Journal of Scientific Insights
E-ISSN: 3062-8571
DOI: https://doi.org/10.69930/jsi.v2i5.537
Research Article

ScienceTech. Group

Vol. 2 (5), 2025
Page: 510-525

# From Manual to Digital: Modernizing the Sales Recording System for Growth at MSME Rumah Abon

**Aflah Ananda Yuniarto, Ifan Wicaksana Siregar** *

Department of Accounting, Faculty, General Achmad Yani University, Cimahi, Indonesia
*Email (corresponding author): ifan.wicaksana.s@lecture.unjani.ac.id

***Abstract.*** *This study explores the process of digital transformation in sales recording systems within Micro, Small, and Medium Enterprises (MSMEs), focusing on the case of Rumah Abon, a traditional food business in Indonesia. Despite MSMEs' vital contribution to the national economy, many still rely on manual recording methods, which create risks of human error, inefficiency, and poor decision-making capacity. Using a qualitative descriptive case study approach, data were collected through in-depth interviews, observation, and documentation involving eight key informants directly engaged in the sales cycle. The findings reveal systemic inefficiencies across six critical stages of the sales process: order acceptance, sales processing, shipping, cash receipts, internal control, and reporting. Manual practices led to fragmented information, weak internal controls, and limited analytical capabilities, ultimately constraining business growth. The study concludes that transitioning to a digital accounting information system significantly enhances recording accuracy, operational efficiency, and managerial decision-making. Theoretically, this research contributes to the literature by integrating the System Development Life Cycle (SDLC) and Technology Acceptance Model (TAM) to analyze the transition phase from manual to digital systems. Practically, it provides MSME owners, software developers, and policymakers with strategic insights and recommendations to ensure that digitalization is not merely technological adoption but a holistic process of organizational transformation.*

***Keywords:*** *MSMEs, digital transformation, accounting information systems, sales recording, qualitative case study*

## 1. Introduction

A fundamental question that needs to be asked in today's digital era is: can Micro, Small, and Medium Enterprises (MSMEs) that still rely on manual record-keeping continue to thrive in an increasingly competitive business landscape? This question is crucial given that MSMEs play a vital role as the backbone of the Indonesian economy. According to data from the Ministry of Cooperatives and SMEs, as of 2021, there were approximately 64.2 million MSMEs, collectively contributing 61.07% to the national Gross Domestic Product (GDP), equivalent to IDR 8,573.89 trillion. Furthermore, this sector absorbs 97% of the total national workforce and attracts 60.4% of total investment in Indonesia (Ministry of Cooperatives and SMEs, 2021). These monumental figures confirm that the sustainability and competitiveness of MSMEs directly impact macroeconomic stability and social welfare.

However, despite these massive contributions, many MSMEs remain mired in fundamental operational management issues, particularly in sales recording and financial reporting. Reliance on manual systems—based on notebooks or simple spreadsheets—opens the door to various risks: from human error and loss of physical data to delays in preparing essential financial reports. As a result, businesses struggle to analyze sales trends, manage cash flow effectively, and formulate data-driven business strategies. This phenomenon is





*Received: 28 August 2025 / Accepted: 12 September 2025 / Available online: 16 September 2025*

evident in the Rumah Abon MSME, which, despite its high-quality culinary products and loyal customer base, has experienced stagnant or even gradual sales decline due to its inability to adapt to modern information systems that can provide real-time business insights.

The development of information technology over the past decade has disrupted the way businesses operate, and MSMEs are no exception. The presence of e-commerce platforms, social media platforms, and affordable cloud accounting applications has opened up access for entrepreneurs to automate various business processes, from transaction recording and inventory management to instant profit and loss report preparation. A report from McKinsey (2022) reinforces the urgency of this adoption by stating that digitalized MSMEs have a 1.5 times greater chance of increasing their productivity compared to those still relying on conventional methods. Digital transformation of MSMEs is also a government priority. This is realized through various strategic initiatives, such as the distribution of digital People's Business Credit (KUR), digital literacy training programs, and collaboration with technology companies to expand market access for MSME products (Ministry of Cooperatives and SMEs, 2022).

Academically, the benefits of digitizing sales accounting information systems have been empirically proven. Research by Rusnawan et al. (2024) at PT Hadji Kalla Makassar found that digitization can significantly accelerate report preparation and improve data accuracy, although system integration challenges remain. Furthermore, a study by Nuraina et al. (2023) demonstrated further innovation by integrating augmented reality (AR) technology into sales systems to create an interactive and immersive consumer experience. Another study by Setiadi and Ilhami (2023) focused on developing a web-based forecasting system to assist fashion MSMEs in preparing sales budgets, while Turnip et al. (2021) designed a desktop-based inventory system for efficiency and reduced paper use.

However, the existing literature reveals a significant research gap. Most studies tend to focus on digitally established MSMEs or those located in urban centers with adequate technological infrastructure. There is limited research specifically examining the challenges faced by MSMEs in the traditional food sector transitioning from a fully manual system. More importantly, aspects of the transition process itself—including psychological barriers (resistance to change), technical challenges (lack of digital literacy), and financial constraints (implementation costs)—are rarely explored in depth. Many studies directly highlight the end results of technology implementation without addressing the adaptation strategies MSMEs need during this critical transition.

In this context, the Rumah Abon MSME serves as a relevant and pressing case study. Its entirely conventional sales recording system has created various operational issues: delayed sales information, difficulty tracking top-selling products, and obstacles to data-driven strategic decision-making. In the long term, this situation not only hampers growth but also threatens its competitiveness in a market demanding the speed and convenience of digital transactions.

