



## COST ACCOUNTING AND BUSINESS EFFICIENCY AS DETERMINANTS OF MSME SUSTAINABILITY IN KOLAKA REGENCY

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<p><b>Info Article</b></p> <p>Received: 02 November 2025</p> <p>Revised: 04 Desember 2025</p> <p>Accepted: 02 Januari 2026</p> <p>Publication: 31 Januari 2026</p> <p><b>Keywords:</b> Cost Accounting; Business Efficiency; MSME Sustainability</p> <p><b>Kata Kunci:</b> Akuntansi biaya, efisiensi usaha, keberlanjutan UMKM</p> <p><i>Licensed Under a Creative Commons Attribution 4.0 International License</i></p> 	<p><b>Abstract:</b> <i>The sustainability of micro, small, and medium enterprises (MSMEs) is not solely determined by their ability to access and retain markets, but also by their capability to manage costs and transform cost information into efficient operational decisions. This study aims to examine the effect of cost accounting on MSME sustainability, both directly and indirectly through business efficiency, among MSMEs in Kolaka Regency. Data were collected using a Likert-scale questionnaire (1–5) distributed to MSME owners or managers. The collected data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the assistance of SmartPLS software. The measurement model was evaluated through reliability and validity testing (outer model), while the structural model was assessed using path coefficients and bootstrapping significance tests. The results indicate that cost accounting has a positive effect on business efficiency but does not have a direct effect on MSME sustainability. Business efficiency has a positive effect on MSME sustainability and mediates the relationship between cost accounting and MSME sustainability.</i></p> <p><b>Abstrak:</b> Keberlanjutan usaha mikro, kecil, dan menengah (UMKM) tidak hanya ditentukan oleh kemampuan memperoleh dan mempertahankan pasar, tetapi juga oleh kemampuan pelaku usaha dalam mengelola biaya serta mengolah informasi biaya menjadi dasar pengambilan keputusan operasional yang efisien. Penelitian ini bertujuan untuk menguji pengaruh akuntansi biaya terhadap keberlanjutan UMKM, baik secara langsung maupun tidak langsung melalui efisiensi usaha, pada UMKM di Kabupaten Kolaka. Data penelitian dikumpulkan menggunakan kuesioner dengan skala Likert 1–5 yang disebarkan kepada pemilik atau pengelola UMKM. Data yang terkumpul dianalisis menggunakan metode Structural Equation Modeling–Partial Least Squares (SEM-PLS) dengan bantuan perangkat lunak SmartPLS. Evaluasi model pengukuran dilakukan melalui pengujian reliabilitas dan validitas (outer model), sedangkan evaluasi model struktural dilakukan melalui analisis koefisien jalur dan uji signifikansi dengan teknik bootstrapping (inner model). Hasil penelitian menunjukkan bahwa akuntansi biaya berpengaruh positif terhadap efisiensi usaha, namun tidak berpengaruh langsung terhadap keberlanjutan UMKM. Efisiensi usaha terbukti berpengaruh positif terhadap keberlanjutan UMKM dan mampu memediasi pengaruh akuntansi biaya terhadap keberlanjutan usaha.</p>
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## INTRODUCTION

MSMEs are a key pillar of the regional economy, including in Kolaka Regency. However, a major challenge commonly faced by MSMEs is limited capability in managing financial information, along with cost recording practices that remain relatively basic. A study of MSMEs in Kolaka found that transaction recording often stops at simple cash-in and cash-out notes, making it difficult for business owners to assess performance and make cost-based decisions (Hidayat et al., 2025). This condition can reduce efficiency and threaten long-term business sustainability.

