

BEYOND SURVIVAL: HOW DIGITAL SKILLS, FINANCIAL TECHNOLOGY ADAPTION, AND FINANCIAL LITERACY SHAPE BUSINESS PERFORMANCE

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Abstract:

Digital and financial capabilities now sit at the heart of how micro, small, and medium enterprises (MSMEs) hold their ground in fast-shifting markets. This study asks which of those capabilities actually move MSME performance. Using the Resource-Based View as its lens, it tests the influence of financial literacy, digital skills, digital transformation strategy, and financial technology (FinTech) adoption on the business performance of Indonesian MSMEs. Questionnaires were completed by 151 MSME owners and managers recruited through purposive sampling, and responses were processed with Partial Least Squares Structural Equation Modeling in SmartPLS. All constructs satisfied validity and reliability criteria, and the structural model accounted for 93% of the variance in business performance ($R^2 = 0.930$). Three of the four predictors proved significant. The largest coefficient belonged to digital transformation strategy ($\beta = 0.371$), followed by FinTech adoption ($\beta = 0.308$) and financial literacy ($\beta = 0.176$). Digital skills showed no significant influence, implying that technological competence accomplishes little on its own unless a coherent transformation strategy puts it to work. These findings deepen the discussion on digital entrepreneurship and MSME performance, and show owners, practitioners, and policy makers where capability building pays off if MSMEs are to stay competitive and sustainable.

Keywords: Financial Literacy, Digital Skills, Digital Transformation Strategy, FinTech Adoption, Business Performance, SMEs

INTRODUCTION

Financial Literacy Goyal & Kumar, (2021) treat financial literacy as the capacity of a person to make sense of financial outcomes, analyse them, and choose better among financial options. It captures a working grasp of financial concepts that allows financial resources to be managed effectively and financial wellbeing to be reached (Lone & Bhat, 2022). Put differently, when someone can read financial information, weigh it, and decide sensibly on that basis, that person is financially literate (Upadhyaya et al., 2024). Those who know more about financial concepts translate that knowledge into practical money management behaviour and find it easier to keep their own finances under control (Lind et al., 2020). OECD (2022) frames financial literacy as a combination of awareness, knowledge, skills, attitudes, and behavior that leads to sound financial decisions and to individual financial wellbeing. Framed this way, the concept stretches well past technical financial knowledge and takes in the positive attitudes and habits people bring to money in daily life (Masdupi, Imran, & Sintya, 2025). Read through the Resource-Based View (RBV),



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financial literacy counts as an intangible resource that can carry SMEs toward competitive advantage, stronger performance, and growth (Barney, 1991). Because it turns financial information into usable judgement, it becomes a strategic asset of real value to business owners, and especially to SMEs working with thin resources (Masdupi et al., 2025). Owners with a solid command of financial concepts take risks in a more measured way and reason more rationally and strategically about the resources at hand, which in the end keeps the business sustainable (Masdupi et al., 2025).

Masdupi et al. (2025) describe financial literacy as multidimensional, built from several aspects that connect to one another. The first is the financial knowledge dimension (financial knowledge), covering command of basic ideas such as the time value of money, inflation, risk diversification, and interest calculation. This layer is the foundation on which an understanding of the various financial products and services available rests. Financial behavior (financial behavior) forms the second dimension and shows up in what a person actually does with money: drawing up a budget, saving on a regular basis, handling debt sensibly, and planning finances over a long horizon. It indicates how far financial knowledge has travelled into everyday life or business practice. The third is financial attitude (financial attitude), the orientation a person holds toward financial matters, including how much weight they give to saving, to managing risk, and to preparing for the financial future.

Hypothesis Development Kurniasari et al. (2025) note that financial literacy equips micro, small, and medium enterprises (SMEs) with the competencies, skills, and financial capabilities needed to shape financial strategy. Trianto et al. (2021) found financial literacy to matter for whether SMEs in Indonesia succeed in business. Ingale et al. (2021) similarly report that the financial knowledge held within SMEs feeds the strength of their financial and business performance. SMEs are also better placed to mitigate risk when their financial investment decisions are sound (Kurniasari et al., 2025). Mavlutova et al. (2022) earlier identified financial literacy as among the strategic elements that count most for firm performance in a dynamic business environment. It sharpens the capacity of individuals and business owners to arrive at the best strategic financial decisions. Abiola et al. (2021) found that sound financial management, growing sales, and rising business profit are what deliver strong SME business performance.