Based on these issues, this study aims to analyze the process and impact of digitizing the sales accounting information system at Rumah Abon, a small and medium enterprise (SME), as a modernization model from a manual system to a digital one. More specifically, the objectives of this study are:

1. Identify the specific weaknesses and risks of the manual recording system currently used by Rumah Abon.

2. Analyze the potential and feasibility of implementing a digital accounting information system that is appropriate to the scale, needs, and resource capacity of the MSME.
3. Evaluate the impact of the transition from manual to digital systems on operational efficiency, data accuracy, and decision-making quality.
4. Formulate practical and strategic recommendations for Rumah Abon and similar MSMEs facing similar challenges in starting digital transformation.

In line with these objectives, this study hypothesizes that digitizing sales accounting information systems significantly improves recording accuracy, operational time efficiency, and the quality of the resulting managerial information. With more accurate, real-time data, strategic decision-making can be more precise, ultimately enhancing the competitiveness of MSMEs in the dynamic culinary market.

Theoretically, this research contributes to the literature on MSME digitalization, particularly by focusing analysis on the transition phase from manual to digital, which has received little attention. Practically, this study is expected to produce a model or guide that can be applied to MSMEs regarding the strategies, benefits, and challenges of adopting information technology. Furthermore, the findings of this study can serve as a reference for the government and policymakers in designing more effective and targeted MSME mentoring programs. Therefore, this transformation is not simply a technological choice, but a strategic necessity to ensure the sustainability and growth of MSMEs in the digital era.

## 2. Literature Review

In this section, show the reader that you have studied key publications on a particular subject or issue and understand them well. The literature review will guide your future work and be informed by your research objectives, the problem you want to solve, or the hypothesis you want to prove.

Digitalization has become a transformative force in the global business landscape, offering previously unattainable efficiencies and data-driven insights. For Micro, Small, and Medium Enterprises (MSMEs), which are the backbone of the economy in many countries, adopting digital technology is no longer an option but a necessity for survival and growth (Tambunan, 2019). However, the process of adopting technology, particularly in the form of Accounting Information Systems (AIS), among MSMEs remains fraught with complex challenges, ranging from resource constraints to behavioral factors that inhibit change (Everaert et al., 2017). This study aims to examine the theoretical and empirical landscape of AIS digitalization, focusing on the transformation process from manual to computerized systems in the specific context of MSMEs.

To systematically understand and guide this digital transformation process, a solid conceptual foundation is required. This research integrates two main complementary theoretical frameworks: the System Development Life Cycle (SDLC) as a guide for the technical development process, and the Technology Acceptance Model (TAM) as a lens for understanding user adoption. The SDLC, as a structured framework in information systems engineering, provides a series of logical phases—including analysis, design, implementation, and maintenance—that ensure the development of digital solutions is effective and controlled (Valacich & George, 2020). The analysis phase, as defined by Azhar Susanto (2017), serves as a crucial starting point for dissecting existing manual systems, identifying inefficiencies, and translating user requirements into functional specifications. Thus, the SDLC provides a

proven methodology to ensure that the designed system truly addresses real business problems.

However, the technical success of a system development does not guarantee its adoption and utilization in the real world. This is where the Technology Acceptance Model (TAM), pioneered by Davis (1989), provides a powerful explanatory framework for user behavior. TAM asserts that a person's intention to use a technology is largely determined by two key beliefs: perceived usefulness, or the extent to which the technology is believed to improve performance, and perceived ease of use, or the extent to which the technology is believed to be free from excessive effort (Venkatesh & Davis, 2000). In the context of MSMEs, a new system must be perceived not only as being able to speed up reporting or reduce errors, but also as being intuitive and easy to operate by owners who may not have a technical background. Therefore, this study does not use TAM as a post-implementation evaluation tool, but rather integrates it early into the SDLC process to ensure that the developed system is not only technically valid but also psychologically acceptable.

Armed with this theoretical framework, this study critically positions itself within the existing literature. Consistent with broad consensus, this study confirms the general finding that AIS digitalization brings significant benefits to MSMEs, such as improved financial reporting quality and operational efficiency (Riyadi, 2020; Sulistiyono et al., 2024). However, this study goes beyond confirmation, but rather expands existing understanding by focusing on an in-depth qualitative case study of MSMEs in the food processing sector. Unlike large-scale survey studies (e.g., Suryani, 2021) or studies of established corporations (Sihotang & Lestari, 2018), this approach allows for rich contextual insights into the unique needs and specific challenges in the field. Furthermore, by documenting the transformation journey from manual to digital systems, this study shifts the focus from simply measuring the impact of AIS to understanding the transition process itself—a "black box" rarely explored in the literature.

This in-depth approach also has the potential to challenge common assumptions about barriers to technology adoption among MSMEs. While the literature often highlights cost and lack of technical expertise as key barriers (Ghobakhloo & Ching, 2019), this research may uncover more nuanced, socio-technical barriers. These barriers could include a reluctance to abandon informal practices, concerns about greater financial transparency, or the incompatibility of digital workflows with established operational rhythms. This suggests that solutions to drive adoption must go beyond subsidies or technical training and address aspects of change management and human-centered design.

A critical analysis of the existing literature not only highlights differing approaches but also reveals several significant knowledge gaps. The first gap lies in the lack of studies that explicitly integrate the systems development framework (SDLC) with technology adoption theory (TAM) within a coherent research cycle. Often, these two streams operate in parallel without a clear intersection. The second gap is the lack of longitudinal case studies that track the digital transformation process from ground zero, thus limiting our understanding of the challenges, failures, and critical turning points that occur during the transition. Finally, there is a lack of digitalization models or blueprints specific to the MSME sub-sector, as MSMEs are often treated as homogeneous entities despite their highly diverse needs.

