Digital Improvements to Microfinance in Bangladesh

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Abstract

This study aims to explore digital improvements to microfinance in Bangladesh. A qualitative approach was used as the research strategy. In-depth interviews were conducted with ten key informants, employing purposive sampling. Content analysis and NVivo were used to analyse the qualitative data. The findings revealed that digital technology has the potential to significantly enhance Bangladesh's microfinance sector. The benefits include increased transaction efficiency and speed, lower operational costs, improved access to financial services for rural and underbanked populations, better loan portfolio management and lower default rates, and increased transparency and accountability. Before digital technologies can be used in the microfinance sector, issues such as the lack of infrastructure, poor digital literacy, security concerns, and regulatory barriers must be addressed. With the proper approach, digital technology has the potential to transform access to financial services for millions of Bangladeshis. As a result, governments, administrations, and policymakers must implement effective digital technology-based microfinance strategies. A recommendation for future research is to expand this study to more areas and samples. Also, a quantitative study, such as one using online questionnaires, should be considered.

Keywords: digital improvement; microfinance; Bangladesh

JEL Classification Code: A10, D00. D01, D04

Introduction

The advancement of information and communication technologies (ICT), the spread of the Internet, and mobile communications have all contributed to globalisation entering a qualitatively new stage of development. The computer and newly generated ICTs are the main technological attributes of the current stages of globalisation, uniting the world into a single communication system, creating an integrated financial and information space (Jangjarat et al., 2023; Limna, Kraiwanit, & Siripipatthanakul, 2023). Moreover, advances in telecommunications and information technology have revolutionised many industries, including banking. Over the last few years, there have been significant changes in the delivery of financial services (Ahmed, Jeon, & Piccialli, 2022; Uddin & Barai, 2022). In addition, in this era the internet and digitisation are rapidly infiltrating all aspects of human life, including the microfinance sector. Ongoing digital technology innovations are helping to reshape the operational models, governance structures, risk profile, industry networks, and dominant practices of microfinance. Both innovation and digital technology integration are important because they have the potential to promote development by spurring innovation, improving efficiency, and increasing inclusion (Ray, Paul, & Miglani, 2018; Napawut et al., 2022). In addition, microfinance plays a crucial role in promoting the growth of microenterprises and reducing poverty worldwide. The sector has experienced significant growth in recent years, particularly in the bottom of the pyramid market, and has become the fastest-growing sector for venture capital funding and risk. The ground-breaking work of Nobel Laureate Professor Muhammad Yunus in Bangladesh during the 1970s led to the establishment of the country's first microfinance organisation, following successful experiments with lending small sums of money to underprivileged residents of Bangladeshi villages. This initiative had a significant impact on Bangladesh's microbusiness development, skill development, wealth, standard of living, and economic empowerment. The continued development and investment in microfinance hold immense potential for empowering individuals and communities globally, and for fighting poverty in a sustainable manner (Jalil, 2021).

Microfinance has arguably proved to be one of the most effective means of combating hunger, poverty, and low living standards among the poor in Bangladesh and the developing world. Bangladesh, a pioneering country in microfinance, has seen widespread use of this tool to provide underprivileged people with access to and inclusion in finance. Indeed, microfinance began to serve the poor, whose banks and other financial institutions were unable to reach because of distance and high transaction costs. However, as a financial product, the dynamics of microfinance have changed over the course of its long history. Microfinance, for example, evolved from microloans to become seed funding for social business ventures to survive in a competitive market. Nonetheless, rapid technological advancements in the financial sector through fintech and the digital revolution have posed a direct challenge to the inclusiveness of the financial industry, including microfinance, around the world. Indeed, digitalization has become a buzzword in our everyday lives, encompassing all financial sectors (Uddin & Barai, 2022). This demonstrates that microfinance is regarded as one of the most critical sectors in Bangladesh, and that digital advancement is vital in the microfinance sector. Thus, digital improvements to microfinance in Bangladesh is a crucial topic of study. This study aims to explore digital improvements to microfinance in Bangladesh.

