

DEVELOPING AN OPERATIONAL STRATEGY TO ENHANCE MAINTENANCE EFFICIENCY: A CASE STUDY OF PROF RENTAL BALIKPAPAN

Eva Ervina^{1*}, Liane Okdinawati²

^{1,2} Institut Teknologi Bandung

E-mail: evaervina26@gmail.com, aneu.okdinawati@sbm-itb.ac.id

Received : 01 December 2025

Published : 31 January 2026

Revised : 15 December 2025

Link Publish : <https://radjapublika.com/index.php/MORFAI/article/view/5092>

Accepted : 10 January 2026

Abstract

Micro-enterprises in Indonesia play a critical role in economic development, yet they often face operational inefficiencies that threaten sustainability. Prof Rental Balikpapan, a motorcycle rental start-up operating in East Kalimantan, exemplifies these challenges. Despite strong market demand and revenue growth during its initial seven months, the company experienced severe volatility in maintenance costs, which exceeded budget allocations by 394% between January and July 2025. This unpredictability undermines profitability and constrains fleet expansion, highlighting the need for a structured operational strategy to stabilize costs and improve reliability. This research aims to address three core questions: (1) What factors contribute to high and inconsistent maintenance costs at Prof Rental Balikpapan? (2) How can a preventive maintenance schedule be structured to reduce costs and ensure timely servicing? (3) How can a standardized Standard Operating Procedure (SOP) be developed to institutionalize maintenance discipline? To answer these questions, a mixed-method approach was employed, combining qualitative diagnostics and quantitative reliability analysis. Primary data were collected through semi-structured interviews with the founder, operational staff, and external mechanic, while secondary data included financial records, maintenance logs, and OEM guidelines. Qualitative analysis using content analysis and BPMN process mapping revealed systemic weaknesses: reactive maintenance behavior, absence of usage-based scheduling, reliance on external workshops for diagnosis, and fragmented documentation. These factors collectively drive cost volatility and operational risk. Quantitative analysis reinforced these findings. Descriptive statistics and Pareto analysis showed that 36.89% of total maintenance costs were concentrated in engine overhauls, while failure interval variability exceeded 50% for high-risk units, confirming the lack of preventive control mechanisms. To address these issues, the study designed a preventive maintenance schedule using Failure Interval Analysis (FIA), which calculates maintenance intervals based on rental-day exposure rather than calendar assumptions. The proposed plan differentiates intervals by unit reliability, introducing monthly checks for high-risk units and quarterly checks for newer assets. Cost projections indicate that shifting from reactive to preventive maintenance reduces total expenditure by approximately 60%, from IDR 7,103,000 to IDR 3,470,000 over six months, while improving predictability and minimizing downtime. This preventive plan will be implemented for a short-term horizon of six months, followed by an evaluation in month seven to validate cost performance improvements. To institutionalize execution discipline, a standardized SOP was developed, integrating preventive triggers, approval thresholds, and documentation protocols. The SOP formalizes roles, introduces Maintenance Work Orders (MWO) for budget locking, and mandates a “reset mechanism” to ensure continuity of preventive cycles. These measures collectively transform maintenance from an ad-hoc, reactive process into a structured, system-driven operation. The contribution of this research lies in demonstrating how micro-enterprises can apply reliability-based preventive strategies and process standardization to achieve cost stability and operational resilience. By integrating FIA-driven scheduling with SOP governance, this study provides a practical framework for improving maintenance efficiency in resource-constrained service businesses. Future research is recommended to conduct longitudinal evaluations and explore digitalization or IoT-based solutions for real-time maintenance monitoring.

Keywords: Preventive maintenance, operational efficiency, micro-enterprise, reliability analysis, SOP standardization, cost control.

INTRODUCTION

Indonesia's strategic pivot towards East Kalimantan, marked notably by the development of the new capital city IKN Nusantara, is driving significant changes in regional mobility dynamics. Balikpapan, situated as a logistical and industrial hub adjacent to the IKN zone, is experiencing heightened influxes of temporary labor, intensified infrastructure development, and increased investment inflows. This surge, complemented by national-scale projects such as Pertamina's Refinery Development Master Plan (RDMP), has resulted in increased daily movement of workers, contractors, and visitors, many of whom lack access to private vehicles (Pertamina, 2023; Bappenas, 2022). Within this evolving urban context, motorcycles remain the predominant and most accessible mode of transport for urban trips under 30 kilometers. As of late 2024, Indonesia had over 125 million registered motorcycles, demonstrating sustained annual growth and widespread reliance on two-wheeled vehicles (Ministry of Transportation, 2024). Given a national average monthly income of approximately IDR 3.09 million, with regional variations in Kalimantan ranging from IDR 3.2 to 4.5 million (BPS, 2024), motorcycles provide a rational and affordable mobility option for residents and domestic visitors alike, particularly in Balikpapan areas where public transport alternatives remain limited.

