Digital Transformation of MSME Finance: The Role of Digital Financial Literacy, Digital Lifestyle, and Saving Decisions in Digital Banks (SDB) for Business Resilience

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Abstract - This research addressed a gap in Micro, Small, and Medium Enterprises (MSMEs) finance research, which has predominantly focused on digital credit adoption while paying limited attention to saving decisions in digital banks and their implications for business resilience. The study aimed to examine the role of digital financial literacy and digital lifestyle in shaping saving decisions in digital banks and to explore how these decisions contribute to strengthening MSME resilience. Data were collected from MSME owners and managers and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings indicate that digital financial literacy and digital lifestyle positively influence saving decisions in digital banks. Furthermore, saving decisions in digital banks play an important role in enhancing business resilience and serve as a mechanism through which digital financial literacy and digital lifestyle contribute to sustainable business operations. The research extends the digital finance literature by conceptualizing digital-bank savings as a digitally enabled cash-management practice that supports financial discipline, fund separation, cash-flow documentation, and liquidity management among MSMEs. This perspective highlights that digital financial services are not only relevant for accessing external financing but also for strengthening internal financial management capabilities. The practical implications suggest the need for MSME-oriented digital banking services, financial literacy programs, and behavioral interventions that encourage safe, documented, and disciplined saving practices to support long-term business resilience in an increasingly digital financial ecosystem.

Keywords: digital transformation, digital financial literacy, digital lifestyle, digital banks, business resilience

I. INTRODUCTION

MSMEs play an important role in the economic structure of developing countries. These enterprises absorb labor, maintain income circulation at the household level, support local consumption, and act as a buffer for economic activity when the formal sector weakens (Llados-Masllorens & Ruiz-Dotras, 2022; Tay et al., 2022). Furthermore, MSMEs are the most vulnerable group to income shocks, changes in raw material prices, cash flow disruptions, and limited access to short-term formal financing. Several actors rely on daily cash and informal personal savings to cover operational costs such as purchasing

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materials, paying rent, and labor wages. Under these conditions, business resilience and sustainability are major concerns for the MSME sector in economically volatile developing countries (Łasak, 2022; Sanga & Aziakpono, 2023).

The rapid expansion of digital banking and cashless payment platforms is reshaping cash management practices. However, various challenges may be experienced when adopting these technologies, such as trust concerns, perceived security and fraud risks, service fees, and interoperability constraints. To avoid conceptual overlap, this research defines digital financial literacy as the capability to use products knowledgeably. Digital lifestyle is defined as habitual mobile, cashless, and always-online routines for managing business transactions and cash flows. These conditions show that saving with digital banks is a relevant cash management mechanism required to strengthen business resilience of MSMEs.

In recent years, there has been an acceleration of digital transformation in the financial sector. This transformation includes the development of digital banks that operate through online channels without physical branches, the integration of wallets, cashless payments based on quick code scanning, and mobile banking services (Almajali et al., 2022; Sultana et al., 2025). These changes have impacted retail consumers, payment methods, supplier payment, transaction recording, and the storage of business funds (Ly & Ly, 2024; Ridwan et al., 2025; Srouji & Torre, 2022). The literature on digital financial inclusion states that access to digital-based financial services can reduce transaction costs, accelerate cash flow, and expand the reach of formal financial services for small-scale businesses (Economic Times, 2025; Mashoene et al., 2025; Tay et al., 2022). Additionally, digital transformation offers access to financial infrastructure that was previously difficult for MSMEs.

Most research on financial digitalization still focuses on financing, particularly on access to technology-based credit through peer-to-peer lending platforms, high-risk app-based loans, and digitally accelerated working capital credit (Imansyah et al., 2025; Łasak, 2022; Sanga & Aziakpono, 2023). The research emphasizes that financial technology serves as an alternative source of capital, assisting MSMEs to overcome collateral, administrative, and geographical proximity barriers. This focus is important, but leaves a significant gap. A relatively undiscussed question is how MSMEs manage the funds obtained through loans. In this context, academic attention has largely been directed towards "raising money", while "saving money in a controlled manner" has not received adequate analysis (Mediaty et al., 2025; Martina & Girsang, 2025; Tandilino et al., 2025). This gap is becoming increasingly relevant since business cash storage patterns are also undergoing digitalization. Many MSME owners/managers use digital bank accounts for transactions and as a main repository for daily business cash. Saving decisions in digital banks (SDB) have important implications. First, business owners can separate business fund from personal money, gaining clearer visibility into cash flow. Second, business funds are held in a secure, institutionally recognized channel and can be accessed in real time without having to keep large cash balances. Third, a consistently maintained balance in a digital account has the potential to become a formal financial record that strengthens the credibility of businesses (Almajali et al., 2022; Ly & Ly, 2024; Ridwan et al., 2025; Sinha et al., 2025).

