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THE IMPACT OF INCLUSIVE FINANCE ON THE DEVELOPMENT OF VIETNAMESE SMALL ENTERPRISES

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ABSTRACT

In Vietnam, small enterprises constitute the majority and play a crucial role in the economy, creating many jobs. However, small businesses often face difficulties in accessing capital, hindering their investment, technological innovation, and competitiveness. In this context, inclusive finance is considered a key solution to promote the development of small businesses, helping them access formal financial resources more easily and effectively. This study analyzes the role of inclusive finance, including traditional and digital finance; and examines the impact of inclusive finance on the development of small businesses in Vietnam. Based on the established theoretical framework, the author surveyed 500 small business managers from three provinces representing the three regions of Vietnam: Lang Son province (Northern), Quang Ngãi province (Central), and An Giang province (Southern). The survey results form the basis for the author's research conclusions and discussion of solutions to promote the development of small enterprises through inclusive financial development policies in the context of Vietnam's socio-economic characteristics.

KEYWORDS: Inclusive Finance; Traditional Finance; Digital Finance; Developing Small Enterprises; Vietnam.

1. INTRODUCTION

Small enterprises play a crucial role in the Vietnamese economy, accounting for a high percentage of the total number of businesses and creating many jobs. However, these businesses often face difficulties in accessing capital, managing finances, and developing and expanding their production and business activities. A lack of suitable financing hinders small businesses from investing, innovating technology, and increasing their competitiveness. In this context, inclusive finance is considered an important solution to promote the development of small enterprises, helping them access formal financial resources more conveniently and effectively.

Inclusive finance encompasses not only credit provision but also includes elements such as digital payments, banking services, insurance, and fundraising through financial technology platforms (FinTech). Thanks to the development of inclusive finance, small enterprises can optimize cash flow, expand markets, improve customer accessibility, and enhance financial management capabilities. Previous studies have shown that small businesses with better access to finance tend to have higher growth rates, create more jobs, and contribute more to the economy (Beck et al., 2011; Demirgüç-Kunt et al., 2018).

Although inclusive finance plays a crucial role, in Vietnam, access to and application of formal financial services by small enterprises remain limited. Barriers such as stringent credit conditions, lack of transparent financial information, high transaction costs, and low levels of financial management expertise hinder small businesses from fully utilizing the benefits of inclusive finance. Furthermore, the application of financial technology in business operations is still not widespread, causing many businesses to miss opportunities to enhance their competitiveness.

Based on the above practical context, this study aims to assess the impact of inclusive finance on the development of small enterprises in Vietnam. Specifically, the study focuses on two main aspects: (1) How the level of access to and use of traditional financial services affects the development of small enterprises, and (2) How the application of digital finance in business operations helps small enterprises improve operational efficiency, expand scale, and increase competitiveness. The research results are expected to provide empirical evidence on the role of inclusive finance in the development of small enterprises, and to offer policy recommendations to promote inclusive finance and create favorable conditions for small enterprises to develop sustainably in the digital economy.

2. LITERATURE

2.1. Traditional Finance

Traditional finance refers to financial products and services provided by commercial banks, credit institutions, and other financial institutions. These products and services, including the use of bank accounts, access to credit (borrowing), savings deposits, and other financial services, play a crucial role in supporting the development and stability of small enterprises (Beck et al., 2008). Traditional finance helps small businesses access formal capital, improve financial management capabilities, and minimize business risks. Thanks to the formal financial system, businesses can conduct safe and transparent transactions and build a solid financial foundation, thereby enhancing competitiveness and promoting sustainable growth (Demirgüç-Kunt & Maksimovic, 1998).

In an increasingly developed economy, traditional finance remains a key pillar supporting the growth of small enterprises, despite the rise of digital financial services. The traditional financial system provides small businesses with a solid financial foundation, ensuring stability in production and business operations (OECD, 2019). However, due to limitations in access to capital, stringent loan conditions and procedures, and high financing costs, many small businesses still struggle to take advantage of the benefits of traditional finance (Klapper et al., 2006).

2.2. Using the Bank Accounts

Bank accounts are a fundamental financial tool that helps small enterprises conduct payment transactions, manage cash flow, and access formal financial services. Using bank accounts enhances financial transparency, minimizes risks associated with cash, and improves access to credit from financial institutions (Beck et al., 2008). According to Klapper et al. (2006) and Stiglitz & Weiss (1981), small businesses with bank accounts often have easier access to loans, as financial institutions can transparently assess their financial history. Furthermore, bank accounts help businesses connect with supplementary financial services such as electronic payments, financial management, and insurance, thereby facilitating business expansion and enhancing competitiveness (Demirgüç-Kunt & Maksimovic, 1998).

2.3. Access to Credit

Access to credit is a crucial factor in helping small

enterprises expand and improve productivity. Borrowing from banks or formal financial institutions provides businesses with additional resources to invest in equipment, improve product quality, and increase operational efficiency (Berger & Udell, 2006). Ayyagari et al. (2010) indicated that small businesses with access to formal credit generally have better growth potential than those relying solely on their own capital. However, some barriers remain, such as collateral requirements, high interest rates, and complex approval processes (Beck et al., 2008). This necessitates improvements in credit policies to support smaller businesses in accessing capital more easily, especially in an increasingly competitive economy (Rajan & Zingales, 1998).