In response to this mobility gap, Prof Rental Balikpapan was established in early 2025 to offer low-barrier, short-term motorcycle rental services. Within its initial six months, from January 2025 to July 2025, the business attracted a diverse customer base comprising 44% tourists, 35% out-of-town workers, and 21% local residents and students. Rental durations range from daily to monthly, with average daily rates between IDR 70,000 and 90,000. Despite encouraging revenue growth, Prof. Rental Balikpapan faces a critical challenge in rising and operational inefficiencies. Table 1.3. This underperformance directly reduces potential revenue and reflects both controllable and uncontrollable factors in daily operations. At the same time, maintenance costs have escalated disproportionately. In March 2025, expenses peaked at IDR 2,835,000 million, or 45% of monthly revenue, compared to 0% in January as shown in Table I.3. This increase coincided with repeated breakdowns, reliance on non-standard workshops, and delays in scheduled servicing. These patterns highlight the absence of structured utilization monitoring and preventive maintenance systems, signaling the need for closer examination of underlying business issues that affect both sustainability and scalability. Micro and small enterprises (MSEs) constitute the backbone of most economies worldwide, contributing significantly to employment generation, poverty alleviation, and national income (Malesu & Syrovátka, 2025). Globally, these enterprises face persistent operational challenges, particularly in resource-constrained environments, where limited access to capital, technology, and skilled labor often results in inefficiencies and cost volatility (Ridzwan et al., 2024). Operational efficiency has thus emerged as a critical determinant of sustainability for micro-enterprises, with scholars emphasizing the role of preventive systems, process standardization, and cost-control mechanisms in mitigating risks associated with unpredictable expenses (Panigrahi et al., 2024).

In Indonesia, the strategic importance of micro, small, and medium enterprises (MSMEs) is underscored by their sheer scale and economic contribution. MSMEs account for approximately 99% of total business entities, absorb 97% of the workforce, and contribute around 61.9% to the national Gross Domestic Product (GDP) (Coordinating Ministry for Economic Affairs, 2023). Despite this dominant role, Indonesian MSMEs continue to grapple with structural weaknesses, including inadequate financial literacy, limited technological adoption, and operational inefficiencies that constrain competitiveness (Setyawan & Hidayat, 2023). These challenges are particularly pronounced in service-based micro-enterprises, where cost unpredictability, especially in maintenance and asset management, that can erode profit margins and threaten long-term viability (Rahmawati & Nugraha, 2024). The regional context of East Kalimantan further amplifies these dynamics. The province is undergoing rapid transformation driven by the development of Indonesia's new capital city, Ibu Kota Negara (IKN) Nusantara, alongside national strategic projects such as Pertamina's Refinery Development Master Plan (RDMP). These initiatives have triggered a surge in temporary labor migration, infrastructure expansion, and investment inflows, resulting in heightened demand for flexible urban mobility solutions (Sugihartono, 2024; Probokawuryan et al., 2025). Balikpapan, as a logistical and industrial hub adjacent to the IKN zone, has become a focal point for short-distance transportation needs, where motorcycles remain the most accessible and cost-effective mode of travel. As of 2023, Indonesia recorded over 125 million registered motorcycles, reflecting their entrenched role in daily commuting and local logistics (BPS, 2024). Within this evolving urban landscape, motorcycle rental services have emerged as a practical solution for addressing mobility gaps among transient workers, tourists, and residents lacking private vehicles. Prof Rental Balikpapan, established in January 2025, exemplifies this trend by offering short-term and medium-term motorcycle rentals at affordable rates. Prof Rental Balikpapan serves to diverse customer segments, including out-of-town workers, local residents, and university students, with rental prices

ranging from IDR 70,000 per day to IDR 1,800,000 per month. Despite promising revenue growth during its initial months of operation, the business faces a critical challenge: escalating and unpredictable maintenance costs. Financial records indicate that actual maintenance expenditures exceeded budget allocations by 394% between January and July 2025. This volatility has impacted significantly on profit stability and poses a substantial threat to long-term business sustainability. Moreover, the uncertainty surrounding maintenance costs has created hesitation toward planned fleet expansion, as additional units could amplify financial risk and operational complexity. The situation at Prof Rental Balikpapan illustrates a common challenge faced by many micro-enterprises in Indonesia's service sector: the lack of structured operational strategies that combine cost control, risk management, and process reliability. Tackling these issues is crucial not only for the survival and growth of individual businesses but also for strengthening the overall resilience of MSMEs, which play a vital role in supporting Indonesia's economic development.