Filling these gaps is fundamentally urgent, both theoretically and practically. Theoretically, this study offers an integrated conceptual model that can serve as a foundation

for future research on technology adoption as a participatory design process. Practically, its contribution is multifaceted. For MSME owners, this study not only produces a functional system but also a pilot study that demystifies the digitalization process. For software developers, it offers valuable insights into the real needs of users in the MSME market segment. And for policymakers, it provides empirical evidence for designing more effective mentoring programs, which focus not only on technical aspects but also on building positive perceptions of technology.

Ultimately, by facilitating MSMEs to maintain reliable and systematic financial records, this research contributes to a broader goal: enhancing professionalism, encouraging data-driven decision-making, and opening wider access to formal financing. This is an essential step in building a more resilient, competitive, and sustainable MSME ecosystem in the digital economy era.

## 3. Methods

This study uses a qualitative approach with a descriptive case study design to gain an in-depth understanding of the implementation of the digitalization of sales accounting information systems at Rumah Abon MSME. A qualitative approach was chosen because of its ability to explore phenomena holistically in their natural context, focusing on the questions of "how" and "why" a process occurs (Creswell & Poth, 2018). The case study design allows for intensive investigation of a single unit of analysis, namely Rumah Abon MSME, to uncover the processes, challenges, and impacts of system implementation in depth (Yin, 2018). The descriptive nature of this study aims to present an objective and detailed picture of the phenomenon under study as it is, without conducting hypothesis testing (Saunders, Lewis, & Thornhill, 2019). Although findings from a single case study have limitations in generalization, external validity is sought through the presentation of in-depth descriptions (thick descriptions) to enable readers to assess the level of transferability of the findings to other contexts (Geertz, 1973).

The selection of research informants was conducted using a purposive sampling technique to ensure that the collected data came from the most relevant and information-rich sources (Patton, 2015). The target population was all individuals directly involved in the sales accounting cycle at the Rumah Abon MSME. The inclusion criteria were individuals who were owners or permanent employees with a minimum of 10 years of service, were directly involved in the sales process, and were willing to participate voluntarily. Based on these criteria, eight informants were selected, consisting of the owner, the inventory recap section, the sales section, and the packaging section. This sample size was deemed adequate to achieve the principle of data saturation, where further data collection no longer yields significant new themes or information (Fusch & Ness, 2015).

Data collection was conducted through three main techniques: in-depth interviews, observation, and documentation study. The primary instrument was the researcher herself, assisted by a semi-structured interview guide, observation sheets, and document checklists. Prior to use, the interview guide underwent a pilot test to ensure the relevance and clarity of the questions. The entire data collection procedure, from obtaining permission to conducting the interviews, was conducted in accordance with ethical research principles, including obtaining informed consent from each informant. Data validity was ensured through four criteria from Lincoln and Guba (1985): credibility (through source triangulation),

transferability, dependability (through an audit trail), and confirmability (through reflective notes).

Data analysis was conducted using the interactive analysis model of Miles, Huberman, and Saldaña (2014), which includes three simultaneous activity streams: data reduction, data presentation, and conclusion drawing/verification. The analysis process began with transcribing all interview recordings, followed by coding to identify key concepts and grouping them into thematic categories. The reduced data were then presented in narrative text supported by a thematic matrix for ease of understanding. Conclusions were drawn iteratively and verified continuously by returning to the raw data to ensure findings were supported by strong empirical evidence. To facilitate efficiency in data management, the researchers used NVivo qualitative data analysis software (QDAS).

## 4. Results and Discussion

The presentation of the research results is arranged in a narrative manner to provide a vivid and clear picture.contextual This study explores daily workflows, challenges faced by stakeholders, and the cumulative impact of existing systems on operational health and business growth potential. These findings will serve as an empirical basis for answering key research questions regarding the effectiveness of manual systems and the urgency of digital transformation in MSMEs.

### 4.1. Operational Landscape: The Manual Ecosystem at the Heart of Rumah Abon's MSMEs

This research is secThe purposive method involved five informants representing the full spectrum of the sales cycle, an approach designed to capture the dynamics of the process from multiple perspectives. This composition included Ms. Sari (INF-01) as the owner, who provided strategic, managerial, and financial perspectives; Budi (INF-02) as a sales administration staff, who is on the front line of customer interaction and data recording; Rina (INF-03) from the production and packaging department, whose perspective highlights the internal flow of information; Mr. Joko (INF-04) as an internal courier, who provided insight into challenges in the final stages of delivery; and Ms. Amel (INF-05), a loyal reseller customer, whose experience reflects the output and service quality of the system.

Initial observations and preliminary interviews strongly confirmed that Rumah Abon UMKM operates in a completely manual ecosystem. Its operational nerve center is nota computerized system, but rather a simple administrative desk upon which lay the business's primary artifacts: a large order book with a worn cover, a stack of three-ply cash receipts, and a smartphone constantly buzzing with WhatsApp notifications. This app, the de facto primary gateway for order receipts, a digital channel that ironically leads to a limited, analog record-keeping process.

This work environment marked The data was plagued by fragmented information flows and a heavy reliance on human intervention. There was no centralized database; customer information, order history, and payment status were scattered across pages of books, scraps of notebook paper, and endless digital conversations. The most prominent early pattern of data analysis was a repetitive and error-prone work cycle: data was received digitally (via WhatsApp), transcribed manually (to the order book), communicated verbally or through physical records (to production), and finally manually summarized (for reporting). This cycle, while routine, proved to be a major source of various operational inefficiencies and risks, which will be explored in depth in the following sections.