H1: Financial literacy exerts a positive and significant influence on business performance

As digital transformation unfolds, a growing number of companies see why a quality talent team matters: carrying out a digital strategy calls for digital talent who bring not only business capability but wide insight and firm digital understanding and skills (Teng et al., 2022). Digital literacy among employees signals readiness for what digital transformation demands (Teng et al., 2022). Earlier work indicates that the digital mindset employees carry shapes how far they join a company's digital transformation programme and even whether they leave (Solberg et al., 2020). Individual digital capability, meanwhile, connects tightly to SME growth and innovation performance (Scuotto et al., 2021). **Digital Skill** How well a person can work with digital technology rests on their digital literacy (van Laar et al., 2017). Within SME operations, owners and managers with stronger digital literacy find it easier to run business activities through digital technology (Scuotto et al., 2021). Zahoor et al. (2026) show that digital literacy lifts both digital usage and the use of digital technology, which then feeds the transformation and the performance gains of SMEs. Evidence from Indonesia, as a developing economy, points to weak digital literacy as a root obstacle to SME modernization: it holds back the move to online operations and narrows the markets firms can reach (Raharjo et al., 2024) Digital skill also ties closely to gains in human capital and firm performance, working through digital literacy alongside employee dedication (Meena & Santhanalakshmi, 2024)



H2: Digital skill experts a positive and significant influence on business performance

Merín-Rodríguez et al. (2024) found that digital transformation has a positive effect on SME performance. Digital transformation improves the financial performance of SMEs, and these findings consistently confirm the crucial role of digital transformation as a key driver of improved SME performance. Companies that embrace digital transformation are likely to achieve improved performance outcomes by leveraging advanced technologies such as AI, blockchain, big data analytics, and the Internet of Things (IoT) (Pelletier & Cloutier, 2019). Corporate digital transformation has been shown to have a positive impact on firm performance. Other research shows that three main resources, namely information technology, human resources, and business strategy, have a positive influence on SME digital transformation, which in turn also has a positive impact on SME business outcomes (Hai, 2021). The various benefits of digital transformation for companies include the ability to drive the transformation and optimization of traditional business through the use of digital technology, expand production capability and product trade more broadly, and create value for the company. This added value takes the form of improved efficiency, reduced operational costs, and improved product or service quality (Teng et al., 2022).

Digital Transformation Strategy Digital transformation puts digital tools to work in generating fresh knowledge, activities, and insight. It begins with the new skills and resources a company finds it needs (Gupta & Bose, 2019). What propels it is digital literacy together with the efficient use of digital technology (Zahoor et al., 2026). When the operating environment grows less certain, technological change presses firms to rework the core of their business model through digital transformation (Gupta & Bose, 2019). Managers draw on digital literacy for the skills to apply technology to business ends (Adomako & Nguyen, 2020). Through digital transformation, SMEs become more adaptable and better equipped to meet critical business challenges (Skare et al., 2023). Business Performance Mahohoma (2024) treats SME performance as a set of metrics that gauge how efficient and effective a business is overall. Two kinds of measurement bring it into view, namely financial and non-financial. On the financial side sit annual sales growth, profit growth, return on investment (ROI), return on equity (ROE), return on assets (ROA), return on sales, and gross profit margin. Non-financial indicators instead look at employee knowledge and skills, the creation of new products or services, and growth in the number of employees. Financial performance surfaces in the financial statements of SMEs, which log every financial transaction and reveal how far a firm practices good governance while operating in a dynamic and competitive environment (Kurniasari et al., 2025). Kurniasari et al. (2025) find that SMEs performing well financially hold their operations together over the long run even as industry competition intensifies. An SME's financial condition also weighs heavily when lenders approve loans or when the firm seeks financing from financial institutions (Teng et al., 2022)

H3: Digital transformation strategy has a positive and significant effect on business performance

Most financial products today already live on digital platforms and are open to the public far more readily than before (Kurniasari et al., 2025). Adopting digital technology helps SMEs pick the financial products that match their financing and business funding needs (Kurniasari et al., 2025). Loan applications on FinTech platforms are simpler and more practical as well, since operational costs there run lower than in conventional financial services (Najib et al., 2021). Managing cash flow more efficiently and effectively through FinTech can in turn raise SME operational performance (Kurniasari et al., 2025). Digital adoption further widens the range of funding sources SMEs can reach (Kurniasari et al., 2025). With capital easier to obtain quickly and flexibly, businesses can develop, operate at greater capacity, and compete more strongly. Better

financial access also gives SMEs more room to raise their business productivity and profitability (Kurniasari et al., 2025). **Financial Technology Adoption** Financial technology, or fintech, is a form of digital innovation that delivers financial services automatically, among them digital banking, mobile payments, insurance, and lending (Sharma, at al., 2025). Its arrival is seen as a way to push transaction costs down while making financial services run more efficiently (Sajid et al., 2023). What holds adoption back includes financial risk, unsettled regulation, worries about security and privacy, and operational systems at fintech companies that remain underdeveloped (Setiawan et al., 2021). Adopting FinTech is not only a matter of taking up technology; it also reflects how people consume financial services (Xie et al., 2021). That consumption means the way customers reach and use financial products or services, internet based investment products among them (Xie et al., 2021).

H4: Financial technology adoption exerts a positive and significant influence on business performance.

