FACTORS INFLUENCING SMALL AND MEDIUM ENTERPRISES' DECISION TO APPLY FOR BANK LOANS: A QUANTITATIVE ANALYSIS IN VIETNAM

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Abstract. *This study investigates the determinants influencing the decision of Small and Medium Enterprises (SMEs) to apply for bank loans. Drawing upon a theoretical framework encompassing human capital, firm attributes, business strategy, and information asymmetry, we develop a model to predict SMEs' propensity to seek bank financing. Employing a quantitative methodology in Vietnam, we utilize a hypothetical-deductive testing approach on primary data collected through questionnaires focusing on loan applications. Our findings reveal several significant factors influencing SMEs' inclination towards bank loans. Contrary to expectations, the business experience of a firm's owner exhibits no significant correlation with the likelihood of applying for a bank loan. However, variables such as the educational background of the firm's owner, firm size, collateral availability, and interest rates on loans exhibit negative associations with loan application propensity. Conversely, factors including the presence of comprehensive business plans and establishment of relationships with bankers during start-up phases demonstrate positive relationships with SMEs' inclination to apply for bank loans. This study contributes to the understanding of SMEs' financing decisions and provides valuable insights for financial institutions in designing tailored lending strategies to meet the diverse needs of SMEs.*

Keywords: *SME, bank loan application, Vietnam.*
JEL Classification: *E22, G32; M21*
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Introduction. The Vietnamese economy is presently undergoing a shift towards structural development and increased privatization, moving away from traditional government control. This shift underscores the urgent need to address, evaluate, and incentivize the status of Small and Medium Enterprises (SMEs) while providing support to existing businesses, rather than solely relying on large corporations. Consequently, in 2011, the new Vietnamese administration was compelled to outline a comprehensive long-term economic strategy aimed at fostering sustainable economic development and diversifying the production base. This strategy aims to reduce the nation's heavy reliance on the oil industry, which serves as a volatile source of income. Additionally, the plan seeks to nurture and enhance viable private sectors capable of sustaining economic growth.

In many developing nations, financial institutions frequently face challenges or exhibit reluctance in extending term loans to Small and Medium Enterprises (SMEs). They tend to favor providing financing to larger, established corporations with robust financial statements and established credit histories, often requiring additional assets as collateral in traditional bank lending (Q. K. Nguyen & Dang, 2022a; Qiao et al., 2023). This practice hinders SMEs' ability to access formal external financing. Various factors contribute to this situation, including the size and age of the firms, absence of a well-defined business strategy, limited collateral, inadequate financial documentation, and stringent banking criteria. Additionally, the educational background and business experience of the owner or manager also play significant roles in this regard.

Small and Medium Enterprises (SMEs) play a crucial role in driving economic growth, fostering innovation, and creating employment opportunities in emerging economies like Vietnam. However, despite their significance, SMEs often encounter difficulties in accessing external financing, particularly from formal banking institutions. Understanding the determinants that influence SMEs' decisions to apply for bank loans is essential for policymakers, financial institutions, and entrepreneurs alike. Vietnam's economy has witnessed remarkable growth and structural transformation in recent years, propelled by a burgeoning SME sector. As the country transitions towards a market-oriented economy and undergoes rapid urbanization, the demand for financial services, including bank loans, among SMEs has surged. However, the banking sector in Vietnam, like many other developing countries, tends to prioritize lending to larger, more established enterprises, leaving SMEs facing challenges in accessing the necessary funds to support their growth and expansion initiatives.

This study seeks to explore and analyze the factors that influence SMEs' decisions to apply for bank loans in Vietnam. By employing a quantitative research methodology, we aim to provide empirical insights into the drivers and barriers that shape SMEs' borrowing behaviors. Specifically, we focus on variables such as firm size, business strategy, collateral availability, financial literacy of owners or managers, and relationships with banks. The findings of this study are expected to offer valuable implications for policymakers, financial institutions, and SMEs themselves. By identifying the key determinants of SMEs' loan application decisions, stakeholders can devise targeted interventions and policy measures aimed at enhancing SMEs' access to finance, promoting entrepreneurial activity, and fostering sustainable economic development in Vietnam.

Literature review. Up to now, there are no single theory comprehensively elucidates the process by which firms secure external formal financing. Huang et al. (2018) contend that "financial theories do not fully capture financial behavior." Consequently, scholars have drawn upon a variety of theoretical frameworks to elucidate how small firms access external financing. These frameworks have been developed to examine the factors influencing Small and Medium Enterprises (SMEs) in seeking external formal financing. To address this complexity, this study adopts four distinct theoretical frameworks: information asymmetry theory, human capital theory, firm theory, and strategy theory. These theories serve as the conceptual underpinnings for investigating the determinants of SMEs' applications for bank loans.

