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QRIS as a Digital Evidence Layer for Recording and Reconciling Micro, Small, and Medium Enterprise (MSMEs) Transactions

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Abstract

Although QRIS has been widely examined as a digital payment instrument, limited attention has been paid to how its transaction trail is used in daily recording and administrative control in MSMEs. This study analyzes how QRIS supports sales recording, verification, reconciliation, and owner monitoring at a culinary MSME in Makassar. A qualitative case study used observations of two work shifts, semi-structured interviews with one owner and two cashiers, and examination of QRIS histories and manual sales records. Data were coded thematically and triangulated across sources and techniques. According to the manager's estimate, QRIS represented approximately 50-60% of daily transactions. The findings reveal a recurring mechanism: payment notification, cashier verification, manual recording, end-of-shift reconciliation, and owner monitoring. The transaction trail supports traceability and provides a basis for detecting potential omitted entries, nominal discrepancies, and unconfirmed payments. However, it does not automatically produce accounting records because BNI and GoPay Merchant data remain separate from manual bookkeeping. The study conceptualizes QRIS as a digital evidence layer between payment execution and accounting input, rather than as an accounting system. Written reconciliation procedures, consolidated merchant reports, backup payment arrangements, and gradual linkage to a simple accounting or point-of-sale system are recommended.
Keywords:*QRIS,Digital Evidence, Transaction Recording, Reconciliation, MSMEs*

A. INTRODUCTION

The transformation of digital payments is changing not only how micro, small, and medium enterprises (MSMEs) receive payments, but also the form of evidence available after a transaction is completed. In Indonesia, the Quick Response Code Indonesian Standard (QRIS) unifies diverse payment applications under a single quick response code standard to expand interoperability and

inclusion across payment systems (Bank Indonesia, 2019). For merchants, confirmed payments leave information about the time, amount, and status of the transaction in the application. This trace opens the possibility of using payment data as a primary source for verifying receipts and tracking sales, although QRIS remains primarily a payment standard, not an accounting information system.

This issue is relevant for MSMEs because their record-keeping practices often rely on simple cash books, irregular records, or direct owner supervision. Hikmahwati and Irwansyah (2022) and Syamsul (2024) show that limitations in MSME accounting practices relate to record-keeping discipline, understanding of standards, and the ability to translate transactions into financial information. While the presence of digital payment histories provides more easily traceable data, they do not automatically translate into journals, ledgers, or financial reports. Their administrative value is only realized when cashiers and owners check payment statuses, match amounts, reconcile shift records, and consolidate receipts from all channels.

The QRIS literature has primarily developed along two streams. The first stream addresses technology acceptance, with perceived usefulness and ease of use as key drivers of adoption (Davis, 1989; Musyaffi et al., 2024; Yamin & Abdalatif, 2024). The second stream assesses outcomes such as transaction efficiency, transparency, inclusion, and MSME performance (Arkeman & Ermawati, 2023; Kusnandar et al., 2024; Suryanto et al., 2022). Taken together, these studies underscore the importance of QRIS for payment digitization, but focus more on the rationale for use and the end result than on the administrative work that occurs after a customer pays.

Studies linking QRIS with accounting information systems have begun to demonstrate the potential for real-time payment data to support recording and reconciliation. However, QRIS-specific evidence is still dominated by literature reviews, thus insufficiently explaining how merchant data is utilized at the operational level of MSMEs (Febriana et al., 2025). The AIS literature emphasizes that system value is determined not only by the digitization of inputs, but also by the timeliness, integration, quality of information, and use of data in organizational processes (Lopung & Rulindo, 2023; Lutfi et al., 2022). Huy and Phuc (2024) also demonstrated that the effectiveness of digital accounting information systems is influenced by infrastructure readiness and the organization's ability to process data. Thus, a research gap lies in the micro-mechanisms linking digital payments to recording practices: how notifications are received, payments are verified before orders are submitted, transactions are entered into manual records, discrepancies are checked at the end of the shift, and records are used by owners for monitoring.

This study positions the QRIS transaction trace as a layer of digital evidence between payment execution and accounting input. This position differs from the assumption that payment digitization is synonymous with accounting digitization. The sequence explored is QRIS → digital evidence → verification → manual recording → reconciliation → monitoring. The Technology Acceptance Model (TAM) is used to a limited extent to assess perceived ease and usefulness during actual use, while the primary analysis focuses on transaction data flows, verification functions, and the extent of integration with business records.

