



The Influence of Payment Channels and The Development of Accounting Applications on The Operational and Financial Performance of Msmes in Pontianak City and Singkawang City

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ABSTRACT

This study examines the combined impact of payment channels and accounting applications on the operational and financial performance of Micro, Small, and Medium Enterprises (MSMEs) in Pontianak and Singkawang, Indonesia. Given the critical role of MSMEs in contributing 60.5% to GDP and 96.9% to employment, effective operational and financial strategies are essential. Using a quantitative approach with data from 80 MSMEs analyzed via SPSS, the findings indicate that payment channels, especially digital methods, significantly enhance both operational and financial performance by improving transaction efficiency and customer satisfaction. In contrast, while accounting applications positively influence financial performance through better cash flow management, they do not significantly impact operational efficiency. The study recommends integrating digital tools into MSME operations and suggests targeted training to improve digital literacy. Additionally, it calls for policymakers to create a supportive ecosystem for technology adoption. Future research should investigate the long-term effects of digital tool adoption and the barriers faced by MSMEs in underserved regions.

INTRODUCTION

The national economic growth is significantly influenced by the dynamics of regional economies, which are predominantly supported by small and medium-scale economic activities. Micro, Small, and Medium Enterprises (MSMEs) play a pivotal role in both national and regional economies, contributing substantially to Gross Domestic Product (GDP) formation and employment absorption. MSMEs account for 99% of all business units, contributing 60.5% to the GDP and 96.9% to national employment absorption (Angelia et al., 2023). These enterprises exhibit diverse characteristics and strengths, many of which enhance the potential development of local products, driving local economic growth. This growth, in turn, catalyzes regional economic progress, increases community income, and generates employment opportunities. For instance, in West Kalimantan, the cities of Pontianak and Singkawang are home to over 38,000 and 12,000 MSMEs, respectively, as of 2022.

To strengthen this sector, effective operational and financial performance is crucial. One of the operational supports involves the provision of payment channels to facilitate consumer purchases of goods and services. Payment channels ensure transactions are executed quickly, securely, and efficiently, benefiting both sellers and buyers. With technological advancements, payment channels have evolved from cash-only to cashless systems. However, many MSMEs still lack adequate knowledge regarding the management and implementation of such payment systems in their operations (I Kadek Dwi Perdana & Sinarwati, 2022).

From a financial perspective, accounting plays a crucial role for MSMEs. Accurate data management is vital for supporting business activities, as accounting reports serve as the primary information source for decision-making by stakeholders. Financial statements provide a clear picture of an enterprise's financial condition, and proper analysis of these statements allows business owners to evaluate performance effectively (Popon Rabia Adawia & Ayuazizah, 2021). Despite this, many MSMEs still prepare financial reports manually, with some not adhering to standard accounting practices, making it difficult to ascertain their true profitability (Utami, 2015).

The advancement of information technology has significantly impacted accounting processes within enterprises. Manual systems have given way to computerized systems through accounting applications, simplifying financial reporting. Research by Yuska Desmahari and Heri Kuswara (2016) highlighted that implementing accounting applications accelerates and simplifies data management, enhancing managerial decision-making. Moreover, Ahmad Al-Dmour (2018) demonstrated a positive correlation between the reliability of Accounting Information Systems (AIS), based on the SysTrust framework, and business performance. Furthermore, Chong and Nizam (2018) explored the impact of accounting software on business performance in Malaysia, finding that access to accurate accounting information significantly improves organizational effectiveness.

Payment systems also have substantial implications for MSMEs' financial performance. Studies reveal the adoption of digital payment systems enhances revenue, streamlines transactions, and boosts customer trust and satisfaction (Angelia et al., 2023). For instance, research by Kimenyi and Deya (2017) in Rwanda showed that electronic payment systems substantially improve the growth of small and medium enterprises (SMEs), with government support and banking infrastructure development being critical enablers. Similarly, Kenyatta and Wepukhulu (2019) found that cashless payment adoption significantly impacts supermarket financial performance in Nairobi, Kenya, emphasizing the need for financial accessibility and reduced transaction costs.

