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Research Article

Digitization of Microfinancing Operational Procedures

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ABSTRACT

This study delves into the crucial theme of enhancing income-generating capacity, recognizing its pivotal role in meeting basic human needs and catalyzing prosperity within communities. The motivation behind this research lies in addressing this significant issue through the lens of microfinancing, a viable solution to the identified problem. Focusing on a group of microfinancing units strategically located in North Cotabato, Philippines, this study follows the experiences of personnel within these units. The integration of digitization into their operational procedures aimed to elevate service efficiency, providing a contemporary solution to the challenges faced. The research methodology employed was qualitative, utilizing purposive sampling to gain in-depth insights. Observations, interviews, and informal conversations with key informants, including loan officers, branch managers, and an area monitor, were integral to the inquiry. Both physical and electronic documents played a crucial role in enriching the data collected. Specifically, the study aimed to identify both digitized and non-digitized operational procedures, elucidate the experiences of microfinancing employees concerning these procedures, observe the effects of digitization, and pinpoint immediate improvements resulting from digitization. Key conclusions emerged from the study. Notably, loan processing was identified as the sole procedure yet to undergo digitization. The digitized procedures, encompassing data management, loan disbursement, repayment tracking, and financial reporting, demonstrated notable advantages, characterized by increased speed and reduced errors. Importantly, personnel satisfaction with digitized operational procedures witnessed a positive upturn. Identified improvements that underscore these findings include digitizing loan processing, optimization of loan officers' client-handling capacity, and fortifying institutional data security.

Keywords: *Data management, Digitization, Loan processing, Philippines, Social capital*

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Introduction

This study is dedicated to enhancing the income-generating capacity of underprivileged communities, recognizing its crucial role in addressing fundamental human needs like food, shelter, health, and education. The absence of such capacity can lead to human suffering, social deprivation, and criminality. The profound significance of this issue drove the selection of microfinancing as the study's focal point. Microfinancing, seen as a catalyst for grassroots development, offers hope in poverty-stricken communities. Unlike simply providing money, microfinancing views communities as active partners in economic development, assisting individuals with the expectation of their committed involvement in improving their circumstances.

In this collaborative effort, microfinancing plays a vital role, evident in studies highlighting its positive impact on entrepreneurial success, especially among female entrepreneurs (Babajide et al., 2022) and its contribution to improved living standards through income generation and employment opportunities (Chowdhury & Ramchandra, 2023b). A study on barriers to technology innovation among budding entrepreneurs revealed the frequent need for funds in deprived areas (Rajiani et al., 2023). Additionally, research on women entrepreneurship antecedents emphasized that access to micro-loans has the highest impact on women entrepreneurship (Dewi et al., 2022).

Given microfinancing's critical role in the lives of underprivileged individuals and communities, there's a need to enhance its service capacity. Modern technology, specifically digitization, presents this opportunity. Studies show that digitization has positive effects on businesses' financial performance (Lolemo & Pandya, 2023) and is essential for small and medium enterprises' adaptability, competitiveness, and long-term viability (Ghimire et al., 2023). A study on the influence of digital transformation on the growth of small and medium enterprises revealed its substantial impact on cultivating customer relationships and ensuring business accessibility (Jeza & Lekhanya, 2022).

This study meticulously examines the experiences of personnel within a network of microfinancing units across North Cotabato, Philippines. It investigates the integration of digitization initiatives into their operational procedures, aiming to enhance service efficiency. Aligned with this initiative, the study seeks to comprehensively explore the effects of digitization on microfinancing operational procedures, contributing valuable insights to the intersection of microfinancing, technological advancement, and community development.

Research Questions

The inquiry centered on the experiences of several microfinancing employees with the digitization of their operations. Specifically, the study sought to answer the following inquiry.

1. What were the digitized and non-digitized operational procedures in the identified group of microfinancing units?
2. What were the key experiences of the microfinancing employees related to the identified operational procedures done in their organization?
3. What were the observable effects brought about by the digitization of operational procedures?
4. What were the other digitization improvements that became manifest through the findings of the study?

Methods

The research was carried out within the microfinancing units situated in North Cotabato, Philippines, with a specific emphasis on their response to technological advancements, particularly digitization. Specific information about the microfinancing units was not mentioned based on the organization's approval to have the research conducted provided anonymity is followed. This investigation delved into the initiatives undertaken by these units to augment their services and improve customer experiences through the integration of digital technologies. The qualitative nature of the inquiry lent itself to a case study methodology, seeking to understand how technology impacted the operations of these microfinancing units. The research employed purposive sampling, selecting informants directly engaged in

the day-to-day operations of the microfinancing units under investigation. The primary methods of data collection included observations, interviews, and informal conversations. Additionally, both physical and electronic document reviews were conducted to gather comprehensive insights. The gathering of information focused on the possible changes caused

by the introduction of digitization, be it positive or negative. A total of fifteen loan officers, five branch managers, and an area monitor were identified as key informants, forming the basis of the study. Table 1 provides an overview of the informants involved in the study, reflecting the diverse roles within the microfinancing units.