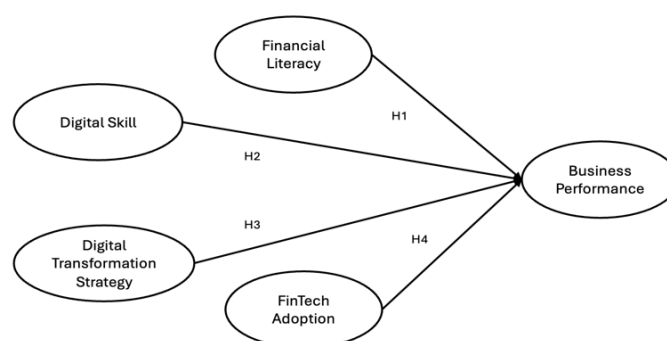


Figure 1. Research Framework

METHODS

A quantitative approach with an explanatory design guides this study. A questionnaire distributed to 151 SME owners in Indonesia, recruited by purposive sampling, supplied the data, and every item was rated on a five points Likert scale. The responses were processed with Partial Least Squares-Structural Equation Modeling (PLS-SEM). Analysis moved in stages: the measurement model (outer model) was examined for validity and reliability, after which the structural model (inner model) was assessed through the R-Square value and hypothesis testing based on path coefficient, t-statistic, and p-value.

RESULT AND DISCUSSION

PLS-SEM serves here to examine both the measurement model and the structural model. Evaluation of the measurement model came first and ran across convergent validity, factor loading coefficient, composite reliability, average variance extracted (AVE), and discriminant validity. Hypothesis testing followed, guided by the structural model proposed. Validity and reliability of the constructs were secured through a comprehensive measurement technique. Partial Least Squares-Structural Equation Modelling (PLS-SEM) was chosen because it fits research that builds theory, examines causal links among latent constructs, and handles models carrying many latent variables and indicators. It also performs well on predictive models when the sample is relatively small.

Convergent Validity Test the convergent validity results appear in Table 1, expressed as the loading factor of each latent variable against its respective indicators; the benchmark is a value above 0.7.

Table 1. Results of the Convergent Validity Test

	Business Performance	Digital Skill	Digital Transformation Strategy	Financial Literacy	Fintech Adoption
BP1	0,924				
BP2	0,931				
BP3	0,921				
BP4	0,924				
BP5	0,942				
BP6	0,901				
DS1		0,922			
DS2		0,947			
DS3		0,922			
DS4		0,923			
DS5		0,920			
DT1			0,864		
DT2			0,916		
DT3			0,908		
DT4			0,923		
DT5			0,922		
DT6			0,920		
DT7			0,927		
FL1				0,935	
FL2				0,889	
FL3				0,907	
FL4				0,915	
FL5				0,921	
FL6				0,910	
FT1					0,937
FT2					0,953
FT3					0,949

Every item in Table 1 loads above 0.7, so all items used in this study can be regarded as convergently valid. No statement requires removal or exclusion, since each item across every variable is already valid and further analysis can move forward. Beyond the loading factor, convergent validity may also be judged from the Average Variance Extracted (AVE) value.

Table 2. Average Variance Extracted (AVE) Values

	Average Variance Extracted (AVE)
Business Performance	0,854
Digital Skill	0,859
Digital Transformation Strategy	0,832
Financial Literacy	0,833
Fintech Adoption	0,896

As Table 2 indicates, the AVE values for business performance, digital skill, digital transformation strategy, financial literacy, and fintech adoption all exceed 0.5, so convergent validity holds for each variable. The constructs therefore satisfy the convergent validity requirements, and the indicators used represent adequately what they are meant to measure.

Discriminant Validity Test

Cross loading values for each indicator are set out in Table 3. A cross loading shows how strongly a variable relates to its own indicators compared with the indicators belonging to other variables, so a variable is expected to correlate more strongly with its own indicators than those indicators do with other variables

Table 3. Cross Loading Values

	Business Performance	Digital Skill	Digital Transformation Strategy	Financial Literacy	Fintech Adoption
BP1	0,924	0,840	0,875	0,856	0,858
BP2	0,931	0,861	0,884	0,858	0,861
BP3	0,921	0,876	0,875	0,868	0,862
BP4	0,924	0,868	0,891	0,875	0,883
BP5	0,942	0,875	0,882	0,861	0,862
BP6	0,901	0,829	0,854	0,839	0,827
DS1	0,881	0,922	0,889	0,890	0,833
DS2	0,864	0,947	0,895	0,900	0,852
DS3	0,839	0,922	0,850	0,861	0,819
DS4	0,849	0,923	0,851	0,839	0,819
DS5	0,870	0,920	0,882	0,849	0,842
DT1	0,790	0,797	0,864	0,784	0,780
DT2	0,874	0,860	0,916	0,878	0,864
DT3	0,869	0,883	0,908	0,859	0,831
DT4	0,885	0,865	0,923	0,877	0,848
DT5	0,880	0,845	0,922	0,878	0,821
DT6	0,878	0,883	0,920	0,863	0,846
DT7	0,878	0,884	0,927	0,871	0,860

	Business Performance	Digital Skill	Digital Transformation Strategy	Financial Literacy	Fintech Adoption
FL1	0,888	0,872	0,890	0,935	0,838
FL2	0,804	0,856	0,820	0,889	0,786
FL3	0,843	0,873	0,860	0,907	0,852
FL4	0,846	0,850	0,852	0,915	0,821
FL5	0,866	0,843	0,872	0,921	0,818
FL6	0,847	0,836	0,866	0,910	0,795
FT1	0,876	0,855	0,874	0,866	0,937
FT2	0,872	0,851	0,868	0,850	0,953
FT3	0,891	0,846	0,861	0,829	0,949

Table 3 shows every indicator scoring higher on its own variable than on its cross-loadings elsewhere. Discriminant validity therefore holds for each indicator used in this study.