Small and Medium Enterprises (SMEs) constitute a vital segment of Vietnam's economy, contributing significantly to employment generation, innovation, and economic growth. However, the ability of SMEs to access external financing, particularly from formal banking institutions, remains a persistent challenge. This literature review synthesizes existing research on the factors influencing SMEs' decisions to apply for bank loans, providing insights into the context-specific dynamics in Vietnam.

Access to Finance for SMEs in Vietnam: Numerous studies have highlighted the constrained access to finance faced by SMEs in Vietnam. Le and Phan (2017) underscored the limited availability of credit for SMEs, exacerbated by stringent collateral requirements and risk aversion among banks. Moreover, Stockport et al. (2009) emphasized the dominance of informal financing channels, such as family and friends, due to the challenges associated with formal bank lending.

Theoretical Perspectives on SME Financing: Romānova and Kudinska (2016) noted the inadequacy of conventional financial theories in explaining the financing behavior of small firms. Consequently, researchers have adopted various theoretical frameworks to understand SMEs' borrowing decisions. Information asymmetry theory, human capital theory, firm theory, and strategy theory have emerged as prominent conceptual lenses for examining the factors influencing SMEs' access to external financing (Q. K. Nguyen & Dang, 2022b; Puthusserry et al., 2021).

Determinants of SMEs' Loan Application Decisions: Several studies have identified a range of factors that influence SMEs' decisions to apply for bank loans. Firm-specific characteristics, such as size, age, and financial health, play a significant role in shaping borrowing behavior (Metz et al., 2007; Q. K. Nguyen & Dang, 2023a). Additionally, owner-manager attributes, including educational background and managerial experience, can impact SMEs' access to formal finance (Demmou et al., 2021; Q. K. Nguyen & Dang, 2023b).

Banking Sector Dynamics and SME Financing: The role of banks in facilitating SME financing is crucial. However, studies have highlighted challenges related to risk assessment, collateral requirements, and relationship banking practices in the Vietnamese banking sector (Beugelsdijk et al., 2008; Q. K. Nguyen, 2020, 2021). These factors can influence SMEs' willingness to apply for bank loans and their ability to navigate the formal credit market.

Policy Implications and Future Directions: Effective policy interventions are essential to address the barriers hindering SMEs' access to bank loans in Vietnam. Initiatives aimed at improving financial literacy, enhancing collateral options, and fostering stronger linkages between SMEs and financial institutions are warranted. Moreover, future research should explore the impact of evolving regulatory frameworks and technological innovations on SME financing dynamics in Vietnam.
This literature review provides a comprehensive overview of the existing research landscape on factors influencing SMEs' decisions to apply for bank loans in Vietnam. By synthesizing empirical findings and theoretical insights, this study aims to contribute to a deeper understanding of the mechanisms driving SME financing behavior and inform policy interventions aimed at enhancing access to finance for small businesses in Vietnam.

Hypothesis development. Banking conditions can exacerbate financial constraints arising from information asymmetry, incentive issues, and limited collateral availability. When financial intermediaries possess greater borrower information, opportunities to enhance borrower motivation through loan contract terms, including interest rates and collateral requirements, diminish (Demmou et al., 2021; Q. K. Nguyen, 2022c). Consequently, banks may prioritize collateral value during financial distress when information is incomplete. Collateral serves multifaceted roles when owners possess superior information about firm success probabilities compared to banks: limiting downside losses, incentivizing entrepreneur commitment, and signaling project viability.

However, collateral presents challenges for small firms, especially in their early stages when significant fixed assets are lacking. This collateral deficiency often impedes small businesses from seeking bank loans. Survey data such as the World Business Environment Survey, Business Environment and Enterprise Performance Survey (BEEPS), and Investment Climate Assessment (ICA) reveal substantial cross-country variations in financing practices, including collateral requirements (Q. K. Nguyen, 2022b; R. Wang et al., 2021). Businesses cite reasons such as insufficient information on borrower financial conditions and evaluation complexities for avoiding bank borrowing, leading to inflated collateral requirements (Q. K. Nguyen, 2022a; Uhde & Heimeshoff, 2009).