Table 1. Informants

	Loan Officers	Branch Managers	Area Monitor
Informants	15	5	1
Grand Total		21	

Results and Discussions

Operational Procedures and Status of Digitization

Table 2. Operational Procedures and their Digitization Status

Operational Procedures	Digitization Status
Customer Data Management	Digitized
Loan Processing	Not Digitized
Loan Disbursement	Digitized
Repayment Tracking	Digitized
Financial Reporting	Digitized

Customer Data Management

The initial operational procedure subjected to digitization was customer data management. Within this process, microfinancing officers undertook the tasks of collating, retrieving, and analyzing client information. Ensuring the accuracy, security, and usability of this client data was paramount, traditionally achieved through the manual completion of forms by clients. However, certain factors beyond the officers' control introduced challenges to this process. Variables such as the exact timing of customer visits, the volume of customers at any given time, and the varying levels of customer literacy posed uncertainties. Particularly, clients with lower literacy levels required additional assistance in completing forms. Despite this situation, in non-digitized customer data processing, a loan officer would serve around half a hundred clients in roughly two hours. This activity was normally done in the afternoon. In response to these challenges, digitization was introduced, enabling loan officers to encode client information directly into the database. Notably, the study suggests a potential avenue for

further exploration, such as the development of an application allowing clients to fill out forms online at their convenience—an innovation that could enhance the efficiency of data collection.

While many unknowns persist, making it challenging to quantify the rate of data management per customer, partial digitization has nonetheless led to improvements in database availability, data retrieval, and analysis. The introduction of new technology necessitated training for microfinancing personnel, aligning with findings in studies on e-resource readiness, and emphasizing the need for training in computer applications and data management (Abdulkareem, 2021; Shah et al., 2023). A study on the determinants of employee digital transformation readiness and job performance revealed that employees' attitude, self-efficacy, and characteristics affected their readiness for digital transformation (Thu et al., 2023). From the point of view of customers, a study on customer preference shift showed that customers change their preferences once they observe obvious improvements in previous practices

(Narsico & Narsico, 2023). The implementation of digitization also brought forth the need for e-maintenance, requiring business personnel to familiarize themselves with data management challenges and potential threats (Razmi-Farooji et al., 2023). This encompassed the acquisition of specific types of data and tools for e-maintenance systems. Moreover, ensuring the efficiency of data management involves incorporating shared practices into the organizational operational processes, as highlighted by studies emphasizing practices that facilitate data management efficiency (Lichtenthaler, 2021).

Loan Processing

The digitization initiative within the microfinancing units notably excluded loan processing, a multifaceted procedure commencing with the submission of a loan application. Subsequent steps involved a meticulous evaluation to ensure borrowers met all stipulated requirements and conditions, a process that included house visitations and environmental assessments. This thorough approach was crucial, requiring a significant time commitment from microfinancing officers who typically dedicated at least six afternoons to visit clients during the loan processing phase. The significance of diligent loan processing is underscored by the critical role it plays in selecting good creditors. The survival of non-bank financial institutions, such as microfinancing, heavily relies on interest incomes from successful loans. Studies in the field highlight the impact of non-performing loan ratios and net interest margin on the profitability of non-bank financial institutions (Imtiaz et al., 2019). This underscores the microfinancing units' emphasis on quality monitoring in both loan applications and subsequent loan payments. A study on the credit risk of microfinance loans among micro-enterprises revealed age, business type, prior loan utilization, and loan experience do not significantly influence individuals' perceptions of credit risk associated with microfinance loans (Juventud et al., 2023). The same study alludes to the necessity of exploring other potentially relevant factors. This further adds to the complex nature of loan processing.

The identification of borrower characteristics emerged as a key task for loan officers, with research by Abdi et al. (2023) highlighting the significance of these characteristics as predictors of good loan borrowers. Moral character and creditworthiness were identified among these characteristics in a study by Nininahazwe & Mutembe (2023). The same study stressed the importance of robust credit risk mechanisms to mitigate loan default risks. In instances where creditworthiness is assessed, the absence of financial or credit history emerges as a positive indicator (Goel & Rastogi, 2021). For borrowers facing credit risks from external factors, the introduction of risk-sharing schemes, such as agricultural insurance, was suggested as a proactive measure (Kuhn & Bobojonov, 2021). The loan processing cycle culminated in a decision to either grant or deny the loan. Integral to this process, microfinance officers' possession of intellectual capital, including knowledge, skills, training, and positive intangible capabilities, proved essential. A study by Gaur & Gupta (2023) indicated that intellectual capital positively influences the management of non-performing assets and aids in the handling of problematic loans, starting from the approval of loan applications. This highlights the holistic approach required in managing the intricate and critical stage of loan processing within microfinancing operations.