Table 4. Fornell-Larcker Criterion Values

	Business Performance	Digital Skill	Digital Transformation Strategy	Financial Literacy	Fintech Adoption
Business Performance	0,924				
Digital Skill	0,929	0,927			
Digital Transformation Strategy	0,949	0,943	0,912		
Financial Literacy	0,930	0,936	0,942	0,913	
Fintech Adoption	0,930	0,899	0,917	0,896	0,946

In Table 4, the Fornell-Larcker value of every variable exceeds its correlation with the Fornell-Larcker values of the others, which points to good and sufficient discriminant validity in the research model.

Reliability Test

Cronbach's Alpha values, together with the Composite Reliability values, are reported in Table 5.



Table 5. Composite Reliability and Cronbach's Alpha Values

	Cronbach's Alpha	Composite Reliability
Business Performance	0,966	0,972
Digital Skill	0,959	0,968
Digital Transformation Strategy	0,966	0,972
Financial Literacy	0,960	0,968
Fintech Adoption	0,942	0,963

Table 5 puts Cronbach's Alpha and Composite Reliability above 0.7 for every variable, so all constructs formed in this study count as reliable. The research instruments measure each construct consistently and are fit to carry into the structural model analysis stage.

Respondent Profile Analysis

This section sketches the profile of the respondents. The questionnaire yielded 151 respondents in total, whose profile is analyzed below.

Table 6. Respondent Profile by Gender

Gender	Frequency (n)	Percentage
Female	81	53,6%
Male	70	46,4%
Total	151	100%

Respondents by gender appear in Table 6. Women make up the larger share at 81 people or 53.6 percent, against 70 men or 46.4 percent. The gap between the two is small, so the respondents can be considered evenly spread and the result balanced.

Table 7. Respondent Profile by Age

Age	Frequency (n)	Percentage
18 to 24 years	40	26,5%
25 to 34 years	32	21,2%
45 to 54 years	25	16,6%
35 to 44 years	23	15,2%
More than 64 years	18	11,9%
55 to 64 years	13	8,6%
Total	151	100%

Table 7 sets out the respondent profile by age. The young productive group dominates: 40 people, or 26.5 percent, fall between 18 and 24 years, followed by 32 people, or 21.2 percent, between 25 and 34 years. Together, those aged 18 to 34 come to nearly half the sample (47.7

percent), indicating that the business owners taking part are largely from the younger generation, who as a rule adapt to digital technology more readily.

Table 8. Respondent Profile by Domicile

Domicile	Frequency (n)	Percentage
Bali	41	27,2%
Sumatera Utara	25	16,6%
Aceh	21	13,9%
Riau	21	13,9%
Kepulauan Riau	21	13,9%
Sumatera Barat	18	11,9%
DI Yogyakarta	2	1,3%
Nusa Tenggara Barat	1	0,7%
Kalimantan Barat	1	0,7%
Total	151	100%

Table 8 lays out where respondents live. Bali accounts for the largest group at 41 people or 27.2 percent, then North Sumatra with 25 people (16.6 percent), and Aceh, Riau, and the Riau Islands with 21 people each (13.9 percent). Respondents thus cluster in Bali and across several parts of the island of Sumatra, while only a few come from the Special Region of Yogyakarta, West Nusa Tenggara, and West Kalimantan.

Table 9. Respondent Profile by Business Industry Sector

Industry Sector	Frequency (n)	Percentage
Culinary (Food/Beverage)	46	30,5%
Services (Education, Health, Tourism, etc.)	23	15,2%
Handicraft	21	13,9%
Technology/Digital	20	13,2%
Fashion (Clothing/ Accessories)	20	13,2%
Agriculture/Livestock/Fisheries	14	9,3%
Other	7	4,6%
Total	151	100%

Table 9 reports the respondent profile by business industry sector. Culinary businesses (food and beverage) lead with 46 firms or 30.5 percent, followed by the service sector with 23 firms (15.2 percent) and handicrafts with 21 firms (13.9 percent). The culinary sector is therefore the field most commonly pursued among the business owners who served as respondents in this study.

Table 10. Respondent Profile by Length of Business Operation

Business Duration	Frequency (n)	Percentage
1 to 3 years	59	39,1%
More than 3 years	56	37,1%
3 months to 1 year	30	19,9%
Less than 3 months	5	3,3%
Other	1	0,7%
Total	151	100%

Table 10 shows how long the respondent businesses have been operating. Most are reasonably well established 59 businesses (39.1 percent) have run for 1 to 3 years and 56 businesses (37.1 percent) for more than 3 years. Taken together, 76.2 percent have been operating beyond a year, which suggests respondents generally bring adequate business experience.

