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Optimization of Sustainable Financial Management Based on Technology-Based Record-Keeping Systems in Order to Improve MSME Business Income in Konawe Regency

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Sustainable Financial Management; Technology-Based Record-Keeping Systems; MSMEs; Business Income; Digital Accounting Transformation.

Abstract

The urgency of this research is driven by the low financial literacy and adoption of digital record-keeping among MSMEs in Konawe Regency, which results in unmeasured cash flow management and difficult access to formal financing. This phenomenon hinders business sustainability amidst the competitive digital market. This study aims to develop and validate a technology-based, adaptive Sustainable Financial Management Model for local MSMEs. UsingSequential Exploratory Mixed MethodThe initial stage involved a qualitative exploration of barriers to technology adaptation using NVivo 12 on 12 key informants. Next, quantitative validation was conducted through model testing with SmartPLS 4 (SEM) to measure the effect of the recording system on significantly increasing revenue in a sample of 100 MSMEs in Konawe Regency. The results of the NVivo analysis identified three main clusters of barriers: technology anxiety (tech-anxiety), local feature limitations, and infrastructure instability. Meanwhile, the SEM-PLS test results prove thatTechnology-Based Record-Keeping Systemshas a positive and significant effect on Sustainable Financial Management, and Sustainable Financial Management has a significant effect on Increasing Business Revenue. Sustainable Finance acts as a strong partial mediator. Strategically, this research supports the 3rd and 5th Asta Cita Programs related to strengthening the people's economy through digitalization and contributes to SDGs points 8 and 9.

INTRODUCTION

In the era of global digital transformation, the Micro, Small, and Medium Enterprises (MSMEs) sector is required to not only survive in terms of profitability but also adopt sustainable financial principles to align with the goals of the company. Sustainable Development Goals (SDGs), particularly point 8 on decent work and economic growth, and point 9 on industry, innovation, and infrastructure. Operational efficiency through technology is key to inclusive economic growth, a key international standard. However, globally, many MSMEs fail to make it past the first five years due to poor financial management and manual record-keeping. This phenomenon is exacerbated by high

global market volatility, which demands transparency of financial data real-time so that business actors can make precise strategic decisions.

In Indonesia, strengthening MSMEs through digitalization is a strategic pillar of Asta Cita, particularly in point 3, which emphasizes development from villages and from the bottom up for economic equality, and point 5, which emphasizes downstreaming and digitalization to strengthen national independence. Although MSMEs make a significant contribution to national GDP, a persistent classic problem is low digital literacy in accounting. Many business owners have yet to separate personal and business finances, which according to the Economic Entity Theory is the foundation of professional management. The regulations in the MSME Financial Accounting Standards (SAK) provide simple guidelines, but their implementation in the field is still hampered by technological resistance and a lack of supporting infrastructure. The resulting gap is the imbalance between the availability of accounting applications and the ability of business owners to operate them consistently to increase revenue. Digital transformation in accounting often stalls at the introduction stage without any sustainable system optimization.

Specifically in Konawe Regency, the potential for MSMEs in the agriculture, trade, and services sectors is enormous. However, based on initial observations, most businesses still use paper-based records, which are prone to loss and inaccuracy. Data shows that MSME credit access in this region remains low due to the lack of accountable financial reports required. Bankability This condition aligns with previous research findings (Paluala, 2025), which highlighted that technology adoption requires specific strategies to gain acceptance among businesses. However, that research focused solely on adoption strategies and did not address system optimization for direct revenue growth.

There isresearch gapbetween the theory of technology adoption and the reality of increasing business revenue in Konawe. Accounting standards demand accuracy, while the reality on the ground shows that the existing system has not been optimally utilized for cost analysis and competitive selling price determination. Novelty (novelty) this research is based on the integration of the concept of Sustainable Financial Management withTechnology-Based Record-Keeping Systemstailored to the local characteristics of business actors in Konawe. This research not only encourages the use of the application but also optimizes its data analysis functions to create a sustainable revenue growth model as a concrete effort to achieve the SDGs targets at the regional level.