Recent studies further suggest that the use of digital financial channels by MSMEs is about transaction convenience and cash management discipline (Apriyanti et al., 2024; Economic Times, 2025). Access to business balances helps MSME owners/managers meet routine obligations, absorb short-term sales declines, and keep business activities running. Therefore, digital-based cash management practices can be understood as a form of business resilience at the micro-level (Tay et al., 2022). The two main drivers of this behavior are digital financial literacy and lifestyle orientation. Digital financial literacy describes the extent to which MSME owners/managers understand the features of products, security mechanisms, cost structures, and the practical benefits of services (Chhillar et al., 2025; Kurniasari et al., 2025; Kusumawardhani et al., 2023). Previous research shows that higher financial literacy among small business owners is associated with increased confidence in the independent use of digital financial instruments, improved awareness of security and fraud risks, and more focused allocation of funds (Kusumawardhani et al., 2023; Rizki & Hendarman, 2024; Andriansyah et al., 2025). These results suggest that digital financial literacy increases technology use and promotes the practice of saving business funds through formal channels.

Digital lifestyle refers to the tendency of MSMEs to conduct business and financial activities in a cashless, fully online, fast, and mobile-based manner. Practices associated with an 'urban lifestyle' have become embedded in daily business operations, including micro and small enterprises (Almajali et al., 2022; Srouji & Torre, 2022; Sultana et al., 2025; Wauk et al., 2025). MSME owners/managers familiar with code-based payments, digital transfers, real-time balance monitoring, and minimal cash handling tend to view digital bank accounts as the most practical methods of holding daily business funds (Almajali et al., 2022; Ly & Ly, 2024; Sultana et al., 2025). Digital lifestyle orientation has the potential to drive repeated "digital saving" behaviour, rather than a one-time use and then being forgotten. This research positions SDB as a form of financial innovation. The term entrepreneurial financial innovation refers to a new method for small entrepreneurs to manage business liquidity through secure, documented, and accessible digital means, rather than relying on informal cash storage (Mediaty et al., 2025; Łasak, 2022; Tandilino et al., 2025). This method broadens the dominant view that digitalisation of MSME finance is important

for access to capital loans. Digitalisation of MSME finance is also important in terms of cash management and business liquidity buffers. By keeping business funds in digital bank accounts, MSME owners/managers build a relatively safe and easily traceable cash buffer related to the perception of business resilience and sustainability (Apriyanti et al., 2024; Economic Times, 2025).

The purpose of this research is to analyze the relationship among digital financial literacy, digital lifestyle, SDB, as well as the resilience and sustainability of businesses. This research explores the effects of digital financial literacy and lifestyle on SDB. The relationship between these decisions and MSME owners' confidence is explored in business continuity and financial resilience. The mediating role of savings in digital banks is examined in the relationship between digital literacy, digital lifestyle, and business resilience.

This research provides three main contributions. First, the focus of research on digital transformations has shifted from technology-based financing issues to cash management and digital business fund storage. Second, this research positions SDB as an entrepreneurial financial innovation practice (Łasak, 2022; Sultana et al., 2025; Wauk et al., 2025). Third, this research links digital savings practices with perceptions of business resilience and sustainability. Therefore, the results are directly relevant to the digital transformation agenda from entrepreneurial and innovation perspectives in developing countries (Mashoene et al., 2025; Ridwan et al., 2025; Tandilino et al., 2025). Even though previous MSME digital finance research has emphasized access to financing and digital credit, this research shifts attention to digitally enabled saving and cash management routines in digital banks. Specifically, SDB is positioned as a measurable mechanism that links digital financial literacy and lifestyles to business resilience and sustainability. Practical implications are also offered for digital banking features and literacy initiatives that support liquidity buffers and continuity for MSMEs.

Digital financial literacy refers to the ability of business actors to understand, evaluate, and use digital-based financial products and services safely and effectively in a business context. This literacy includes knowledge about the features of banking and digital payment products, service costs, data and transaction security, as well as rights and protections as users of formal financial services. In addition, digital financial literacy also comprises the ability to manage business cash flow through digital channels (Chhillar et al., 2025; Kurniasari et al., 2025; Kusumawardhani et al., 2023). In developing countries, this variable distinguishes between business actors who passively use applications and those who consciously use digital financial services management purposes (Rizki & Hendarman, 2024; Andriansyah et al., 2025).

Several research studies show that improved digital financial literacy is associated with more formal financial behavior and increased capacity to plan short-term cash usage (Kusumawardhani et al., 2023; Rizki & Hendarman, 2024). Literacy is associated with greater confidence in using digital financial services since business actors are more aware of potential risks and security mechanisms, including the ability to identify official applications, verify transaction security, and understand withdrawal limits and hidden costs (Ridwan et al., 2025; Sijabat, 2024). Digital financial literacy is an educational tool and foundation for recurring and sustainable digital financial behavior (Mashoene et al., 2025; Tay et al., 2022). This variable drives financial behavior through attitudes and lifestyle, which are relevant to the formation of saving habits and digital cash management discipline (Widjayanti et al., 2025). MSME owners/managers with higher digital financial literacy tend to be more prepared to deposit business funds in formal channels, such as digital bank accounts. SDB requires an understanding of the security and control of funds. Therefore, the first hypothesis is formulated.

H1: Digital financial literacy has a positive effect on SDB.