2.4. Savings Deposit

Besides borrowing, savings are also an important tool for small enterprises to effectively manage cash flow and maintain financial stability. Accumulating reserve capital helps businesses cope with financial fluctuations and reduce dependence on external borrowing (Demirgüç-Kunt et al., 2018). Ghosh et al. (2020) indicated that small businesses tend to save more when the financial system is stable and the business environment is favorable. Maintaining savings helps businesses be more proactive in investment decisions and increases their access to credit in the future thanks to a transparent financial history. Furthermore, flexible savings products from banks help businesses optimize cash flow and improve capital efficiency (Mader et al., 2016).

In summary, traditional finance remains a crucial foundation supporting the development of small enterprises through formal financial services. However, to optimize the benefits from the traditional financial system, policy reforms are needed to reduce financial barriers and improve access to capital for small businesses.

2.5. Digital finance

The rapid development of digital technology has created major breakthroughs in the financial sector, helping small enterprises access capital, manage finances, and expand markets more flexibly. Digital finance is understood as the application of digital technology to financial activities, including digital banking, digital payments (electronic payments), fundraising through digital channels (online fundraising), and other digital financial services (Arner et al., 2016). Thanks to digital finance, small businesses can reduce their dependence on traditional financial institutions, optimize transaction costs, and improve operational efficiency.

According to Zavolokina et al. (2016), digital finance not only simplifies the process of accessing finance but also opens up innovative financing models such as crowdfunding, peer-to-peer lending (P2P lending), and online microfinance. The development of financial technology (Fintech) has made it easier for small enterprises to access financial tools that were previously only available to large businesses. In addition, digital finance promotes transparency, reduces risks associated with using cash, and enhances integration with digital business platforms.

However, despite its many benefits, digital finance also presents several challenges such as data security risks, financial fraud, and disparities in technology access among businesses. Therefore, to maximize the potential of digital finance, supportive policies are needed regarding technological infrastructure, legal frameworks, and raising awareness among small businesses about digital finance.

2.6. Digital Banking

Digital banking is one of the important applications of digital finance, helping small enterprises access financial services more conveniently and efficiently. The digital banking system includes services such as online accounts, mobile banking applications, e-wallets, and electronic financial transaction platforms. These tools allow businesses to conduct financial transactions without needing traditional banks, minimizing transaction time and costs (Gomber et al., 2018).

The biggest benefit of digital banking for small enterprises is the ability to quickly open accounts, make automatic payments, and manage cash flow effectively. According to Arner et al. (2016), digital banking helps small businesses optimize cash flow, enhance transparency in financial operations, and improve access to credit. Especially for businesses in remote areas, digital banking helps remove geographical barriers, allowing them to participate in the formal financial system without needing physical bank branches.

However, alongside the benefits, small enterprises also face several challenges when using digital banking. Issues related to information security, the risk of online fraud, and the ability to adapt to new technologies remain major obstacles (Philippon, 2019). Therefore, to maximize the benefits of digital banking, businesses need to raise awareness of information security and effectively utilize financial management tools.

2.7. Digital Payments

Digital payments play a crucial role in improving the efficiency of financial transactions for small businesses. Digital payment methods include online bank transfers, e-wallets, QR codes, credit cards, and mobile payment platforms. Thanks to this technology, businesses can conduct transactions more quickly, transparently, and securely (Philippon, 2019).

According to Bollaert et al. (2021), the use of digital payments helps small enterprises minimize risks associated with cash, reduce operating costs, and improve cash flow control. Simultaneously, digital payments also help businesses enhance customer experience by providing flexible, modern, and reliable payment methods. Another important benefit of digital payments is that they help small businesses expand their market reach, especially when engaging in e-commerce. According to Wang et al. (2022), businesses that accept digital payments have access to more customers, including international markets, thereby increasing revenue and business opportunities.

However, several challenges remain in the implementation of digital payments, including transaction fees on payment platforms, concerns about data security, and reluctance to change traditional payment habits (Gomber et al., 2018). Therefore, policies are needed to support small enterprises in transitioning to digital payments, including improving technological infrastructure and raising awareness of digital financial security.

2.8. Raising Capital through Digital Channels

Digital fundraising is becoming a significant trend, helping small enterprises access financing more flexibly than traditional borrowing methods. Popular forms of digital fundraising include crowdfunding, peer-to-peer lending (P2P lending), online microfinance, and issuing shares on digital platforms (Ozili, 2018). These tools help small businesses reduce their dependence on traditional banks while expanding their fundraising capabilities at lower costs and with simpler processes.

According to Zalan & Toufaily (2017), digital financial platforms are increasingly optimized thanks to Big Data and Artificial Intelligence (AI). These technologies help assess the creditworthiness of businesses based on transaction data and financial behavior, thereby improving access to capital for businesses with weak credit histories.

One of the key advantages of raising capital through digital channels is the ability to access financing even when businesses lack collateral or fail to meet traditional credit requirements. According to Ayyagari et al. (2014), small businesses, especially those in underserved areas of the traditional financial system, can leverage digital financial platforms to grow their businesses.