Based on this, the problem formulation in this research is:

1. How to apply Technology-Based Record-Keeping systems in supporting sustainable financial management in MSMEs in Konawe Regency.
2. Does the optimization of technology-based recording systems have an impact on increasing the income of MSMEs in Konawe Regency.
3. What is the appropriate strategy for improving accounting technology governance to ensure the financial sustainability of MSMEs in Konawe Regency.

METHODS

Theory of Economic Entities (Economic Entity Theory)

The economic entity theory states that a company or business unit should be treated as a separate legal and accounting entity from its owners. In the context of MSMEs in Konawe Regency, violation of this principle is a major cause of cash inefficiency. Technology-Based Record-Keeping Systemsact as a digital enforcer (digital enforcer) for this theory, separating personal and business wallets through a systematic cash account.

Resource-Based View (RBV) & Technology Acceptance Model (TAM)

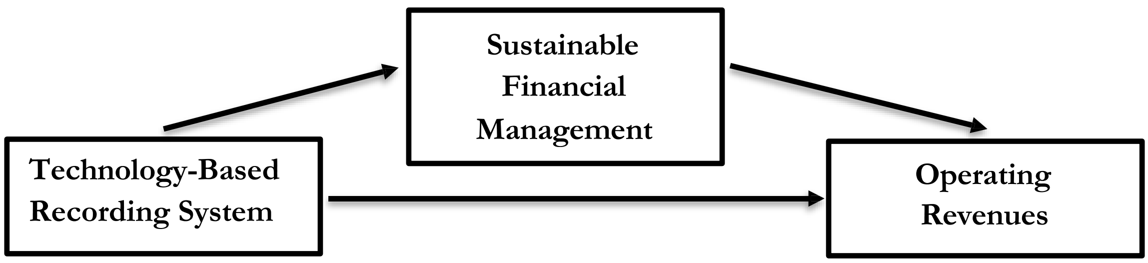
The RBV theory states that sustainable competitive advantage stems from internal capabilities that are valuable, rare, and difficult to imitate. An optimized digital accounting system is a knowledge-based asset (knowledge-based asset) which drives managerial efficiency. Through TAM integration, ease of use (perceived ease of use) and benefits (perceived usefulness) of accounting applications not only encourages adoption, but creates long-term economic value oriented towards sustainable financial profits (sustainable value creation).

Operational Definition of Variables

Technology Based Recording System (X): Measured through indicators of intensity of use of application features (such as BukuWarung, CrediBook, or SiAPIK), perception of ease, and data accuracy. real-time.

Sustainable Financial Management (Y1): Measured based on the level of separation of personal-business assets, compliance with the principles of SAK EMKM, and continuity of cost analysis.

Business Income (Y2): Measured through daily/monthly profit growth indicators, working capital turnover efficiency, and expansion of physical and digital business scale.



Hypothesis Development

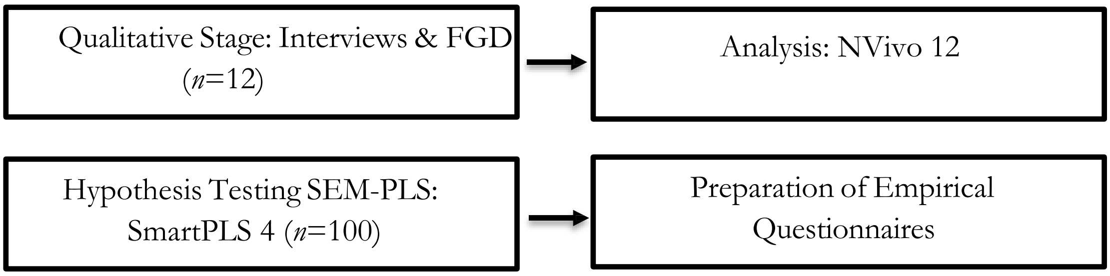
H1: Technology-Based Record-Keeping Systemshas a positive and significant impact on Sustainable Financial Management of MSMEs in Konawe Regency.