LITERATURE REVIEW

Theoretical Foundation

Operations Management (OM) theory underpins the research, providing a framework for managing processes that transform inputs into value-added outputs. Effective OM balances quality, cost, speed, and reliability, making it crucial for businesses like Prof Rental Balikpapan. The implementation of systematic scheduling, resource allocation, and standardized procedures are identified as key solutions to mitigate operational inefficiencies and reduce cost fluctuations. Studies have shown that Indonesian micro, small, and medium enterprises (MSMEs) benefit significantly from OM-based maintenance strategies, which can reduce operational costs by up to 30% .

Business Process Standardization and BPMN

Business Process Model and Notation (BPMN) plays a critical role in visualizing and improving workflows. By mapping existing processes, businesses can identify inefficiencies and optimize operations. This standardization ensures consistency in tasks, crucial for reducing maintenance costs and ensuring service reliability. BPMN has been successfully applied in micro-enterprises to design efficient workflows, particularly in maintenance activities

Preventive Maintenance

Preventive maintenance (PM) theory emphasizes the importance of scheduling regular maintenance activities to prevent breakdowns, which are costly and disrupt operations. Studies indicate that PM significantly reduces operational costs compared to reactive maintenance . Haque et al. (2025) reported an 8–12% cost reduction through preventive strategies. This finding aligns with Rahmawati and Nugraha (2024), who observed a 30% reduction in maintenance costs when PM strategies were adopted in Indonesian MSMEs.

Failure Interval Analysis (FIA)

Failure Interval Analysis (FIA) optimizes preventive maintenance by calculating intervals based on real usage data rather than arbitrary time-based schedules. This method is particularly effective in industries where asset usage is variable, such as motorcycle rentals. By aligning maintenance schedules with actual usage patterns, businesses can reduce unnecessary repairs and improve asset reliability. For Rental, applying FIA could lead to better cost control and enhanced operational efficiency.

Standard Operating Procedure (SOP)

SOPs formalize routine tasks and ensure that activities are performed consistently across different personnel. They are essential for maintaining reliability and improving the quality of service in operations. In the case of Prof Rental, the absence of an SOP for maintenance has resulted in irregular service intervals, leading to unpredictable costs. Implementing a well-structured SOP can ensure that maintenance is conducted systematically, reducing errors and improving service delivery. The following demonstrates the relevance of applying structured management theories, process standardization, and maintenance strategies like PM, FIA, and SOP to improve operational efficiency and cost predictability in micro-enterprises. These insights form the foundation for developing solutions to address maintenance cost volatility at Prof Rental Balikpapan.

METHOD

This research uses a mixed-method approach, combining qualitative and quantitative techniques to analyze operational inefficiencies at Prof Rental Balikpapan, particularly focusing on rising maintenance costs.

Research Design

1. **Problem Identification:** The core issue is high and inconsistent maintenance costs.
2. **Data Collection:** Primary data is gathered through semi-structured interviews with the founder, operational staff, and an external mechanic. Secondary data includes financial records, maintenance logs, and OEM guidelines.
3. **Data Analysis:** Qualitative data is analyzed through content analysis, while quantitative data is analyzed using descriptive statistics and Pareto analysis to identify cost drivers.
4. **Solution Development:** A preventive maintenance schedule is designed using Failure Interval Analysis (FIA), and a Standard Operating Procedure (SOP) is developed to standardize maintenance practices.

Data Collection Methods

- **Primary Data:** Semi-structured interviews with key stakeholders.
- **Secondary Data:** Maintenance cost records, operational logs, and OEM guidelines.

Data Analysis Methods

- **Qualitative Analysis:** Content analysis of interview transcripts to identify operational themes.
- **Quantitative Analysis:** Descriptive statistics, Pareto analysis, and Failure Interval Analysis (FIA) for cost stability and maintenance optimization.