Restricted access to formal financing often compels SMEs to resort to informal sources, circumventing collateral and information requirements (Q. K. Nguyen, 2022d; Varotto & Zhao, 2018). Personal and familial funds become crucial for SMEs with low turnovers, implying that bank collateral requirements may reflect owner-manager loan application decisions. Thus, this study posits the following hypotheses:
H1: Collaterals required by banks affect owner-manager decisions to apply for bank loans. Banks serve as primary financiers for businesses, possessing superior information capabilities compared to other financial intermediaries. Consequently, establishing a firm-bank relationship proves instrumental in addressing asymmetric information challenges in business and lending. Research by Yin (2019) reveals that collateral requirements decrease as bank-borrower relationships strengthen. Borrowers maintaining concentrated and enduring relationships with banks face less stringent collateral demands.

Thus, a robust firm-bank relationship fosters owner-managers' willingness to seek bank loans. Tansuhaj et al. (1987) note that firms with prior bank relationships can re-establish connections with those banks. Ye et al. (2010) observe that firms utilizing short-term debt also utilize long-term debt, with bank-affiliated firms accessing both forms of financing. Conversely, firms lacking such relationships struggle to secure any bank funding.

Consequently, based on insights into information asymmetry and collateral dynamics, the following hypothesis is proposed:

H2: The extent of startup financing sourced from banks (firm-bank relationship) influences the likelihood of a firm applying for a bank loan.

Human capital encompasses a spectrum of attributes including knowledge, skills, competencies, attitudes, talents, and experiences leveraged by individuals to enhance firm value, achieve organizational objectives, and foster success (Q. K. Nguyen, 2023c; Xu & Zeng, 2016). Recognized as pivotal in enhancing firm assets and workforce capabilities, human capital drives productivity and sustains competitive advantage. H. Wang et al. (2021) highlight its significant contribution to entrepreneurial firm success, serving as a proxy for firm competence, credibility, and stakeholder confidence.

Owner-managers constitute a prevalent segment within SMEs, often single-handedly steering business operations. In contrast, larger enterprises typically feature management teams appointed by shareholders. Consequently, owner-manager attributes such as education and experience profoundly influence firm longevity and access to external financing. Highly educated entrepreneurs may opt to dissolve their ventures in pursuit of lucrative employment opportunities (Q. K. Nguyen, 2023b; Yasser et al., 2017; Q. K. Nguyen, 2024). Nofsinger and Weicheng (2011) underscore the pivotal role of owner-manager experience in shaping external financing disparities.

However, some studies suggest that the benefits of knowledge accrue primarily to managerial rather than operational roles (Almustafa et al., 2023; Dang et al., 2020; Q. K. Nguyen, 2023a). Balachandran et al. (2020) cautions against equating experience with knowledge, highlighting the variable relationship between the two. Yung and Chen (2018) employ Spearman's correlation analysis, fail to establish a definitive link between owner-manager education levels and financing application.

Prior research reveals conflicting findings regarding the impact of human capital on firm performance and owner-manager education on firm success. Shen et al. (2020) identifies a negative correlation between bank financing and owner experience. Yet, SME owners and employees in developing nations often possess lower educational attainment compared to their counterparts in larger enterprises (Q. Nguyen & Dang, 2020; Xia et al., 2017). Human capital theory posits that owner-manager education and experience shape firm access to external financing.

Consequently, the present study formulates the following hypotheses:

H3: Owner-manager education level significantly influences firms' propensity to apply for bank loans.

H4: Owner-manager experience significantly impacts firms' decision to seek bank loans.

Determining firm size may hinge on capital investments' value or employee count, serving as internal metrics of firm size (Dang & Nguyen, 2022; Kalsie & Shrivastav, 2016; Khai, 2022). The empirical exploration of symmetry and simultaneity hypotheses has largely overlooked firm size, as differences in size often reflect variances in other factors like age (Dang & Nguyen, 2021a; Offenberg, 2009). Guest (2009) delineates four approaches to size theories: the conventional microeconomic approach, transaction cost approach, industrial organization approach, and dynamic model of size distribution approach. The latter incorporates stochastic, life cycle, and evolutionary models, with research and development serving as the primary innovation source. Larger, established firms tend to have an advantage in this approach due to their pursuit of research and development activities, correlating firm size with age and growth (Dang & Nguyen, 2021b; Kalsie & Shrivastav, 2016). Beck et al. (2005) posit that firms typically enter the market as small entities and grow through learning, albeit facing higher risks and turbulence compared to larger counterparts. Small firms encounter challenges in securing credit, emphasizing the significance of controlling interactions between external and internal financing when examining financing relationships (LiPuma et al., 2013). Firms inclined toward growth are more prone to seek external equity and debt capital compared to stagnant counterparts (Ho et al., 2023; Kalkan et al., 2011), with firm size shaping the impact of financial structure on the growth process. Research indicates a positive relationship between firm size and external financing application, with debt significantly associated with firm size. Conversely, newer and younger firms tend to use fewer banks and finance institutions than their older counterparts (Dang et al., 2022; Yitayaw et al., 2023).