Table 1 Number of MSME Traders (Small Traders) by Subdistrict in Kolaka Regency

Number	Subdistrict	Number of MSME Traders (unit)
1	Watubangga	415
2	Tanggetada	170
3	Toari	550
4	Polinggona	145
5	Pomalaa	568
6	Wundulako	295
7	Baula	62
8	Kolaka	1.198
9	Latambaga	250
10	Wolo	142
11	Samaturu	235
12	Iwoimendaa	230
Jumlah		4.26

Source: Office of Trade, Industry and Cooperative of Kolaka Regency (BPS, 2025)

Data from Office of Trade, Industry and Cooperative of Kolaka Regency show that in 2024 there were 4,260 small traders (MSMEs) across Kolaka Regency, with the largest concentration in Kolaka Subdistrict (1,198 units), followed by Pomalaa (568 units) and Toari (BPS, 2025). his large number of MSME traders reflects strong grassroots economic activity, but it also indicates intense competition and increasing demands for more efficient business management. In this context, the adoption of cost accounting and efforts to improve business efficiency are important research phenomena because they can determine MSMEs' ability to control costs, set competitive prices, maintain profitability, and ultimately sustain business continuity (going concern).

The Resource-Based View (RBV) posits that competitive advantage and business sustainability are shaped by internal resources and capabilities that are valuable, rare, difficult to imitate, and non-substitutable. In this study, cost accounting practices are positioned as a managerial capability (an informational capability) that helps MSME

actors understand their cost structure, calculate cost of goods sold (COGS), and exercise cost control. In turn, this capability promotes operational efficiency and strengthens MSMEs' ability to sustain business continuity (going concern) amid competition (Barney, 1991; Wernerfelt, 1984).

Meanwhile, contingency theory explains that the effectiveness of management accounting systems including cost accounting practices and control mechanisms depends on their alignment (fit) with the organizational and environmental context, such as environmental uncertainty, technology/processes, strategy, and organizational characteristics. Therefore, the adoption of cost accounting in MSMEs does not necessarily produce the same impact across all businesses; its influence tends to be stronger when MSMEs face competitive pressures and resource constraints, which require more disciplined cost control (Chenhall, 2003; Otley, 2014).

From a cost accounting perspective, cost information serves as a foundation for planning, control, and evaluation—particularly in determining product costs, identifying waste, and improving processes. Empirical evidence shows that the application of cost accounting methods, such as standard costing and variance analysis, helps MSME owners/managers identify cost deviations and strengthen control over production resources (Natasha et al., 2025). Other studies also emphasize the importance of controlling production costs to assess efficiency and cost-effectiveness, including in small-scale businesses (Massie et al., 2018).

In addition, better financial literacy and financial management in Kolaka have been shown to help MSMEs manage financial resources and leverage financial technology, which in turn supports business sustainability (Kumalasari et al., 2024). These findings indicate that cost management and operational efficiency are worth examining as determinants of MSME sustainability in Kolaka.

Unlike many previous studies that relied on case studies or linear regression, this study proposes testing a relational model using SEM-PLS to capture simultaneous relationships among latent constructs and to examine the mediating role of business efficiency. PLS-SEM is well suited for applied research aimed at prediction and model development, and it is widely used in survey-based management and accounting research (Ringle et al., 2023).

The hypotheses developed in this study propose that cost accounting (X) influences business efficiency (M) and MSME sustainability (Y). Business efficiency is also expected to influence sustainability and to act as a mediator. Conceptually, reliable

cost information improves the quality of pricing decisions, planning, and control, thereby reducing waste and enhancing efficiency. Improved efficiency increases the likelihood that MSMEs can survive and grow in the long term. In summary, the hypotheses are as follows: (1) cost accounting has a significant effect on MSME business efficiency; (2) cost accounting has a significant effect on MSME sustainability; (3) business efficiency has a significant effect on MSME sustainability; and (4) business efficiency mediates the effect of cost accounting on MSME sustainability.

## **METHOD**

The study employs an explanatory quantitative approach using a questionnaire survey. The primary objective is hypothesis testing. Hypothesis testing refers to a study expressed in the form of statements that explains logically predictable relationships among two or more variables, enabling solutions to be identified for the problems faced (Sekaran & Bougie, 2016). This research uses a correlational study design. A correlational study is used to determine whether relationships exist among the variables examined and to identify which variable is most strongly associated with the problem under investigation (Sekaran & Bougie, 2016).