Table 11. Respondent Profile by Total Sales in the Past Year

Total Annual Sales	Frequency (n)	Percentage
≤ Rp2 billion (Micro Enterprise) IDR 2 billion or less (Micro Enterprise)	116	76,8%
More than IDR 2 to 15 billion (Small Enterprise)	27	17,9%
More than IDR 15 to 50 billion (Medium Enterprise)	8	5,3%
Total	151	100%

Table 11 groups respondents by total sales over the past year, following Government Regulation No. 7 of 2021. The Micro Enterprise category, with revenue at or below IDR 2 billion, holds most of them: 116 respondents or 76.8 percent. Small Enterprises follow with 27 respondents (17.9 percent) and Medium Enterprises with 8 respondents (5.3 percent). The research sample therefore stands mainly for SME owners, the micro enterprise group above all.

Descriptive Statistical Analysis

Descriptive statistics serve to portray how respondents perceive each research variable, captured on a Likert scale running from 1 to 5.

Table 12. Descriptive Analysis

Variable	Number of Items	Mean	Std. Dev	TCR	Interpretation
Digital Transformation (X1)	7	4,15	1,00	83,0%	High
Digital Skill (X2)	5	4,02	1,08	80,5%	High
Financial Literacy (X3)	6	4,06	0,96	81,1%	High
Fintech Adoption (X4)	3	3,98	1,06	79,7%	High
Business Performance (Y)	6	4,04	0,96	80,9%	High

Across the board the variables sit in the high category, with mean values between 3.98 and 4.15 and TCR values between 79.7 percent and 83.0 percent. Digital Transformation records the highest mean at 4.15 (TCR 83.0 percent), a sign that respondents view the role of digital transformation strategy in developing their business very positively. Digital Skill, Financial Literacy, and Business Performance also land in the high category, at 4.02, 4.06, and 4.04 respectively, so respondents rate these three aspects well. The lowest mean belongs to Fintech Adoption (mean 3.98, TCR 79.7 percent), which suggests a willingness to take up fintech services that trails the other variables somewhat while still counting as high.

Inner Model Analysis

Two analyses make up the inner model section of the structural model (inner model), namely the R-Square value and hypothesis testing.

Table 12. R-Square Values of Each Research Variable

	R Square	R Square Adjusted
Business Performance	0,930	0,928

Table 12 puts the R-Square value for business performance at 0.930 (high), meaning digital skill, digital transformation strategy, financial literacy, and financial technology adoption together account for 93 percent of the variation in business performance, with the remaining 7 percent left to other variables. The R-Square Adjusted value stands at 0.928 for business performance, so 92.8 percent of that variation traces back to digital skill, digital transformation strategy, financial literacy, and financial technology adoption, while the remaining 7.2 percent rests on variables outside the research model. An R square value of 0.930 marks the model as having very strong explanatory power, showing that the combination of digital skill, digital transformation strategy, financial literacy, and fintech adoption explains most of the variation in business performance.

Hypothesis Testing bootstrapping in SmartPLS handled the hypothesis testing at a significance level of 5 percent. A hypothesis holds when the t-statistic exceeds 1.96 and the p-value falls below 0.05. Table 13 reports the path coefficients alongside the hypothesis testing results within the structural model, judged against that 5 percent significance level, that is a p-value under 0.05 and a t-statistic over 1.96.

Table 13. Path Coefficient Results and Structural Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Digital Skill -> Business Performance	0,137	0,126	0,096	1,428	0,154
Digital Transformation Strategy -> Business Performance	0,371	0,373	0,089	4,181	0,000
Financial literacy -> Business Performance	0,176	0,188	0,089	1,974	0,049
Fintech Adoption -> Business Performance	0,308	0,306	0,104	2,967	0,003

Financial Literacy and Business Performance

H1, the first hypothesis, proposes a positive effect of financial literacy on business performance. Testing returns a path coefficient of 0.176, a t-statistic of 1.974 (above 1.96), and a p-value of 0.049 (below 0.05), so H1 is accepted: financial literacy does exert a positive and significant effect on business performance. The stronger the financial literacy of a business owner, then, the better the performance the business reaches. Owners who understand finance well are usually more capable of drawing up budgets, keeping cash flow in hand, arranging debt, and choosing investments more suitably, all of which feed profitability and the longerterm survival of the business. The result aligns with Padi (2025) who report financial literacy and entrepreneurial competence as significantly related to SME financial performance under the moderating hand of corporate governance. It also echoes Yakob (2021) whose work examined the positive link between financial literacy and SME financial performance. Financial literacy thus reads as a strategic resource reinforcing a business's internal capabilities, much as the *Resource-Based View* (RBV) perspective describes.

Digital Skill and Business Performance

H2, the second hypothesis, proposes a positive effect of digital skill on business performance. Testing produces a path coefficient of 0.137, a T-statistic of 1.428 (under 1.96), and a p-value of 0.154 (over 0.05). H2 is therefore rejected: digital skill shows no significant effect on business performance. The effect points in a positive direction, yet it is too slight to carry statistical meaning. Several factors help explain why. First, digital skill on its own cannot raise performance without an adequate strategy, investment, and organizational transformation behind it. Second, its effect on performance is likely indirect, needing technological capability or a digital transformation strategy to carry it through before performance moves. Third, respondents are dominated by micro businesses at an early stage of digitalization, so whatever digital skill they hold has yet to be turned fully toward driving business performance. Holding digital skill, this finding shows, does not by itself translate into improved business performance. SME owners may well know how to use digital technology, but that ability has not been harnessed optimally to support business strategy, sharpen operational efficiency, or generate innovation. Digital skill works, then, as an *enabling capability* rather than a factor that directly improves business performance. Heredia et al. (2022) support this reading, having found that digital capability reaches firm performance only through the mediation of technological capability, never directly. The results here reinforce the same argument: digital skill plays a supporting part, and its influence on performance runs through digital transformation rather than standing as a direct determinant.