Loan Disbursement

The subsequent digitized operational procedure was loan disbursement, involving the release of approved loan funds to borrowers. In the non-digitized procedure, clients scheduled to receive loans underwent a formal orientation seminar, facilitating comprehension of loan payment procedures. With the introduction of digitization, the face-to-face orientation seminar was replaced by a conveniently accessible digitized format, streamlining the loan disbursement process. Although the process was partially digitized, there is room for improvement by considering complete digitization, where forms are filled digitally, and funds are disbursed through automated teller machines. This aligns with studies emphasizing the advantages of digitization in providing financial services (Mahayana & Purwanto,

2023). However, it is crucial to acknowledge potential challenges, including the emergence of cybercrimes. Strict legal regulations and standardization of cybersecurity systems are deemed necessary to address these threats and maintain customer confidence, preventing asset outflow and protecting the reputation of financial institutions (DOROSH, 2023).

Efficiency in loan disbursement could also be enhanced by adhering to time-tested company protocols, as suggested by a study emphasizing that profitability is positively influenced by guideline adherence (Shiralashetti & Hadapad, 2021). Furthermore, attracting un-reached customers and improving loan facilities were identified as strategies to enhance performance. An indication of successful loan disbursement performance is the presence of customers who complete their loans and return for additional ones, signifying that borrowed funds are used for the intended purpose. This concept is recognized as one of the social indicators of positive financial performance (Singh, 2023). Considering social performance indicators in microfinancing, studies have established a strong correlation between microfinancing services and the income stability of identified businesses (Apat & Bawica, 2022). Additionally, microfinancing has been shown to significantly impact the growth of entrepreneurship, particularly among women in specific localities (Adeoti et al., 2021). These findings emphasize the broader positive effects of microfinancing on both economic stability and entrepreneurial development within communities.

Repayment Tracking

The digitization initiative targeted the operational process of repayment tracking, wherein financial officers assumed the responsibility of monitoring and managing the repayment of loans or credit provided to borrowers. This multifaceted task involved meticulous tracking of borrowers' payments, ensuring adherence to repayment schedules, and effectively managing any overdue or missed payments. Microfinancing officers, assigned around fifty clients each, traditionally carried out this process in the morning. With the intro-

duction of digitization, loan repayment tracking has been seamlessly integrated into the readily available customer database, offering enhanced efficiency. This process also encompasses the physical collection of loan payments, often conducted in the afternoons, with microfinance officers visiting the homes of creditors. This approach is particularly useful in cases where it is inconvenient for borrowers to visit the microfinancing establishment.

Emphasizing the proactive nature of payment tracking and collection, a study revealed that persistent follow-up on clients' loan payment obligations, even with frequent loan defaulters, significantly reduces the frequency of loan non-payments (Karanja & Simiyu, 2022). The task in this process would have been simplified if all clients consistently paid the correct amount and adhered to the repayment schedule. Consideration of factors influencing loan repayment is crucial before approving loans. Notably, the alignment of values between lenders and borrowers, favorable loan credit terms, and thriving business performance collectively contribute to improved loan repayment performance (Zahid & Rao, 2022). In alignment with this perspective, another study corroborated these findings, particularly highlighting the positive effects of social capital and favorable loan credit terms on loan payment performance (Iqbal & Rao, 2022). Stressing the importance of appropriate lending interest rates, a study indicated that such rates significantly reduce the occurrence of loan non-payment (Ghosh et al., 2020). The same study asserted the necessity of adapting domestic lending interest rates to the comprehension situation of the community being served. In challenging circumstances, akin to those experienced during the pandemic, credit restructuring emerged as a viable option to make loan repayment more manageable for borrowers (Calin et al., 2023). However, in cases where borrowers fail to meet their obligations due to the misuse of loaned funds, creditors cannot solely blame external forces for non-payment (Jakhar et al., 2023). This underscores the importance of responsible and informed borrowing practices within the microfinancing context.

