The Effects of SME Performance on Credit Accessibility in Border Economic Zones: The Case of Nong Khai Province, Thailand

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Abstract

This study examines and models how firm competitiveness, managing uncertainty, and government support affect the performance of small and medium-sized enterprises (SME), focusing on impacts of credit accessibility for SMEs in border areas. Quantitative design underpinned by performance theory support analysis of 362 valid survey responses obtained in Nong Khai, Thailand, during November – December 2020. Confirmatory factor analysis (CFA) and structural equation modelling (SEM) demonstrate the structural relationships among the proposed constructs. Findings indicate that there was a significant positive relationship between firm performance and credit accessibility. Therefore, enhancing SME performance by increasing firm competitiveness, managing uncertainty, and government support would improve financial acquisition outcomes. Studying SMEs in Nong Khai's vital border economic zone provides valuable insights to maximize international gateway trade and to other regions with similar characteristics highlighting how three significant direct drivers can improve the performance of SMEs thus enhancing their credit accessibility.

Keywords: 1) small and medium-sized enterprise 2) business performance 3) credit accessibility 4) special economic zone 5) border trade

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Introduction

All businesses need capital to run their operations, enhance liquidity, or expand their business. However, some scholars have found that many SMEs have limited credit access, especially from financial institutions (Domeher and Raymond, 2012, p. 168; Luan, 2020, p. 120). Primarily, entrepreneurs who rely on external funding from financial institutions often face significant problems regarding their strictness of lending by and complexity of borrowing conditions (And and Kajornnun, 2015, p. 144; Maiti, 2018, p. 1212). Additionally, borrowers often do not qualify due to lacking guarantee securities, having a history of debt payments, holding minimum business experiences, and under-preparation of business plans to demonstrate entrepreneurial business potential. All of these issues make commercial banks view SMEs as risky when applying for a loan.

According to Asian Development Bank (2014, p. 3), credit is a crucial financial instrument of business funding in Asia, where SMEs rely on bank lending. In 2013, SME loans as a percentage of GDP were relatively high in the Republic of Korea and Thailand (38.9 and 33.7 percent, respectively). In emerging economies, formal SMEs account for up to 40% of national income (GDP) (World Bank, 2022), with an estimated 400 million SMEs in developing markets worldwide. Of the 156 million SMEs in South Asia, Owens and Wilhelm (2017, p. 1) suggests approximately half of these have unmet loan needs. This is because many banks perceive SMEs to be high-risk clients. Financial statements, tax records, and collateral are all required for SMEs credit approval, which most micro and small firms cannot fulfil. During the Covid-19 pandemic, access to financing significantly impacted business and financing environments, resulting in increased challenges for SMEs in obtaining funding.

Many studies have focused on the relationship between access to capital and firm performance across a wide range of businesses (Quartey, et al., 2017, p. 19; Sekyi, et al., 2017, p. 448; Wasiuzzaman, et al., 2020, p. 294). Fundraising for SMEs has significant and positive effects on SME growth in developing economies. African and Asian firms that have loans and credit lines have strengthened their performance in terms of the growth rate of sales, investment, sales per employee, return on investment (ROI), return on assets (ROA), and return on equity (ROE) (Fowowe, 2017, p. 16; Probst, et al., 2021, p. 9; Tran, et al., 2019, p. 160). Several factors enable businesses to access finance, each influenced by firm size, ownership, collateral, the strength of legal rights, depth of credit information, firm's export orientation, and the top manager's experience. However, there are several limitations in the earlier studies. Many variables are either ignored or without insufficient focus on individual dimensions of firm competitiveness, managing uncertainty, government support to firm performance and credit accessibility.