Solution Development

- **Preventive Maintenance Schedule:** Based on FIA, ensuring maintenance intervals reflect actual usage.
- **SOP Development:** Standardizing processes to ensure consistency and reduce cost variability.

This methodology ensures a comprehensive approach to addressing maintenance inefficiencies, stabilizing costs, and improving business sustainability.

RESULTS AND DISCUSSION

This chapter presents the analysis and interpretation of the data collected to address the research questions regarding high and inconsistent maintenance costs at Prof Rental Balikpapan. The results are drawn from both qualitative and quantitative methods, providing a holistic understanding of the operational challenges and proposed solutions.

1. Factors Contributing to High and Inconsistent Maintenance Costs

Qualitative Insights:

- **Reactive Maintenance:** Interviews revealed that maintenance is largely reactive, triggered by visible damage, customer complaints, or breakdowns rather than planned intervals. This leads to unpredictable repair costs and delayed interventions.
- **Lack of Standardized Inspection:** Maintenance inspections rely on individual judgment, with no formal checklist or standardized procedures, resulting in inconsistent assessment quality and missed early signs of issues.
- **External Workshop Dependence:** Prof Rental heavily depends on external mechanics for diagnosis and repairs, which affects cost predictability and delays in decision-making.
- **Operational Pressures:** Due to the high demand for rental units, maintenance often gets postponed, leading to higher costs when repairs are eventually made.

Quantitative Insights:

- **Maintenance Cost Fluctuations:** Analysis of financial data showed significant fluctuations in maintenance costs. For instance, in March 2025, maintenance costs exceeded budget by 394%, reaching IDR 2,853,000, which impacted the business's profitability.
- **Pareto Analysis:** A Pareto analysis revealed that a significant portion of maintenance costs is concentrated in engine overhauls and major repairs, suggesting that focusing on these areas could reduce costs substantially.

2. Preventive Maintenance Schedule Design

Failure Interval Analysis (FIA):

- **Usage-Based Scheduling:** By applying FIA, we identified that maintenance intervals should be based on actual usage rather than arbitrary calendar dates. This ensures that units with higher usage receive more frequent checks, while newer or less-used units can be serviced less often.
- **Cost Projections:** The proposed preventive maintenance plan, based on FIA, is projected to reduce maintenance costs by approximately 60%, from IDR 7,103,000 to IDR 3,470,000 over six months, while improving predictability and minimizing downtime.

3. Standard Operating Procedure (SOP) Development

SOP Implementation:

- **A Standard Operating Procedure (SOP)** was developed to formalize maintenance practices. This SOP integrates preventive maintenance triggers, approval thresholds, and documentation protocols to ensure consistent execution and accountability.
- **Roles and Responsibilities:** The SOP clearly outlines roles for the operational staff and mechanics, specifying who is responsible for inspections, repairs, and documentation.
- **Documentation and Compliance:** The SOP includes Maintenance Work Orders (MWOs) to lock in budgets and ensure that all maintenance activities are tracked and approved before execution.

4. Implementation of the Preventive Maintenance System

- **Process Mapping:** Using BPMN, the current (As-Is) maintenance process was mapped, revealing inefficiencies such as irregular maintenance intervals and incomplete documentation. The To-Be process, based on the preventive maintenance schedule and SOP, was developed to standardize and streamline the workflow.
- **Benefits:** The new system is expected to stabilize maintenance costs, reduce unplanned breakdowns, and improve unit availability, contributing to long-term business sustainability.

5. Discussion

The findings demonstrate that the primary cause of high maintenance costs at Prof Rental Balikpapan is the lack of a structured maintenance system. Reactive maintenance, inadequate inspection protocols, and external dependency for diagnostics create inefficiencies that result in unpredictable costs. By implementing a preventive maintenance schedule, driven by Failure Interval Analysis (FIA), and standardizing processes through SOPs, Prof Rental can achieve significant cost reductions and operational efficiency improvements. The results of the Pareto analysis and FIA emphasize that focusing on critical components such as engine overhauls and major repairs will offer the greatest potential for cost savings. The implementation of the preventive maintenance schedule, combined with formalized SOPs, will provide a sustainable solution to the volatility of maintenance costs and ensure a more predictable and reliable service for customers. In conclusion, this research provides a practical framework for Prof Rental Balikpapan to improve its operational efficiency, stabilize costs, and ensure long-term business viability. The integration of Preventive Maintenance, Failure Interval Analysis, and Standard Operating Procedures addresses the root causes of cost volatility and lays the foundation for a more resilient business model.