Based on the aforementioned assertions, the following hypothesis is formulated:
H5: Firm size significantly influences firms' propensity to apply for bank loans.

A strategy represents a deliberate plan crafted to accomplish specific objectives. In the context of business endeavors, a strategy encompasses the comprehensive blueprint of a firm, aligning various functional domains, analyzing internal and external environments, and charting the strategic trajectory of the organization towards achieving its goals. This perspective underscores the contextual and dynamic nature of business plans, serving as instrumental tools utilized by owner-managers to realize both short and long-term aspirations.

Typically, small businesses do not formulate operational or financing plans, especially during their inception phase. However, once a business plan is established, small businesses often operate with gearing ratios akin to or higher than larger enterprises, often exhibiting a higher proportion of short-term debt. While SME owners may not initially employ formal business plans to secure debt or external financing during the startup phase, their adoption of such plans correlates with an increased propensity to seek and utilize financing, as evidenced by Yitayaw et al. (2023).

A well-crafted business plan serves as a pivotal instrument in seeking and securing external formal financing. Entrepreneurs can present their business plans to potential investors or commercial banks, providing a clear and compelling rationale for funding. Yüksel et al. (2020) underscore the importance of business plans in facilitating debt acquisition. Conversely, small businesses lacking formal planning processes often resort to familial loans, with older family owners, who wield control over family finances, less inclined to consider business plans. Studies by Tariq et al. (2021) corroborate the significant association between written business plans and debt application.

This discourse examines the impact of business strategy attributes, particularly the presence of a written business plan, on firms' propensity to apply for bank loans. Consequently, the following hypotheses are proposed for empirical testing:

H6: The existence of a written business plan is likely to influence firms' inclination to apply for bank loans.

Methodology. To address this inquiry, small firms are categorized based on their likelihood to seek a bank loan. The data for this study were derived from a survey conducted by the authors in Vietnam. A total of 436 SMEs were selected, ranging in size from 1 to 50 employees, and representing various sectors of the economy. From the survey, 372 valid questionnaires were obtained, containing pertinent information regarding the attributes of SME owner-managers, including their educational background, professional experience, firm size, and age. Additionally, the survey collected data on business strategies, such as the presence of a business plan, and the sources of financing utilized during startup, as well as whether the SMEs had applied for a bank loan post-startup.

Our empirical investigation seeks to explore the likelihood and impact of various factors, including human capital, firm characteristics, business strategy, and bank conditions, on the application for bank loans by firms following the startup phase.

These factors are treated as dependent variables in our analysis. To examine these relationships, we employed the following model:

Bank loan application = constant + owner-manager characteristics + firm characteristics + business strategy + bank conditions + εi (1)

We utilized logistic regression analysis to investigate this model. The dependent variable (Y) was measured based on responses to the survey question regarding whether the business had applied for a bank loan for additional financing after the startup phase. Responses indicating affirmative applications were coded as "1," representing instances of "bank loan," while negative responses were coded as "0." The coefficients (β) were estimated using the following model:

Y = β0 + β1 Education level + β2 Previous business experience + β3 Business plan + β4 SME startup size + β5 Firm startup financing (firm-bank relationship) + β6 Collateral required by the bank + εi (2)

Result and discussion. Table 1 illustrates that the majority of correlations exhibit relatively modest values. While some correlations are statistically significant, the highest and lowest correlation coefficients are 0.432 and 0.003, respectively. Thus, according to Spearman's correlation analysis, the level of multicollinearity is notably low. To validate the findings of our study, a collinearity statistics test was conducted, revealing variance inflation factors (VIF) ranging from 1.019 to 1.751 for all independent variables. Myers (1990) advises that VIF values exceeding 10 should raise concerns about multicollinearity. Fortunately, no evidence of collinearity issues among the predictor variables was detected.