However, raising capital through digital channels also presents many challenges, including fraud risks, cybersecurity issues, the legality of digital financial platforms, and businesses' lack of understanding of new financial instruments (Gomber et al., 2018). To fully exploit the potential of this model, government support is needed in perfecting the legal framework, promoting fintech innovation, and enhancing access to digital finance for small businesses.

2.9. Developing Small Enterprises

Small enterprises make a significant contribution to the economy by creating jobs, driving growth, and improving the living standards of communities. However, the development of these businesses is heavily influenced by access to finance, including both traditional and digital financing. With access to appropriate financing, businesses can expand their operations, enhance their competitiveness, and achieve sustainable growth (Beck et al., 2011; Banerjee & Duflo, 2014).

In the digital age, inclusive finance plays a crucial role in helping small enterprises optimize resources, reduce transaction costs, and improve business efficiency. Studies have shown that businesses with favorable access to finance tend to have faster growth rates, higher revenues, and make more positive contributions to the labor market (McKenzie, 2017). Many recent studies analyze key aspects of small enterprise development under the impact of inclusive finance, including business scaling, revenue growth, job creation, and ensuring the financial stability of the business.

2.10. Expanding the business Scale

One of the key factors driving the development of small enterprises is their scalability. With adequate access to finance, businesses can invest in technology, upgrade equipment, develop human resources, and expand their markets, thereby improving productivity and competitiveness (Beck et al., 2011).

According to Banerjee & Duflo (2014), in developing economies, small enterprises often face financial constraints that make scaling up difficult. Access to bank credit or fundraising through digital financial platforms can help businesses overcome this problem, thereby facilitating long-term investment plans instead of focusing only on maintaining short-term operations.

Furthermore, digital finance plays a crucial role in

supporting small enterprises to scale up. Digital payment platforms, financial management software, and online fundraising solutions help businesses optimize cash flow, reduce financial risks, and develop sustainably (McKenzie, 2017). However, to fully leverage these benefits, support from the government and financial institutions is needed to build flexible financing mechanisms and enhance the financial capacity of businesses.

2.11. Revenue Growth

Revenue growth is a key indicator reflecting the development of small enterprises. With access to inclusive finance, businesses can invest in product innovation, market expansion, and improved operational efficiency, thereby creating momentum for sustainable growth (Allen et al., 2014).

According to Morduch & Rutherford (2003), small enterprises often face obstacles in raising capital to expand their operations, leading to slow revenue growth. Traditional finance, especially bank credit, plays a crucial role in providing businesses with capital for investment and expansion. When businesses can access loans at reasonable interest rates, they have more opportunities to expand production and improve services, thereby boosting revenue.

Furthermore, digital finance opens up many opportunities to help small enterprises grow their revenue faster. Digital payment platforms not only help businesses save on transaction costs but also expand their reach to customers (Levine, 1997). Participating in e-commerce and applying online payment methods allows businesses to go further in the market, increasing revenue and profits effectively.

Furthermore, flexible fundraising models such as FinTech, P2P lending, and crowdfunding provide small enterprises with additional financial resources for development. This allows them to enhance their marketing strategies, diversify their products, and expand their business scale, generating sustainable profits in the long term.

2.12. Create Jobs

Small enterprises play a crucial role in creating jobs and improving working conditions, especially in developing economies. When businesses have access to favorable financing, they can expand production, thereby increasing the demand for labor and contributing to the development of the labor market (Beck et al., 2005).

According to research by Ayyagari et al. (2014), small enterprises are often an important source of job creation but face many barriers to accessing finance. When they can borrow from banks or raise capital through digital financial platforms, businesses will be able to invest in technology, equipment, and human resources, thereby expanding their operations and creating more job opportunities.

Besides traditional finance, digital finance also contributes significantly to promoting employment opportunities. Digital payment platforms and online financial services help businesses optimize operational processes, reduce operating costs, and improve management efficiency, thereby creating more favorable conditions for recruitment and training of personnel (Demirgüç-Kunt et al., 2018).

Furthermore, crowdfunding and peer-to-peer lending models provide small enterprises with additional financing to expand their business operations, thereby increasing job creation and improving working conditions. To optimize this impact, policy support is needed to help businesses easily access capital and enhance their financial management capabilities.

2.13. Corporate financial Stability

Financial stability is a crucial factor in helping small enterprises maintain sustainable operations, especially in volatile market conditions. Access to inclusive finance, including both traditional and digital finance, plays a vital role in improving financial management capabilities and ensuring long-term stability for small businesses (Ghosh et al., 2020). According to research by Markus & Rideg (2021), small businesses often struggle with cash flow management due to limited capital. With access to formal financing, businesses can be more proactive in financial planning, thereby minimizing liquidity risk and maintaining stable business operations.

Furthermore, digital finance helps enterprises control cash flow more effectively through electronic payment tools and financial management software. Online fundraising platforms such as P2P lending or crowdfunding provide more flexible access to capital, reducing reliance on traditional credit and enhancing resilience to financial risks (Stiglitz & Weiss, 1981). In addition, the use of financial services such as corporate insurance and contingency funds helps small enterprises mitigate the negative impacts of financial shocks. To optimize the benefits of inclusive finance, close coordination is needed between government support policies and financial management strategies from businesses, enabling them to maximize their growth potential and achieve sustainable development.