Literature Review

Microfinance, as opposed to traditional banking, is an alternative way for the poor to access affordable finance, and it is the primary source of financing for the world's unbanked and underbanked population, with $124 billion in loans currently serving 140 million global customers. The purpose of microfinance is not to fund personal consumption, but to start a self-perpetuating cycle of business growth. Its practitioners typically pursue both a development goal and market principles, implying that an evolving institutional environment can lead to a shift in the logic of microfinance institutions (Sun & Liang, 2021). The microfinance system provides financial services around the world, and particularly in emerging markets, to a population that has limited access to the conventional financial market or is at risk of financial exclusion. The sector is distinguished by a focus on low-cost products and services, easy access to financial instruments, simple opening procedures, and regulated returns of guarantees. Low-income clients seek microfinance to meet basic needs and personal emergencies, or to expand a small business, among other things (García-Pérez, Fernández-Izquierdo, & Muñoz-Torres, 2020).

Jalil (2021) explores the impact of microfinance on the long-term development of Malaysia's rural microenterprises. This study incorporates digital finance into the conceptual model to investigate its mediating impact. Microfinance has a significant and positive influence on the development of rural microenterprises, and digital finance partially mediates this relationship. Hence, microfinance institutions must embrace digital finance to boost microenterprise productivity through low transaction costs. Kandie and Islam (2022) investigate the effects of digital microcredit on poverty in Kenya and compare them to the effects of traditional microcredit. The findings indicate that digital loans are more accessible to better-off households than traditional microcredit. Additionally, Dang and Vu (2020) examine fintech activities in the microfinance sector and make recommendations for fintech adoption by microfinance institutions in Vietnam. In recent years, the use of fintech in the microfinance sector has yielded several positive outcomes, including improved product and service quality, easy access to a wide range of customer groups, and the expansion of the operating model. Using fintech, microfinance institutions in Vietnam have created new products and services. The use of technology and digital solutions has assisted microfinance institutions in Vietnam in gradually achieving targeted growth by increasing geographical inclusion and scale, improving product supply and provision, facilitating in-depth customer understanding, and improving operational efficiency. Furthermore, Tripalupi, Yulianti, and Naafisah (2023) discuss the strategy for developing Islamic microfinance institutions in West Java during the financial technology era. Their study investigates internal strategy factors in the development strategy of Islamic microfinance institutions, external strategy factors, and the formulation of alternative development strategies. The internal strategic factors include a generally good financial performance, an increase in public deposits, appropriate financing and support for the strengthening of micro, small, and medium enterprises (MSMEs), risk management implemented effectively and gradually, digital-based services, education and assistance, easy access, development of the competency of human resources and members, development of information technology organisation tools, and innovation in strength. The external strategic factors include relatively high investment realisation, government assistance, and fintech-based services. The national and Islamic finance industries are performing well. Global and national economic growth is unfavourable, but the Islamic finance industry is maintaining a small market share. The services of other financial institutions to MSMEs and digital-based services have decreased, as have household consumption activities.

Methodology

A qualitative approach was used as the research strategy in this study. In-depth interviews were conducted. The qualitative research method consists of four major steps: research design, data collection, data analysis, and report writing (Viphanphong, Kraiwanit, & Limna, 2023). The goal of qualitative research is to comprehend the context in which individuals or groups make decisions and act, and to explain why an observed phenomenon occurs in a specific manner. In-depth interviews also provide detailed answers on a specific topic, resulting in accurate information to meet research objectives (Siripipatthanakul et al., 2022). To obtain the primary data results, secondary data were examined to choose the relevant key survey questions for the in-depth interviews, which were conducted using the documentary method. Purposive sampling is a qualitative research technique in which researchers use their expertise to select the most useful sample. The goal of purposive sampling is to know everything there is to know about a specific phenomenon or population (Limna et al., 2022), and it was therefore used as the sampling method. The participants in the study were ten workers and experts from the microfinance sector in Bangladesh. Content analysis is a qualitative method for systematically and objectively describing and quantifying specific phenomena by drawing valid inferences from verbal, visual, or written data (Limna & Kraiwanit, 2022). Zamawe (2015) claims that NVivo is a useful tool for broadening and deepening an analysis. Therefore, to analyse the qualitative data gathered through the in-depth interviews, the content analysis method and the NVivo software program were used.

Results

Ten respondents from the microfinance sector in Bangladesh were interviewed. The respondents agreed that the use of digital technology has the potential to significantly improve the microfinance sector in Bangladesh. The benefits include 1) increased efficiency and speed of transactions, 2) lower operational costs, 3) improved access to financial services for rural and underbanked populations, 4) better management of loan portfolios and reduced default rates, and 5) increased transparency and accountability. However, implementing digital technologies in the microfinance sector requires issues such as a lack of infrastructure, poor digital literacy, security concerns, and regulatory barriers to be addressed. Nonetheless, with the right approach, digital technology has the potential to transform access to financial services for millions of people in Bangladesh.

