised, all respondents face similar challenges that can be categorised into three main dimensions:

1. Technical challenges: Internet disruptions are causing transaction delays. As complained by the owner of Kantin Al-Barru, "The only problem is the network, making it difficult for buyers to pay."
2. Structural challenges: transaction tax costs are burdensome for small businesses; as Dune Coffee states, "The tax is quite high; hopefully, it can be reduced."
3. Cognitive and institutional challenges: low digital literacy and minimal government support. Warung Makan Madika emphasised that "The use of QRIS is purely our own

initiative; there has been no government assistance."

These findings indicate that most MSMEs in Palu have begun to adopt digital systems but still face technical, structural, and cognitive obstacles that hinder optimal implementation. From a strategic perspective, business owners believe that digitalisation has a positive impact on the efficiency and professionalism of business management. However, they also emphasise the need to improve the stability of digital networks, adjust tax rates for small businesses, and provide digital literacy training, especially for senior business owners. They believe that stronger support from the government and financial institutions would greatly help expand the benefits of digital payment systems at the local level. Thus, support from the government and local financial institutions is key to accelerating digital financial inclusion in Palu.

To clarify the variations in experiences among informants, the following table summarises the patterns of adoption, strategic utilisation, and main obstacles faced by food and beverage SMEs in Palu City.

Table 1. Summary of field findings.

Business Name	Digital Payment Platform Used	Impact on Cash Flow	Use of Data for Financial Planning	Challenges Faced Business
Kantin Ma'e	QRIS	Faster transactions and more organised cash flow more organised	Daily income monitoring	Network disruptions
Kantin Al-Barru	QRIS, bank transfers	Stable and secure cash flow	Food stock adjustment	Minimal interference The governor
Dune Coffee	QRIS	Automatic recording and cash efficiency	Inventory planning and small investments	Tax and network costs
Pelipur Lapar	QRIS, GoPay, DANA	Smoother cash flow and digital recording	Stock control and investment	Digital literacy
Warung Madika	QRIS	Fast transactions and secure	Raw material management	Network disruptions

5. DISCUSSION

This section presents the research findings by linking field observations to theory and prior research to explain the dynamics of *digital payment* adoption among MSMEs in Palu City. Overall, the results show that the use of digital payment systems not only improves cash-flow efficiency but also shapes new patterns in data-driven financial management and long-term business planning.

The decision of MSME players to adopt *digital payments* is influenced more by practical experience and perceived benefits than by formal policy interventions. Factors such as ease of use, time efficiency, and suitability for young consumer behaviour are the main drivers. These findings reinforce the *Technology Acceptance Model* (TAM) as described by Sutrisno & Nainggolan (2025), that *perceived ease of use* and *perceived usefulness* are important factors in the acceptance of financial technology by SMEs. In the context of Palu, the ease of transactions via QRIS and *e-wallets*, as well as customer trust in digital systems, accelerated adoption. This aligns with the findings of Nurchayati et al. (2024), which emphasise practicality and consumer trust as key variables in the success of digital transformation in the MSME sector.

The study's results also show that digital payments directly improve cash-flow efficiency and financial transparency. Transactions automatically recorded in the application help businesses reduce the risk of cash loss and enhance the accuracy of daily records. These findings are consistent with research (Rosyidiana et al., 2025) demonstrating that the implementation of QR codes enhances the regularity of cash recording, and with a study (Saragih, 2025) that found a decrease in transaction costs and an increase in operational efficiency among MSMEs. Conceptually, cash flow efficiency reflects the ability of business owners to maintain liquidity through a fast and transparent recording system (Kurniasih et al., 2025). In this context, digital payments function not only as a transaction tool but also as a micro-financial control mechanism.

Digital transformation has also shifted the orientation of MSME players from daily cash management to more strategic financial planning. Several informants, such as Dune Coffee, Pelipur Lapar, and Warung Madika, have used digital transaction data to manage stock, estimate capital requirements, and plan small investments. These findings align with Harun et al. (2025), which confirms that the integration of digital literacy and application-based accounting systems strengthens MSMEs' financial planning capabilities. In line with

Nurhaedha (2025), the use of digital data facilitates more rational, information-based financial decision-making. This phenomenon marks the beginning of *data-driven financial management* practices among MSMEs in Palu, although their application remains limited to entrepreneurs with higher levels of digital literacy.

However, this study also identified several obstacles to optimising technology use. The three main obstacles that emerged were internet network disruptions, transaction tax burdens, and low digital literacy among senior business entrepreneurs. These findings reinforce the study by Pratama & Nurwani (2023), which highlights infrastructure and digital capacity gaps as major obstacles in eastern Indonesia. Based on Diffusion of Innovation Theory, these conditions indicate that the adoption process in Palu is in the "implementation" stage, in which the innovation has been accepted but has not yet been fully integrated into the managerial system due to weak institutional support.

From a reflective perspective, business entrepreneurs assess that the success of digital transformation depends not only on technology but also on social readiness, literacy, and public policy support. Collaboration between local governments, financial institutions, and MSME communities is key to creating an inclusive and sustainable digital financial ecosystem. Efforts to improve digital financial literacy, ongoing training, and adaptive fiscal policies are necessary to ensure that digital transformation in the MSME sector does not stop at the transaction stage but advances toward data-driven and professional financial management.

6. CONCLUSION

This study shows that the use of digital payments significantly improves cash-flow efficiency and alters the financial behaviour of MSMEs in Palu City. The digitisation of payment systems not only accelerates transaction processing but also enhances transparency, the regularity of record-keeping, and daily financial control. The research findings indicate a shift from conventional cash management to data-driven management practices, which creates opportunities for MSMEs to develop more strategic financial planning. However, the benefits of digitalisation have not been fully optimised due to technical constraints, limited digital literacy, and uneven policy support.

Reflectively, the success of digital transformation in the MSME sector depends on the synergy between technology, human capacity, and institutional support. Local governments,

financial institutions, and SME communities need to collaborate to strengthen network infrastructure, improve digital literacy, and provide incentives that encourage small-business participants to join the digital economic ecosystem. Thus, digital payments can serve as a strategic instrument for realising a more inclusive, efficient, and sustainable financial ecosystem in Palu City and similar regions.

Based on the findings of this study, several recommendations are provided for business entrepreneurs, local governments, and future researchers. MSMEs need to utilise digital payment systems not only for transactions but also as tools for cash-flow management and financial planning. Digital recording should be integrated with a simple analysis of income and expenditure to make business decision-making more measurable and long-term oriented.

The Palu City Government and financial institutions need to strengthen network infrastructure and expand financial digital literacy training programmes for SMEs. In addition, incentives such as reductions in transaction taxes for small businesses can encourage greater participation and sustained use of digital payments.

Higher education institutions in Palu City can assist SMEs with digital literacy through community service programmes. This research opens opportunities for further studies using quantitative or mixed-method approaches to measure the extent to which the use of *digital payments* affects the financial performance of MSMEs. Comparative research across regions is also needed to examine differences in the adoption rates and effectiveness of digital payment systems across local contexts.

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