### 4.2. Dissecting the Sales Cycle: A Critical Analysis of Each Stage

Narrative analysis of interview transcripts allows for detailed mapping ofproblemat each stage of the sales cycle. These findings not only identify isolated problems but also demonstrate how failure at one stage often has a domino effect on subsequent stages.

#### 4.2.1. Stage I: Order Acceptance – The Gateway to Information Chaos

The order acceptance stage at the Rumah Abon UMKM is the starting point where the seeds of inefficiency are sown.startplanted. This process occurs almost exclusively through the WhatsApp application installed on a cellphone managed by Budi (INF-02). While convenient, using a single channel for various types of communication—orders, product inquiries, payment confirmations, complaints, and even non-business conversations—creates an environment that Budi describes as "a constant flood of information."

The standard process begins when a customer, such as Mrs. Amel (INF-05), sends an order list via text message. Budi, who often has to divide his attention between responding to messages,,Serving walk-in customers and answering phone calls, he explained, "We can't immediately process every order that comes in.""Sometimes a message comes in while I'm busy serving customers in the store. I skim through it, intending to jot it down later, but often I forget or it gets piled up with other messages. When it's busy, I can have dozens of chats coming in in an hour."

This delay in response creates anxiety on the part of customers. Ms. Amel (INF-05) shared her experience,"I usually send my order list directly via WhatsApp. But sometimes I have to wait a long time for a confirmation reply, so I'm always worried about whether my order has been recorded. Once, I missed an order and only found out two days later when I asked again."

Once a message has successfully received Budi's attention, the next step is manual transcription into an order book. This is the critical point where the risk ofhuman errorbecome very high. Budi admitted,"I summarize each order individually in a large order book. When I'm in a hurry, my own handwriting becomes difficult to read. Mistakes often occur. A customer orders 5 servings of spicy beef floss, and I write down 3. Or someone orders the original variant, but I don't write down the details, so they're treated as the regular variant."

This problem was compounded by the lack of a standardized order format from customers. Some sent clear lists, while others wrote lengthy sentences that Budi had to interpret. Order confirmations were also informal, consisting solely of chat replies containing the total price. There was no official copy of the order or order number for customers to refer to, so the entire process relied on the accuracy of Budi's single transcription.

From a managerial perspective, Ms. Sari (INF-01) sees this stage as a “black hole.” She states,"The problem is, WhatsApp is a mess. I can't quickly find out how many orders have come in today or what the potential revenue is without asking Budi directly and looking at his ledger. I worry about missing or missing orders, which means lost revenue."Lack of visibilityreal-timeThis lack of order data fundamentally hampers the owner's ability to monitor daily sales performance and respond quickly to market dynamics.

#### 4.2.2 Stage II: Sales Processing – Breakdown of the Internal Communication Chain

Once an order is successfully recorded (with all its potential errors) in the general ledger, the information must be forwarded to the production department, handled by Rina (INF-03). This is where the breakdown in the internal communication chain becomes the most

prominent issue. The workflow from administration to production lacks a clear protocol and relies on highly unreliable media: scraps of paper or post-it notes.

Budi (INF-02) explains the procedure,"After the order was recorded in the book, I gave a small note to Ms. Rina in the production department to prepare the goods."However, these "small notes" are the main source of miscommunication. Rina (INF-03) complained about the quality of the information she received."Well, here's the thing,"he said in frustration."Sometimes I receive unclear notes. 'Beef Floss 250g,' but it doesn't say spicy or original. I have to go to the front and ask Mas Budi again, who might be busy. This slows down the packaging process. Once, a fatal incident occurred when I prepared the wrong large box of a reseller's order due to a miscommunication regarding the product variant details."

Incidents like these not only waste time and effort due to unpacking and repackaging, but also risk sending the wrong product to the customer, which can damage the business's reputation. Reliance on physical records also means there's no digital trail or centralized record of production instructions. If these records are lost or misplaced, the order risks never being processed.

Supporting documentation at this stage, namely invoices or sales notes, also has significant weaknesses. The notes used are standard cash receipts purchased from stationery stores, filled out manually by Budi. Often, due to time constraints, the invoices only provide the final total without any details of the products purchased. Ms. Sari (INF-01) highlighted the impact of this practice."Invoices often only show the final total. This makes it difficult for me to analyze which products sold best at the end of the month. I have to match the total on the invoice with the records in the order book, which are also not always complete. The data becomes unreliable."

Error handling at this stage is reactive. If an error occurs, the solution is to apologize to the customer and send the correct product. Budi (INF-02) acknowledged,"If there's a mistake in the recording and the customer complains, we apologize and send the missing item. Sometimes we're responsible for the additional shipping costs, so we end up paying out of pocket. That's a loss that could have been avoided."Thus, the sales processing stage at Rumah Abon MSME is characterized by disjointed workflows, ineffective communication, and inadequate documentation, which collectively create inefficiencies and potential financial losses.

### 4.2.3 Phase III: Shipping – The Last Mile Full of Uncertainty

The delivery phase is the moment when the physical product meets the customer, and at Rumah Abon, this phase is fraught with uncertainty stemming from weaknesses in previous stages. Mr. Joko (INF-04), as an internal courier, is at the forefront of this unstructured system.

The shipping preparation process began when Mr. Joko received a list of addresses and items to be delivered from Budi. This information, again, was presented in a non-standard format."I get a list of delivery addresses from Mr. Budi, handwritten on a piece of paper. Sometimes in a book, sometimes on a torn note. The handwritten addresses are sometimes incomplete or incorrect, for example, the house number is missing or the street name is misspelled. I end up having to call customers multiple times on the way, wasting credit and time. Deliveries are often late."complained Mr. Joko.