Increased efficiency and speed of transactions

The use of digital technology can increase the efficiency and speed of transactions in the microfinance sector. For example, mobile banking and digital payment systems can streamline the disbursement and repayment of loans, reducing the time and costs associated with manual transactions. Digital systems can also automate record-keeping and reporting, reducing the potential for errors and making it easier to track financial performance. These improvements can make microfinance institutions more efficient and effective, allowing them to reach more people with financial services.

Lower operational costs

Microfinance institutions can reduce operational costs by implementing digital technology. Digital systems can reduce the need for staff, while also lowering the costs of printing, storing, and manually processing paper-based records by automating many manual processes. Furthermore, digital systems can provide real-time data and analytics, allowing microfinance institutions to make better decisions and improve their operations. Digital technology can help microfinance institutions to increase their financial viability and sustainability by lowering operational costs, allowing them to reach more people with financial services.

Improved access to financial services for rural and underbanked populations

Digital technology can improve the access to financial services of rural and underbanked populations in Bangladesh. By leveraging mobile banking and other digital platforms, microfinance institutions can reach people in remote areas who might otherwise be excluded from financial services because of geographical barriers. Digital systems can also reduce the need for collateral and other barriers to access, making it easier for people with limited resources to obtain loans and other financial products. In addition, digital systems can provide greater transparency and accountability, helping to build trust and confidence in the microfinance sector among underbanked populations. By improving access to financial services, digital technology can help to promote financial inclusion and reduce poverty in Bangladesh.

Better management of loan portfolios and reduced default rates

The use of digital technology can also lead to better loan portfolio management and lower default rates in the microfinance sector. Digital systems can provide real-time data on loan performance, allowing microfinance institutions to track repayments and detect potential default risks more effectively. Furthermore, digital systems can automate collection processes and send borrowers reminders, lowering the likelihood of missed payments. Microfinance institutions can make more informed lending and risk management decisions using more accurate and up-to-date information, resulting in more stable loan portfolios and lower default rates. This can help microfinance institutions to increase their financial viability and sustainability, allowing them to better serve the needs of their clients and communities.

Increased transparency and accountability

The implementation of digital technology can also increase transparency and accountability in the microfinance sector. Digital systems can provide real-time data on financial performance, enabling stakeholders to monitor the use of funds and assess the impact of microfinance programmes. In addition, digital systems can support the tracking of payments and reduce the potential for fraud and corruption. By increasing transparency and accountability, digital technology can help to build trust and confidence in the microfinance sector, promoting greater investment and support from stakeholders, and ultimately helping to expand access to financial services for people in Bangladesh.

NVivo Analysis

The interpretation and analysis were based on NVivo. The following images depict word frequency (word cloud) and text search (word tree).

Figure 1

Word Cloud

Figure 2

Word Tree (Microfinance)

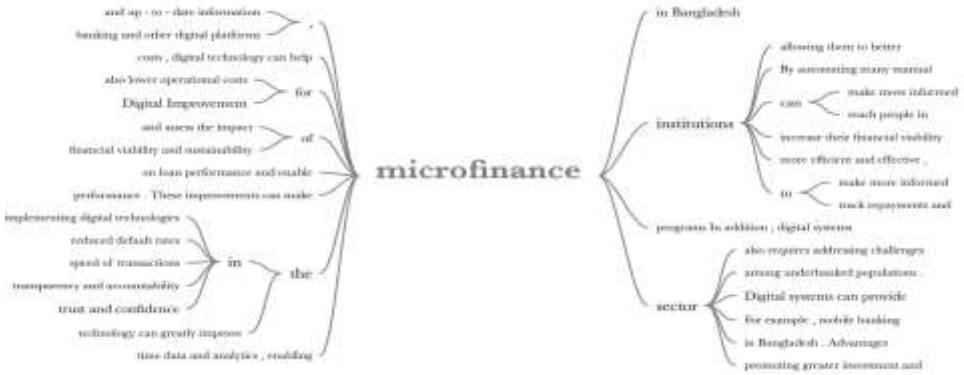

Figure 3

Word Tree (Digital)