The empirical context of this research is the Jalangkote and Lumpia Asli Lasinrang stores, BTP branches in Makassar. The stores accept cash, debit, transfer, and QRIS payments through BNI and GoPay Merchant, but their records still combine digital history with manual records. This context allows the research to examine the benefits and limitations of QRIS in real-world work routines. The study aims to analyze how QRIS usage contributes to sales transaction recording and administrative control practices of MSMEs. Theoretically, the study offers an explanation of QRIS as a digital evidence layer, while practically, the results serve as the basis for developing procedures for merchant data verification, reconciliation, and consolidation.

B. METHOD

This research uses a qualitative approach with a case study design. The analysis is descriptive-interpretive in nature because the study does not measure the impact of QRIS statistically, but rather examines the process of using transaction traces in its natural operational context. The case study was chosen to gain an in-depth understanding of the sequence of payments, verification, recording, reconciliation, and monitoring within a single business unit (Assyakurrohim et al., 2022; Fadli, 2021). The research was conducted from April to May 2026 at the Jalangkote and Lumpia Asli Lasinrang Stores, BTP Branch, Tamalanrea District, Makassar City.

Informants were selected purposively based on their direct involvement in receiving and monitoring transactions. To maintain the confidentiality of internal business practices, identities are coded O1 for the owner, C1 for the morning-afternoon shift cashier, and C2 for the evening-night shift cashier. O1 is responsible for monitoring receipts and sales progress. C1 and C2 process payments, review notifications, create sales records, and perform end-of-shift matching. This composition allows for comparison between the monitoring and implementation perspectives across the two work periods.

Data were collected through observation, semi-structured individual interviews, and documentation. Observations during the study period covered transaction flows during the morning-

afternoon and evening-night shifts: code scanning, nominal top-up, status confirmation, order submission, handling of pending or failed transactions, recording, and cash closing. Interviews explored implementation time, use of two providers, estimated payment proportions, perceived ease and usability, network disruptions, backup payment options, use of history, and reconciliation procedures. Informant responses were recorded in interview notes and compared with observations and documents. Available research materials did not separately record the duration of each interview, recording status, number of observation hours, and number of visits. Therefore, the study does not claim saturation based on duration or frequency, but rather limits interpretation to the consistency of information that can be triangulated from the three data sources.

Documentation includes transaction histories on GoPay Merchant and BNI, as well as manual sales records available during data collection. Documents were used functionally: the time, amount, and status in the app were compared with sales records to understand how cashiers verify receipts and reconcile them at the end of the shift. The estimate that QRIS covers approximately 50-60% of daily transactions comes from manager information and is treated as an informant estimate, not a longitudinal calculation. Available documents do not include a formal log of the amount of discrepancies, the type of error, and the resolution time. Therefore, the study describes the detection and reconciliation mechanisms, but does not conclude on the magnitude of the error reduction.

The analysis was conducted through reduction, presentation, and conclusion drawing. Interview notes, observations, and documents were initially coded, then grouped into themes of usage patterns, ease of use and constraints, digital evidence and reconciliation, and the limits of accounting digitization. The validity of the findings was maintained through source triangulation by comparing O1, C1, and C2; technique triangulation by comparing interviews, observations, and documentation; and checking for consistency between claims and available evidence. Claims were not formulated as causal improvements because the study lacked a before-after design or quantitative measures of error and efficiency. TAM was used at the interpretation stage to read perceived ease of use and perceived usefulness, not as a tested model.

C. RESULTS AND DISCUSSION

QRIS Implementation and Usage Patterns

BTP branches have been using QRIS since 2024 through BNI and GoPay Merchants, in addition to cash, debit, and transfer payments. GoPay Merchants are more frequently used in daily practice, while BNI channels remain available as an alternative. According to O1 estimates, QRIS

transactions account for approximately 50-60% of daily transactions. This figure reflects the intensity of use according to management experience, but is not considered a calculated proportion based on a long-term data set. Available interviews have not yielded a definitive explanation as to whether the use of two providers is driven by customer preference, merchant policy, or backup needs. Therefore, the study does not establish causal reasons and only interprets the existence of two channels as an operational fact that creates the need for data consolidation.

As an interoperable standard, QRIS allows customers to pay through QRIS-enabled apps. In this case, the empirical findings lie not in interoperability itself, but rather in the post-scanning routine. The cashier waits for a success status on the merchant's device before completing the transaction and handing over the order. This flow adds a digital verification point not available in the same form for cash transactions.