The unit of analysis in this study is the individual, because the research focuses on the perceptions of individual business actors operating in Kolaka Regency namely, owners or managers who understand business cost processes and operations. Data were collected using a cross-sectional design. A cross-sectional study is conducted by collecting data only once possibly over a daily, weekly, or even monthly period to answer the research questions, without attempting to study individuals or phenomena in depth. This study uses a Likert scale as the measurement scale.

The population comprises 4,260 MSMEs in Kolaka Regency, all of which are classified as small traders, based on licensing data from BPS Kolaka Regency for 2024 (BPS, 2025). The sample was determined using purposive sampling (e.g., the business has operated for at least two years; the owner/manager is willing to complete the questionnaire; and the business engages in production or trading activities that allow cost identification). Sample size is recommended to follow PLS-SEM guidelines based on predictive power; in practice, MSME survey studies often use around 100 respondents to obtain stable estimates, although PLS-SEM can still be applied to moderate sample sizes depending on model complexity (Ringle et al., 2023).

This study uses three main constructs: Cost Accounting (X), Business Efficiency (M), and MSME Sustainability (Y), measured using a five-point Likert-scale questionnaire. Cost Accounting (X) is defined as the level of implementation of cost accounting practices in planning, calculating cost of goods manufactured (COGM)/cost of goods sold (COGS), and cost control. It is measured through indicators such as recording raw material, labor, and overhead costs; routinely calculating product costs; preparing cost budgets; conducting cost variance analysis; and using cost reports as a basis for business decision-making (Abdel-Kader & Luther, 2008). Business Efficiency (Mediator) is defined as MSMEs' ability to minimize input cost waste in order to produce outputs or sales optimally, measured through indicators such as reducing material waste, improving labor productivity, controlling overhead costs, controlling unit costs, and improving operational process efficiency (Fullerton & Wempe, 2009).

Meanwhile, MSME Sustainability (Y) is defined as the ability of a business to survive and grow sustainably (going concern), measured through indicators including sales stability, profit stability, the ability to survive over the next three years, the ability to adapt and innovate, and the ability to meet business obligations (Dess & Robinson, 1984; Nur & Zulkiffli, 2014). All indicators are measured using a 1–5 Likert scale.

Data analysis is conducted using SEM-PLS with SmartPLS 4. The main stages include: (1) evaluation of the measurement model (outer model) for reflective constructs through indicator reliability (outer loadings), internal consistency reliability (composite reliability), convergent validity (AVE), and discriminant validity using HTMT (Hasnidar et al., 2025; Henseler et al., 2015); (2) evaluation of the structural model (inner model) through VIF, path coefficients,  $R^2$ ,  $f^2$ , and  $Q^2$ ; and (3) significance testing using bootstrapping. For final results, a large number of bootstrap subsamples (e.g., 5,000–10,000) is recommended to ensure an adequate approximation of the sampling distribution (Hair Ringle & Sarstedt, 2023; Ringle et al., 2024). The HTMT criterion is generally  $HTMT < 0.90$  to indicate adequate discriminant validity, which can be further supported when the bootstrapped confidence interval does not exceed the threshold (Hasnidar et al., 2025; Henseler et al., 2015).

## RESULTS AND DISCUSSION

Quantitative data analysis was conducted to examine the effect of cost accounting on MSME sustainability, with cost efficiency as a mediating variable, using Partial Least Squares–based Structural Equation Modeling (PLS-SEM). The test results

indicate that the measurement model demonstrates convergent validity, as the reflective indicators were evaluated based on the correlations between the estimated item/component scores and the PLS outputs generated by the software. The results produced using SmartPLS are presented in Table 2.