Financial Reporting

This operational process, too, underwent digitization, functioning as a monitoring mechanism for the monthly transactions of the microfinancing unit. In this context, microfinancing unit personnel generated documents showcasing their monthly financial performance for top management. Unlike other processes requiring daily compliance, this specific operational task occurs monthly. Before digitization, the preparation of financial reports typically took about two days for each microfinancing unit. However, with the integration of digitization, essential documents became readily accessible through electronic files, reducing the time required for this task by half. Despite the evident benefits, the digitization of financial statement preparations can present challenges. A study revealed that organizations, upon introducing digitization, are mandated to integrate their existing systems. Moreover, issues such as the inadequacy of technological infrastructure, internet availability, and a lack of trained personnel to handle new technologies can compound the complexity of the situation, discouraging organizations from adopting digitization for financial statement preparations (Susilowati et al., 2023). Fortunately, such hindrances were not observed in the microfinancing units identified in this study.

Financial reports, in most cases, are expected to illustrate the profitability, liquidity, and solvency ratios of the business (Yuniawati & Farman, 2023b). Additionally, a critical consideration in financial reporting is the identification of potential fraud. In this context, tools for predicting the possibilities of financial manipulation are available (Wang et al., 2023). From a broader perspective, a study on the digital transformation of microfinance institutions revealed that digitization not only aids microfinance institutions in improving profitability through the application of digital support solutions but also enhances their social performance through the adaptation of these tools (Dorfleitner et al., 2021). In a parallel vein, an examination of digitization effects on banks' financial performance indicated that digital transformation had a positive impact on financial institutions, particularly banks, driven by the introduction of digitized payment tools,

digital channels, and internet security (Theiri & Hadoussa, 2023). These findings underscore the multifaceted benefits and positive outcomes associated with the strategic adoption of digitization in the financial operations of microfinance units.

Microfinance Employee Experience on Digitized Operational Procedures

The infusion of digitization into microfinancing operations has brought about tangible enhancements in the efficiency of various operational procedures. Recognizing the inherent diversity in client interactions, it becomes apparent that the collective experiences of those engaging with digitized processes underscore substantial progress. Notably, processing times have been expedited, and instances of errors have seen a marked reduction. The improvements in data management, loan disbursement, and repayment tracking can be attributed to the seamless access to customer databases, the streamlining of document forms, and the introduction of a more organized sequence of steps facilitated by computer applications. Noteworthy gains have also been made in financial statement preparation, with the microfinancing unit significantly reducing the time involved by leveraging its database for essential documents and employing pertinent computer applications. The digitization initiative not only facilitated accuracy in both data collation and retrieval processes but also fostered better decision-making outcomes through the analysis of precise data. Corroborating these findings, Seseli et al. (2023) asserted in a related study that digitization not only enhances process accuracy but also augments work efficiency, cost savings, and customer satisfaction. A study on the advantages and challenges of digitization, as highlighted by HOLOVCHAK et al. (2023), reinforced the notion that automation of manual tasks and optimization of data storage contribute to improved performance. Nevertheless, the study underscored the challenges of high implementation costs and the need for robust technical support.

From a personnel perspective, the increased efficiency in work speed and accuracy resulted in heightened appreciation among microfinancing staff for their organization's

digitization initiatives. While these personnel were already content with their impact on impoverished communities, the positive effects of digitization further elevated their job satisfaction—a sentiment consistent with findings from various studies. Research conducted among bank employees (Ichbal & Ubaidillah, 2023), workers in the beauty service industry (Kim et al., 2023), and nurses (Dirdjo et al., 2023) consistently revealed a strong positive relationship between job satisfaction and job performance. In parallel, the microfinancing personnel's increased job satisfaction aligns with these established patterns, highlighting the profound impact of digitization on both efficiency and employee contentment. This situation leads to an intensified worker engagement with work and inspires innovation. A study on the impact of employee engagement and innovation revealed that both variables in the study contribute to business success (Shkurti & Mustafa, 2024).

Additional Digitization Improvements

Digitization presents numerous opportunities for improvement, particularly through the adoption of more suitable and advanced applications. A good example of this assertion could be gleaned from a study on the legal framework for taxing digital transactions that showed the relevance of a digitized tax platform for online transactions that is both convenient and accessible for taxpayers leading to a timely and resilient revenue generation and imposition of tax administration (Cater et al., 2023). Additionally, improvements in digitization could be derived from a meticulous evaluation of a digitized operation. A study on the importance and performance analysis of digital platform attributes revealed that the organization focused in the study was weak in three out of eighteen relevant factors, allowing the organization to tailor-fit improvements (Wahyudin et al., 2023).