H2: Sustainable Financial Management has a positive and significant impact on increasing MSME business income in Konawe Regency.

H3: Technology-Based Record-Keeping Systemshas a positive and significant impact on increasing business income directly and indirectly through Sustainable Financial Management.

Research methods

This research uses an approachSequential Exploratory Mixed Methods.



Qualitative Data Collection

Qualitative exploration was conducted through in-depth interviews And Focus Group Discussion (FGD) with 12 key informants consisting of MSME actors in Konawe Regency, representatives of the Cooperatives and MSMEs Office, and academics. The transcript results were analyzed thematically using NVivo 12 to discover the phenomena of resistance and governance challenges.

Quantitative Data Collection and Samples

The second stage is quantitative empirical validation. The research population includes all registered MSMEs in Konawe Regency. The sampling technique usedpurposive sampling with the following criteria: (1) MSMEs have been operating for at least 2 years, (2) Have equipment smartphone, and (3) Willing to be involved in a digital book keeping optimization program. The number of samples that meet the criteria is 100 respondents.

RESULTS AND DISCUSSION

Qualitative Exploratory Analysis Results (NVivo 12 Application)

Based on the results of processing interview data using coding Using the multilevel matrix in NVivo 12, a common thread was found as to why digital accounting transformation at the local level often stagnates.

Table 1. Classification Structure of Digital Transformation Barrier Nodes in Konawe

Main Cluster (Parent Node)	Sub-Indikator (Child Node)	Confirmation Frequency	Issue Density (Percentage)
Tech-Anxiety	- Fear of entering cash data incorrectly - Accounting application menu is too complicated - Limited digital literacy of gadgets	24	40.00%
Local Feature Limitations	- Not accommodating to local cash advance systems - Debt maturity schemes are not flexible - Regional tax reporting has not been automated	18	30.00%
Infrastructure Instability	- Unstable cellular internet signal in remote areas - Periodic power outages in areas outside urban areas	18	30.00%

Interpretation of Qualitative Findings: MSME actors in Konawe actually know about the existence of free recording applications, but there are mental barriers (tech-anxiety) and the absence of socio-cultural transaction features (such as recording recurring customary debts/cash advances) makes them return to conventional paper-based recording.

Quantitative Validation Analysis Results (SmartPLS 4) Evaluation of Measurement Model (Outer Model)

Evaluation is carried out to ensure that all indicators have valid and reliable qualities to test the hypothesis.

Table 2. Results of Convergent Validity and Construct Reliability Tests

Construct / Variable	Research Indicators	Outer Loading	AVE	Composite Reliability (CR)	Measure Status
Technology-Based Recording System (X)	X.1 (Accessibility) X.2 (Feature Usability) X.3 (Real-Time Accuracy)	0,8120,8450,798	0.67	0.859	Valid & Reliable
Sustainable Finance (Y1)	Y1.1 (Separation of Assets) Y1.2 (In accordance with SAK EMKM) Y1.3 (Cost Analysis)	0,8340,8110,856	0.695	0.872	Valid & Reliable
Business Income (Y2)	Y2.1 (Profit Growth) Y2.2 (Capital Efficiency) Y2.3 (Business Scalability)	0,8760,8200,841	0.715	0.883	Valid & Reliable

Analysis: Mark Outer Loading of all indicators are above the thres hold value of 0.70. The value

Average Variance Extracted (AVE) exceeds the minimum standard of 0.50, and all scores Composite Reliability (CR) is > 0.70. This proves that the research instrument has a very strong level of internal reliability.

Structural Model Evaluation (Inner Model) and the Coefficient of Determination (R^2)

Mark R^2 Sustainable Financial Management (Y1): Amounting to 0.412. This shows that the variable Technology-Based Record-Keeping Systems able to explain the variability of sustainable financial governance of MSME actors in Konawe by 41.2%.