Digital Transformation Strategy and Business Performance

H3, the third hypothesis, proposes a positive effect of digital transformation strategy on business performance. Testing yields a path coefficient of 0.371, a T-statistic of 4.181 (above 1.96), and a p-value of 0.000 (below 0.05), so H3 is accepted. That coefficient is the largest of any variable, which makes digital transformation strategy the strongest predictor of business performance within this research model. Success for SMEs in the digital era does not rest on the possession of business skills alone; it rests on a digital transformation strategy that is focused and integrated. Where business owners can design and carry out a comprehensive digital strategy, from integrating technology and automating processes to using data analytics and building an online presence, real improvement in business performance follows. Juárez et al., (2023) reach a similar conclusion, finding digital transformation important in driving both technological and nontechnological innovation and, through that, SME financial performance. Teng et al. (2022) and Zhang et al., (2023) likewise found that digital transformation, whether exploratory or exploitative, raises firm performance significantly by way of business model innovation.

Fintech Adoption and Business Performance

H4, the fourth hypothesis, proposes a positive effect of *financial technology (fintech)* adoption on business performance. Testing gives a path coefficient of 0.308, a T-statistic of 2.967 (above 1.96), and a p-value of 0.003 (below 0.05), so H4 is accepted. This coefficient ranks second only to digital transformation strategy, making fintech adoption a fairly strong predictor of business performance. The more fintech services business owners take up, the finding indicates, the better their business performs. Fintech brings several benefits along: wider access to financing, faster and simpler payment transactions, lower operational costs, and a broader market reach. Nagy (2025) the same pattern, with fintech adoption significantly and positively affecting SME performance while financial literacy and transparency act as partial mediators.

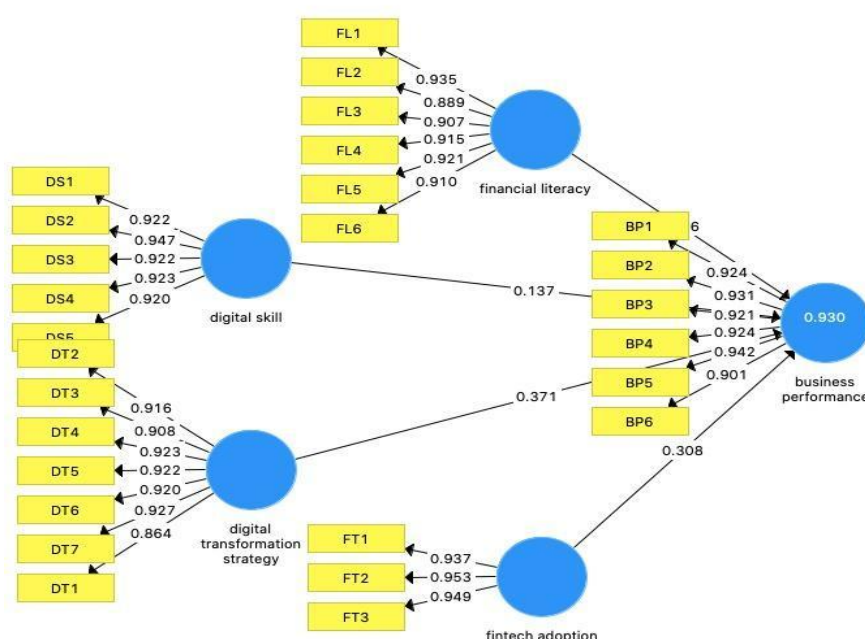


Figure 2. Structural Model

CONCLUSION

This study examines how financial literacy, digital skills, digital transformation strategy, and fintech adoption bear on the business performance of Indonesian SMEs. A PLS-SEM analysis of 151 SME owners shows a model that explains 93% of the variance in business performance. Digital transformation strategy stands as the strongest predictor, with fintech adoption and financial literacy behind it, while digital skills register no significant effect. Knowing how to use technology, in other words, is not enough on its own; it lifts performance only when paired with a deliberate transformation strategy and with technology that genuinely supports the business as a whole. These results support arguments that competitive advantage comes not only from owning resources but from how well a firm manages, combines, and uses them. For SMEs, financial literacy, fintech adoption, and above all digital transformation strategy are internal capabilities that create value and keep a business competitive over time. Digital skills work more as an enabling capability: useful, but only paying off when channeled through a clear transformation strategy.