However, in the current context of the microfinancing units, three key areas have been identified for immediate enhancement: digitization of loan processing, optimization of loan officers' client-handling capacity, and safeguarding of institutional data. The primary area for potential improvement centers on the digit-

ization of loan processing. Notably, this operational process within the study remained non-digitalized. At its core, loan processing involves a critical aspect of decision-making. The loan-approving officer makes decisions regarding loan approval or denial, relying on information collected by microfinance officers. These officers, operating in the field, gather pertinent client information and input them into the decision-making process.

The process of quality data gathering and the subsequent data analysis leading to decision-making can be digitized. In support of this line of thinking, a study on data-driven decision-making practice in higher education institutions showed that in some contexts, instructors use manual data analysis and basic software in handling job-related data (Asfaw et al., 2023). The same study asserted the need for capability enhancement training and leadership support to pave the way to the use of more sophisticated data analytics. A study on a similar subject matter in the context of maintenance management revealed that with digitized data-driven decision-making, key components in maintenance operations were coordinated effectively with cross-functional responsibilities (Hinrichs et al., 2023). This is a complex task but was efficiently implemented through a digitized decision-making process. Digitized data-driven decision-making could significantly cut the procedure of loan processing which currently takes six half days. Standardizing required data for loan approval and making them available electronically to decision-makers could be the first step in the right direction. One of the obstacles in the implementation of the mentioned improvement is resistance to change. In this connection, a study by Sayogo et al. (2023), pointed out the possibility of resistance in terms of the attitudes and mindsets of key people in organizations.

As indicated in the study, the operational capacity of a microfinancing unit was inherently tethered to the processing capabilities of its officers. This limitation in capability had direct implications for the scale of services the microfinancing unit could extend to its surrounding communities. While digitization has already brought about notable improvements

in operational procedures, there exists an opportunity to leverage this technological advancement further to maximize the service capability of the microfinancing unit. Digitization, by its nature, enhances technical efficiency, defined as proficiency in transforming inputs into outputs (Feng et al., 2022). By harnessing the benefits of digitization, the microfinancing unit can elevate its service capability, resulting in a broader reach and impact on the communities it serves. The amplification of service capability translates to a greater number of clients benefiting from its services, thereby fostering a more substantial economic influence on the surrounding communities. This evolution represents a progressive step towards aligning technological advancements with the overarching goal of enhancing the microfinancing unit's contribution to community development.

Addressing the third potential improvement, the introduction of digitization has brought about the convenience of information relay, but it has also introduced the potential vulnerability of computer hardware or software breakdowns. Microfinancing personnel now bear the responsibility of safeguarding both the personal data of their clients and the sensitive documents of their institution. Effective data protection necessitates the active involvement of everyone in the organization, including clients, as highlighted by research findings (Liyanaarachchi et al., 2020). To mitigate the risks associated with potential computer hardware and software issues, implementing standard operating procedures for data preservation is crucial. This may involve the creation of backup digital files and maintaining hard copies. These precautionary measures not only serve as a protective measure against potential digital disruptions but also contribute to a comprehensive approach to data security and preservation within the microfinancing unit. By fostering a culture of shared responsibility and implementing robust data preservation practices, the organization can proactively address potential challenges associated with digitization while ensuring the integrity and security of valuable information.

Conclusions

Based on the findings through observations, interviews, informal conversations with informants, and document reviews the following conclusions were deduced.

1. Out of five operational procedures done in the microfinancing units, only loan processing was not digitized.
2. The digitized operational procedures improved processing speed and accuracy.
3. Personnel satisfaction with digitized operational procedures improved.
4. Immediate areas of possible improvements were the digitization of loan processing, maximization of loan officers' client-handling capacity, and protection of institutional data.

Recommendations

After considering the conclusions, recommendations were directed to the personnel of the group of microfinancing units included in the study, to the personnel of other microfinancing entities, and future researchers.

1. It was recommended to microfinancing personnel included in the study to digitize their loan processing procedures, increase their service capacity, and install data protection mechanisms.
2. It was recommended that other microfinancing institutions adopt digitization initiatives.
3. It was recommended to other researchers to conduct studies related to intensifying the impact of digitization like customized applications, standardizations of operational procedures, etc.