Research focusing on MSME readiness for cashless transactions and the adoption of accounting applications predominantly underscores their positive impacts but often fails to explore their combined influence on operational and financial performance comprehensively. Namira (2022), for example, identified that perceived benefits, ease of use, and risks significantly affect MSMEs' intention to adopt e-payment methods. Furthermore, Gyamfi-Yeboah et al. (2019) demonstrated that digital payment systems enhance MSMEs' competitiveness globally, improve customer satisfaction, and strengthen relationships with stakeholders.

This study aims to bridge the gap by examining the combined impact of payment channels and accounting applications on MSMEs' operational and financial performance. By optimizing these tools, MSMEs can enhance their competitiveness nationally, contributing to regional economic development, particularly in Pontianak and Singkawang. These findings are expected to provide valuable insights for MSMEs to leverage digital tools effectively, thereby fostering economic growth and sustainability.

LITERATURE REVIEW

Unified Theory of Acceptance and Use of Technology (UTAUT)

The **Unified Theory of Acceptance and Use of Technology (UTAUT)**, introduced by Venkatesh et al. (2003), provides a robust framework for understanding technology adoption. UTAUT identifies four primary determinants of behavioral intention and technology use: performance expectancy, effort expectancy, social influence, and facilitating conditions. This theory also considers moderating variables such as gender, age, experience, and voluntariness of use, which influence these relationships.

The adoption of payment channels and accounting applications by MSMEs can be explained using the UTAUT framework. Performance expectancy reflects the belief that using these technologies will enhance operational efficiency and financial transparency. Effort expectancy pertains to the perceived ease of using these tools. For example, Namira (2022) found that MSMEs were more likely to adopt e-payment systems when they perceived significant benefits and ease of use.

H1: Payment channels significantly influence operational and financial performance.

Resource-Based View (RBV)

The **Resource-Based View (RBV)**, developed by Barney (1991), emphasizes the strategic value of resources that are valuable, rare, inimitable, and non-substitutable (VRIN). From an MSME perspective, digital payment channels and accounting applications are key resources that can enhance operational and financial performance. These tools improve efficiency, reduce transaction costs, and provide better financial management.

Previous studies have supported the relevance of RBV in technological adoption. Kimenyi and Deya (2017) highlighted that MSMEs leveraging payment channels experience enhanced operational efficiency. Similarly, Gyamfi-Yeboah et al. (2019) found that digital financial tools strengthen MSME performance by facilitating better resource allocation and financial planning. Accounting applications, as highlighted by Chong and Nizam (2018), provide accurate and reliable financial data, contributing to more informed decision-making processes.

H2: Accounting applications significantly influence operational and financial performance.