Within ASEAN (The Association of Southeast Asian Nations), Thailand is a strategic economic community. Consequently, rapid growth ensued in the value of border trade from international economic activities, investment and cross-border tourism among

Thailand - Laos, and by extension Vietnam. Thus, this study draws on a case study of businesses operating within Nong Khai province, Thailand, which serve as critical distribution hubs for regional trade with neighboring countries. In mid-2014, the Thai government declared Nong Khai the focal point of a border special economic zone (Bui and Preechametta, 2019, p. 324) Nong Khai is the location for the first Thai-Lao Friendship Bridge, constructed in 1994. It is home to many enterprises crucial to the Greater Mekong Subregion Economic Corridors. As a result, the value of border trade from international commercial activity, investment, and cross-border tourism increased rapidly between Thailand and Laos, and by early extension, Vietnam. In 2020, the total border trade between Thailand and Laos was 189,836 million baht (USD5,714.51 million), second only to the Thai-Malaysian border trade. SMEs provided 57,452.25 million baht (USD1,729.45 million) in border exports to the Lao PDR in 2019 (Trade and Investment Cooperation Division Department of Foreign, 2021). Nong Khai continues its strategic border-zone status through current renovations to accommodate a significant international outpost for a high-speed train corridor connecting Kunming (China) - Vientiane (Lao) - Bangkok (Thailand) - Singapore. The multi-country Kunming-Singapore train link emanated from the 1995 ASEAN meeting (Morris, 2019, p. 2) and is scheduled for completion by 2029.

Such border areas are critical and need development to support future growth. As a result, this research focuses on the factors that support border-zone SMEs in their elevation to become high-performing SMEs. It aims to contribute knowledge by creating a model that links SMEs performance and accessibility to capital. The objectives of this research are thus twofold: 1) to examine factors influencing the performance of SMEs; 2) to examine the influence of the performance of SMEs on the access to business funding sources. The remainder of the paper presents as follows. First, a review of the literature precedes the conceptual framework and research hypothesis before the research methodology, data analysis and validation of the structural model present. The interpreted results are discussed in terms of theoretical and managerial implications. Finally, the paper concludes with recognition of its limitations and scope for future research.

Literature Review

The developed literature shows that a firm's performance dimensions can be broad-based. SME success can be measured monetary and non-monetary terms, such as product-oriented performance, customers, operations, marketing and finance (Ahmad and Jamil, 2020, pp. 709-710; Simpson, et al., 2012, pp. 275-276). The latter traditionally focuses on measuring financial performance measured by sales growth, operating income or net profit margin. On the other hand, firm performance reflects through the quality of service and the variety of services. It is typically measured based on performance related to efficiency in the use of market position, customer satisfaction, and customer engagement which positively influences business success and leads to an acceleration of cash flows (Wil-

liams and Naumann, 2011, p. 21). Therefore, organizations must measure all aspects of their performance to reflect their true strengths and weaknesses (Maduekwe and Kamala, 2016, p. 53). If only the financial account is measured, the indicators may not have sufficient ability to rate the organization holistically. Scholars such as de Mel, et al. (2014, p. 205) postulate that business skills acquisition is an essential driver of SME' performance and a key determinant of productivity. AliGongbing and Mehreen (2019, p. 718) suggest trade digitization affects the relationship between supply chain finance and firm performance. Table No. 1 displays a summation overview of such relationships. This study investigates three identified themes deemed influential to firm performance as gleaned through various research and literature reviews. They are firm competitiveness, ability to manage uncertainty, and government support policy.

Table No. 1 Summary of previous research

Issues	Findings	Researcher
Firm Competitiveness	Firm competitiveness such as corporate strategy, organizational culture and leadership, work system, employee work skills, and big data and knowledge management have a significant positive influence on the performance	O'Connor and Kelly (2017) Anning-Dorson (2021)
Managing Uncertainty	Capability to respond to technology uncertainties, innovation uncertainties and product uncertainties is positively associated with performance measurement diversity	Cheng and Humphreys (2016)
Government Support	Government support such as investment loan assistance, tax aid, government policies and regulations have a positive and significant effect on performance	Njinyah (2018) Siddiqui and Saleem (2010)
Firm Performance and Credit Accessibility	Credit access, including microfinance accessibility, supports SME and MSME performance. SMEs with good performance often have access to a broader range of financing options	Bongomin, et al. (2020) Cheong, et al. (2020) Wasiuzzaman (2019)

By untangling variables affecting SME performance and credit accessibility, the researcher develops a hypothesized model for this research. The following section unpacks each theme separately, notwithstanding the relationship between them and acknowledgement that emphasis of perspectives differs by author.