**Table 2 Outer Loading (Measurement Model)**

Variable	Construct	Initial Model	Modification
Cost Accounting (X)	X.1	0.847	0.846
	X.2	0.843	0.842
	X.3	0.845	0.845
	X.4	0.769	0.767
	X.5	0.767	0.769
Business Efficiency (M)	M.1	0.695	-
	M.2	0.747	0.744
	M.3	0.807	0.833
	M.4	0.828	0.837
	M.5	0.781	0.803
MSME Sustainability (Y)	Y.1	0.877	0.880
	Y.2	0.849	0.848
	Y.3	0.883	0.886
	Y.4	0.757	0.751
	Y.5	0.870	0.871

Source: Data Processed (2025)

Based on Table 2 (Outer Loadings/Measurement Model), the measurement model evaluation shows that the constructs of Cost Accounting, Cost Efficiency, and MSME Sustainability generally have adequate outer loading values, as most indicators exceed the commonly used threshold of 0.70 and can therefore be considered to represent their respective constructs well. For the Cost Accounting construct, all indicators (X.1–X.5) exhibit high and stable outer loadings in both the initial and modified models, ranging from 0.767–0.847 (initial model) and 0.767–0.846 (modified model), indicating consistent indicator contributions in measuring Cost Accounting. For the Cost Efficiency construct, most indicators meet the criterion: M.2–M.5 fall within 0.747–0.828 in the initial model and increase to 0.744–0.837 in the modified model. However, indicator M.1 has an outer loading of 0.695 in the initial model (below 0.70) and was subsequently removed during model modification, suggesting that this indicator reflects the Cost Efficiency construct less strongly than the others. Finally, for the MSME Sustainability construct, all indicators (Y.1–Y.5) show strong outer loadings, ranging from 0.757–0.883 (initial model) and 0.751–0.886 (modified model), indicating that the sustainability indicators demonstrate good convergent validity. Overall, the model modification improves measurement quality particularly for the Cost Efficiency

construct and ensures that the retained indicators have strong explanatory power for their underlying latent variables.

**Table 3 Construct Reliability Test Results**

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Cost Accounting	0.819	0.827	0.880	0.648
Business Efficiency	0.874	0.887	0.908	0.664
MSME Sustainability	0.902	0.907	0.928	0.720

Source: Data Processed (2025)

Based on the reliability and convergent validity test results, all constructs in this study demonstrate good measurement quality. The Cost Accounting construct has a Cronbach's alpha of 0.819, rho\_a of 0.827, and composite reliability (rho\_c) of 0.880, all of which exceed the commonly accepted threshold of 0.70, indicating that the construct is reliable. The AVE value of 0.648 also surpasses the minimum criterion of 0.50 (Hasnidar et al., 2025; Ringle et al., 2024), indicating that the indicators explain a sufficient proportion of the construct variance (i.e., convergent validity is achieved). Furthermore, the Business Efficiency construct shows a Cronbach's alpha of 0.874, rho\_a of 0.887, and rho\_c of 0.908, indicating very good internal consistency. Its AVE value of 0.664 also meets the criterion, suggesting that the business efficiency indicators strongly represent the construct. The SMEs Sustainability construct exhibits the strongest results, with a Cronbach's alpha of 0.902, rho\_a of 0.907, and rho\_c of 0.928, along with an AVE of 0.720. This implies that the instrument used to measure MSME sustainability has high reliability and excellent convergent validity. Overall, Cronbach's alpha, rho\_a, and rho\_c values above 0.70 confirm that the research instrument is reliable, while AVE values above 0.50 ensure that each construct meets convergent validity requirements. Therefore, the measurement model is appropriate for testing the structural (inner) model (Hasnidar et al., 2025; Ringle et al., 2024).

**Table 4 Result for Inner Weight Direct Effects**

Variable	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	P values
M -> Y1	0.756	0.757	0.064	11.827	0.000
X1 -> M	0.530	0.535	0.074	7.187	0.000
X1 -> Y1	0.097	0.098	0.075	1.293	0.196

Source: Data Processed (2025)