Previous research has shown that inclusive

finance plays a crucial role in promoting the development of small enterprises. By providing formal financial services such as bank accounts, credit, insurance, and digital payment platforms, inclusive finance helps small businesses access capital more easily, optimize financial costs, and improve business performance. Expanding access to finance not only facilitates investment and expansion for small businesses but also enhances competitiveness and ensures sustainable growth.

In the context of Vietnam promoting inclusive finance to support the small enterprise sector, this study further examines the impact of inclusive finance on the development of small businesses through the following hypotheses: (H1) The level of access to and use of traditional financial services has a positive impact on the development of small businesses; (H2) The ability to apply digital finance to business operations helps small businesses improve operational efficiency, expand scale, and increase competitiveness.

Table 1: Summary of Theoretical Research on the Impact of Inclusive Finance on the Development of Small Enterprises.

Scales	Related research	Content that inherits and develops the research scale
I. Traditional finance (TF)		
1. Using bank accounts: The percentage of small enterprises maintaining/ increasing bank accounts has a positive impact on their access to credit and formal financial services.	Beck et al. (2008); Demirgüç-Kunt & Maksimovic (1998); Klapper et al. (2006); Stiglitz & Weiss (1981)	TF1. Small enterprises maintain bank accounts, which helps them maintain access to formal credit.
2. Access to credit: The proportion of small enterprises borrowing from formal financial institutions is maintained/increasing, helping to expand production and development.	Beck et al. (2008); Berger & Udell (2006); Rajan & Zingales (1998); Ayyagari et al. (2010)	TF2. Small enterprises' access to formal credit helps them maintain/develop production and business, and achieve stable growth.
3. Savings deposits: The proportion of small enterprises depositing savings at formal financial institutions is maintained/increasing, helping to strengthen financial stability.	Demirgüç-Kunt et al. (2018); Ghosh et al. (2020); Mader et al. (2016)	TF3. Small enterprises maintain savings at formal financial institutions, which helps them manage their cash flow effectively.
II. Digital finance (DF)		
4. Digital banking utilization: The percentage of small enterprises using digital banking services, e-wallets, and other digital financial channels is maintained/ increasing, helping to improve financial efficiency.	Gomber et al. (2018); Arner et al. (2016); Philippon. (2019)	DF1. Small enterprises are increasingly using digital banking and e-wallets to conduct financial transactions, helping them improve the efficiency of their management, operations, production, and business.
5. Digital payments: The level of digital payment adoption by small enterprises is being maintained/increasing, reducing transaction costs and enhancing transparency.	Philippon (2019); Bollaert et al. (2021); Gomber et al. (2018); Wang et al. (2022)	DF2. Small enterprises are adopting digital payments, reducing their reliance on cash, helping them optimize cash flow, and boosting production and business development.
6. Raising capital through digital channels: The proportion of small enterprises raising capital through digital financial platforms is being maintained/ increasing, providing flexible access to funding.	Ozili (2018); Zalan & Toufaily (2017); Ayyagari et al. (2014); Gomber et al. (2018)	DF3. Small enterprises are raising capital through digital financial channels, helping them reduce their dependence on traditional credit and promoting production and business development.
III. Developing small enterprises (DSE)		
7. Scalability: The proportion of small enterprises expanding production and business through access to formal and digital finance.	Beck et al. (2011); Banerjee & Duflo (2014); McKenzie (2017)	DSE1. Small enterprises have the opportunity to expand their scale thanks to improved access to inclusive finance.
8. Revenue growth: Small enterprises' revenue growth is driven by improved access to credit and digital payments.	Allen et al. (2014); Morduch & Rutherford (2003); Levine (1997)	DSE2. Small enterprises achieve sustainable revenue growth when they utilize inclusive finance effectively.
9. Job creation: The number of jobs created	Beck et al. (2005); Ayyagari et al. (2014);	DSE3. Small enterprises have the potential to

Scales	Related research	Content that inherits and develops the research scale
by small enterprises thanks to the development of traditional and digital finance.	Demirgüç-Kunt et al. (2018)	create more jobs by improving access to inclusive finance for production and business development.
10. Financial stability of businesses: The financial stability of small enterprises improves with access to formal financing and financial digitalization.	Ghosh et al. (2020); Markus & Rideg. (2021); Stiglitz & Weiss (1981)	DSE4. Small enterprises manage their finances more effectively and maintain financial stability through improved access to inclusive finance.

Source: Compiled by the author through the review.

Through the review of the research content, the author developed a theoretical framework for studying the development of small enterprises and the impact of inclusive finance on small enterprise development. The theoretical framework includes a research model with three scales: the "Traditional finance" (TF) scale, the "Digital finance" (DF) scale [two scales/independent variables], and the "Developing small enterprises" (DSE) scale [one scale/dependent variable]. These scales consist of 10 observed variables, designed by the author as 10 questions in a survey questionnaire and measured using a 5-point Likert scale: 1 - Strongly disagree; 2 - Disagree; 3 - Neutral; 4 - Agree; 5 - Strongly agree [Table 1, Figure 1].