The practical message is that SMEs owners should move their focus from simply learning to use technology toward building a broader transformation strategy, streamlining business processes, making data-driven decisions, and using fintech services to improve efficiency and access to financing. Government and SMEs support institutions, in turn, should go beyond basic digital skills training and help businesses develop strategic capacity for digital transformation along with stronger financial literacy, so SMEs can keep growing in a fast-changing digital economy. Purposive sampling and a modest number of respondents limit this study, so its findings should not be read as applying to all Indonesian SMEs. Future research could test the mediating and moderating roles that digital transformation strategy plays in the link between digital skills and performance, cover more regions and sectors, and draw on more representative sampling. That would give a fuller picture of what shapes SME performance in the digital era and a contribution to theory as much as to the practice of managing SMEs.

REFERENCES

- Abiola, B., Osabuohien, E., Tunji-Olayeni, P., Falola, H., Amodu, L., Olokoyo, F., ... Ehikioya, B. (2021). Financial literacy, financial capabilities, and sustainable business model practice among small business owners in Nigeria. *Journal of Sustainable Finance & Investment*, 13, 1–23. <https://doi.org/10.1080/20430795.2021.1962663>
- Adomako, S., & Nguyen, N. (2020). Human resource slack, sustainable innovation, and environmental performance of small and medium-sized enterprises in sub-Saharan Africa. *Business Strategy and the Environment*, 29, 2984–2994. <https://doi.org/10.1002/bse.2552>
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
- Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, 45(1), 80–105. <https://doi.org/https://doi.org/10.1111/ijcs.12605>
- Gupta, G., & Bose, I. (2019). Digital transformation in entrepreneurial firms through information exchange with operating environment. *Information & Management*, 59, 103243. <https://doi.org/10.1016/j.im.2019.103243>
- Hai, N. (2021). Digital transformation barriers for small and medium enterprises in Vietnam today. *LAPLAGE EM REVISTA*, 7, 416–426. <https://doi.org/10.24115/S2446-6220202173A1424p.416-426>



- Heredia, J., Castillo-Vergara, M., Geldes, C., Carbajal Gamarra, F. M., Flores, A., & Heredia, W. (2022). How do digital capabilities affect firm performance? The mediating role of technological capabilities in the “new normal.” *Journal of Innovation & Knowledge*, 7(2), 100171. <https://doi.org/https://doi.org/10.1016/j.jik.2022.100171>
- Ingale, K., Paluri, R., & Bonfigt, L. (2021). Financial literacy and financial behaviour: a bibliometric analysis. *Review of Behavioral Finance*. <https://doi.org/10.1108/RBF-06-2020-0141>
- Juárez, M. Á., González-Ortega, D., & Aguiar-Pérez, J. (2023). Digital Distractions from the Point of View of Higher Education Students. *Sustainability*, 15, 6044. <https://doi.org/10.3390/su15076044>
- Kurniasari, F., Abd Hamid, N., & Lestari, E. (2025). Unraveling the impact of financial literacy, financial technology adoption, and access to finance on small medium enterprises business performance and sustainability: a serial mediation model. *Cogent Business & Management*, 12. <https://doi.org/10.1080/23311975.2025.2487837>
- Lind, T., Ahmed, A., Skagerlund, K., Strömbäck, C., Västfjäll, D., & Tinghög, G. (2020). Competence, Confidence, and Gender: The Role of Objective and Subjective Financial Knowledge in Household Finance. *Journal of Family and Economic Issues*, 41. <https://doi.org/10.1007/s10834-020-09678-9>
- Lone, U. M., & Bhat, S. A. (2022, October). Impact of financial literacy on financial well-being: a mediational role of financial self-efficacy. *Journal of Financial Services Marketing*, pp. 1–16. <https://doi.org/10.1057/s41264-022-00183-8>
- Mahohoma, T. (2024). A comparison of the usage between financial and non-financial performance metrics in Small and Medium Enterprises (SMEs) in South Africa. *International Journal of Research in Business and Social Science* (2147- 4478), 13, 547–557. <https://doi.org/10.20525/ijrbs.v13i5.3540>
- Masdupi, E., Imran, M., & Sintya, R. (2025). Financial literacy and sustainability of SMEs: the mediating and moderating effect of entrepreneurial financing choice, risk-taking and social capital. *Management & Sustainability: An Arab Review*, 1–24. <https://doi.org/10.1108/MSAR-01-2025-0003>
- Mavlutova, I., Fomins, A., Spilbergs, A., Atstaja, D., & Brizga, J. (2022). Opportunities to Increase Financial Well-Being by Investing in Environmental, Social and Governance with Respect to Improving Financial Literacy under COVID-19: The Case of Latvia. *Sustainability*, 14(1). <https://doi.org/10.3390/su14010339>
- Meena, G., & Santhanalakshmi, K. (2024). Deconstructing Digital Transformation: A Multidimensional Analysis of Digital Literacy’s Role in Shaping Human Capital and Driving Organizational Success. *ECONOMICS*, 13. <https://doi.org/10.2478/eoik-2025-0018>
- Merín-Rodríguez, J., Dasí, À., & Alegre, J. (2024). Digital transformation and firm performance in innovative SMEs: The mediating role of business model innovation. *Technovation*. Retrieved from <https://api.semanticscholar.org/CorpusID:269679184>
- Nagy, A., Arie, F., Tuegeh, O., Bittner, B., & Tumiwa, J. (2025). Fintech adoption for SMEs in different socioeconomic contexts: evidence from Hungary and Indonesia. *Financial Innovation*, 11. <https://doi.org/10.1186/s40854-025-00876-8>
- Najib, M., Ermawati, W. J., Fahma, F., Endri, E., & Suhartanto, D. (2021). FinTech in the Small Food Business and Its Relation with Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1). <https://doi.org/10.3390/joitmc7010088>
- OECD. (2022). *OECD / INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022*.