Digital lifestyle refers to the routine use of digital and cashless financial practices by MSME owners/managers in daily business activities. The orientation is characterized by a preference for non-cash payments, the use of mobile phones to manage business transactions and balances, the habit of making transfers or payments online, and the need to monitor cash flow in real time (Almajali et al., 2022; Srouji & Torre, 2022; Sultana et al., 2025; Wauk et al., 2025). Digital lifestyle is considered a phenomenon among middle-class urban consumers. However, recent research shows that micro and small MSME is also rapidly adopting similar patterns due to operational efficiency, faster supplier payments, and a professional image in the eyes of customers (Almajali et al., 2022; Economic Times, 2025; Ly & Ly, 2024).

Furthermore, previous research suggests that a cashless lifestyle orientation plays a role in promoting the continued use of digital channels. Habitual engagement with digital transactions, electronic record-keeping, and digital cash management leads business actors to view digital bank accounts as a natural and secure option for storing funds, given continuous accessibility and reduced reliance on physical cash holdings (Ridwan et al., 2025; Sultana et al., 2025). Digital lifestyle refers to a preference for payment methods and an operational mindset that compel MSME to transition from informal physical cash storage to more structured digital cash storage. This variable is expected to be a direct driver of SDB. A stronger digital orientation in business management increases the tendency to use digital bank accounts as a business-only wallet. Based on this reasoning, the second hypothesis is proposed.

H2: Digital lifestyle has a positive effect on SDB.

SDB includes the possession of digital accounts by MSME owners/managers and the regular allocation of business income as reserves for operational cash. Digital bank accounts are considered the main location for storing daily business liquidity. This practice has strategic characteristics in relation to the separation of business and personal funds, transaction traceability, and the preparation of a cash cushion to manage income fluctuations. Recent field research and policy analyses indicate that MSMEs are treating digital channels as a secure, quickly accessible, and documented "liquidity vault" (Economic Times, 2025; Rakshit et al., 2021).

Regarding entrepreneurial finance, practices that transform the management and protection of business funds are frequently conceptualised as financial innovations. Entrepreneurial financial innovation is the ability of small entrepreneurs to use financial instruments creatively and strategically, enabling businesses to operate, survive, and grow under conditions of uncertainty (Mediaty et al., 2025; Łasak, 2022; Tandilino et al., 2025). In this context, SDB can be considered a form of financial innovation because it moves funds from informal cash storage to regulated financial accounts, generates a transaction record that may facilitate future access to formal financing, and ensures the availability of funds for operational expenses.

The literature on digital financial inclusion and banking in developing countries links cash storage behavior with improved cash flow discipline, operational efficiency, and increased perceptions of security among business owners (Almajali et al., 2022; Arner et al., 2024; Ridwan et al., 2025; Sinha et al., 2025). Therefore, SDB serves as a financial mechanism that helps MSME owners/managers maintain financial stability.

Business resilience is the ability to withstand disruptions, maintain core operations, fulfill routine obligations, and quickly resume activities after experiencing income pressure. In this context, business sustainability reflects owners' belief in the businesses' ability to persist over the medium term, rather than surviving daily (Apriyanti et al., 2024; Rizki & Hendarman, 2024). The literature on MSMEs in developing countries emphasizes that access to flexible and readily available formal financial services is a key factor in supporting resilience through emergency financing and the availability of safe and controlled cash reserves (Kurniasari et al., 2025; Mashoene et al., 2025; Tay et al., 2022).

In the context of digital transformation, there is growing evidence that the use of digital financial services, including bank accounts, cashless payments, wallets, and mobile-based cash flow monitoring, contributes to the resilience of small businesses. This is because business owners can more quickly ascertain cash position, prioritize important payments, and adjust operational costs when sales decline (Ly & Ly, 2024; Wauk et al., 2025). Evidence from MSMEs under economic pressure shows that the capacity to mobilize cash efficiently, securely, and transparently determines business survival (Arner et al., 2024; Rakshit et al., 2021). Therefore, the relationship between digital cash storage behavior and business resilience becomes important. The practice of maintaining business funds in digital bank accounts as liquidity reserves enhances the perceptions of safety, preparedness for revenue shortfalls, and the ability to fulfill short-term obligations. Business resilience and sustainability are viewed as strategic outcomes of digital cash management practices. This research predicts that a stronger commitment to deposit business funds is associated with higher levels of resilience and long-term sustainability. Therefore, the third hypothesis is formulated.

H3: SDB has a positive effect on the resilience and sustainability of businesses.

Digital financial literacy and lifestyle are two main factors driving digital financial behavior in MSMEs. These two factors are expected to increase the propensity of business actors to actively allocate funds and use digital accounts as a cash-flow buffer. SDB functions as a financial mechanism that strengthens resilience and sustainability. Therefore, business funds become more segregated, documented, easily accessible, and readily available to ensure operational continuity during periods of income pressure. This research examines the direct influence of digital financial literacy and lifestyle on SDB. The mediating role of saving in digital banks is examined in the relationship between digital factors and MSME resilience. This mediation idea is in line with the view that entrepreneurial financial innovation serves as a bridge between digital capabilities of actors and sustainability of businesses (Mediaty et al., 2025; Łasak, 2022; Tandilino et al., 2025). Therefore, the fourth hypothesis is formulated.