C1 succinctly described the process: "With QRIS, once the customer has scanned and paid, it's done immediately. On average, it takes two minutes, depending on the network." This quote demonstrates both its operational ease and its conditional nature. The few payment steps, the absence of the need to count change, and the availability of confirmation can be understood as manifestations of perceived ease of use. However, the study did not quantitatively assess the level or strength of the TAM construct.

The intershift perspective reveals variations in usage context. C2 reported that QRIS payments are used relatively frequently during the afternoon and evening shifts, but confirmations can take longer when the signal is weak. In these situations, C2 confirms the success status and transaction amount before closing the cashier or directing the customer to another payment method. Because the available records do not contain verbatim quotes from C2, these experiences are presented as attributed paraphrases and not as direct quotes.

Table 1. Matrix of Empirical Findings on QRIS Implementation and Transaction Recording

Aspect	O1 - Owner	C1 - Morning-Afternoon Cashier	C2 - Evening-Night Cashier
Implementation	Since 2024; BNI and GoPay Merchant	Using QRIS every day	Relatively high usage on the afternoon-evening shift
Verification	Monitor acceptance on history	Waiting for notification before order is submitted	Ensure successful status before closing the transaction

Aspect	O1 - Owner	C1 - Morning-Afternoon Cashier	C2 - Evening-Night Cashier
Constraint	Slow network or problematic application	Notifications may be late	Signal instability is more noticeable at night
Mitigation	Provide cash, debit, or transfer	Examine the evidence and switch methods if necessary.	Using backup payments when the network is disrupted
Recording	Monitor sales history and development	Matching manual records at the end of the shift	Ensure payments and amounts are recorded before cash closes

Source: Processed research data (2026).

QRIS as Digital Evidence and Reconciliation Mechanism

A key research finding is the use of notifications and transaction history as digital evidence. Every successful payment stores information that can be reviewed. Cashiers use this information at two points in time: at the time of the transaction to confirm receipt before the order is submitted and at the end of the shift to reconcile it with manual records. Owners use the same history to monitor receipts and sales progress.

O1 explained: "There's automated transaction evidence, so the risk of manual recording errors is reduced. I can view transaction history to monitor sales progress." The statement "reduced risk" is understood as the informant's perception, not quantitative evidence that error rates have decreased. Research data more accurately indicates that history provides a traceability and verification mechanism that can be used when discrepancies arise.

C1 confirmed the reconciliation work: “I matched the manual records from the QRIS sales department with the history in the app.” The matching provided a basis for examining three possibilities: successful payments that had not yet been entered into the manual records, discrepancies between the app and the records, and unconfirmed transactions that had been treated as completed. However, the documentation does not contain a detailed incident log that could be used to present a single discrepancy, along with its timing and resolution. Therefore, the empirical contribution of the study lies in explaining the audit procedures and potential issues that can be detected, not in claiming that the frequency of these three types of errors has been measured or proven to be decreasing.

The mechanism discovered can be summarized as: customer makes payment → merchant app generates notification → cashier verifies status and amount → transaction is recorded → history and records are matched at the end of the shift → owner monitors report. Compared to cash flow that relies on physical cash and cashier records, QRIS adds a layer of traceable evidence. This layer doesn't replace record-keeping, but rather strengthens traceability and provides a reference for reconciliation.

This finding provides a more specific meaning than the general benefits of speed or convenience. In information systems terms, transaction data only becomes information when it is reviewed, classified, and used in work processes. Therefore, QRIS in this case is more appropriately conceptualized as a digital evidence layer: a digital trail that exists between payment execution and accounting input. This position complements Febriana et al.'s (2025) study with practical-level evidence on how merchant data is used by MSMEs.

Digital Payments Are Not the Same as Digital Accounting

Despite generating transaction records, QRIS has not yet established an integrated accounting system. BNI and GoPay Merchant data are stored on separate platforms, while stores still use manual records. Reconciliation is performed by reviewing history and matching it individually. There is no automated flow from the merchant app to the cash book, point of sale, journal, or financial reports. Therefore, the term "initial recording infrastructure" refers only to QRIS's function as a source of transaction data, not as a replacement for accounting processes.