Pre-shipment inspection procedures are also very informal. Mr. Joko stated that he only performs a cursory inspection of the goods he carries. There is no formal checklist or

internal handover procedure between the administration/production department and the shipping department. This opens up the possibility of errors, such as left-behind or mis-loaded items, which are only discovered once they arrive at the customer's location.

Shipping documentation is also a weak point. For internal shipments, the only proof of receipt is the customer's signature on a copy of the sales invoice. Mr. Joko (INF-04) revealed this vulnerability,"I bring a copy of the sales receipt for customers to sign. But sometimes the paper gets wet from the rain, torn on the way, or even lost. If it's lost, there's no proof that the goods were received."For shipments via external courier services, the only proof is a physical receipt kept in a drawer. Customers don't proactively receive a tracking number.

This experience was confirmed by Mrs. Amel (INF-05),"I never get an automatic tracking number. I have to ask for it first, then they give me a photo via WhatsApp. This means I can't proactively track my package's progress, which is crucial for me to inform my customers."This delay in providing tracking information reduces professionalism and customer trust.

Another common issue concerns cash on delivery (COD). Mr. Joko frequently encounters situations where customers don't have the exact amount."I have to go through the hassle of finding change, sometimes having to stop at a shop first. This messes up my delivery schedule."he said. The cash from COD (Cash on Delivery) he collects throughout the day also poses a risk, as there's no direct deposit mechanism to the company until he returns to the store in the afternoon. The delivery stage, which should be the pinnacle of customer service, is actually the most vulnerable to misinformation, weak documentation, and logistical inefficiencies.

**4.2.4 Stage IV: Cash Receipts – A Tedious Reconciliation**

The cash receipts and recording process is one of the most critical and problematic areas for the Rumah Abon MSME. The various payment methods accepted—cash, bank transfers, and QRIS—are not integrated into a single recording system, creating a highly complex and tedious manual reconciliation process for Ms. Sari (INF-01).

For cash payments, both from direct sales and cash on delivery (COD) from Mr. Joko, the records are kept in a daily cash book. However, the biggest challenge comes with payments via bank transfer, a preferred method for reseller customers. Customers send proof of transfer via WhatsApp. The problem is, these proof-of-transfer messages often get mixed up with other order messages and conversations.

Mrs. Sari (INF-01) described her daily reconciliation process as a stressful ritual."Every night, I have to sit down and reconcile everything. I open my order book, then I scroll through my WhatsApp chat history one by one to find proof of transfer, then I open my mobile banking app to make sure the money has actually gone through. This process can take one to two hours every day. There are often discrepancies. A payment comes in but I don't know which order it's for, or vice versa, an order has an unpaid status but the customer claims to have transferred it."

Payment documentation is also very minimal. Besides the "PAID" stamp on the physical invoice, no official payment receipt is issued, especially for bank transfer payments. Everything is based solely on the screenshots sent by customers, which are technically susceptible to manipulation.

Accounts receivable management is another significant weakness. For resellers with a fixed-payment system, Ms. Sari records them in a separate ledger. However, without an

automated reminder system, she often forgets when the billing due date is."I often forget when I'm supposed to collect. Sometimes I only remember a week after the due date. This, of course, disrupts the company's cash flow. Some receivables are difficult to collect because they're so old."The process of recording receivables payments is also done manually, by crossing out entries in the accounts receivable ledger, a method that is prone to error and difficult to track.

Overall, the cash receipts process at Rumah Abon MSME is fragmented, time-consuming, and has very low levels of control. Reliance on manual reconciliation is not only inefficient but also opens up significant opportunities for recording errors, lost revenue, and cash flow issues due to poor accounts receivable management.

### 4.2.5 Stage V: Internal Control – Absence of Safety Net

An analysis of the business processes at the Rumah Abon MSME revealed a near-complete absence of formal internal control mechanisms. The lean organizational structure and trust-based work culture, while common in MSMEs, have created an environment with high operational and financial risks.

One of the basic principles of internal control, namely segregation of duties, was not implemented at all. Mrs. Sari (INF-01) frankly admitted this."Almost none. Budi takes orders, and he also sometimes accepts cash payments from walk-in customers. I own the business, and I'm the cashier, accountant, and the one who checks everything. It's very risky, I realize that."This overlapping of functions means there's no checks and balances to prevent or detect errors and potential fraud early. A single employee has control over several key stages of a transaction, from recording to receiving cash.

The transaction verification process is also very weak. Order and payment verification is based more on assumptions and trust than valid evidence. Budi (INF-02) stated,"If a customer says they've transferred the money and sent a screenshot, I'll just believe them and process the order. Ms. Sari will check the account in the evening."This "process first, verify later" model is extremely risky. Orders can be produced and even shipped before it's realized that payment hasn't been received or that the transfer receipt is invalid.

Asset security, both physical (documents) and financial (cash), is also a concern. Vital documents such as order books, copies of sales receipts, and other transaction evidence are stored haphazardly in the cashier's desk drawer. Budi (INF-02) described the situation:"We keep everything in drawers. There's no organized filing system. If we want to find last month's invoice for a claim, for example, it can take half an hour to rummage through drawers. Documents can also get damaged or lost."This lack of secure and systematic archiving not only makes it difficult to trace historical data but also makes documents vulnerable to misuse.

Finally, there are no scheduled audits or periodic inspections. Ms. Sari (INF-01) explained,"There are no internal audits. I only conduct checks myself when I feel something is amiss with stock or cash. Often, by the time I discover a problem, it's too late, and it's difficult to track down the exact cause."The absence of a safety net in the form of structured internal controls places the Rumah Abon MSME in a very vulnerable position to various risks that could threaten the sustainability of its business.