H4: SDB mediates the influence of financial literacy and lifestyle on the resilience and sustainability of MSME.

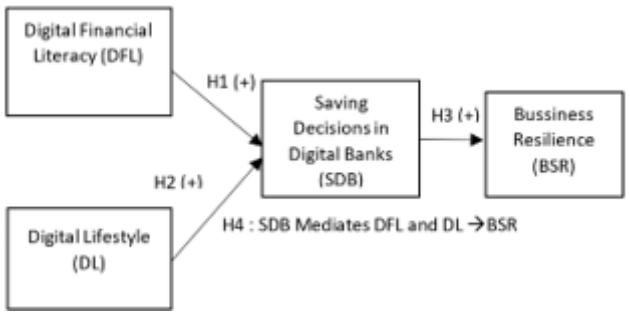


Figure 1 Conceptual model of the research

II. METHODS

A quantitative method is used with a cross-sectional survey design. The design is selected

because this research aims to examine the relationship between latent variables reflecting the behavior and perceptions of MSMEs. The quantitative survey method is commonly used in research on the adoption of digital financial services, business cash management behavior, and digital financial inclusion in MSME, allowing for simultaneous testing of structural models (Kusumawardhani et al., 2023; Ridwan et al., 2025; Tandilino et al., 2025). The model positions digital financial literacy and lifestyle as independent variables, SDB as a mediating variable, and business resilience and sustainability as dependent variables. Therefore, this research combines descriptive and explanatory methods to uncover the mechanisms linking the variables.

The population consists of MSME owners/ managers who actively manage business finances. The following inclusion criteria are applied. First, respondents had to be individual business owners or directly responsible for daily financial decisions, including receiving customer payments, paying suppliers, and managing operational cash flow. Second, the business had to be active at the time of data collection, with ongoing commercial transaction activities. Third, access to digital financial services is required, such as mobile banking, digital banking, digital wallets, or other non-cash payment channels.

Respondents are recruited in Indonesia through two channels: MSME mentoring/training activities and online dissemination using MSME community networks and social media. Since respondents are recruited from mentoring/training programs, which may attract more digitally engaged individuals than the broader population, the results should be interpreted as representative of digitally active MSME. To address the issue, this research provides detailed information on the characteristics of respondents and acknowledges the potential selection bias as a limitation. Future research could use probability sampling across regions and sectors.

Purposive sampling is used to deliberately select respondents based on eligibility criteria. After the screening process, 210 MSME respondents have data suitable for analysis. This sample size is considered sufficient for analysis, as 200 respondents are considered adequate for PLS-SEM models (Hair et al., 2021.; Wauk et al., 2025). Respondent characteristics indicated that the majority of MSME operators are women (63.8%) in the productive age range of 25 to 44 years. Most businesses have been operating for more than one year. The most prominent business sectors are retail trade and food and beverages, reflecting the typical composition of MSMEs in developing countries. Approximately 72.4% of respondents had used digital bank accounts to manage business funds. The average weighted monthly turnover is around IDR 60 million per business. This suggests that respondents are entrepreneurs who truly rely on daily cash flow to maintain commercial operations (Economic Times, 2025).

Data are obtained through a structured questionnaire distributed using direct and independent online completion by respondents who meet the inclusion criteria. Respondents are asked to answer based on the conditions of businesses. For the mentoring/training channel, respondents are invited by program organizers in Indonesia and complete the survey online through Google Forms after the session. The questionnaire link is distributed through WhatsApp group or communities of MSMEs to reach eligible actors for the online channel. Furthermore, no personal identifiers are collected, and a total of 260 responses are received. Only 210 responses are retained as valid for analysis. Responses are excluded when incomplete, missing substantial data, or showing low-quality patterns such as duplicates or inconsistencies. The questionnaire is pre-tested with a small group of MSME owners for clarity and content validity.

A formal pilot test is not conducted, but the instrument is adapted from established measures. The instrument is reviewed for face validity and clarity before distribution. Minor wording adjustments are applied to ensure contextual fit for MSME respondents and to minimize ambiguity in interpretation. Measurement quality is subsequently evaluated using PLS-SEM.

To minimize common method and self-report biases, the survey emphasizes voluntary participation and anonymity. The survey also avoids evaluative wording and divides the questionnaire into clearly labeled sections according to construct. In addition, collinearity is assessed using Variance Inflation Factor (VIF) values. The results indicate low VIF values (1.000–1.164), which are well below common thresholds. This suggests that multicollinearity is a concern, and the common method bias affects the result significantly.

Furthermore, this research applies four main constructs, namely digital financial literacy, digital lifestyle, SDB, and business resilience and sustainability. All four are treated as reflective constructs. Each construct is measured using several statement indicators, and respondents rate their level of agreement with each statement on a five-point Likert scale.