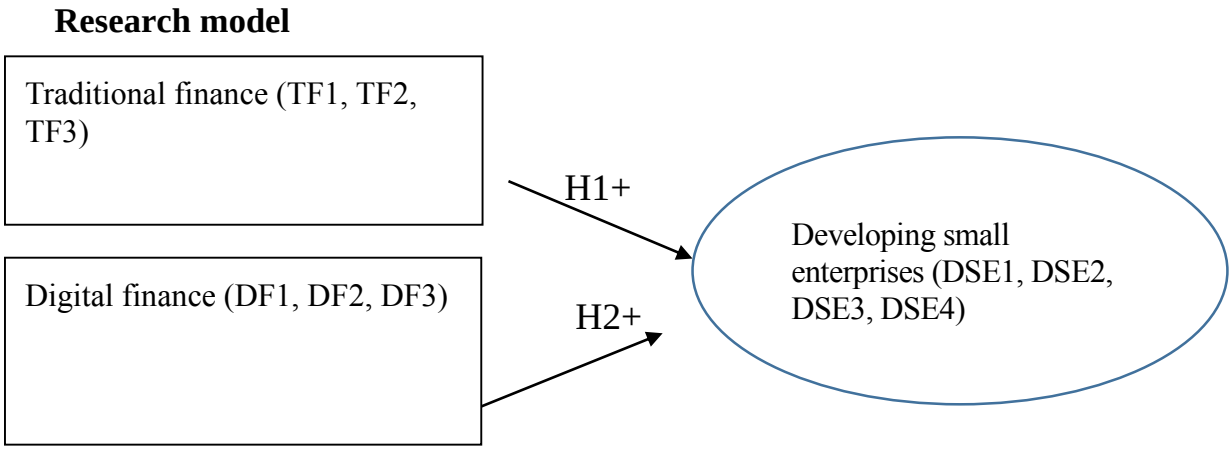

Figure 1: Research Model.

3. RESEARCH METHODS

- **Qualitative research:** The author used qualitative methods through the collection and analysis of secondary documents to build a theoretical framework. The theoretical framework includes a research model with 3 scales showing the impact of inclusive finance on the development of small enterprises (Table 1, Figure 1).

- **Quantitative research:** The author uses a quantitative method through sociological surveys to collect and analyze primary data in order to test the theoretical framework and research model. The survey was conducted in two steps: preliminary survey and formal survey.

Preliminary Survey: The theoretical framework includes a research model with 3 scales and a total of 10 observed variables. According to Hair, J.F. et al. (2009), the minimum sample size required for exploratory factor analysis and regression analysis for this research model is: N = 10*5 = 50. The author conducted a preliminary survey in Lang Son province with a sample size of N = 150 (N > 50) managers of small enterprises. The results of the preliminary survey in Lang Son province show that the scales and observed variables have sufficient reliability to be used in a larger-scale formal survey.

Formal Survey: Based on the preliminary survey results that met reliability testing requirements, the author conducted a formal survey with a sample size of N = 500 (N > 50) of managers from 250 small enterprises operating in three provinces representing the three regions of Vietnam: Lang Son province (Northern Vietnam), Quang Ngai province (Central Vietnam), and An Giang province (Southern Vietnam). The survey was selective, targeting small business managers with at least three years of experience. With the consent of 500 respondents, the

author obtained 500/500 valid responses, achieving a 100% response rate.

4. RESEARCH RESULTS AND DISCUSSION

In this study, the author uses exploratory factor analysis and regression analysis techniques to test the theoretical model and the correlation of the scales. To perform these analyses, the author first tested the reliability of the scales and observed variables in the research model. In quantitative research, scales have reliability when they meet the Cronbach's alpha standard > 0.6; observed variables have reliability when they meet the Corrected Item-Total Correlation standard > 0.3 (Hair, J.F. et al. (2009)). The results of testing the survey data of 500 business managers showed that all 3 scales and 10 observed variables in the initial research model had sufficient reliability to perform further analysis (Table 2).

Table 2: Statistical Results and Testing Results of the Scale.

Scales	Observed variables	N	Min	Max	Mean	Std. Deviation	Cronbach' Alpha	Corrected Item-Total Correlation
1. Traditional finance (TF)	TF1	500	1	5	4.22	.501	.725	TF1 = .519
	TF2	500	1	5	4.18	.524		TF2 = .493
	TF3	500	1	5	4.20	.602		TF3 = .388
2. Digital finance (DF)	DF1	500	1	5	3.99	.611	.643	DF1 = .396
	DF2	500	1	5	4.02	.598		DF2 = .374
	DF3	500	1	5	3.97	.608		DF3 = .367
3. Developing small enterprises (DSE)	DSE1	500	1	5	4.11	.594	.665	DSE1 = .469
	DSE2	500	1	5	4.13	.558		DSE2 = .494
	DSE3	500	1	5	4.06	.601		DSE3 = .396
	DSE4	500	1	5	4.08	.579		DSE4 = .392
Valid N (listwise)		500						

Source: Author's survey results.