The structural model results show that Business Efficiency (M) has a positive and significant effect on MSME Sustainability (Y). This is indicated by the path coefficient for  $M \rightarrow Y = 0.756$  with a t-statistic of 11.827 and a p-value of 0.000, meaning that the

hypothesis on the effect of efficiency on sustainability is supported. This finding suggests that the higher the level of business efficiency (i.e., the ability to reduce waste and control costs), the higher the sustainability of MSMEs (in terms of performance stability and survival capability). Furthermore, Cost Accounting (X) has a positive and significant effect on Business Efficiency (M). The path coefficient for  $X \rightarrow M = 0.530$  with a t-statistic of 7.187 and a p-value of 0.000 indicates a significant relationship, thus supporting the related hypothesis. This result implies that better implementation of cost accounting practices (e.g., cost recording, COGS calculation, budgeting, and cost control) contributes to improved operational efficiency in MSMEs. However, the direct effect of Cost Accounting (X) on MSME Sustainability (Y) is not significant. The path  $X \rightarrow Y = 0.097$  has a t-statistic of 1.293 and a p-value of 0.196 ( $p > 0.05$ ), leading to the rejection of the direct-effect hypothesis. This means that cost accounting does not directly enhance MSME sustainability; rather, it tends to influence sustainability through improved business efficiency, indicating that Business Efficiency serves as a mediating variable in the relationship between cost accounting and MSME sustainability.

Table 5 Result for Inner Weight Indirect Effects

Variable	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	P values
X1 -> M -> Y1	0.401	0.406	0.074	5.411	0.000

Source: Data Processed (2025)

The indirect effect test results indicate that Cost Accounting (X) has a positive and significant effect on MSME Sustainability (Y) through Business Efficiency (M). This is evidenced by the mediated effect coefficient ( $X \rightarrow M \rightarrow Y$ ) of 0.401, with a t-statistic of 5.411 and a p-value of 0.000 ( $p < 0.05$ ). This finding means that improving the implementation of cost accounting enhances business efficiency, which in turn contributes to higher MSME sustainability. When considered alongside the earlier direct-path result ( $X \rightarrow Y$  is not significant), this result indicates that Business Efficiency functions as a full mediator (full mediation), meaning that the effect of Cost Accounting on MSME Sustainability occurs primarily through Business Efficiency rather than directly.

## Discussion

Based on data from BPS Kolaka Regency, the number of small traders (MSMEs) in 2024 reached 4,260 units and was distributed across all subdistricts, with the largest concentration in Kolaka Subdistrict. This condition reflects high community economic

activity, but it also indicates intense business competition, meaning that MSMEs are required to manage costs and operations efficiently in order to survive (BPS, 2025). Within this context, the present study positions cost accounting as a managerial capability that is expected to encourage business efficiency and ultimately strengthen MSME sustainability.

*Effect of cost accounting on MSME business efficiency.* The results show that cost accounting has a significant effect on business efficiency. This indicates that the better MSMEs implement costing practices (cost recording, COGS calculation, budgeting, variance analysis, and the use of cost reports), the more efficient their operations become in controlling waste and unit costs. Conceptually, management accounting practices—including costing and budgeting—provide information for planning and cost control, thereby supporting improvements in operational efficiency (Abdel-Kader & Luther, 2008). Empirically, studies on production cost control also show that effective cost control is associated with evaluations of efficiency and cost-effectiveness in production activities (Massie et al., 2018). Evidence in the MSME context is also reflected in the use of standard costing and variance analysis to reduce production costs and improve efficiency (Natasha et al., 2025). Therefore, this finding is theoretically and practically plausible: cost accounting functions as a control tool that helps MSMEs manage resources more economically and productively.

*Effect of cost accounting on MSME sustainability.* The study finds that the direct effect of cost accounting on MSME sustainability is not significant, suggesting that cost accounting practices do not automatically make MSMEs more sustainable without an operational mechanism that links them to long-term outcomes. This finding can be explained using Contingency Theory, which argues that the effectiveness of management accounting and control systems depends heavily on their fit with the organizational context (e.g., human resource capacity, strategy, technology, firm size, and environmental uncertainty) (Chenhall, 2003; Otley, 2014). In MSMEs, cost accounting practices are often not strongly institutionalized or are implemented in a relatively simple manner; as a result, their benefits for long-term outcomes (sales/profit stability, survival capability, and the ability to meet obligations) may not emerge as a direct effect. Thus, the non-significant direct relationship is theoretically reasonable: the impact of cost accounting may only become visible when it is consistently used to improve processes and inform business decisions. *Effect of business efficiency on MSME sustainability.* The significant effect of business efficiency on MSME

sustainability indicates that MSMEs that can reduce input waste, increase productivity, and control operating costs tend to achieve more stable performance and are therefore better able to maintain going concern. This relationship aligns with operations and performance literature suggesting that improvements in operational efficiency and the use of performance measures are associated with stronger financial performance (Barney, 1991; Wernerfelt, 1984). In other words, efficiency is not merely about cost savings; it becomes a foundation for stronger cash flow, margins, and business resilience, which ultimately support MSME sustainability.