Digital financial literacy is defined as the ability of MSME owners or managers to understand, assess, and use digital financial services safely and effectively in the context of business. This literacy includes understanding the features and costs of digital bank accounts, awareness of transaction security, and the ability to monitor business cash flow through applications. Examples of statements presented to respondents are "I understand the main features of digital savings account I use for my business" and "I know how to ensure that digital banking application I use is secure." Digital financial literacy has been viewed in previous research as a foundation of repeated and sustainable digital-based behavior in the MSME sector (Kurniasari & Lestari, 2024; Ridwan et al., 2025; Andriansyah et al, 2025).

Digital lifestyle is defined as the orientation

of business actors to conduct financial activities digitally and in a cashless manner as a part of their routine. Indicators include a preference for cashless transactions, reliance on mobile phones as the primary tool for managing cash flow, and the need for real-time access to cash balances. They also reflect the importance of financial processes that do not require cash handling or visits to physical bank branches. Examples of statements include "I prefer to receive and make business payments in a non-cash manner" and "I almost always use a mobile phone to manage my business finances." Digital lifestyles have been linked to the sustained adoption of financial channels among MSME in various developing countries (Almajali et al., 2022; Srouji & Torre, 2022; Sultana et al., 2025; Wauk et al., 2025).

SDB is defined as the tendency of MSME owners/managers to actively set aside business funds into a digital bank account for storing operational cash. The indicators include the intention to continue the practice of saving in digital bank accounts, the perception of security regarding the storage of business funds, the routine of setting aside a portion of income, and the preference for placing funds in digital accounts rather than storing cash. Examples of statements include "I routinely set aside a portion of business income into a digital bank account" and "I believe my business funds are safe if stored in a digital bank account." These decisions are seen as a form of entrepreneurial financial innovation that moves cash from informal storage to secure, documented, and easily monitored formal channels (Arner et al., 2024; Economic Times, 2025; Ridwan et al., 2025).

Business resilience and sustainability are defined as the level of confidence among MSME owners or managers that businesses can withstand short-term declines in sales, meet routine operational obligations, and continue operating over the medium term. Indicators include business cash reserves, short-term operational cost coverage, timely payment of obligations, resilience to sales declines, and confidence in business continuity over the next one to two years. Examples of statements are "My business has sufficient reserve savings to cover operational costs for the next few months" and "I am confident that my business will continue to run even if sales suddenly decline." MSME resilience is widely connected in the literature to rapid, secure, and digitally accessible formal financial channels (Apriyanti et al., 2024; Rakshit et al., 2021; Rizki & Hendarman, 2024). Therefore, this section explains the conceptual definitions of each construct and shows the empirical measurement through statements provided to respondents.

Data analysis is conducted using PLS-SEM. This method was selected for several relevant reasons. First, the research model comprised several interrelated latent constructs and included mediation paths, namely SDB as an intermediary variable between digital factors (digital financial literacy and digital lifestyle) and business resilience. Second, the analysis uses a moderate sample size (210 respondents), appropriate for PLS-SEM, which is tolerant of non-large samples. Third, the variables are perceptual in nature, and the use of variance-based estimation was considered appropriate (Hair et al., 2021; Ridwan et al., 2025; Sultana et al., 2025).

PLS-SEM is selected because the research was prediction-oriented, included a mediation structure (DFL and DL → SDB → BSR), and focused on explaining variance in the key endogenous constructs. The method is suitable for non-normally distributed data and for analysis that focuses on estimation and prediction rather than exact model fit.

The model is estimated using SmartPLS (v. 3.2.9). Significance testing is performed using bootstrapping with 5,000 subsamples, two-tailed tests ($\alpha = 0.05$), and bias-corrected and accelerated (BCa) 95% confidence intervals for direct and indirect effects. Potential collinearity and common method bias are assessed using inner VIF values, which are low (1.000–1.164), indicating biases do not affect the results.

The analysis is conducted in two main stages. The first stage is the evaluation of the measurement model to test internal reliability and convergent validity. Internal reliability is assessed using Cronbach's Alpha and Composite Reliability (CR), with a general benchmark of above 0.70 as an indication of good consistency. Then, convergent validity is assessed using the Average Variance Extracted (AVE) value. In this context, a value above 0.50 shows that the indicators in a construct adequately explain the latent variable (Hair et al., 2021; Kurniasari et al., 2025; Tandilino et al., 2025)

The second stage is the evaluation of the structural model. At this stage, the path coefficients between latent variables, t-values, and p-values were assessed to test the statistical significance of the direct relationships. In addition, the coefficient of determination (R^2) is reported to assess the proportion of variance in the endogenous variables explained by the model. Indirect effect testing is also conducted to evaluate the mediating role of SDB in transmitting the influence of digital financial literacy and lifestyle on business resilience and sustainability (Łasak, 2022; Wauk et al., 2025). Following the analytical design, this research analyzes direct digital–financial relationships and the mediating role of saving business funds in digital banks as an entrepreneurial innovation that enhances MSME resilience.

