



# Digital Financial Literacy and Digital Financial Inclusion: Efforts to Overcome Challenges After the Covid-19 Pandemic and Increase the Independence of Financial Management

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**Abstract.** Indonesia's post-COVID-19 recovery witnessed various sectors, including Micro, Small, and Medium Enterprises (MSMEs), striving to sustain their businesses through improved financial management. Digital financial literacy and inclusion emerged as crucial aspects of the company's financial recovery programs. This study focuses on MSME entrepreneurs in Tasikmalaya City and aims to describe the role of digital financial literacy and inclusion in fostering financial management independence. Using a qualitative case study approach with participatory observation and secondary data sources, the study revealed that digital financial literacy positively correlated with increased knowledge, rational attitudes, and responsible financial behaviour, empowering MSMEs to effectively manage their financial resources and achieve sustainable financial security. Additionally, digital financial inclusion played a vital role in bridging gaps and ensuring the journey of sustainable development. It also highlighted the significance of customer protection and complaint handling for the financial resilience of new or novice MSME actors. The research contributes to understanding the importance of digital financial literacy and inclusion in enhancing MSMEs' financial capabilities, promoting sustainable financial security, and supporting national Sustainable Development Goals. Collective efforts from various stakeholders are crucial to ensure the long-term prosperity of MSMEs and their active participation in the sustainable development process.

**Keywords:** Digital Financial Inclusion, Digital Financial Literacy, MSMEs, SDGs.

## 1 INTRODUCTION

The global outbreak of the COVID-19 pandemic has unleashed unprecedented disruptions to economies worldwide, and Indonesia, as one of the most severely impacted countries, has faced formidable challenges in its path to recovery. Among the most

vulnerable sectors are Micro, Small, and Medium Enterprises (MSMEs), which have encountered significant hurdles in maintaining their business operations during this time of upheaval [1]. In response to these pressing circumstances, the significance of digital financial literacy and inclusion has emerged as pivotal factors in the post-COVID-19 recovery strategies for MSMEs in Indonesia.

The primary problem this study aims to address is the limited understanding of the role and impact of digital financial literacy and inclusion on the financial management of MSMEs, specifically in the context of post-pandemic recovery in Tasikmalaya City, Indonesia. While financial literacy and inclusion have been extensively studied in broader contexts, limited research explicitly addresses their impact on MSMEs in this region. By investigating the interplay between digital financial literacy, financial inclusion, and sustainable financial management, this study aims to contribute valuable insights to the existing literature.

Digital financial literacy is critical in the financial management of MSMEs, encompassing the ability to understand and manage finances, including personal finance, investment, and business-related financial matters [2]. It specifically refers to the proficiency in utilising digital tools and technologies for financial transactions and accessing financial services [3].

Numerous studies have investigated the interplay between financial literacy, digitalisation, and MSMEs' financial management. For instance, an OECD report examined the impact of financial literacy, formal accounts, and digitalisation on MSMEs' financial and digital competencies during the COVID-19 pandemic [4]. The findings demonstrated that higher levels of financial literacy and digitalisation were associated with better capabilities in facing pandemic-related challenges.

Another study by Imelda T. Angeles explored the influence of digital financial services and digital and financial literacy on the financial behaviour of MSME owners. While digital financial services alone did not significantly impact savings, borrowing, and investing behaviours, digital and financial literacy substantially influenced the owners' financial behaviour. This highlights the importance of equipping MSME owners with digital and financial literacies, as it influences their effective utilisation of digital financial services to make informed financial decisions. Digital financial inclusion is vital in ensuring MSMEs' access to financial services through digital channels. Research shows that digital financial inclusion can bridge gaps in financial services availability and support the journey of sustainable development for MSMEs [5].

Scholars have extensively studied the impact of digital financial inclusion on MSMEs' access to finance and have found that it can offer solutions, particularly during times of crisis. Financial digitalisation, facilitated by fintech companies, has emerged as a viable means to provide much-needed financial services to underserved MSMEs, effectively addressing liquidity constraints, especially in the face of demand and supply shocks, such as those experienced during the COVID-19 pandemic [6].

In response to the growing importance of digitalisation, numerous players have introduced innovative digital solutions and initiatives across key areas, including lending, payments, insurance, and non-financial services, which have the potential to benefit MSMEs [7]. Pallegirino and Abe's comprehensive study in 2022 has delved extensively

into the effects of digitalisation and financial innovation on MSMEs' access to finance, emphasising the crucial role of regulations in bolstering MSME digital financing.