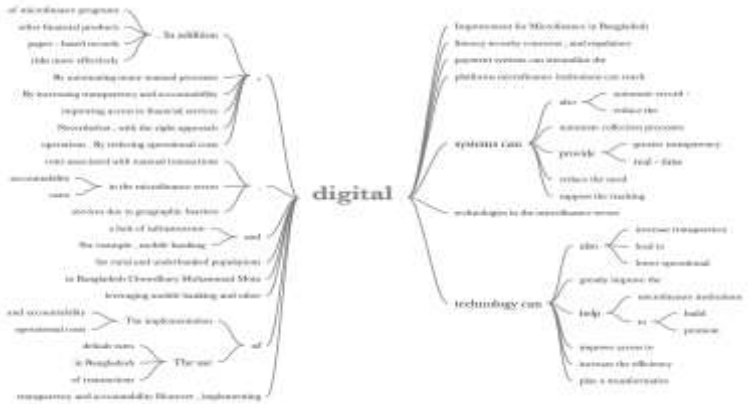

Figure 4

Word Tree (Digital Technology)

Discussion and Conclusion

This study explored digital improvements to microfinance in Bangladesh. The findings indicate that digital technology has the potential to significantly improve Bangladesh's microfinance sector. The advantages include increased transaction efficiency and speed, lower operational costs, improved access to financial services for rural and underbanked populations, better loan portfolio management and lower default rates, and increased transparency and accountability. The findings support the previous research of Pal et al. (2021), who showed that digital transformation in microfinance is a driver for sustainable development. In recent times, the digitisation process and its outcomes have accelerated the transformation and rebuilding of sustainable societies. Ndungu and Moturi (2020) investigated the factors influencing mobile fintech adoption in the Kenyan microfinance sector. These factors include the availability of technology, the perceived benefits of technology, the size of the organisation, the availability of resources, and the competitive, regulatory, and legal environment. The use of mobile fintech has been shown to lower operating costs and improve business operations efficiency. Moreover, Das and Ali (2021) concluded that, despite the numerous challenges faced by the microfinance industry as a whole as a result of demonetization, it is the microfinance industry that will benefit the most from digital receipts and payments in the long run. Hoque (2022) also demonstrated how blockchain can be used to create credible financial profiles for micro-borrowers, and that these are likely to increase lenders' trust. Furthermore, the use of blockchain can lower borrowing costs for the poor. However, coordination complexities and the lack of a standard for sharing data among multiple participating organisations remain significant barriers to the adoption of blockchain technology in microfinance.

Issues such as a lack of infrastructure, poor digital literacy, security concerns, and regulatory barriers must be addressed before digital technologies can be implemented in the microfinance sector. With the right approach, digital technology has the potential to transform access to financial services for millions of Bangladeshis. For this reason, governments, administrations, and policymakers must implement effective digital technology-based strategies to improve microfinance.

The limitation of this study is that the respondents were workers and experts from the microfinance sector in Bangladesh. It is recommended that future researchers expand this study to more areas and use a wider sample. Moreover, a quantitative method, such as the use of online questionnaires, should be considered in a future study.

References

Ahmed, I., Jeon, G., & Piccialli, F. (2022). From artificial intelligence to explainable artificial intelligence in industry 4.0: a survey on what, how, and where. *IEEE Transactions on Industrial Informatics*, *18*(8), 5031-5042. https://doi.org/10.1109/TII.2022.3146552.

Dang, T. T., & Vu, H. Q. (2020). Fintech in Microfinance: A New Direction for Microfinance Institutions in Vietnam. *Asian Journal of Business Environment*, *10*(3), 13-22. https://doi.org/10.13106/jbees.2020.vol10.no3.13.

Das, K. K., & Ali, S. (2021). Effect of Demonetization on Microfinance Industry in India. *International Journal of Research in Business and Social Science*, *10*(3), 352-356. https://doi.org/10.20525/ijrbs.v10i3.1105.

García-Pérez, I., Fernández-Izquierdo, M. Á., & Muñoz-Torres, M. J. (2020). Microfinance Institutions Fostering Sustainable Development by Region. *Sustainability*, *12*(7), 2682. https://doi.org/10.3390/su12072682.

Hoque, M. M. (2022). *Microfinance Challenges and the Potential Benefits of Blockchain Technology and Mobile Money*. Doctoral dissertation, Queensland University of Technology. https://eprints.qut.edu.au/228731/.

Jalil, M. F. (2021). Microfinance towards Micro-Enterprises Development in Rural Malaysia through Digital Finance. *Discover Sustainability*, *2*(1), 55. https://doi.org/10.1007/s43621-021-00066-3.