III. RESULTS AND DISCUSSIONS

Respondent characteristics provide context regarding the profile of MSME. Table 1 presents a summary of 210 respondents. Table 1 shows that the majority of respondents are women and are in the productive age range of 25 to 44 years. The majority of businesses had operated for more than one year, suggesting that the sample does not consist of newly established entrepreneurs. The dominant sectors are

retail trade and food and beverages, which are in line with the general structure of MSMEs in developing countries.

Table 1 Profile of MSME Respondents (n = 210)

Characteristics	Category	Percentage (%)
Gender of business owner/manager	Female	63.8
	Male	36.2
Age of business owner/manager	Under 25 years old	12.4
	25–34	37.1
	35–44	34.3
	45 years and above	16.2
Length of time in business	Less than 1 year	9.5
	1–3 years	41
	4–7 years	32.4
	Over 7 years	17
Business sector	Retail trade	38.6
	Food and beverages	33.3
	Services (salons, repairs, tailoring, and similar services)	21
	Other	7.1
Monthly business turnover	Less than Rp10 million	27.1
	IDR 10–50 million	44.8
	IDR 50–200 million	20
	Over IDR 200 million	8.1
Number of employees	Self-managed (no employees)	52.9
	Two to four people	33.8
	Five to ten people	10.5
	More than ten people	2.9
Using a digital bank account for business	Yes	72.4
	No	27.6
Having more than one digital bank account for business	Yes	28.1
	No	71.9

A total of 72.4% of respondents reported using digital bank accounts specifically for business funds. In addition, evidence suggests a separation of business and personal funds since some respondents reported maintaining more than one digital bank account specifically for managing cash. The weighted average turnover is around IDR 60 million per month per business. Respondents are active business owners who engage in daily cash management, rather than operating small-scale household-side enterprises. This is in line with the latest results that the adoption of digital financial services is becoming a normal operational practice (Totolo, et al., 2025).

This research uses four main constructs, namely digital financial literacy, digital lifestyle, SDB, and business resilience and sustainability. Table 2 presents the mean values, standard deviations, and correlations between variables.

The average digital financial literacy score of 4.10 (on a five-point scale) shows that MSME owners/managers are relatively confident in their understanding of bank account features, costs, and security. The average score for digital lifestyle is slightly higher at 4.20, indicating that the use of mobile phones to manage business finances, accept cashless payments, and monitor cash balances in real time has become routine among MSME owners and managers.

SDB has an average of 3.90, indicating that MSME owners/managers have begun to actively place business funds into digital bank accounts. However, there are still variations between actors with a standard deviation of 0.70. Business resilience and sustainability have an average score of 3.80. This suggests a fairly high level of confidence that businesses can continue to operate, meet routine obligations, and survive short-term sales decline.

Table 2 shows descriptive statistics and bivariate associations among the constructs. These bivariate results are reported for descriptive purposes only and indicate that the constructs are related in the expected direction. However, hypothesis testing is based on PLS-SEM structural model results (path coefficients and bootstrapped inference) reported in Table 4 and Table 5.

At the descriptive level, digital financial literacy and lifestyle show positive associations with SDB ($r = 0.48$ and $r = 0.44$, respectively). Furthermore, SDB suggests a positive association with business resilience and sustainability ($r = 0.52$). These pairwise associations describe the pattern of relationships in the sample. Conclusions regarding hypothesis support were drawn from PLS-SEM structural model estimates and bootstrapped significance tests reported in Tables

Table 2 Descriptive Statistics and Correlations between Constructs (n = 210)

Variable	Mean	Standard Deviation	DFL	DL	SDB	BSR
DFL : Digital financial literacy	4.1	0.60	1.00	0.41	0.48	0.35
DL : Digital lifestyle	4.20	0.50	0.41	1.00	0.44	0.32
SDB : Decision to save in a digital bank	3.90	0.70	0.48	0.44	1.00	0.52
BSR : Business resilience and sustainability	3.80	0.70	0.35	0.32	0.52	1.00

4 and 5. These descriptive results are consistent with the literature stating that digital financial literacy promotes more formal cash management behavior (Kurniasari & Lestari, 2024; Kusumawardhani et al., 2023; Andriansyah et al., 2025). Digital lifestyle is associated with the habit of non-cash payment practices and continuous monitoring of business cash (Almajali et al., 2022; Sultana et al., 2025; Wauk et al., 2025). The availability of secure and documented cash reserves increases the resilience of small businesses (Apriyanti et al., 2024; Rizki & Hendarman, 2024).

The measurement model is evaluated to ensure each construct is measured reliably and validly before testing the relationships between latent variables. The results of internal reliability and convergent validity are shown in Table 3.

Cronbach's Alpha values for all constructs are above 0.80, indicating good internal consistency. CR values are all above 0.90, showing that the indicators in the construct consistently measure the same concept. AVE values ranged from 0.60 to 0.68. Therefore, each construct meets the convergent validity criteria because AVE is greater than 0.50. The four constructs in this research are reliable and valid for further analysis. The results meet the general criteria in PLS-SEM, which recommend Cronbach's Alpha and CR above 0.70, and AVE above 0.50 (Kurniasari et al., 2025; Sarstedt et al., 2020; Tandilino et al., 2025). The instruments used to measure digital financial literacy, digital lifestyle, SDB, as well as business resilience and sustainability, are statistically robust.