Enhanced digital financial literacy and inclusion significantly impact MSMEs' long-term prosperity and the achievement of national Sustainable Development Goals. It leads to increased awareness of new financial services and intermediaries [7], improved financial inclusion [8], better financial decision-making, enhanced access to finance and growth [9], improved SME performance [10], and contributes to national Sustainable Development Goals [11]. Embracing digital financial literacy equips MSMEs to conquer the economic landscape, driving sustainable growth and progress.

The novelty of this research lies in its focus on exploring the role of digital financial literacy and inclusion among MSME actors in Tasikmalaya City, Indonesia, in the post-pandemic period. Understanding the critical role of digital financial literacy and inclusion is essential for the long-term viability of MSMEs in a rapidly evolving digital landscape. Scholars have highlighted that digital financial literacy equips individuals with the knowledge and skills to make informed financial decisions, thereby promoting more responsible financial behaviour [12]. This research extends the theoretical underpinnings by investigating how digital financial literacy can positively influence financial management practices within the unique context of MSMEs.

Aligned with the United Nations (UN) Sustainable Development Goals framework, which aims to foster global inclusive and sustainable economic growth, the study seeks to identify the factors accompanying financial management independence for MSMEs [13]. By elucidating the nexus between digital financial literacy, financial inclusion, and sustainable financial management, this research contributes to the broader objective of advancing national development agendas in Indonesia, particularly concerning MSMEs.

This research holds significance as it sheds light on the pivotal role of digital financial literacy and inclusion in the post-COVID-19 recovery and sustainable financial management for MSMEs in Indonesia. The findings are expected to contribute valuable insights for policymakers and stakeholders, assisting them in designing targeted interventions and strategies to empower MSMEs towards financial independence and sustainable growth in a digitalised era.

## **2 METHODS**

The research employed a qualitative case study approach to investigate the phenomenon of digital financial literacy among MSMEs in Indonesia during the COVID-19 pandemic. Utilising secondary data sources, including previous studies, references, and online news directly related to the research about financial literacy and inclusion, the study delved deeply into the observation and analysis of the case to understand the role of digital financial literacy and inclusion in fostering financial management independence.

Empirically, this study's qualitative case study approach, along with participatory observation, allows for an in-depth exploration of the experiences and perceptions of MSME actors regarding digital financial literacy and inclusion. Methodologically, this

research contributes to the literature by providing insights into the application of participatory observation to collect data from secondary sources related to financial literacy and inclusion.

Through a qualitative case study approach and participatory observation, the study delves into the intricate dynamics of digital financial literacy and inclusion among MSMEs in this region.

### 3 RESULTS AND DISCUSSION

After the COVID-19 pandemic, there have been notable changes and developments in digital financial services and financial behaviours. The pandemic-induced lockdowns and social distancing measures have significantly increased the demand for digital financial services, with consumers turning to internet banking and mobile banking services [14]. This shift towards digital transactions was driven by the need for contactless and remote access to financial services during the pandemic [15].

The pandemic underscored the importance of digital financial inclusion, yet it also revealed disparities in access, particularly among marginalised populations [16]. Efforts to bridge this digital divide are crucial in promoting financial inclusion and reducing disparities in financial access. Moreover, the changes in consumer behaviour during the pandemic, such as the shift towards online shopping and altered payment preferences, further impacted the use of digital financial services.

Moreover, studies conducted by the Asian Development Bank Institute have demonstrated that digital finance fosters financial inclusion and is linked to higher GDP growth [17]. Thus, enhancing digital financial literacy and inclusion becomes imperative for the resilience and sustainability of MSMEs and the overall economy.

Research conducted in South Asia and Sub-Saharan Africa found that financial and digital literacy can help MSMEs build financial resilience and overcome financial challenges [18]. This finding underscores the importance of promoting financial and digital literacy among MSME entrepreneurs to enhance their financial resilience and ensure long-term sustainability.

Furthermore, digital financial inclusion emerges as a vital tool in mitigating the economic and social impacts of the pandemic. Research shows that improving financial access for low-income families and small enterprises can lead to a more inclusive financial recovery [19]. Digital financial services facilitate the efficient distribution of relief and stimulus funds to MSMEs during lockdowns and social distancing measures [8]. Hence, promoting digital financial inclusion is crucial to enhancing the resilience and sustainability of MSMEs in the post-COVID-19 period.