*Business efficiency mediates the effect of cost accounting on MSME sustainability.* Because the direct path from cost accounting to sustainability is not significant, whereas the indirect path through business efficiency is significant, business efficiency functions as a full mediator (full mediation). This pattern is consistent with the Resource-Based View (RBV): cost accounting can be viewed as a valuable internal capability (a knowledge-based/managerial resource), but its benefits translate into business performance and resilience only when that capability is transformed into concrete operational improvements—represented in this study by business efficiency (Barney, 1991; Wernerfelt, 1984). In essence, cost accounting does not act as a direct lever of sustainability; rather, it improves efficiency, which then strengthens performance stability and MSMEs' ability to survive over time.

## CONCLUSION

This study concludes that Cost Accounting has a positive and significant effect on Business Efficiency among MSMEs in Kolaka Regency. This finding indicates that the better MSMEs implement cost accounting practices such as cost recording, COGS calculation, budgeting, variance analysis, and the use of cost reports the more capable they become of reducing waste and controlling operating costs, thereby improving the efficiency of business operations. Furthermore, this study confirms that Business Efficiency has a positive and significant effect on MSME Sustainability, meaning that efficiency is a key factor in maintaining performance stability (e.g., sales/profit) and business resilience. However, the direct effect of Cost Accounting on MSME Sustainability is not significant, indicating that the adoption of cost accounting does not automatically improve sustainability unless it is accompanied by operational improvements. Finally, the indirect effect test confirms that Business Efficiency significantly mediates the relationship between Cost Accounting and MSME

Sustainability; because the direct path is not significant, the resulting pattern reflects full mediation. Thus, the contribution of cost accounting to MSME sustainability in Kolaka Regency occurs primarily through the mechanism of improved business efficiency rather than through a direct effect.

Local governments and MSME support institutions are encouraged to provide hands-on training and mentoring on practical skills such as COGS calculation, simple budgeting, and cost variance evaluation, complemented by recording templates or simple applications and regular monitoring so that cost accounting practices become part of routine operations. For future research, it is recommended to incorporate contingency variables (e.g., firm size, level of competition, accounting literacy, use of recording technology, and sector type) as moderators and to consider objective data or longitudinal designs, so that the efficiency-to-sustainability mechanism can be tested more robustly and in a way that better reflects MSME contexts.

## REFERENCES

- Abdel-Kader, M., & Luther, R. (2008). THE IMPACT OF FIRM CHARACTERISTICS ON MANAGEMENT ACCOUNTING PRACTICES: A UK-BASED EMPIRICAL ANALYSIS. *The British Accounting Review*, 40(1), 2–27. <https://doi.org/10.1016/j.bar.2007.11.003>
- Barney, J. (1991). FIRM RESOURCES AND SUSTAINED COMPETITIVE ADVANTAGE. *Journal of Management*, 17(1), 99–120.
- Badan Pusat Statistik Kabupaten Kolaka. (2025). KABUPATEN KOLAKA DALAM ANGKA 2025 (Vol. 1). BPS Kabupaten Kolaka.
- Chenhall, R. H. (2003). MANAGEMENT CONTROL SYSTEMS DESIGN WITHIN ITS ORGANIZATIONAL CONTEXT: FINDINGS FROM CONTINGENCY-BASED RESEARCH AND DIRECTIONS FOR THE FUTURE. *Accounting, Organizations and Society*, 28(2–3), 127–168. [https://doi.org/10.1016/S0361-3682\(01\)00027-7](https://doi.org/10.1016/S0361-3682(01)00027-7)
- Dess, G. G., & Robinson, R. B. (1984). MEASURING ORGANIZATIONAL PERFORMANCE IN THE ABSENCE OF OBJECTIVE MEASURES: THE CASE OF THE PRIVATELY-HELD FIRM AND CONGLOMERATE BUSINESS UNIT. *Strategic Management Journal*, 5(3), 265–273.
- Fullerton, R. R., & Wempe, W. F. (2009). LEAN MANUFACTURING, NON-FINANCIAL PERFORMANCE MEASURES, AND FINANCIAL