Jangjarat, K., Kraiwanit, T., Satityapong, N., Sonsuphap, R., & Phaksipaeng, I. (2023). The Social Economy in the Digital Era: A Perspective on Community Enterprises in a Developing Economy . *Journal of Social Economics Research*, *10*(1), 13-21. https://doi.org/10.18488/35.v10i1.3317.

Kandie, D., & Islam, K. J. (2022). A New Era of Microfinance: The Digital Microcredit and Its Impact on Poverty. *Journal of International Development*, *34*(3), 469-492. https://doi.org/10.1002/jid.3607.

Limna, P., & Kraiwanit, T. (2022). Service Quality and Its Effect on Customer Satisfaction and Customer Loyalty: A Qualitative Study of Muang Thai Insurance Company in Krabi, Thailand. Journal for Strategy and Enterprise Competitiveness, 1(2), 1-16. https://so07.tci-thaijo.org/index.php/STECOJournal/article/view/912.

Limna, P., Kraiwanit, T., & Siripipatthanakul, S. (2023). The Growing Trend of Digital Economy: A Review Article. International Journal of Computing Sciences Research, 7, 1351-1361. https://www.stepacademic.net/ijcsr/article/view/347.

Limna, P., Siripipatthanakul, S., Siripipattanakul, S., & Auttawechasakoon, P. (2022). Determinants of Electronic Word of Mouth During the COVID-19 Pandemic in Thailand: A Qualitative Case Study of Hostels at Aonang, Krabi in Thailand. *Central Asian Journal of Innovations on Tourism Management and Finance*, *3*(4), 8-20. https://ssrn.com/abstract=4091061.

Napawut, W., Siripipatthanakul, S., Phayaphrom, B., Siripipattanakul, S., & Limna, P. (2022). The Mediating Effect of E-WOM on the Relationship Between Digital Marketing Activities and Intention to Buy Via Shopee. *International Journal of Behavioral Analytics*, *2*(2), 1-13. https://ssrn.com/abstract=4047441.

Ndungu, J. M., & Moturi, C. A. (2020). Determinants of Mobile Fintech Uptake in Kenyan Microfinance Sector. Current Journal of Applied Science and Technology, 39(28), 102-114. http://erepository.uonbi.ac.ke/handle/11295/155301.

Pal, A., Dey, S., Nandy, A., Shahin, S., & Singh, P. K. (2021). Digital Transformation in Microfinance as a Driver for Sustainable Development. In *Handbook of Sustainability Science in the Future: Policies, Technologies and Education by 2050* (pp. 1-21). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-68074-9_74-1.

Viphanphong, W., Kraiwanit, T., & Limna, P. (2023). Goodness Bank, Volunteer Bank, and Time Bank in the Digital Age. *Advance Knowledge for Executives*, *2*(1), 1-14. https://ssrn.com/abstract=4344570.

Ray, S., Paul, S., & Miglani, S. (2018). *Innovation, Efficiency and Inclusion: Integration of Digital Technologies in the Indian Microfinance Sector* (No. 366). Working Papers, Indian Council for Research on International Economic Relations. http://hdl.handle.net/10419/203700.

Siripipatthanakul, S., Jaipong, P., Limna, P., Sitthipon, T., Kaewpuang, P., & Sriboonruang, P. (2022). The Impact of Talent Management on Employee Satisfaction and Business Performance in the Digital Economy: A Qualitative Study in Bangkok, Thailand. *Advance Knowledge for Executives*, *1*(1), 1-17. https://ssrn.com/abstract=4157704.

Sun, S. L., & Liang, H. (2021). Globalization and Affordability of Microfinance. *Journal of Business Venturing*, *36*(1), 106065. https://doi.org/10.1016/j.jbusvent.2020.106065.

Tripalupi, R. I., Yulianti, L., & Naafisah, D. D. (2023). Optimization of Financial Technology as an Opportunity for Development of Islamic Microfinance Institutions. *International Journal of Artificial Intelligence Research*, *6*(1.1), 1-9. https://doi.org/10.29099/ijair.v6i1.340.

Uddin, H., & Barai, M. K. (2022). Will Digital Revolution be Disruptive for the Inclusive Finance in Bangladesh? The Case of the Microfinance Industry. *Journal of Novel Carbon Resource Sciences & Green Asia Strategy*, *9*(4), 909-923. https://doi.org/10.5109/6622878.

Zamawe, F. C. (2015). The Implication of Using NVivo Software in Qualitative Data Analysis: Evidence-Based Reflections. *Malawi Medical Journal*, *27*(1), 13-15. https://www.ajol.info/index.php/mmj/article/view/116229.