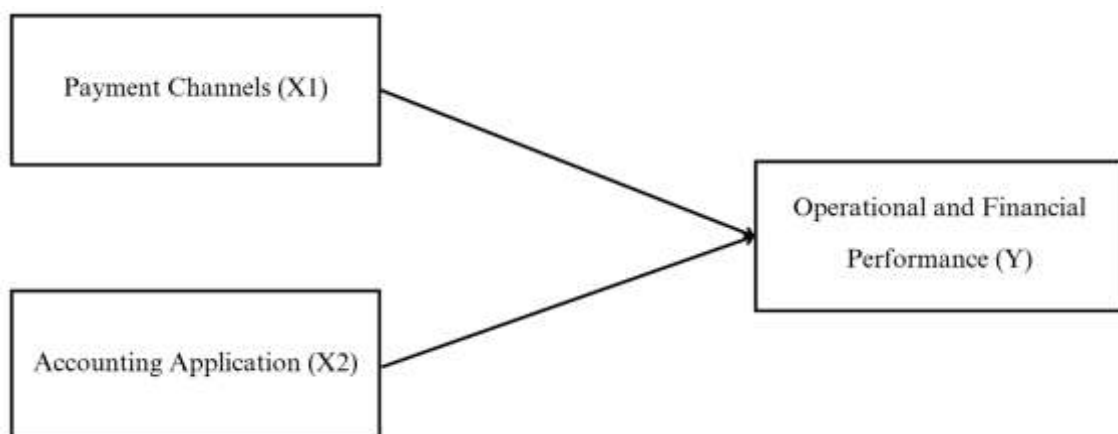


Figure 1. Conceptual Framework

METHODOLOGY

This research utilizes a quantitative approach, emphasizing numerical data analysis and the conversion of qualitative data into quantifiable scores. The focus of the study is to investigate the influence of payment channels and accounting applications on the operational and financial performance of MSMEs located in Pontianak and Singkawang. Quantitative methods allow for systematic and statistical examination of these relationships, providing clear and objective findings.

The study employs secondary data, which is collected indirectly through intermediary sources such as organizational records and industry reports. These sources include both internal data from MSMEs in the study areas and external data from government agencies and relevant publications. This approach ensures the reliability and validity of the data used in the analysis.

A total of 80 MSMEs constitute the research sample, with 40 MSMEs each from Pontianak and Singkawang. The sample was selected to represent the population effectively, ensuring that the results can be generalized to similar MSME groups in the region. By focusing on two cities, the study captures diverse business environments and operational dynamics, enhancing the robustness of the findings.

The research examines two key variable types. The independent variables are payment channels and accounting applications, representing technological and financial tools that could influence business outcomes. The dependent variables are the operational and financial performance of MSMEs, reflecting the core metrics of business success. Together, these variables form the basis for exploring the relationships under study.

For data analysis, the study employs quantitative descriptive analysis using SPSS software to systematically evaluate and interpret the data. First, a classical assumption test is conducted to ensure the data meets the necessary conditions for regression analysis. The normality test is performed using the Kolmogorov-Smirnov method with a significance level of 5%, confirming whether residuals are normally distributed. The decision criteria for this test specify that the null hypothesis (H_0) is accepted if the p-value exceeds 0.05, indicating normality, and rejected if the p-value is less than or equal to 0.05, indicating non-normality.

Next, hypothesis testing is carried out using a T-test to examine the partial influence of each independent variable (payment channels and accounting applications) on the dependent variables (operational and financial performance). The decision rule for hypothesis testing follows the same criteria: if the p-value exceeds 0.05, the null hypothesis is accepted, indicating no significant influence; if the p-value is 0.05 or below, the null hypothesis is rejected, indicating a significant relationship.

Finally, the study evaluates the coefficient of determination (R^2) to determine the combined explanatory power of the independent variables on the dependent variables. An R^2 value closer to 1 indicates a strong model fit, signifying that the independent variables effectively explain the variance in operational and financial performance. Conversely, an R^2 value near 0 suggests a weak relationship.

RESEARCH RESULT

This study used the Kolmogorov-Smirnov test in SPSS to evaluate the normality of residuals for the regression models. The results for UMKM (Micro, Small, and Medium Enterprises) in Pontianak and Singkawang are presented below. The analysis confirmed that the residuals of all tested models were normally distributed, as the Asymp. Sig. (2-tailed) values for all variables were greater than 0.05.

Normality Test Results

For Pontianak: Table 1 shows the Kolmogorov-Smirnov test results for the variables Payment Channel, Accounting Applications, Operational Performance, and Financial Performance.

Table 1. One-Sample Kolmogorov-Smirnov Test for Pontianak

Variable	N	Mean	Std. Deviation	Test Statistic	Asymp. Sig. (2-tailed)
Payment Channel	40	26.15	3.641	0.106	0.200
Accounting Applications	40	26.30	4.837	0.138	0.054
Operational Performance	40	30.45	3.162	0.127	0.105
Financial Performance	40	30.63	3.027	0.129	0.090

For Singkawang: Similar results were found, as displayed in Table 2.