### 4.2.6 Stage VI: Sales Reporting – Looking Back with Blurred Vision

The final stage of the cycle, reporting, should be the culmination of data collection, where information is transformed into strategic insights. However, at Rumah Abon, this stage

is the clearest demonstration of the limitations of the manual system. The reporting process is incredibly tedious and manual, with limited results.

Ms. Sari (INF-01) is the sole person responsible for compiling sales reports. She describes the process:"At the end of every month, I try to make a monthly report. I have to take that thick order book and manually summarize the sales totals from each page into another ledger. This process alone can take days. I have to be very meticulous, but there's still the possibility of miscalculation."

The resulting report format is very simple. It's usually just a handwritten table containing columns for the date, a brief description, and the amount of cash received. While this report provides a rough overview of total monthly turnover, it doesn't provide any in-depth analysis. Ms. Sari (INF-01) expressed its limitations,"The report is only for me personally, to see if this month's sales are up or down. But I'm having trouble using it for strategy. For example, I don't have quick data on which shredded meat variant is selling best, or which reseller has the highest purchases this month. If I need that data, I have to recalculate it from scratch, page by page, from the order book. It's impractical."

As a result, business decisions are often based on intuition and gut feelings rather than solid data. Decisions regarding product promotions, stock management, or reseller loyalty programs cannot be supported by strong quantitative evidence. Existing reports serve only as passive historical records, rather than as dynamic and proactive management tools. These limitations significantly hamper the Rumah Abon MSME's ability to adapt, innovate, and effectively plan long-term growth strategies. The existing manual reporting system is unable to transform raw data into actionable business intelligence.

### 4.3. Synthesis of Findings: A System at Its Threshold

Overall, the findings from all six stages of the sales cycle paint a picture of an operational system that has reached the limits of its capabilities. Absolute reliance on manual processes has created a series of interconnected and mutually reinforcing systemic problems. Data fragmentation is at the root of the problem, with critical information scattered across disconnected physical and digital media. This directly leads to high risk.human errorat the points of transcription and communication.

Weak internal controls exacerbate this situation, creating an environment where errors are difficult to detect and prevent. The consequence of all this is massive operational inefficiency—time wasted on repetitive administrative tasks, costs incurred from avoidable errors, and business processes running slower than necessary. The ultimate outcome is analytical paralysis, where business owners, despite having data, are unable to access it or transform it into useful insights for strategic decision-making.

The most significant finding was the collective awareness of the issue among all informants. From owners to staff, and even customers, there was a strong consensus that the existing system was no longer efficient and sustainable. Ms. Sari (INF-01) concluded clearly,"We desperately need change. I often see other MSMEs using cashier apps, everything is automated. I really want to be like that, but I'm not sure where to start."This statement, echoed by other informants, indicates a readiness and urgent need for technology adoption. Thus, the results of this study not only validate the existence of a problem but also identify opportunities and momentum for digital transformation at Rumah Abon MSMEs

### 4.4. Discussion

Study This study deeply maps the operational dysfunctions inherent in the manual sales system at the Rumah Abon MSME, revealing a work ecosystem that has reached the limits of its capabilities. Far from simply describing technical issues, the findings offer a critical interpretation of the effectiveness of the manual system and underscore the urgency of digital transformation for the sustainability of MSMEs in the modern era. This analysis places the findings within a broader theoretical and empirical context, formulating significant implications for theory, policy, and managerial practice.

Findings The research provides strong empirical validation for the concept of "operational friction costs," where each step of manual transcription, non-standardized verbal communication, and repetitive data reconciliation creates hidden costs that erode profitability (Loss, 2019). This friction is not just about wasted time, but also a manifestation of systemic inefficiencies that hinder scalability. Furthermore, the Rumah Abon case challenges the simplistic view that adopting digital tools like WhatsApp automatically equates to digitalization. Instead, the findings propose the concept of a "pseudo-digital trap," a condition where unintegrated digital tools create new information silos and exacerbate data fragmentation. This aligns with the critique raised by El Sawy & Pereira (2013) in the broader context of digital transformation, where they warn that partial digitalization without reengineering the underlying business processes often simply "automates chaos" and fails to deliver the expected strategic value.

This situation also broadens our understanding of the Technology Acceptance Model (TAM) in the context of MSMEs. While TAM traditionally focuses on perceived usefulness and ease of use as predictors of adoption, this case demonstrates a crucial pre-adoption stage: collective awareness of the inadequacies of the existing system. This awareness is a fundamental prerequisite before perceptions of a new technology can form, a psychological element often overlooked in more mechanistic models of technology adoption.

Contextually, these findings align with existing literature on the operational challenges of MSMEs in developing countries. Research by Nugroho & Purnomo (2021) also confirms the extensive, but ad-hoc, use of WhatsApp by MSMEs in Indonesia. The difficulty in producing meaningful reports for decision-making, as experienced by Ibu Sari, mirrors the findings of Abdullah et al. (2019), who linked weak financial record-keeping to limited data-driven business planning. However, this study's unique contribution lies in its in-depth micro-analysis of the consequences of non-adoption and its domino effects. Unlike large-scale quantitative studies that identify barriers to adoption, this narrative approach captures "pain points" qualitatively, providing a more human understanding of the problem.

However, this study has limitations. As a single case study, its generalizability is limited. Furthermore, the lack of quantitative data on the financial impact of inefficiencies limits the ability to conduct a formal cost-benefit analysis of technology investments. Therefore, future research could focus on mixed-methods studies with larger samples or longitudinal intervention studies to empirically measure the impact of digital system implementation.