The pandemic-induced shifts have also accelerated the adoption of digital financial services, fostering innovation and resilience among MSMEs. Reports indicate that MSMEs embracing digital financial services are more likely to innovate and adapt to changing circumstances during the pandemic [20]. Digital financial inclusion also plays a crucial role in contributing to sustainable development by enhancing financial inclusion and reducing poverty. Research reveals that digital finance correlates with higher GDP growth and increased financial inclusion among marginalised populations [19].

Policymakers and stakeholders can advance the resilience and sustainability of MSMEs and the overall economy by prioritising the promotion of digital financial inclusion.

However, in the post-pandemic period, MSME entrepreneurs encountered significant challenges in adopting digital financial literacy and inclusion. The low level of financial literacy among these entrepreneurs hampers their ability to embrace digital financial services [21]. Moreover, the absence of a savings culture further impedes their adoption of digital financial literacy [22]. Gender and other gaps in digital financial inclusion create additional barriers, particularly affecting women entrepreneurs [23]. Cybersecurity and data privacy concerns add to the hesitancy among entrepreneurs in adopting digital financial services [19]. Additionally, limited access to digital infrastructure poses challenges for MSMEs in rural areas or with limited resources. Addressing these challenges is essential to promoting the resilience and sustainability of MSMEs in the digital era.

Despite that, promoting digital financial literacy and inclusion among MSMEs presents several potential opportunities and strategies. Targeted financial education programs can equip entrepreneurs with the necessary knowledge and skills to leverage digital financial tools and overcome financial challenges. Collaborating with fintech companies can provide MSMEs access to digital financial services and training to facilitate adoption [6], [21].

Moreover, government initiatives to enhance digital infrastructure, such as investing in broadband networks and mobile payment systems and implementing policies for digital financial inclusion, can further support MSMEs [23]. Partnerships with financial institutions can grant MSMEs access to services and support in embracing digital financial tools.

Furthermore, targeted financial incentives, such as tax breaks or subsidies for adopting digital financial services, can encourage MSMEs to embrace these advancements. By recognising these opportunities and implementing corresponding strategies, policymakers and stakeholders can foster digital financial literacy and inclusion among MSME entrepreneurs, promoting their resilience and sustainable growth in the digital era.

## 4 CONCLUSIONS

The post-COVID-19 has witnessed significant changes and developments in digital financial services and financial behaviours. The pandemic-induced shifts have increased demand for digital financial services, highlighting the importance of digital financial inclusion. Studies have shown that digital finance fosters financial inclusion, enhances resilience, and is associated with higher GDP growth. However, MSME entrepreneurs encounter challenges in adopting digital financial literacy and inclusion, including low financial literacy, lack of savings culture, gender disparities, cybersecurity concerns, and limited digital infrastructure access. Addressing these challenges is crucial to promoting the resilience and sustainability of MSMEs. Promising opportunities and strategies, such as targeted financial education programs, collaborations with fintech com-

panies, government initiatives, partnerships with financial institutions, and targeted financial incentives, can empower MSMEs to embrace digital finance and enhance their growth and financial management independence. Policymakers and stakeholders must recognise and act upon these opportunities to drive digital transformation and ensure the long-term success of MSMEs in the post-pandemic era.

#### 4.1 Implication/Limitation and Suggestions

This research offers valuable insights into digital financial literacy and inclusion for MSMEs after the COVID-19 pandemic. However, certain limitations should be considered:

1. **Research Method:** The qualitative case study approach may limit generalizability to other MSME contexts, warranting caution in interpreting results for broader populations.
2. **Reliance on Secondary Data:** Using secondary sources may impact accuracy and completeness, potentially influencing research outcomes.
3. **Temporal Limitations:** Focusing on the post-pandemic period might restrict the relevance of findings in the rapidly evolving digital financial landscape.
4. **Response Bias:** Self-reported data from MSME entrepreneurs may be subject to bias, affecting the accuracy of reported digital literacy and inclusion levels.
5. **Sample Characteristics:** The representativeness and comparability of the sample to the broader MSME population may affect generalizability.

Future research could adopt a mixed-methods approach with primary data collection methods to address these limitations to enhance comprehensiveness and accuracy. Despite the limitations, this research lays a foundation for further exploration of digital financial literacy and inclusion for MSMEs in various contexts.

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