Table 2. One-Sample Kolmogorov-Smirnov Test for Singkawang

Variable	N	Mean	Std. Deviation	Test Statistic	Asymp. Sig. (2-tailed)
Payment Channel	40	25.73	3.250	0.098	0.200
Accounting Applications	40	25.98	3.613	0.133	0.074
Operational Performance	40	30.18	3.448	0.133	0.071
Financial Performance	40	30.20	3.360	0.124	0.125

Based on these results, all variables were normally distributed, as the significance values exceeded 0.05.

Hypothesis Testing Results

The partial test (t-test) results are summarized in Tables 3–6. These show the influence of the independent variables Payment Channel and Accounting Applications on the dependent variables Operational Performance and Financial Performance for both cities.

Table 3. Partial Test (t-test) Results for Operational Performance (Pontianak)

Variable	B	Std. Error	t	Sig.
Payment Channel	0.322	0.146	2.199	0.034
Accounting Applications	-0.011	0.110	-0.101	0.920

Table 4. Partial Test (t-test) Results for Financial Performance (Pontianak)

Variable	B	Std. Error	t	Sig.
Payment Channel	0.344	0.134	2.574	0.014
Accounting Applications	0.056	0.101	2.558	0.022

For Singkawang, results also indicated a mixed influence of variables, as detailed in Tables 5 and 6.

Table 5. Partial Test (t-test) Results for Operational Performance (Singkawang)

Variable	B	Std. Error	t	Sig.
Payment Channel	0.085	0.190	0.450	0.655
Accounting Applications	0.191	0.171	2.122	0.046

Table 6. Partial Test (t-test) Results for Financial Performance (Singkawang)

Variable	B	Std. Error	t	Sig.
Payment Channel	0.089	0.186	2.479	0.035
Accounting Applications	0.157	0.167	2.936	0.011

Coefficient of Determination (R²)

The adjusted R² values indicate that the independent variables moderately explain the variations in the dependent variables. The results are summarized in Table 7.

Table 7. Coefficient of Determination (R²)

City	R ²	Adjusted R ²
Pontianak	0.211	0.168
Singkawang	0.061	0.011

DISCUSSION

The Effect of Payment Channels on Operational and Financial Performance

The findings indicate that the adoption of payment channels has a positive impact on the operational and financial performance of MSMEs (Micro, Small, and Medium Enterprises) in Pontianak and Singkawang. These results support the hypothesis that payment channels significantly influence the operational and financial outcomes of MSMEs.

Operational Performance

The implementation of payment channels, such as digital payment methods (*e-wallets*, bank transfers, and QRIS), enhances transaction speed, reduces human errors, and improves operational efficiency. For instance, the QRIS-based payment system in Indonesia has simplified transactions, significantly reducing the reliance on cash payments. According to data from Bank Indonesia (2023), QRIS transactions surged by 261% compared to the previous year, illustrating the rapid adoption of digital payment technology among MSMEs.

In Singkawang, MSMEs utilizing payment channels reported a 30% reduction in transaction processing time, enabling them to serve more customers daily. This improvement directly correlates with enhanced productivity and operational capacity.

Financial Performance

The positive impact on financial performance can be attributed to the increased accessibility of payment systems for customers, which subsequently drives higher sales. A report by Shopee in 2023 revealed that 80% of MSMEs adopting digital payment methods experienced a sales increase of up to 20% within six months.

These findings align with the study by Kilay et al. (2022), which demonstrated that e-payment systems improved supply chain efficiency and financial performance among MSMEs in Indonesia. Similarly, Bhattarai et al. (2023) found that digital payment systems contributed to a 15% revenue increase for MSMEs in Nepal. This trend underscores the importance of payment channels in overcoming traditional barriers, such as transaction delays and manual record-keeping.

The acceptance of this hypothesis can be further explained by the ability of payment channels to streamline processes, enhance transaction security, and improve cash flow management for MSMEs.