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References

- Abdi, A. A., Mohamud, I. A., & Hussein, F. (2023). BORROWER'S CHARACTERISTICS AND LOAN REPAYMENT PERFORMANCE AMONG SMALL AND MEDIUM ENTERPRISES IN MOGADISHU, SOMALIA. *Journal of Asian and African Social Science and*

- Humanities, 9(2), 87–95. <https://doi.org/10.55327/jaash.v9i2.306>
- Adeoti, G. O., Siyanbola, T. T., Adegbe, F. F., & Adekola, D. O. (2021). Microfinancing and Entrepreneurship Growth among Women in Ogun State, Nigeria. *Asian Journal of Managerial Science*, 10(2), 16–26. <https://doi.org/10.51983/ajms-2021.10.2.2855>
- Apat, E. J. C., & Bawica, I. M. (2022). MICROFINANCING SERVICES TO INCOME STEADINESS BY MINI GROCERY STORE OWNERS. *Malaysian Business Management Journal*, 1(2), 92–98. <https://doi.org/10.26480/mbmj.02.2022.92.98>
- Asfaw, Z., Alemneh, D. G., Jimma, W., & Ferede, B. (2023). Data-Driven Decision-Making practice in higher education institutions in Ethiopia. *Proceedings of the Association for Information Science and Technology*, 60(1), 872–874. <https://doi.org/10.1002/pr2.882>
- Babajide, A. A., Obembe, D., Solomon, H., & Woldesenbet, K. (2022). Microfinance and entrepreneurship: the enabling role of social capital amongst female entrepreneurs. *International Journal of Social Economics*, 49(8), 1152–1171. <https://doi.org/10.1108/ijse-11-2020-0745>
- Calin, A. M., Pargaru, O. I., Răducan, D., & Buzoi-anu, O. a. C. (2023). Determinants of the probability of non-repayment of loans granted to individuals. *European Journal of Sustainable Development*, 12(4), 217. <https://doi.org/10.14207/ejsd.2023.v12n4p217>
- Cater, B. P., Agustin, R. C., Josef, J. R., Oxales, A. A. F., & Malang, B. P. (2023). Assessing The Country's Legal Framework for Taxing Digital Transactions: A Basis for Recommending Policy Measures. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(11), 3923–3936. <https://doi.org/10.11594/ijma-ber.04.11.13>
- Chowdhury, A., & Ramchandra. (2023b). Impact of Microfinancing on Socio Economic Status and Employment Condition among the Rural Farmers in Murshidabad District of West Bengal, India. *Journal of Experimental Agriculture International*, 45(9), 46–56. <https://doi.org/10.9734/jeai/2023/v45i92174>
- Dewi, R., Eliyana, A., & Anwar, A. (2022). The role of women entrepreneurship antecedents in supporting social and economic well-being. *Problems and Perspectives in Management*, 20(2), 438–447. [https://doi.org/10.21511/ppm.20\(2\).2022.36](https://doi.org/10.21511/ppm.20(2).2022.36)
- Dirdjo, M. M., Syahab, S. R., Sureskiarti, E., & Suwanto, S. (2023). Job satisfaction and nurse performance. *Jurnal Ilmu Kesehatan*, 11(1), 25–40. <https://doi.org/10.30650/jik.v11i1.3700>
- Dorfleitner, G., Forcella, D., & Nguyen, Q. A. (2021, September 21). The digital transformation of microfinance institutions: an empirical analysis. *Journal of Applied Accounting Research*, 23(2), 454–479. <https://doi.org/10.1108/jaar-02-2021-0041>
- DOROSH, I. (2023, October 31). Cyber security and its role in the financial sector: threats and protection measures. *Economics. Finances. Law*, 10, 48–51. <https://doi.org/10.37634/efp.2023.10.10>
- Feng, S., Chong, Y., Yang, Y., & Hao, X. (2022). DIGITIZATION AND TOTAL FACTOR PRODUCTIVITY: EVIDENCE FROM CHINA. *The Singapore Economic Review*, 1–33. <https://doi.org/10.1142/s0217590822500771>
- Gaur, D., & Gupta, K. (2023, March 15). Intellectual capital and non-performing assets: the role of knowledge assets in improving credit quality of Indian banking sector. *Journal of Indian Business Research*, 15(3), 379–402. <https://doi.org/10.1108/jibr-03-2021-0113>
- Ghimire, A., Jaiswal, B., Shrestha, J., Shrestha, K., & Shrestha, S. (2023). COVID-19 and Digitization of SMEs: the impact and way forward. *New Perspective Journal of Business and Economics*, 6(1), 83–90.