Using two providers presents consolidation challenges. The existence of alternative channels facilitates payment continuity but splits the history between two sources. To obtain a complete picture of receipts, both providers' reports must be combined with cash, debit, and transfer records. Without a consolidation procedure, payments are digitized, but sales information remains scattered. This emphasizes the importance of integration and timeliness in AIS (Lopung & Rulindo, 2023) and supports the findings of Lutfi et al. (2022) that the benefits of digital accounting systems depend on actual use and organizational readiness. Therefore, technology does not eliminate the need for disciplined record-keeping and accounting competency (Hikmahwati & Irwansyah, 2022; Syamsul, 2024).

Connection disruptions were reported by all informants, while C2 specifically highlighted instability at night. This formulation is important because the experience of working hours varies. When notifications are delayed, cashiers face uncertainty about whether transactions have been successful. The store's response is to check the payment receipt and offer cash, debit, or bank transfer. These findings suggest that ease of use is situational and influenced by infrastructure quality, not solely by app design.

These limitations of digitalization also explain why claims of increased accuracy or efficiency should be treated with caution. The study lacked sufficient before-and-after data, error counts, or time horizons to conclude causal changes. The available evidence supports a more limited but defensible conclusion: QRIS history enhances transaction traceability, facilitates verification, and provides a

basis for reconciliation. The impact on financial reporting quality requires further integration and separate testing.

Theoretical Interpretation and Implications

In TAM, informants' experiences can be interpreted proportionally through two constructs. The simplified scanning process, the absence of change, and payment confirmation indicate perceived ease of use. The availability of proof, the ability to review history, and support for reconciliation indicate perceived usefulness. These findings are consistent with the literature on QR payment acceptance (Musyaffi et al., 2024; Yamin & Abdalatif, 2024), but this study shifts the focus from adoption intention to actual use after the technology is implemented.

TAM alone is insufficient to explain the entire phenomenon because the research focus is not only on why QRIS is used, but also on how data moves and achieves administrative functions. The concept of a digital evidence layer bridges payments with accounting inputs: technology creates a trace, actors verify the trace, and then the data is used for recording and reconciliation. This contribution places human actions and work procedures as a crucial part of the value of information. Without verification and reconciliation, digital records remain a collection of transactions, not processed accounting information.

Practically speaking, stores need written procedures that define status verification before order submission, payment channel recording, reconciliation at each shift change, handling of pending or failed transactions, resolving discrepancies, and daily consolidation of all providers. Stores also need to prepare alternative internet connections or backup payment methods in case of network disruptions, as network stability is not entirely within the control of MSMEs.

In the next phase, merchant reports can be periodically exported to structured spreadsheets or linked to point-of-sale and simple accounting applications. This setup can reduce repetitive input and facilitate consolidation, but its effectiveness needs to be evaluated after implementation. Merchant account access, correction authorization, evidence retention, and data backup also need to be restricted to prevent digitization from creating new control risks.

D. CONCLUSION

This research shows that QRIS at Jalangkote and Lumpia Asli Lasinrang stores in the BTP branch is not solely used for payment acceptance. According to management estimates, QRIS covers approximately 50-60% of daily transactions, with data spread across BNI and GoPay merchants. In routine operations, notifications are used to verify payments, history is matched with manual records

at the end of the shift, and the owner reviews the data to monitor receipts. These practices enhance transaction traceability and facilitate verification and reconciliation, without proving causal improvements in accuracy or efficiency.

The main finding positions QRIS as a digital evidence layer between payments and accounting inputs. QRIS is not an accounting system because it does not automatically generate journal entries or financial reports. The value of its information depends on the actions of cashiers and owners in checking status, recording transactions, matching sources, and resolving discrepancies. Therefore, digitizing payments is not synonymous with digitizing accounting.

MSMEs are advised to implement shift-by-shift reconciliation procedures, consolidate reports across providers, restrict account access, and establish backup connections or payment methods. Gradual integration with point-of-sale or simple bookkeeping applications can be tested to reduce redundant recording. Limitations of the study include a single location, three informants, the lack of longitudinal measurement of recording errors, incomplete metadata on interview and observation durations, the absence of formal transaction discrepancies, and the lack of definitive documentation of the reasons for using two providers. These limitations limit the generalizability and robustness of efficiency claims, but do not eliminate the consistency of the process findings across sources. Future research could compare multiple MSMEs, use transaction logs across time, systematically record the duration and frequency of data collection, and evaluate the impact of QRIS integration on accounting information quality.

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