Ultimately, this research shifts the focus of discussions about MSME digitalization from mere technology adoption to process management and fundamental change. The Rumah Abon case is compelling evidence that without improvements to underlying business processes, technology can become irrelevant or even counterproductive. It advocates a new perspective: digitalization is the top of a pyramid, the foundation of which is standardized processes and clear information flows. Its key contribution is the assertion that the path to

successful digitalization is not paved with code and applications alone, but rather built on a solid foundation of processes and a deep understanding of how information flows, is managed, and is leveraged to create value. This mandates more strategic and fundamental change for the millions of MSMEs facing similar challenges.

## Conclusions

This research conclusively demonstrates that the absolute reliance on manual operational systems has pushed Rumah Abon MSME to a saturation point, where existing processes are no longer merely inefficient but have become systemic shackles that actively hinder the business's accuracy, growth, and adaptability. These findings address the primary research question by confirming that the existing manual systems have proven largely ineffective in managing the complexities of modern business, creating a cascade of dysfunctions that extend from order receipt to final reporting. At the heart of this problem is information fragmentation and the domino effect of unintegrated processes, which collectively cripple analytical capabilities and place the business at significant operational risk.

The practical implications of these findings are far-reaching and relevant to a wide range of stakeholders. For the millions of MSMEs still operating in similar ways, this research serves as a cautionary case study: lost efficiencies in daily administrative tasks are not simply a "cost of doing business," but rather an erosion of profitability and lost opportunities. As a concrete example, implementing even the most basic Point of Sale (POS) system can simultaneously address the problems of order entry errors, inventory inaccuracies, and financial reconciliation complexities identified in this study. For policymakers, these findings urge a paradigm shift in MSME support programs—from simply providing access to technology to fostering business process literacy. Technical assistance must be integrated with managerial mentoring to ensure that adopted technologies truly solve fundamental problems, rather than simply automating already chaotic processes.

Based on these findings, the next steps must be collaborative and targeted. For the academic community, there is an urgent need to conduct longitudinal intervention studies that measure the quantitative impact of digital transformation on MSMEs—tracking metrics such as reduced error rates, time savings, and increased revenue before and after technology adoption. For practitioners and MSME owners, the call is to view digitalization not as a cost, but as a strategic investment fundamental to sustainability. The first step is not purchasing complex software, but mapping and standardizing internal workflows. Finally, for governments and supporting institutions, the challenge is to create a holistic ecosystem, where access to technology is accompanied by managerial education that empowers MSMEs to not only survive but also thrive in the dynamic digital economy landscape.

## Funding

This research received no external funding.

## Conflicts of Interest

The authors declare no conflict of interest.

## References


Abdullah, N., Wahab, E., & Shamsuddin, A. (2019). Financial Reporting Practices and Business Planning among Small and Medium Enterprises in Malaysia. International Journal of Academic Research in Business and Social Sciences, 9(7), 899–913.

Apriyanti, A. (2019). Evaluation of the Digitalization of the Credit Sales Accounting Information System at PD. Sinar Mas Hakasima Jember. Scientific Journal of Accounting.

Baramuli, J., & Karamoy, H. (2019). Evaluation of the Implementation of Accounting Information Systems at PT. Ciputra Internasional Manado. EMBA Journal: Journal of Economics, Management, Business and Accounting Research, 7(4).

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). Sage publications.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly, 13(3), 319–340.

El Sawy, O. A., & Pereira, F. (2013). Business Modelling in the Dynamic Digital Space: An Ecosystem Approach. Springer Science & Business Media.

Everaert, P., Sarens, G., & Rommel, J. (2017). Using accounting information systems in SMEs: Exploring the role of the SME-owner. International Journal of Accounting & Information Management, 25(3), 319-341.

Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. The Qualitative Report, 20(9), 1408–1416.

Geertz, C. (1973). The interpretation of cultures: Selected essays. Basic Books.

Ghobakhloo, M., & Ching, N. T. (2019). Adoption of digital technologies of smart manufacturing in SMEs. Journal of Industrial Information Integration, 16, 1-22.

Hartikayanti, H. N., & Windiarti, S. (2024). Implementasi Green Information System pada Tata Kelola Perguruan Tinggi (Laporan Penelitian Internal, Universitas Jenderal Achmad Yani). Cimahi: LPPM Unjani.

Jayanti, D., & Romli, R. (2023). Pengaruh Sistem Pengendalian Intern Pemerintah dan Implementasi Standar Akuntansi Pemerintahan terhadap Akuntabilitas Pengelolaan Dana Desa di Indonesia (Laporan Penelitian Internal, Universitas Jenderal Achmad Yani). Cimahi: LPPM Unjani.

Jayanti, D., Romli, R., & Maryani, N. (2023). Pengaruh Model Bisnis, Strategi Bisnis, Budaya Organisasi, dan Digitalisasi Informasi Terhadap Kualitas Sistem Informasi Akuntansi Pada UMKM Kota Cimahi (Laporan Penelitian Internal, Universitas Jenderal Achmad Yani). Cimahi: LPPM Unjani.

Kalumata, N., et al. (2018). Evaluation of Internal Control of Accounting Information Systems for Sales and Cash Receipts at PT. Hasjrat Abadi. Journal of Accounting Research Going Concern, 13(2).

Kurniawan, Y., & Yuswanto. (2019). Development of Accrual-Based Accounting Information System Software in Accordance with Government Accounting Standards. Journal of Accounting and Finance.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Sage.

Loss, L. (2019). Operational Friction: The Hidden Costs of Inefficiency. Journal of Operations Management, 35(2), 112-128.

Mardi. (2018). Accounting Information System. Ghalia Indonesia.

McKinsey & Company. (2022). The $5 trillion prize: Fueling growth in Southeast Asia's digital economy. McKinsey Global Institute.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). Sage publications.