After the measurement model is declared feasible, the structural model is evaluated to test the hypothesized relationships among latent variables. Table 4 reports the standardized path coefficients (β), t-values, and p-values. The model shows moderate explanatory power, with R^2 for SDB is 0.350. Therefore, 35.0% of the variance in SDB is explained by digital financial literacy and digital lifestyle. R^2 for business resilience (BSR) is 0.308, showing that SDB explains 30.8% of the variance in BSR.

As presented in Table 4, digital financial literacy had a significant positive effect on SDB ($\beta = 0.386$, $t = 6.969$, $p < 0.001$), supporting H1. Digital lifestyle also had a significant positive effect on SDB ($\beta = 0.327$, $t = 6.011$, $p < 0.001$), supporting H2. These results suggest that fast-paced, cashless, and gadget-based financial routines allow MSMEs to treat digital bank accounts as a primary place for storing business working capital. Therefore, the normalization of digital payment practices changes the storage and management of business funds (Sultana et al., 2025; Wauk et al., 2025).

SDB significantly predicted business resilience and sustainability ($\beta = 0.555$, $t = 11.927$, $p < 0.001$), supporting H3. The results imply that regular allocation of business funds to digital bank accounts enhances preparedness to fulfill routine operational obligations, handle short-term sales fluctuations, and sustain business continuity. This is consistent with the argument that documented and easily accessible cash management strengthens small-business resilience to shocks (Apriyanti & Bella, 2024; Legenzova et al., 2025; Rakshit et al., 2021.

Table 5 reports the mediation results in addition to the direct effects. Bootstrapping shows that SDB significantly mediates the effect of digital financial literacy (β_indirect = 0.214, $t = 5.547$, $p < 0.001$, 95% CI [0.142, 0.293]) and lifestyle (β_indirect = 0.181, $t = 5.321$, $p < 0.001$, 95% CI [0.120, 0.253]) on business resilience. Indirect effects are significant since the 95% BCa confidence intervals do not include zero, providing support for the mediating role of SDB (H4). Conceptually, digital financial literacy and lifestyle do not make a business resilient. This is because resilience increases when digital capabilities

Table 3 Internal Reliability and Convergent Validity of Constructs

Construct	Items used	Cronbach's Alpha	Composite Reliability (CR)	AVE
Digital financial literacy (DFL)	DFL1–DFL5	0.88	0.91	0.62
Digital lifestyle (DL)	DL1–DL5	0.86	0.90	0.60
Decision to save in a digital bank (SDB)	SDB1–SDB5	0.89	0.92	0.66
Business resilience and sustainability (BSR)	BSR1–BSR5	0.90	0.93	0.68

Table 4 Structural Model Testing Results

Path between variables	Coefficient (β)	T-Value	p-value	Hypothesis Support
Digital financial literacy → Decision to save in digital banks (SDB)	0.386	6.969	< 0.001	H1 supported
Digital lifestyle → Decision to save in digital banks (SDB)	0.327	6.011	< 0.001	H2 supported
Decision to save in digital banks (SDB) → Business resilience (BSR)	0.555	11.927	< 0.001	H3 supported

and habits are translated into concrete financial actions. SDB functions as an entrepreneurial financial innovation mechanism that channels digital factors towards business resilience (Mediaty et al., 2025; Łasak, 2022; Tandilino et al., 2025).

Table 5 Specific Indirect Effects (Mediation) through SDB

Indirect path	β_indirect	T-Value	p-value	95% CI (BCa)
DFL → SDB → BSR	0.214	5.547	< 0.001	[0.142, 0.293]
DL → SDB → BSR	0.181	5.321	< 0.001	[0.120, 0.253]

Additional model diagnostics report satisfactory validity and predictive capability. Discriminant validity is supported since HTMT values are below commonly used thresholds (max HTMT = 0.612). Collinearity is not a concern, with outer VIF values ranging from 1.815 to 3.243. Effect size results indicated a medium (DFL → SDB: $f^2 = 0.197$) and a small-to-medium (DL → SDB: $f^2 = 0.141$) effect of digital financial literacy and lifestyle on SDB. Meanwhile, SDB exhibits a large effect on business resilience (SDB → BSR: $f^2 = 0.445$). Blindfolding results support predictive relevance (SDB: $Q^2 = 0.231$; BSR: $Q^2 = 0.114$).

This research reinforces several important results in the literature, while adding a new perspective. First, digital financial literacy is directly related to cash-management behavior through SDB. MSME owners/managers who understand the features, security, cost structure, and benefits of financial services tend to allocate business funds into formal digital channels. In this context, digital financial literacy supports disciplined cash management. Business funds are stored in accounts that can be monitored and recorded (Kurniasari et al., 2025; Kusumawardhani et al., 2023; Ridwan et al., 2025). These results reinforce the argument that improving digital financial literacy is a strategic intervention because the concept is associated with more orderly and measurable financial practices at the small-business level.