- Padi, A., Musah, A., Blay, M., & Odei Okyere, D. (2025). Small and Medium Scale Enterprise (SME) Owner financial literacy, entrepreneurial competencies and financial performance: the role of corporate governance. *Future Business Journal*, 11. <https://doi.org/10.1186/s43093-025-00585-9>
- Pelletier, C., & Cloutier, L. (2019). *Challenges of Digital Transformation in SMEs: Exploration of IT-Related Perceptions in a Service Ecosystem*. <https://doi.org/10.24251/HICSS.2019.597>
- Raharjo, K., Afrianty, T., & Prakasa, Y. (2024). Digital literacy and business transformation: social-cognitive learning perspectives in small business enterprises. *Cogent Business & Management*, 11. <https://doi.org/10.1080/23311975.2024.2376282>
- Sajid, R., Ayub, H., Malik, B., & Ellahi, A. (2023). The Role of Fintech on Bank Risk-Taking: Mediating Role of Bank's Operating Efficiency. *Human Behavior and Emerging Technologies*, 2023, 1–11. <https://doi.org/10.1155/2023/7059307>
- Scuotto, V., Nicotra, M., Del Giudice, M., Krueger, N., & Gregori, G. L. (2021). A microfoundational perspective on SMEs' growth in the digital transformation era. *Journal of Business Research*, 129, 382–392. <https://doi.org/https://doi.org/10.1016/j.jbusres.2021.01.045>
- Setiawan, B., Nugraha, D. P., Irawan, A., Nathan, R. J., & Zoltan, Z. (2021). User Innovativeness and Fintech Adoption in Indonesia. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3). <https://doi.org/10.3390/joitmc7030188>
- Sharma, A., Johri, A., Kaushal, D., Ahalawat, K., & Chauhan, J. (2025). *Financial Technology (FinTech) in Advancing Sustainable Development in the Indian Agrarian Economy: A Systematic Review and Comprehensive Analysis*. <https://doi.org/10.1109/ICITIIT64777.2025.11041145>
- Skare, M., de las Mercedes de Obesso, M., & Ribeiro-Navarrete, S. (2023). Digital transformation and European small and medium enterprises (SMEs): A comparative study using digital economy and society index data. *International Journal of Information Management*, 68, 102594. <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2022.102594>
- Solberg, E., Traavik, L. E. M., & Wong, S. I. (2020). Digital Mindsets: Recognizing and Leveraging Individual Beliefs for Digital Transformation. *California Management Review*, 62(4), 105–124. <https://doi.org/10.1177/0008125620931839>
- Teng, X., Wu, Z., & Yang, F. (2022). Impact of the Digital Transformation of Small- and Medium-Sized Listed Companies on Performance: Based on a Cost-Benefit Analysis Framework. *Journal of Mathematics*, 2022, 1–14. <https://doi.org/10.1155/2022/1504499>
- Trianto, B., Rahmayati, R., Yuliaty, T., & Sabiu, T. T. (2021). Determinant Factor of Islamic Financial Inclusiveness at MSMEs: Evidence From Pekanbaru, Indonesia. *Jurnal Ekonomi Dan Keuangan Islam*, 7(2), 105–122. <https://doi.org/10.20885/jeki.vol7.iss2.art1>
- Upadhyaya, A., Kumar, R., & Dalwai, T. (2024). Impact of financial literacy on savings behavior: the moderation role of risk aversion and financial confidence. *Journal of Financial Services Marketing*, 29, 843–854. <https://doi.org/10.1057/s41264-023-00265-1>
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72, 577–588. <https://doi.org/https://doi.org/10.1016/j.chb.2017.03.010>
- Xie, J., Ye, L., Huang, W., & Ye, M. (2021). Understanding FinTech Platform Adoption: Impacts of Perceived Value and Perceived Risk. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1893–1911. <https://doi.org/10.3390/jtaer16050106>

- Yakob, S., Yakob, R., B.A.M, H.-S., & Rusli, R. (2021). Financial Literacy and Financial Performance of Small and Medium-sized Enterprises. *The South East Asian Journal of Management*, 15, 72–96. <https://doi.org/10.21002/seam.v15i1.13117>
- Zahoor, N., Zopiatlis, A., Adomako, S., & Lamprinakos, G. (2026). The micro-foundations of digitally transforming SMEs. *Journal of Business Research*, 159, 113755. <https://doi.org/10.1016/j.jbusres.2023.113755>
- Zhang, L., Qiu, P., & Cao, P. (2023). Does digital transformation enhance the core competitiveness? –Quasi-natural experimental evidence from Chinese traditional manufacturing. *PLOS ONE*, 18, e0289278. <https://doi.org/10.1371/journal.pone.0289278>