CONCLUSION

Based on the comprehensive analysis of the maintenance operations at Prof Rental Balikpapan, this study draws the following conclusions which answer the research questions:

1. The study concludes that the factors of cost volatility and inefficiency are the reactive nature of the existing maintenance strategy and structural process deficiencies. Specifically:
 - a. **Reactive Trigger Mechanism:** Maintenance is currently treated as a corrective action rather than a planned activity. This leads to severe component degradation before any intervention occurs, resulting in higher repair costs compared to preventive replacement.
 - b. **Subjective Diagnosis:** External mechanics perform diagnostics without a standardized reference or checklist. This lack of initial scope definition leads to "scope creep," where costs accumulate uncontrollably during the repair process as mechanics discover additional issues.

- c. **Decision-Making Bottleneck:** The workflow relies heavily on the Founder for every approval decision, regardless of the cost magnitude. This centralization creates a bottleneck, prolonging unit downtime and distracting the Founder from strategic business activities.
 - d. **Absence of Data Cycle:** The current process is linear and terminates upon payment. There is no mechanism to record technical history or reset maintenance intervals, making it impossible to predict future failure points or track asset health.
2. To address the identified inefficiencies, the appropriate operational strategy is the implementation of a Preventive Maintenance Strategy grounded in Failure Interval Analysis (FIA). Unlike the previous reactive approach, this strategy focuses on anticipating failures before they occur. The specific outputs of this strategy are:
- a. **Optimized Maintenance Intervals:** The establishment of a fixed maintenance cycle derived from historical failure data for each unit.
 - b. **Set the MTBF % to monitor the movement of failure frequency.**
 - c. **Cost Predictability:** Transforming variable, unpredicted repair costs into fixed, budgeted maintenance expenses, thereby stabilizing the company's cash flow.
3. The Preventive Maintenance Strategy can be effectively implemented through a structured Implementation Plan governed by a new Standard Operating Procedure (SOP). The implementation relies on three key mechanism:
- a. **Standardization of Input:** enforcing the use of Standardized Pre-Maintenance Checklists and Maintenance Work Orders (MWO) to "lock" the scope and budget before any unit is dispatched to a workshop.
 - b. **Process Re-engineering:** Adopting the "To-Be" workflow which delegates authority to Operational Staff for minor repairs (removing the bottleneck) and mandates a "Counter Reset" discipline to ensure the preventive cycle continues automatically.
 - c. **Governance and Monitoring:** Establishing strict control measures, including Monthly Compliance Audits and tracking Budget Variance and MTBF percentage to ensure the new process is sustainable.

REFERENCES

- Ahmad, S., & Omar, R. (2023). Workforce operational challenges in small enterprises: A qualitative approach. *Journal of Workplace Learning*, 35(4), 312–328.
<https://doi.org/10.1108/JWL-01-2023-0007>
- Badan Pusat Statistik. (2023). *Statistik Usaha Mikro dan Kecil Indonesia 2023*. BPS.
- Blanchard, B. S., & Fabrycky, W. J. (2011). *Systems engineering and analysis* (5th ed.). Pearson.
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in reflexive thematic analysis. *Qualitative Research in Psychology*, 18(3), 328–352.
<https://doi.org/10.1080/14780887.2020.1769238>
- Camp, R. C. (2020). *Benchmarking: The search for industry best practices*. ASQC Quality Press.
- Coordinating Ministry for Economic Affairs. (2023). *Increasing financial inclusion for MSMEs through digital technology*. Government of Indonesia.
- Creswell, J. W., & Creswell, J. D. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE.
- Dwiastuti, R., & Setiawan, H. (2022). Employee perceptions and operational bottlenecks in MSMEs. *Jurnal Sistem Industri*, 21(2), 101–112.
- Garvin, D. A. (2021). *Managing quality: The strategic and competitive edge*. Harvard Business School Press.
- Haque, F. U., Raza, A. H., & Hossain, M. (2025). Optimizing maintenance cost in a multi-component environment. *International Journal of Scientific and Management Research*, 8(1), 99–120.
- Heizer, J., Render, B., & Munson, C. (2020). *Operations management: Sustainability and supply chain management* (13th ed.). Pearson.
- IEC. (2015). *IEC 60050-192: Dependability*. International Electrotechnical Commission.
- Karima, M., & Romadlon, U. (2021). Usage-based maintenance scheduling optimization in small vehicle fleets. *Jurnal Teknologi dan Sistem Transportasi*, 9(2), 112–124.