Second, digital lifestyle of MSME owners/managers is not a technological preference or personal style but has become an operational pattern. Individuals accustomed to receiving and making cashless payments, recording transactions with devices, and monitoring business cash flow in real time through applications, concentrate business funds in digital bank accounts. Digital lifestyle orientation normalises digitally enabled financial routines as a temporary adoption of new technology (Almajali et al., 2022; Sultana et al., 2025; Wauk et al., 2025).

Third, this research links SDB with MSME owners' perceived ability to withstand short-term cash flow pressures. MSME owners/managers who routinely deposit business funds in digital bank accounts report a higher sense of operational security. These individuals feel more capable of meeting routine obligations on time, managing temporary sales declines, and maintaining business continuity. The results expand the discussion of MSME resilience by reporting secure, documented, and easily accessible business cash reserves as an important component of resilience (Rakshit et al., 2021).

Fourth, the mechanism underlying the relationship between digital capability and resilience is reported. SDB is an entrepreneurial financial innovation that channels digital capabilities into resilience outcomes. In the context of a developing country, entrepreneurial financial innovation focuses on accessing new financing and managing internal liquidity in a more structured, transparent, and separated manner from household consumption (Łasak, 2022; Tandilino et al., 2025). Therefore, routinely placing business funds in digital banks functions as a transactional tool and a financial management instrument at the micro level.

The results position digital transformation as a matter of business financial management rather than technology adoption. From the perspective of regulators and financial service providers, digital banking services should be positioned as fast-payment tools that support business stability. The practical implication is the need to separate business and personal funds, maintain cash reserves in secure and recorded accounts, and build consistent cash-management habits.

IV. CONCLUSIONS

In conclusion, digital financial literacy and lifestyle strengthened business resilience and sustainability through concrete cash-management behavior, namely saving business funds in digital banks. This research explores the links between digital financial literacy, digital lifestyle, SDB, and the effects on MSME resilience and sustainability. PLS-SEM is used to conduct a quantitative survey of 210 MSME owners/managers who actively manage business finances.

The results reveal three main findings. First, digital financial literacy had a significant positive effect on SDB. This shows that understanding the features, security, costs, and mechanisms of using digital financial services played a direct role in promoting formal business cash storage behavior. Second, a digital lifestyle also has a significant positive effect on SDB. MSME actors accustomed to non-cash transactions, recording cash flow through mobile devices, and monitoring financial conditions in real time tended to use digital bank accounts as the main location for storing business cash. Third, SDB significantly predicts resilience and sustainability. Therefore, MSME owners and managers become more confident in their ability to withstand sales declines, meet operational obligations on time, and continue operating their businesses in the future.

The mediation results suggest that SDB transmits the influence of digital financial literacy and lifestyle on business resilience. Conceptually, digital financial literacy and lifestyle do not automatically make a business resilient. In this context, business resilience is strengthened when digital capabilities and habits are manifested in concrete financial actions, namely, regularly setting aside funds in a digital bank account. SDB functions as an entrepreneurial financial innovation mechanism that channels the influence of digital factors toward business resilience. Theoretically, the results position the practice of saving business funds in digital bank accounts as a form of micro-scale entrepreneurial financial innovation. This perspective broadens the discussion of digital transformation beyond access to credit and platform-based financing by highlighting the importance of internal liquidity management and financial discipline. Digital transformation also occurs through the organization of internal liquidity buffers. An important aspect of digital transformation is not only the ability to obtain external funds but also the capacity to save, separate, and sustainably protect business funds.

This research has several practical implications. For MSME owners, separating business from personal funds through digital bank accounts has created more disciplined cash control and clearer visibility into financial condition. The habit of setting aside business funds in digital accounts serves as an operational buffer fund when sales decline in the short-term. Furthermore, the results show that digital banking products for micro-businesses serve as a method of transaction and an instrument for small-business stability. Features such as the separation of business and personal balances, real-time cash monitoring, and the marking of operational reserve funds have the potential to provide added value directly relevant to the needs of MSMEs in developing countries. The results suggest that digital financial literacy programs are designed to address proficiency with digital financial applications and the capacity to safeguard, monitor, and segregate business funds from personal consumption.

This research reports several limitations. First, the cross-sectional nature of the data shows that the relationships are associative. Further research can use a longitudinal design to examine changes in fund placement behavior in digital bank accounts and business resilience. Second, all indicators are measured through self-assessment by respondents. Subsequent research adds objective indicators, such as the frequency of business cash deposits into digital bank accounts, average business account balances, and records of the use of reserve funds for operational needs. Third, this research focuses on MSMEs in the context of developing countries. The performance of replication research in medium-sized sectors with formalized cash flow systems could assess when the results apply broadly or remain specific to micro and small businesses. Digital capabilities (literacy) and habits (cashless financial lifestyle) are related to the storage of business cash. The behavior of storing business funds in digital bank accounts serves as a financial mechanism that supports resilience. Therefore, digital-based cash management practices should be understood as an important part of the digital transformation agenda in developing countries, particularly from an entrepreneurship and innovation perspective.

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