Mark R^2 Business Revenue (Y2): 0.538. This indicates that the model combining recording technology and sustainable financial management has moderate to strong strength because it is able to project a variation in business revenue of 53.8%.

Hypothesis Testing (Path Coefficients)

Through algorithms bootstrapping with a sub sample of 5,000, path significance testing yielded the following parameters:

Table 3. Path Coefficients and Hypothesis Test Significance Results

Hypothesis	Influence Path Structure	Coefficient	T-Statistics	P-Values	Test Conclusion
H1	Recording System (X) → Sustainable Finance (Y1)	0.642	8.431	0	Accepted, Significant
H2	Sustainable Finance (Y1) → Operating Income (Y2)	0.515	5.214	0	Accepted, Significant
H3 (a)	Recording System (X) → Business Income (Y2) (Direct)	0.21	2.105	0.036	Accepted, Significant
H3 (b)	Recording System (X) → Sustainable Finance (Y1) → Business Income (Y2) (Mediation)	0.331	4.678	0	Accepted, Significant (Partial)

In-depth Discussion

The Role of Technology in Transforming Sustainable Finance

The H1 test empirically proves that the path coefficient value is 0.642 with a value oft= 8.431, confirming a very dominant positive influence. This result shows that the utilization of Technology-Based Record-Keeping SystemsIn Konawe Regency, digital bookkeeping serves as a crucial instrument for shifting traditional business models into modern, measurable entities. In accordance with the premise of the Economic Entity Theory, when business owners use a digital book keeping system, the tendency to mix household and store operational expenses is drastically reduced. Digital bookkeeping automation trains financial discipline repeatedly, making it easier to synchronize daily transactions into the formal SAK EMKM reporting format without requiring advanced accounting expertise.

The Impact of Sustainable Finance on Business Revenue Escalation

Acceptance of H2 with a value t= 5,214 confirms the scientific truth of Resource-Based View (RBV). Accurate sustainable financial management is an internal strategic asset that transforms raw accounting data into a profit-generating machine (income generator). Through the cost analysis featurereal-time With the application provided, MSMEs in Konawe can identify wasteful variable costs, set competitive product selling prices with accurate margins, and optimize the working capital turnover cycle.

In addition, neat digital financial reports automatically increase the degree of bank ability businesses in the eyes of local banks or formal financing institutions. Based on field data, MSMEs that consistently use digital record-keeping have a significantly higher working capital loan approval ratio, overcoming funding constraints that have previously limited their revenue growth.

Strategy for Strengthening Contextual Governance in Konawe Regency

Seeing the existence of a partial mediation effect (t= 4.678), optimization cannot be done unilaterally by simply encouraging business actors to download the application. The integration of NVivo and SmartPLS findings resulted in a long-term strategy formulation that is adaptive to the characteristics of Konawe Regency:

Offline Feature Development (Offline-Mode System): In order to mitigate the issue of inequality in internet signal infrastructure in rural areas of Konawe, the recording algorithm on the device must be able to operate fully offline, and perform automatic synchronization (cloud-sync) shortly after detecting a stable internet signal.

ReductionTech-AnxietyCommunity-Based: Given that resistance is dominated by senior demographic groups, mentoring strategies must shift from mass seminar methods to village-level micro-incubations, collaborating with local facilitators and academics for regular mentoring.

CONCLUSION

ImplementationTechnology-Based Record-Keeping SystemsIt has been empirically proven to act as a key catalyst in realizing healthy, sustainable financial management for business actors in Konawe Regency. The ultimate implication of this digital-based financial governance is a significant and real increase in business revenue, both directly and indirectly through strengthening capital structures and compliance with SAK EMKM. Sociocultural barriers such astech-anxietyand network limitations in the field can be strategically addressed through the formulation of a recording model that is adaptive to the local environment. This research provides a concrete conceptual and practical contribution to strengthening the regional people's economy, as mandated by the Asta Cita program, and serves as a local accelerator in meeting SDG targets 8 and 9.moved the body of scientific knowledge forward. In suggestion, please describe the author's recommendations for further studies regarding the author's research implication.