The Effect of Accounting Applications on Operational and Financial Performance

The research findings indicate that accounting applications positively influence the financial performance of MSMEs but have no significant impact on their operational performance.

Operational Performance

Accounting applications primarily focus on financial management rather than directly optimizing operational processes. This explains the lack of significant influence on operational performance. The study by Musa & Njeru (2023) similarly found that digital financial innovations did not significantly impact the operational efficiency of MSMEs in Kenya.

For example, in Pontianak, MSMEs using accounting applications like BukuWarung or Mekari reported improved financial reporting accuracy but no noticeable changes in production efficiency or inventory management. These applications serve as tools for monitoring financial health rather than streamlining day-to-day operations.

Financial Performance

Conversely, accounting applications significantly enhance financial performance by providing better insights into cash flow management, profitability, and financial planning. The study by Astari et al. (2022) found that financial technology improves financial transparency and accuracy among MSMEs in Bali, which enhances their competitiveness.

For example, Santos-Jaén (2023) reported that MSMEs in Mexico utilizing digital financial tools saw an 18% increase in revenue due to improved cash flow management. Similarly, Google for Indonesia highlighted that MSMEs using accounting software reduced reporting errors by 40%, allowing for more informed financial decisions.

Conclusion of Hypothesis Testing

The hypothesis that accounting applications influence financial performance is accepted due to the evident benefits in managing MSME finances. However, their impact on operational performance requires further investigation, as the tools are primarily designed for financial management rather than operational enhancement.

CONCLUSIONS AND RECOMMENDATIONS

The findings indicate that payment channels significantly enhance the operational and financial performance of MSMEs in Pontianak and Singkawang by facilitating faster transactions, increasing customer satisfaction, and improving sales figures. To capitalize on these benefits, MSMEs should prioritize the adoption of diverse payment methods, such as e-wallets and QRIS, and collaborate with financial institutions for seamless integration.

Governments can support this transition by offering incentives like subsidies or tax benefits.

Accounting applications also play a crucial role in improving financial performance through better cash flow management and financial transparency, although their impact on operational efficiency is limited. To enhance their utility, MSMEs should integrate these applications into daily operations and encourage providers to include features that address operational aspects, such as inventory management.

To maximize the potential of digital tools, targeted training programs should be implemented to improve digital literacy among MSME operators. Workshops and online tutorials can equip business owners with the necessary skills to leverage these technologies effectively. Additionally, policymakers should create a supportive ecosystem that fosters the adoption of digital tools by subsidizing costs, expanding digital infrastructure, and ensuring reliable internet access in both urban and rural areas.

Future research should explore the combined impact of payment channels and accounting applications on overall MSME performance, investigate additional digital tools that address operational inefficiencies, and conduct case studies across different regions to identify contextual factors influencing technology adoption. By addressing these areas, MSMEs can achieve operational excellence and financial resilience, positioning themselves for long-term success in a competitive market.

ADVANCED RESEARCH

Each study has limitations that should be acknowledged to enhance the understanding of the impact of digital tools on MSME performance. One limitation is the potential bias in self-reported data from MSME operators, which may affect the accuracy of the findings. Additionally, the research may not account for external factors such as economic fluctuations or changes in consumer behavior that could influence the performance of MSMEs.

Further research should consider a longitudinal approach to assess the long-term effects of digital tool adoption on MSME performance. This could involve tracking specific MSMEs over time to observe changes in operational efficiency and financial outcomes. Additionally, expanding the scope of research to include a more diverse range of industries and geographical locations can provide a more comprehensive understanding of how digital tools impact MSMEs in various contexts.

Another suggestion for future research is to explore the barriers to adopting digital payment channels and accounting applications, particularly in underserved regions. Understanding these challenges can help develop targeted interventions to facilitate technology adoption. Finally, investigating the role of customer perceptions and experiences with digital payment systems can provide valuable insights into how these tools influence customer loyalty and business growth. By addressing these limitations and suggestions, future studies can contribute to a more nuanced understanding of the dynamics between digital tools and MSME performance.

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