Table 2 data shows that observations on the "Traditional finance" (TF), "Digital finance" (DF) and "Developing small enterprises" (DSE) scales are all rated at a mean of Mean ≥ 3.97, which is statistically significant according to the Likert scale (1-5) as determined. However, there is a certain difference, which is that the observed variables of the "Digital finance" (DF) scale are rated lower than those of the "Traditional finance" (TF) scale: Mean (DF1) = 3.99, Mean (DF2) = 4.02, Mean (DF3) = 3.97, indicating that many small enterprises are still not actively applying digital technology in management, operation, production, and business: Limited use of digital banking and e-wallets to conduct financial transactions, helping them improve management, operation, production, and business efficiency; Restrict the use of digital payment applications to reduce reliance on cash and optimize cash flow, promoting production and business development; restrict capital mobilization through digital financial channels to reduce reliance on traditional credit, promoting production and business development.

The survey results also reflect the current state of small enterprise development and inclusive finance development in Vietnam, consistent with the opinions and assessments of many experts and managers. Accordingly, many small businesses have limitations in digital capabilities – limitations in knowledge and skills in digital financial transactions to more easily access financial sources. Luong, N.T. (2023) and Ven, L.P. (2024) noted, analyzed, and assessed that about 25%-40% of Vietnamese small and medium-sized enterprises (SMEs) invest in modern technology; the majority of SMEs have not yet developed a strategy for applying digital technology; the majority of SMEs have low technological levels and are slow to innovate, with low financial capacity, labor productivity, and business efficiency. This is one of the barriers for small businesses, making their business linkages not strong enough to compete and develop in foreign markets or participate in global production networks, while small and medium-sized enterprises (SMEs) number 589,067, accounting for 97.3% of the total number of businesses nationwide.

The reliability test results of the scales and observed variables in Table 2 serve as the basis for the author to conduct exploratory factor analysis to test the initial theoretical research model. Exploratory factor analysis with Varimax rotation was performed to preliminarily assess the unidimensionality, convergent validity, and discriminant validity of the

scales, providing further basis for drawing research conclusions about the suitability of the proposed theoretical research model. The results of the exploratory factor analysis are shown in Table 3 and Table 4 below.

Table 3: Total Variance Explained.

KMO and Bartlett's Test									
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.							.744		
Bartlett's Test of Sphericity				Approx. Chi-Square			2501.557		
				df			36		
				Sig.			.000		
Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.436	38.177	38.177	3.436	38.177	38.177	2.980	33.107	33.107
2	3.078	34.196	72.373	3.078	34.196	72.373	2.783	30.920	64.026
3	1.024	11.374	83.747	1.024	11.374	83.747	1.775	19.721	83.747
4	.674	6.341	87.752						
5	.521	5.794	89.541						
6	.452	5.022	94.563						
7	.172	1.916	96.479						
8	.156	1.737	98.216						
9	.112	1.241	99.457						
10	.049	.543	100.000						
Extraction Method: Principal Component Analysis.									

Source: Author's survey results.

Table 4: Rotated Component Matrix.

Rotated Component Matrix[a]				
Scales	Observed variables	Component		
		1	2	3
1. Traditional finance (TF)	TF1	.807		
	TF2	.805		
	TF3	.796		
2. Digital finance (DF)	DF1		.791	
	DF2		.782	
	DF3		.788	
3. Developing small enterprises (DSE)	DSE1			.787
	DSE2			.779
	DSE3			.793
	DSE4			.784
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 6 iterations.				

Source: Author's survey results.

In quantitative research, according to Hair, J.F. et al. (2009), exploratory factor analysis was performed appropriately on the dataset through the following values: $0.5 \leq KMO \leq 1$; Bartlett's test had an observed significance level Sig. < 0.05; Eigenvalue ≥ 1; Total Variance Explained ≥ 50%; Factor Loading ≥ 0.5. Data in Tables 3 and 4 show that:

- The KMO = 0.744 > 0.5 confirms that exploratory factor analysis is appropriate for the dataset; the Bartlett test has an observed significance level of Sig. = 0.000 < 0.05, indicating that the observed variables are linearly correlated with the representative factor. The Total Variance Explained with Cumulative % = 83.747% > 50% (Table 3) shows that 83.747% of the variation in the representative factors is explained by the observed variables; all observed variables have Factor Loading > 0.5 (Table 4), indicating that the observed variables are statistically significant. The initial theoretical research model is consistent with the survey research.

- The observed variables were extracted into 3 factors corresponding to the 3 original factors with Eigenvalues > 1 (Table 3), further confirming the suitability of the original research model. The original research model was retained, consisting of: 2 independent variables "Traditional finance" (TF), "Digital finance" (DF) and 1 dependent variable "Developing small enterprises" (DSE), with a total of 10 observed variables of good statistical significance. Multiple linear regression analysis could be

performed to examine the relationships between the variables in the model. The regression analysis results are shown in Table 5, which forms the basis for the author's research conclusions.

Table 5: Multivariate Regression Results.

Coefficients[a]							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
		B	Std. Error	Beta			
1	(Constant)	1.134	.287		14.629	.000	
	1. Traditional finance (TF)	.562	.391	.544	12.753	.000	1.759
	2. Digital finance (DF)	.435	.342	.375	9.976	.000	1.801
a. Dependent Variable: Developing small enterprises (DSE) Adjusted R Square: 0.735 Durbin-Watson: 2.106							

Source: Author's survey results.