- <https://doi.org/10.3126/npjbe.v6i1.58918>
- Ghosh, R., Sen, K. K., & Riva, F. (2020, July 17). Behavioral determinants of nonperforming loans in Bangladesh. *Asian Journal of Accounting Research*, 5(2), 327–340. <https://doi.org/10.1108/ajar-03-2020-0018>
- Goel, A., & Rastogi, S. (2021). Credit scoring of small and medium enterprises: a behavioural approach. *Journal of Entrepreneurship in Emerging Economies*, 15(1), 46–69. <https://doi.org/10.1108/jeee-03-2021-0093>
- Hinrichs, M., Prifti, L., & Schneegass, S. (2023, December 14). Data-driven decision-making in maintenance management and coordination throughout the asset life cycle: an empirical study. *Journal of Quality in Maintenance Engineering*. <https://doi.org/10.1108/jqme-04-2023-0038>
- HOLOVCHAK, Y., HOLOVCHAK, H., & PYSARCHUK, O. (2023, November 30). Digitalization of accounting: advantages and challenges in the era of digital technologies. *Economics. Finances. Law*, 11/2023, 38–42. <https://doi.org/10.37634/efp.2023.11.7>
- Ichbal, M., & Ubaidillah, H. (2023). The Effect of Career Development, Job Placement and Job Training on the Performance of Bank Employees with Job Satisfaction as Moderating Variable. *Academia Open*, 8. <https://doi.org/10.21070/acopen.8.2023.3773>
- Imtiaz, M. F., Mahmud, K., & Faisal, M. S. (2019). The Determinants of Profitability of Non-Bank Financial Institutions in Bangladesh. *International Journal of Economics and Finance*, 11(6), 25. <https://doi.org/10.5539/ijef.v11n6p25>
- Iqbal, Z., & Rao, Z. U. R. (2022, June 13). Social capital and loan credit terms: does it matter in microfinance contract? *Journal of Asian Business and Economic Studies*, 30(3), 187–209. <https://doi.org/10.1108/jabes-10-2021-0185>
- Jakhar, B., Kait, R., & Kumar, V. (2023). Loan Utilisation and Repayment Behaviour: Evidence from Farmers of Haryana. *Economic and Regional Studies*, 16(2), 286–316. <https://doi.org/10.2478/ers-2023-0019>
- Jeza, S., & Lekhanya, L. M. (2022). The influence of digital transformation on the growth of small and medium enterprises in South Africa. *Problems and Perspectives in Management*, 20(3), 297–309. [https://doi.org/10.21511/ppm.20\(3\).2022.24](https://doi.org/10.21511/ppm.20(3).2022.24)
- Juventud, W. M., Matigas, E. A. O., Himongala, J., Galla, M. R., & Abiol, M. J. D. (2023). Perceived Credit Risk of Micro Finance Loans among Micro-enterprises Business in Población Iligan City. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(10), 3697–3702. <https://doi.org/10.11594/ijmaber.04.10.22>
- Karanja, S., & Simiyu, E. (2022). Credit management practices and loan performance of microfinance banks in Kenya. *Journal of Finance and Accounting*, 6(1), 108–139. <https://doi.org/10.53819/81018102t6009>
- Kim, S., Joung, J., & Oh, S. (2023). A Study of the Effects of Individual Competences on Job Satisfaction and Job Performance: For those working in the beauty service industry. *Han’gug Miyong Haghoeji*, 29(5), 1222–1230. <https://doi.org/10.52660/jksc.2023.29.5.1222>
- Kuhn, L., & Bobojonov, I. (2021). The role of risk rationing in rural credit demand and uptake: lessons from Kyrgyzstan. *Agricultural Finance Review*, 83(1), 1–20. <https://doi.org/10.1108/afr-04-2021-0039>
- Lichtenthaler, U. (2021). Data management efficiency: major opportunities for shared value innovation. *Management Research Review*, 45(2), 156–172. <https://doi.org/10.1108/mrr-10-2020-0639>
- Liyanaarachchi, G., Deshpande, S., & Weaven, S. (2020). Market-oriented corporate digital