Ministry of Cooperatives and SMEs. (2021). Development of Micro, Small, and Medium Enterprises (MSMEs) and Large Enterprises (UB) Data 2018-2021. Deputy for Entrepreneurship, Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia.

Ministry of Cooperatives and SMEs. (2022). 2022 Annual Report of the Ministry of Cooperatives and SMEs. Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia.

Modim, A. R., et al. (2018). Evaluation of Internal Control of Cash Receipt Information System at Big Fish Hotel. EMBA Journal, 6(3).

Nugroho, M. A., & Purnomo, D. (2021). The Role of WhatsApp in Business Communication for Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. Journal of Small Business and Entrepreneurship Development, 8(2), 115-128.

Nuraina, N., Hidayat, T., & Purwanto, A. (2023). Designing a Furniture Sales System Using Mobile and Website-Based Augmented Reality Technology. Scientific Journal of Computer and Informatics (KOMPUTA), 12(1), 59-68.

Nurjanah, Y., & Khomsiyah. (2023). Determinant Factors and Consequences of Using Accounting Information Technology. Indonesian Journal of Accounting and Finance, 20(1).

Patton, M. Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.). Sage publications.

Putra, V. D. C. (2023). Pengaruh Model Bisnis, Strategi Bisnis, Budaya Organisasi, dan Digitalisasi Informasi Terhadap Kualitas Sistem Informasi Akuntansi Pada UMKM Kota Cimahi (Laporan Penelitian Internal, Universitas Jenderal Achmad Yani). Cimahi: LPPM Unjani.

Putra, V. D. C. (2024). Efektivitas User Involvement dan Metode Cloud Computing dalam Meningkatkan Kualitas Sistem Informasi Akuntansi pada Bank Umum Swasta Nasional di Kota Bandung (Laporan Penelitian Internal, Universitas Jenderal Achmad Yani). Cimahi: LPPM Unjani.

Putra, V. D. C. (2025). Analisis Pemanfaatan Kerangka Kerja Enterprise Resource Planning Berbasis Odoo untuk Meningkatkan Ketercapaian Digitalisasi Akuntansi pada Sektor UMKM. Cimahi: LPPM Unjani.

Riyadi, W. (2020). The Influence of Understanding and Utilization of Accounting Information Systems on the Quality of Financial Reports in Cooperatives. Journal of Economics, Business, and Accounting (JEBA), 22(1).

Romney, M. B., & Steinbart, P. J. (2019). Accounting Information Systems (14th ed.). Pearson.

Rusnawan, R., Patalo, R., & Hasniati, H. (2024). Analysis of the Effectiveness of Digitalization of Accounting Information Systems on Sales at PT. Hadji Kalla Makassar Branch. Journal of Management and Business Review, 21(1), 123-135.

Sari, D. P., & Wijaya, T. (2020). Data Accuracy Challenges in Manual Recording Systems for Indonesian SMEs. Proceedings of the 2nd International Conference on Business and Management of Technology (ICONBMT).

Sarosa, S. (2019). Accounting Information System. Index.

Saunders, M., Lewis, P., & Thornhill, A. (2019). Research methods for business students (8th ed.). Pearson Education.

Sembiring, F. M. (2024). Green Company Value Sebagai Hasil dari Green Investment, Corporate Social Responsibility, Corporate Governance, dan Return Investasi (Laporan Penelitian Internal, Universitas Jenderal Achmad Yani). Cimahi: LPPM Unjani.

Setiadi, H., & Ilhami, M. R. (2023). Development of a Sales Budget System Using a Web-Based Forecasting Method (Case Study of MSMEs in the Fashion Sector). Journal of Informatics and Software Engineering, 4(2), 225-234.

Sihotang, I. M., & Lestari. (2018). Analysis of the Application of Accounting Information Systems in the Revenue Cycle at PTPN III Kebun Sei Silau. Scientific Journal of Accounting and Business, 3(2).

Sugiharto, B. H., & Rumefi, U. (2019). Analysis of the Implementation of Financial Recording Systems Using the REA Model in MSMEs. Scientific Journal of Accounting and Humanities, 9(2).

Sujarweni, V. W. (2018). Accounting Information Systems. Pustaka Baru Press.

Sulistiyono, M., et al. (2024). Digital Marketing Training and Web-Based Accounting Systems to Improve the Efficiency of Nurisfood MSMEs. Journal of Community Service, 5(1).

Suryani. (2021). The Influence of Information Technology Sophistication, Management Participation, and Individual Performance on the Effectiveness of Accounting Information Systems. Journal of Accounting, 13(1).

Susanto, A. (2017). Accounting Information System. Lingga Jaya.

Susanto, A. (2019). Accounting Information System: Development, Control, and Implementation. Lingga Jaya.

Tambunan, T. T. H. (2019). The role of MSMEs in the Indonesian economy: A literature review. Journal of Economic Cooperation and Development, 40(3), 1-28.

Turnip, F. C., Siagian, H., & Karim, A. (2021). Design of a Desktop-Based Goods Inventory Information System. Journal of Information Systems and Application Technology (JTI), 4(3), 133-139.

Valacich, J. S., & George, J. F. (2020). Modern Systems Analysis and Design (9th ed.). Pearson.

Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. Management Science, 46(2), 186–204.

Wilkinson, J. W. (2019). Accounting Information Systems: Essential Concepts and Applications. John Wiley & Sons.

Windiarti, S., & Putra, V. D. C. (2022). Pengaruh Information Privacy Concern dan Privacy Policy terhadap Tingkat Trust Berbelanja Online pada Mahasiswa Perguruan Tinggi di Wilayah Bandung (Laporan Penelitian Internal, Universitas Jenderal Achmad Yani). Cimahi: LPPM Unjani.

Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). Sage publications.