- PERFORMANCE. *International Journal of Operations & Production Management*, 29(3), 214–240. <https://doi.org/10.1108/01443570910938970>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2023). PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELING (PLS-SEM) USING R. Springer.
- Hasnidar, H., Wawo, A. B., Hadisantoso, E., Purnaman, S. M. N., & Awal, T. S. (2025). PENGOLAHAN DATA DENGAN APLIKASI SMARTPLS 4 (METODOLOGI PENELITIAN KUANTITATIF). Eureka Media Aksara.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A NEW CRITERION FOR ASSESSING DISCRIMINANT VALIDITY IN VARIANCE-BASED STRUCTURAL EQUATION MODELING. *Journal of the Academy of Marketing Science*, 43(1)115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hidayat, N., Triani, N., & Sabarudin, H. (2025). ANALISIS PENERAPAN AKUNTANSI PADA USAHA TOKO SEPATU DI KABUPATEN KOLAKA (STUDI PADA TOKO SEPATU BUDIMAN). *Jurnal Akuntansi Kompetitif*, 8(3), 959–964. <https://doi.org/10.35446/akuntansikompetif.v8i3.2457>
- Kumalasari, F., Bay, A. Z., Fetni, & Rulimo, P. L. (2024). IMPLEMENTASI FINANSIAL LITERASI DAN FINANSIAL TEKNOLOGI DALAM PENGELOLAAN KEUANGAN UMKM DI KABUPATEN KOLAKA. *Journal Publicuho*, 7(2), 938–953. <https://doi.org/10.35817/publicuho.v7i2.449>
- Massie, N. I. K., Saerang, D. P. E., & Tirayoh, V. Z. (2018). ANALISIS PENGENDALIAN BIAYA PRODUKSI UNTUK MENILAI EFISIENSI DAN EFEKTIVITAS BIAYA PRODUKSI. *Jurnal Riset Akuntansi Going Concern*, 13(3), 355–364.
- Natasha, S. F., Epi, Y., & Khoirunnisa, T. (2025). PENERAPAN STANDARD COSTING DALAM UPAYA EFISIENSI BIAYA PRODUKSI PADA UMKM STRAWBERRY CAKE MEDAN. *Jurnal Ekonomi Bisnis, Manajemen Dan Akuntansi (JEBMA)*, 5(3), 621–629.
- Nur, S., & Zulkiffli, A. (2014). BUSINESS PERFORMANCE FOR SMES: SUBJECTIVE OR OBJECTIVE MEASURES? *Review of Integrative Business & Economics Research*, 3(1), 371–381.
- Otley, D. (2014). THE CONTINGENCY THEORY OF MANAGEMENT ACCOUNTING AND CONTROL: 1980–2014. *Management Accounting Research*.

- Ringle, C. M., Sarstedt, M., Sinkovics, N., & Sinkovics, R. R. (2023). A PERSPECTIVE ON USING PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELLING IN DATA ARTICLES. *Data in Brief*, 48, 109074. <https://doi.org/10.1016/j.dib.2023.109074>
- Ringle, C. M., Wende, S., & Becker, J.-M. (2024). SMARTPLS 4. SmartPLS. <https://www.smartpls.com/>
- Sekaran, U., & Bougie, R. (2016). RESEARCH METHODS FOR BUSINESS: A SKILL-BUILDING APPROACH (7th ed.). John Wiley & Sons.
- Wernerfelt, B. (1984). A RESOURCE-BASED VIEW OF THE FIRM. *Journal of Management*, 5(2), 171–180.