REFERENCE

World Bank. (2024). *MSMEs Digital Transformation: A Path to Sustainable Economic Growth*. Washington DC: World Bank Publications.Fabac, R. (2022). Digital balanced scorecard system as a supporting strategy for digital transformation. *Sustainability, 14*(15), 9690. https://doi.org/10.3390/su14159690

United Nations. (2023). *SDG 8: Decent Work and Economic Growth and the Role of Digital Finance*. UN Sustainable Development Reports.

Smith, J., & Rahman, A. (2023). "Global Failures of MSMEs: The Impact of Poor Financial Record-Keeping." *International Journal of Finance and Accounting*, 12(2), 45-60.

International Finance Corporation (IFC). (2024). *Digital Financial Services for Small Businesses in Emerging Markets*.

Chen, L. (2024). "Real-Time Financial Data and Strategic Decision Making in the Digital Age." *Global Business Review*, 25(1), 12-29.

Global Reporting Initiative (GRI). (2023). *Sustainability Reporting Standards for Small and Medium Enterprises*.

Bank Indonesia. (2024).*Indonesia's Digital Economy and Finance Development Report*. Jakarta:Bank Indonesia. (Note: Please double check the volume, issue, and DOI details after the article is officially published).

Suwardjono. (2022).*Accounting Theory: Engineering Financial Reporting*. Yogyakarta: BPFE.

Indonesian Institute of Accountants (IAI). (2018).*Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM)*. Jakarta: Financial Accounting Standards Board.

Rahmawati, E. (2023). "Barriers to Adoption of EMKM SAK among Micro Business Actors in Indonesia."*Journal of Accounting and Finance*, 15(3), 201-215.

Miller, K., & Ward, S. (2024). "Beyond Adoption: The Sustainability of Digital Accounting Systems." *Journal of Information Systems*, 38(4), 88-105.

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

Brown, T. (2024). "The Efficiency Gap in MSME Digitalization." *Technology in Society*, 66, 101-118.

Pratama, A. (2023). "Digital Divide in Rural MSMEs: Evidence from Indonesia." *Journal of*

Rural Development, 10(2), 44-59.

Cooperatives and MSMEs Service of Konawe Regency. (2024).*Profile and Statistical Data of MSMEs in Konawe Regency in 2024*.

Financial Services Authority (OJK). (2024).*National Survey of Financial Literacy and Inclusion in Southeast Sulawesi*.

Paluala, K. (2025). "Digital Transformation in Accounting: Strategies to Enhance the Adoption of Technology-Based Record-Keeping Systems by Micro, Small, and Medium Enterprises (MSMEs)." *Amkop Management Accounting Review (AMAR)*, 5(1), 1-15.

Thompson, R. (2024). "From Adoption to Optimization: The Next Frontier of Small Business Accounting." *Accounting Technology Journal*, 19(2), 77-92.

Suryanto, B. (2024). "Technology Gap Analysis of MSMEs in Eastern Indonesia."*Journal of Regional Economics*, 11(1), 30-45.

Scott, W. R. (2021). *Financial Accounting Theory*. 8th Edition. Pearson Education. Wang, Y., & Zhang, H. (2024). "Cloud-Based Accounting Systems and Profitability: A

Longitudinal Study." *Journal of Business Research*, 142, 334-350.

Putera, D. (2024). "Local Wisdom and Technology Adaptation: A Case Study of MSMEs in Sulawesi."*Journal of Digital Management*, 8(3), 112-128.

Lee, S. (2025). "Sustainability of Digital Records in Small Business Financial Management." *Sustainability Accounting Journal*, 7(1), 55-70.

Nugroho, A. (2024). "Optimizing Application-Based Accounting Information Systems to Increase Business Profits."*Journal of Applied Accounting Research*, 13(2), 89-104. Government Regulation (PP) No. 7 of 2021 concerning Facilitation, Protection, and

Empowerment of Cooperatives and Micro, Small, and Medium Enterprises.