- Kato, T. (2022). Standard operating procedures as behavioral governance mechanisms. *International Journal of Operations & Production Management*, 42(7), 1033–1050.
<https://doi.org/10.1108/IJOPM-10-2021-0634>
- Kemenkop UKM. (2022). *Laporan Tahunan Usaha Mikro, Kecil, dan Menengah di Indonesia 2022*. Government of Indonesia.
- Kiran, D. R. (2021). *Total quality management: Key concepts and case studies*. Butterworth–Heinemann.
- Li, R., & Zhang, X. (2020). Preventive maintenance interval optimization for continuous multistate systems. *Mathematical Problems in Engineering*, Article 2942940.
<https://doi.org/10.1155/2020/2942940>
- Lune, H., & Berg, B. L. (2023). *Qualitative research methods for the social sciences (10th ed.)*. Pearson.
- Mobley, R. K. (2002). *An introduction to predictive maintenance (2nd ed.)*. Butterworth–Heinemann.
- Moubray, J. (1997). *Reliability-centered maintenance*. Industrial Press.
- Nunes, P., Rocha, E., & Santos, J. (2024). Adaptive framework for maintenance scheduling based on dynamic preventive intervals. *Future Internet*, 16(6), 214–227.
<https://doi.org/10.3390/fi16060214>
- Ohno, T. (1988). *Toyota production system: Beyond large-scale production*. Productivity Press.
- Panigrahi, R. R., Shrivastava, A. K., & Kapur, P. K. (2024). Impact of inventory management practices on operational performance of SMEs. *International Journal of System Assurance Engineering and Management*, 15, 1934–1955.
- Probokawuryan, M., et al. (2025). The impact of IKN development on regional economic growth: An IRIO approach. *Jurnal Ekonomi dan Kebijakan Pembangunan*, 14(1), 41–57.
- Rahayu, S., & Widodo, A. (2022). Usage frequency approach for optimizing maintenance cycles in transport MSMEs. *Jurnal Rekayasa Sistem Industri*, 11(3), 233–245.
- Rahmawati, T., & Nugraha, D. (2024). MSME performance and cost efficiency in Indonesian service sectors. *Jurnal Manajemen dan Kewirausahaan*, 26(2), 145–159.
- Ridzwan, R., et al. (2024). Survival challenges of SMEs in turbulent markets: A literature review. *International Journal of Academic Research in Business and Social Sciences*, 14(3).
- Rummler, G. A., & Brache, A. P. (2022). *Improving performance: How to manage the white space on the organization chart*. Jossey-Bass.
- Sahoo, S., & Yadav, S. (2022). Integrating TQM and operational excellence for sustainable performance in SMEs. *The TQM Journal*, 34(5), 1203–1220.
- Saunders, M., Lewis, P., & Thornhill, A. (2020). *Research methods for business students (8th ed.)*. Pearson.
- Setyawan, M., & Hidayat, T. (2023). Digital transformation and operational sustainability in Indonesian MSMEs. *Jurnal Ekonomi dan Bisnis Indonesia*, 38(3), 201–220.
- Slack, N., Brandon-Jones, A., & Johnston, R. (2022). *Operations management (10th ed.)*. Pearson.
- Stevenson, W. J. (2021). *Operations management (14th ed.)*. McGraw-Hill.
- Sugihartono, S. (2024). Nusantara capital city mega project in Indonesia: Progress and public skepticism. *Modern Diplomacy Southeast Asia*.
- Sutrisno, H., Lestari, N., & Purba, J. (2023). Process mapping and workflow redesign to improve efficiency in small service enterprises. *International Journal of Productivity and Performance Management*, 72(4), 1089–1107.
<https://doi.org/10.1108/IJPPM-03-2022-0124>
- Vaismoradi, M., et al. (2020). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, 22(1), 1–12.
- Wijayanti, S., & Prabowo, A. (2022). Operational diagnostics and process simplification in MSMEs using process mapping tools. *Jurnal Sistem & Manajemen Industri*, 6(3), 145–157.
- Wireman, T. (1990). *World-class maintenance management*. Industrial Press.