- responsibility to manage data vulnerability in online banking. *International Journal of Bank Marketing*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/ijbm-06-2020-0313>
- Lolemo, S., & Pandya, H. (2023). THE IMPACT OF DIGITIZATION ON THE PROFITABILITY OF SELECTED INDIAN BANKS: POOLED OLS MODEL APPROACH. *International Journal of Management Public Policy and Research*, 2(3), 1–9. <https://doi.org/10.55829/ijmpr.v2i3.167>
- Mahayana, D. a. L., & Purwanto, I. W. N. (2023). THE INFLUENCE OF DIGITALIZATION ON BANKING FINANCIAL INSTITUTIONS IN INDONESIA. *POLICY LAW NOTARY AND REGULATORY ISSUES (POLRI)*, 2(4), 365–372. <https://doi.org/10.55047/polri.v2i4.864>
- Narsico, L. O., & Narsico, P. G. (2023). Customer Preference Shift: A Laundry Shop Experience. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(12), 4160–4167. <https://doi.org/10.11594/ijma-ber.04.12.01>
- Nininahazwe, P., & Mutembe, C. (2023). Analyzing the effects of credit management practices on loan repayment performance of microfinance institutions in Makamba, Burundi. *International Journal of Current Aspects in Finance, Banking and Accounting*, 5(2), 49–70. <https://doi.org/10.35942/416j5039>
- Rajiani, I., Kot, S., Michałek, J., & Riana, I. G. (2023). Barriers to technology innovation among nascent entrepreneurs in deprived areas. *Problems and Perspectives in Management*, 21(3), 614–628. [https://doi.org/10.21511/ppm.21\(3\).2023.48](https://doi.org/10.21511/ppm.21(3).2023.48)
- Razmi-Farooji, A., Kropsu-Vehkapera, H., Härkönen, J., & Haapasalo, H. (2019). Advantages and potential challenges of data management in e-maintenance. *Journal of Quality in Maintenance Engineering*, 25(3), 378–396. <https://doi.org/10.1108/jqme-03-2018-0018>
- Sayogo, D. S., Yuli, S. B. C., & Amalia, F. A. (2023). Data-driven decision-making challenges of local government in Indonesia. *Transforming Government: People, Process and Policy*. <https://doi.org/10.1108/tg-05-2023-0058>
- Seseli, E. M. I., Risakotta, K. A., & Bawono, A. (2023). The Role of Accounting Digitization in Entrepreneurial Success in West Java: Quantitative study of efficiency, accuracy, cost reduction, customer satisfaction, and data security. *The ES Accounting and Finance*, 1(02), 82–94. <https://doi.org/10.58812/esaf.v1i02.65>
- Shah, N. U., Naeem, S. B., & Bhatti, R. (2023). Digital data sets management in university libraries: challenges and opportunities. *Global Knowledge, Memory and Communication*. <https://doi.org/10.1108/gkmc-06-2022-0150>
- Shiralashetti, A. S., & Hadapad, M. (2021). EFFICIENCY IN SANCTION AND DISBURSEMENTS OF LOANS: A STUDY OF BIJAPUR DISTRICT CENTRAL CO-OPERATIVE BANK VIJAYAPUR. *PARIPEX INDIAN JOURNAL OF RESEARCH*, 24–28. <https://doi.org/10.36106/paripex/3205551>
- Shkurti, L., & Mustafa, L. (2024). The impact of employee engagement and innovation performance on business success in manufacturing and service enterprises in Albania and Kosovo. *Problems and Perspectives in Management*, 22(1), 94–102. [https://doi.org/10.21511/ppm.22\(1\).2024.09](https://doi.org/10.21511/ppm.22(1).2024.09)
- Singh, K. (2023). Social performance, financial risk and financial performance in microfinance institutions. *International Journal of Bank Marketing*. <https://doi.org/10.1108/ijbm-01-2023-0005>
- Susilowati, E., Permadi, A., Hariyanti, S., Munir, M., & Wahyudi, A. B. (2023). Analysis of the implementation of digitalization of financial statements in micro, small, and medium enterprises. *Open Access Indonesia Journal of Social Sciences*, 6(4), 1048–1054. <https://doi.org/10.37275/oaijss.v6i4.170>

- Theiri, S., & Hadoussa, S. (2023, April 11). Digitization effects on banks' financial performance: the case of an African country. *Competitiveness Review: An International Business Journal*. <https://doi.org/10.1108/cr-10-2022-0147>
- Thu, T. N. T., Thanh, H. P. T., Ngọc, T. T., & Tran, L. (2023). Determinants of employee digital transformation readiness and job performance: A case of SMEs in Vietnam. *Problems and Perspectives in Management*, 21(4), 226–239. [https://doi.org/10.21511/ppm.21\(4\).2023.18](https://doi.org/10.21511/ppm.21(4).2023.18)
- Wahyudin, M., Wuryandani, S., Maksum, M., & Arifadini, Q. (2023). Importance-Performance Analysis on the Digital Platform Attributes of Food Convenience Store in Indonesia. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(11), 4144-4151. <https://doi.org/10.11594/ijma-ber.04.11.31>
- Wang, C., Lyu, L., & Li, S. (2023). Identifying financial report frauds. *Advances in Economics Management and Political Sciences*, 22(1), 9–17. <https://doi.org/10.54254/2754-1169/22/20230281>
- Yuniawati, A. S., & Farman, F. (2023b). ANALYSIS OF FINANCIAL REPORTS TO ASSESS FINANCIAL PERFORMANCE. *Jurnal Ilmiah Manajemen, Ekonomi, Dan Akuntansi*, 7(1), 889–900. <https://doi.org/10.31955/mea.v7i1.2948>
- Zahid, I., & Rao, Z. (2022). Social capital and loan credit terms: does it matter in micro-finance contract? *Journal of Asian Business and Economic Studies*. <https://doi.org/10.1108/jabes-10-2021-0185>