Table 5 data shows:

+ R2 = 0.735, confirming that the "Traditional finance" (TF) and "Digital finance" (DF) scales explain 73.5% of the variation in the "Developing small enterprises" (DSE) scale; VIF = 1.759 and VIF = 1.801 (1 < VIF < 2), indicating that the regression model does not exhibit multicollinearity; Durbin-Watson = 2.106 (1 < d < 3), indicating that the regression model does not exhibit autocorrelation, confirming that the "Traditional finance" (TF) and "Digital finance" (DF) scales are independent and have a common impact on the "Developing small enterprises" (DSE) scale, thus confirming the suitability of the theoretical research model to the survey dataset.

+ The regression coefficients of the two independent variables "Traditional finance" (TF) and "Digital finance" (DF) are both statistically significant (Sig. = 0.000, Sig. < 0.05) and positive: B(TF) = 0.562 and B(DF) = 0.435, confirming a positive correlation between the two independent variables "Traditional finance" (TF), "Digital finance" (DF) and the dependent variable "Developing small enterprises" (DSE); hypotheses H1 and H2 are accepted; and the initial research model's suitability is further confirmed.

Based on the generalized regression model of Hair, J.F. et al. (2009): Y = Bo + B1*X1 + B2*X2 + … + Bi*Xi, the author determined the multivariate regression model of this study as follows: DSE = 1.134 + 0.562*TF + 0.435*DF.

Based on the standardized regression coefficient (Beta), the correlation between the independent and dependent variables, in decreasing order, can be seen as: "Traditional finance" (TF), "Digital finance" (DF). This further confirms the empirical research results in Vietnam: Inclusive finance is considered an important solution to promote the development of small enterprises, helping them access formal financial resources more conveniently and effectively. The effective use of traditional and digital financial tools is crucial for small businesses to survive and thrive in the digital economy era. However, many small businesses have not actively applied digital technology in management, production, and business operations: They limit the use of digital banking and e-wallets for financial transactions, which helps them improve management, operation, production, and business efficiency; they also limit the application of digital payments to reduce dependence on cash and optimize cash flow, thereby promoting production and business development. Restricting capital mobilization through digital financial channels helps businesses reduce their dependence on traditional credit, promoting production and business development. This is one of the barriers that prevents many businesses from effectively managing finances and costs in production and business operations, and limits their options in accessing capital.

Based on the research findings, the author discusses several solutions for developing inclusive finance to promote the growth of small businesses in Vietnam in the current context. Specifically:

- Firstly, it is necessary to promote the development of digital capabilities in small enterprises: Small businesses need to proactively grasp technological trends and participate in the digital economy to enhance their competitiveness. Building a digital capability development strategy, training technological skills for the workforce, and applying digital solutions in management will optimize business operations and open up opportunities to access modern digital financial resources.

- Secondly, a mechanism for protection and support from state management agencies is needed: The government and local authorities need to build a clear legal framework, creating conditions for small enterprises to participate in the digital financial market safely and effectively. The issuance of policies to protect against risks, support training in digital transformation, and encourage innovation will help small businesses feel more confident when expanding their operations in the digital economy.

- Third, enhance access to finance for small enterprises: Small businesses often struggle to raise capital, so it's necessary to promote flexible financial solutions such as fintech, peer-to-peer lending (P2P lending), and crowdfunding. Improving credit rating systems, expanding cooperation between financial institutions and small businesses, and developing appropriate financing models will help increase access to capital sustainably.

- Fourth, small enterprises need to be transparent about their financial operations: Public disclosure and transparency in business operations are key factors for small businesses to enhance their reputation and facilitate access to financing. Building a clear financial reporting system, applying technology to manage finances transparently, and complying with auditing standards helps businesses strengthen trust from financial institutions and investment partners.

- Fifth, small enterprises need to strengthen their capabilities and strongly apply the achievements of the 4.0 technological revolution: The 4.0 technological revolution opens up many opportunities for small businesses to access finance and optimize business operations. Applying artificial intelligence (AI) to analyze financial data, using blockchain to increase security and transparency of transactions, and leveraging digital financial platforms to raise capital will help small businesses develop effectively in the digital economy.

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REFERENCES

Allen, F., Demirgüç-Kunt, A., Klapper, L., & Peria, M. S. M. (2014). The foundations of financial inclusion: Understanding ownership and use of formal accounts. Journal of Financial Intermediation, 27, 1-30. https://doi.org/10.1016/j.jfi.2015.12.002

Arner, D. W., Barberis, J., & Buckley, R. P. (2016). The evolution of fintech: A new post-crisis paradigm? Georgetown Journal of International Law, 47(4), 1271-1319.

Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2010). Formal versus informal finance: Evidence from China. Review of Financial Studies, 23(8), 3048-3097. https://doi.org/10.1093/rfs/hhq030

Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2014). Who creates jobs in developing countries? Small Business Economics, 43(1), 75-99. https://doi.org/10.1007/s11187-014-9545-7

Banerjee, A. V., & Duflo, E. (2014). Do firms want to borrow more? Testing credit constraints using a directed lending program. Review of Economic Studies, 81(2), 572-607. https://doi.org/10.1093/restud/rdt046

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2005). SMEs, growth, and poverty: Cross-country evidence. Journal of Economic Growth, 10(3), 199-229. https://doi.org/10.1007/s10887-005-3533-5

Beck, T., Demirgüç-Kunt, A., & Maksimovic, V. (2008). Financing patterns around the world: Are small firms different? Journal of Financial Economics, 89(3), 467-487. https://doi.org/10.1016/j.jfineco.2007.10.005

Beck, T., Demirgüç-Kunt, A., & Singer, D. (2011). Is small beautiful? Financial structure, size, and access to finance. World Development, 39(8), 1295-1309. https://doi.org/10.1016/j.worlddev.2010.12.009

Berger, A. N., & Udell, G. F. (2006). A more complete conceptual framework for SME finance. Journal of Banking & Finance, 30(11), 2945–2966. https://doi.org/10.1016/j.jbankfin.2006.05.008

Bollaert, H., Lopez-de-Silanes, F., & Schwienbacher, A. (2021). Fintech and access to finance. Journal of Corporate Finance, 68, 101941. https://doi.org/10.1016/j.jcorpfin.2021.101941

Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. Journal of Finance, 53(6), 2107-2137. https://doi.org/10.1111/0022-1082.00084

Demirgüç-Kunt, A., Klapper, L., Singer, D., & Van Oudheusden, P. (2018). The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. World Bank Group. https://doi.org/10.1596/978-1-4648-1259-0

Ghosh, S., Mookherjee, D., & Ray, D. (2020). Credit rationing and microfinance: Revisiting the role of competition. Journal of Development Economics, 146, 102517. https://doi.org/10.1016/j.jdeveco.2020.102517

Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services. Journal of Management Information

Systems, 35(1), 220-265. https://doi.org/10.1080/07421222.2018.1440766
Hair, J. F.; Black, W. C.; Babin, B. J.; & Anderson, R. E. (2009). Multivariate data analysis (7th ed.). Pearson.
Klapper, L., Love, I., & Randall, D. (2006). SMEs access to finance in developing countries. World Bank Policy Research Working Paper Series, No. 4029. https://doi.org/10.1596/1813-9450-4029
Levine, R. (1997). Financial development and economic growth: Views and agenda. Journal of Economic Literature, 35(2), 688-726.
Luong, N.T. (2023). "Promoting digital transformation in financial management - accounting in small and medium enterprises". Journal of Finance, address https://tapchitaichinh.vn/thuc-day-chuyen-doi-so-trong-quan-ly-tai-chinh-ke-toan-tai-doanh-nghiep-nho-va-vua.html, September 13, 2023.
Mader, P., Sarpong, S., & Zimmermann, L. (2016). Financial inclusion and savings behavior in low-income households: Evidence from a field experiment in Ghana. The European Journal of Development Research, 28(4), 597–613. https://doi.org/10.1057/ejdr.2015.57
Markus, G., & Rideg, A. (2021). Understanding the connection between SMEs' competitiveness and cash flow generation: An empirical analysis from Hungary. Competitiveness Review, 31(3), 397–419. https://doi.org/10.1108/CR-01-2020-0019
McKenzie, D. (2017). Identifying and spurring high-growth entrepreneurship: Experimental evidence from a business plan competition. American Economic Review, 107(8), 2278-2307. https://doi.org/10.1257/aer.20151404
Morduch, J., & Rutherford, S. (2003). Microfinance: Analytical issues for India. Journal of Economic Perspectives, 17(3), 157-182. https://doi.org/10.1257/089533003769204404
OECD. (2019). Financing SMEs and Entrepreneurs 2019: An OECD Scoreboard. OECD Publishing. https://doi.org/10.1787/fin_sme_ent-2019-en
Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. Borsa Istanbul Review, 18(4), 329-340. https://doi.org/10.1016/j.bir.2017.12.003
Philippon, T. (2019). The fintech opportunity. Brookings Papers on Economic Activity, 2019(1), 1-54.
26. Rajan, R. G., & Zingales, L. (1998). Financial dependence and growth. American Economic Review, 88(3), 559-586.
Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. American Economic Review, 71(3), 393-410.
Ven, L.P. (2024). "Current situation and solutions for developing small and medium enterprises from bank credit policies". Journal of Financial and monetary market, address https://thitruongtaichinhtiente.vn/thuc-trang-va-giai-phap-phat-trien-doanh-nghiep-nho-va-vua-tu-chinh-sach-tin-dung-ngan-hang-63332.html, October 12, 2024.
Wang, Y., Sun, S. L., & Peng, M. W. (2022). The fintech revolution: Business models and regulation. Journal of International Business Studies, 53(2), 220-244. https://doi.org/10.1057/s41267-021-00468-9
Zavolokina, L., Dolata, M., & Schwabe, G. (2016). FinTech – What's in a name? Electronic Markets, 26(3), 293-317. https://doi.org/10.1007/s12525-016-0223-5
Zalan, T., & Toufaily, E. (2017). The promise of fintech in emerging markets: Not as disruptive. Contemporary Economics, 11(4), 415-430. https://doi.org/10.5709/ce.1897-9254.249.