Table 1. Correlation of independent variables for the bank loan-application model

Variables	1	2	3	4	5	6
Size	1.000					
Business plan	.432**	1.000				
Start-up financing	.380**	.483**	1.000			
Education	.182**	.212**	.074	1.000		
Experience	.148**	.044	.043	-.003	1.000	
Collateral	-.334**	-.282**	-.188**	-.047	-.048	1.000

Sources: Correlation is significant at the 0.01 level (2-tailed)

Through a meticulous quantitative analysis in Table 2, the research uncovers significant insights into how various factors influence these crucial decisions within the Vietnamese business landscape. Notably, the findings reveal a nuanced interplay between several key variables and the propensity of SMEs to seek external financing from banking institutions.

One salient observation from the study is the negative impact of firm size, education level, collateral availability, and loans with interest on SMEs' inclination to apply for bank loans. The inverse relationship between firm size and loan application suggests that smaller enterprises might face barriers in accessing formal financing due to their limited resources or perceived risk profiles. Similarly, the adverse influence of education level underscores potential challenges faced by less educated entrepreneurs in navigating the complexities of financial markets, thus reducing their likelihood of pursuing bank loans. Moreover, the deterrent effect of collaterals and interest-bearing loans underscores the financial constraints and risk aversion prevalent among SMEs, leading them to seek alternative funding sources or adopt conservative financing strategies.

Conversely, the study identifies positive associations between the presence of a business plan and start-up financing with SMEs' propensity to apply for bank loans. A well-developed business plan serves as a strategic roadmap, instilling confidence in lenders regarding the viability and growth potential of the enterprise. SMEs equipped with comprehensive business plans are better positioned to articulate their financial needs and growth strategies, thereby enhancing their attractiveness to banks as potential borrowers. Additionally, start-up financing, often indicative of external support or investor confidence, augments SMEs' credibility and financial stability, thereby facilitating their access to bank loans.

The findings underscore the complex interplay of factors shaping SMEs' decisions to apply for bank loans in Vietnam's dynamic business environment. While certain variables exert a deterrent effect on loan application rates, others serve as catalysts, highlighting the importance of tailored financial strategies and support mechanisms for SMEs. By shedding light on these intricate dynamics, the study provides valuable insights for policymakers, financial institutions, and SMEs alike, facilitating the development of targeted interventions and financial products aimed at enhancing

SMEs' access to formal financing and fostering sustainable growth in Vietnam's entrepreneurial ecosystem.

Table 2. Results of the logistic regression analysis for the determinants of bank loan- application

Variables	B	S.E.	Wald	Sig.
Size	-.365	.215	3.633	.031**
Business plan	1.321	.350	11.333	.001***
Start-up financing	2.555	.323	35.565	.000***
Education	-.613	.363	2.533	.052*
Experience	.025	.322	.005	.630
Collaterals	-1.753	.302	15.635	.000***
Constant	1.323	.630	6.227	.013

Conclusion. In conclusion, this study delved into the intricate determinants influencing Small and Medium Enterprises (SMEs) in Vietnam when deciding to seek bank loans. By grounding our investigation in a robust theoretical framework encompassing human capital, firm characteristics, business strategy, and information asymmetry, we developed a predictive model to elucidate SMEs' propensity towards bank financing. Our empirical analysis, conducted through a quantitative methodology and hypothetical-deductive testing approach, yielded valuable insights derived from primary data sourced via questionnaires focusing on loan applications within the Vietnamese SME sector.

The findings of our study shed light on several significant factors shaping SMEs' decisions regarding bank loans. While the business experience of a firm's owner surprisingly exhibited no substantial correlation with loan application likelihood, other variables emerged as influential determinants. Notably, the educational background of the firm's owner, firm size, collateral availability, and interest rates on loans were identified as factors negatively impacting SMEs' inclination to seek bank financing. Conversely, the presence of comprehensive business plans and the establishment of early relationships with bankers during start-up phases were associated with heightened tendencies among SMEs to apply for bank loans.

In providing empirical evidence and insights into the factors guiding SMEs' financing decisions, our study offers valuable contributions to both academic literature and practical implications for financial institutions. By better understanding the multifaceted dynamics influencing SMEs' loan application behaviors, financial institutions can tailor their lending strategies to effectively meet the diverse needs and preferences of SMEs. Moreover, policymakers and stakeholders can leverage these findings to formulate targeted interventions aimed at fostering an enabling environment for SME growth and entrepreneurship in Vietnam. Ultimately, this study underscores the significance of informed decision-making and strategic financial planning in facilitating the sustainable development of SMEs in emerging economies like Vietnam.

Author contributions. The authors contributed equally.

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