The concept of firm competitiveness

Firm competitiveness is an organization's advantage over competitors. Famiyeh, et al. (2018, p. 599) support that competitiveness positively impacts performance, and that the exploitation of competitive strengths leads to superior results among high-competitive businesses. Driving factor strategic competitive achievements include: 1) core competencies of the organization that focuses on building and enhancing the internal capabilities of the organization which competitors is difficult to replicate and 2) strategically important external resources which is caused by adjusting and taking advantage of relationships with external organizations and partners (Cong and Thu, 2021, p. 310). In addition, business competitiveness has a furthering and significant influence on export business performance as it is a driver of organizational culture and leadership (Anning-Dorson, 2021, p. 1319). To address the competitiveness challenges, innovation and technology transfer have been referred as possible solutions. Wahyono (2020, pp. 23-25) asserts that the mechanisms through which innovation and technology transfers jointly affect productivity and competitiveness of small, medium and micro enterprises (SMMEs) in emerging economies. Premised on the above outline of SME competitiveness, the first hypotheses present below:

Hypothesis 1 (H1): Strategic competitiveness has a positive influence on firm performance.

Concepts of the ability to manage uncertainty

This concept focuses on addressing the potential business impacts on both internal and external environmental factors. It is challenging for SMEs to deal with implications as they affect business performance (Cheng and Humphreys, 2016, p. 523). In particular, the external environment is an uncontrollable factor and constantly changing. Therefore, SMEs need to monitor environmental changes comprehensively and respond to critical environmental factors such as situational economic instability, politics, law changes, or technological advances. Taking these external factors into account in developing a preparedness plan is essential to strengthening business.

External environmental factors affecting the performance of SMEs range across economic, social and political domains, each presenting positive, negative or neutral success positions (Sitharam and Hoque, 2016, pp. 278-279). For example, Poramatworachote, et al. (2019, pp. 32-45) found that SME investment in the lower northeastern region of Thailand post opening the ASEAN Economic Community was affected by political and legal factors, bringing about social and cultural change. Such factors all relate to the success of SME performance. Therefore, all elements need managing as they influence business growth. Premised on the above outline of SME ability to manage uncertainty, the second hypothesis presents below:

Hypothesis 2 (H2): The ability to manage uncertainty from external factors has a positive influence on firm performance.

Government support policy

Financial assistance from the federal government provides strengths for SMEs to survive in an environment of high competition.

Several studies have identified the relationship between government support and the performance of SMEs, finding that huge government spending in the services sector had a significant and positive impact on the survival of SMEs (Cancino, Bonilla and Vergara, 2015, p. 1747). Developing county governments, in particular, place great importance on supporting businesses to have easy access to funding (Candiya Bongomin, et al., 2018, p. 62; Xiang and Worthington, 2015, p. 520). This situation is especially so during this COVID-19 pandemic crisis. SMEs all over the world suffer reduced demand for products and services. Governments, therefore, rush to help SMEs as they are the main backstay in the economy. Assistance presents in various forms through many financial and institutional systems. Mechanisms such as offering a 6-month moratorium, conversion of credit card balance to term loans, and restructuring of corporate loans to help business sustainability and remain competitive in the market are examples (Mustapa and Mohamad, 2021, pp. 296-298). Many governments also offer long-term export assistance programs to build SME internationalization (Appiah, et al., 2019, p. 311; Njinyah, 2018, p. 178; Shamsuddoha, et al., 2009a, p. 418).

In Thailand, the government set up a Small and Medium Enterprise Development Bank to provide credit services to SMEs. The bank offers a range of assistance packages such as low-interest investment loan assistance for new business investment in various special economic zones (ASEAN Briefing, 2018) loan application with exemption to deliver assets to creditors under the Business Security Act B.E. 2558 (Department of Business Development, 2021), and business tax aid. Each offer, backed by appropriate government policies and regulations, assists businesses to increase their operational capacity. Such government policy support helps entrepreneurs to operate their businesses and reduce risks arising from uncontrollable external factors. Premised on the "government support policy" literature as outlined above, the third hypothesis presents below:

Hypothesis 3 (H3): Government support has a positive influence on firm performance.

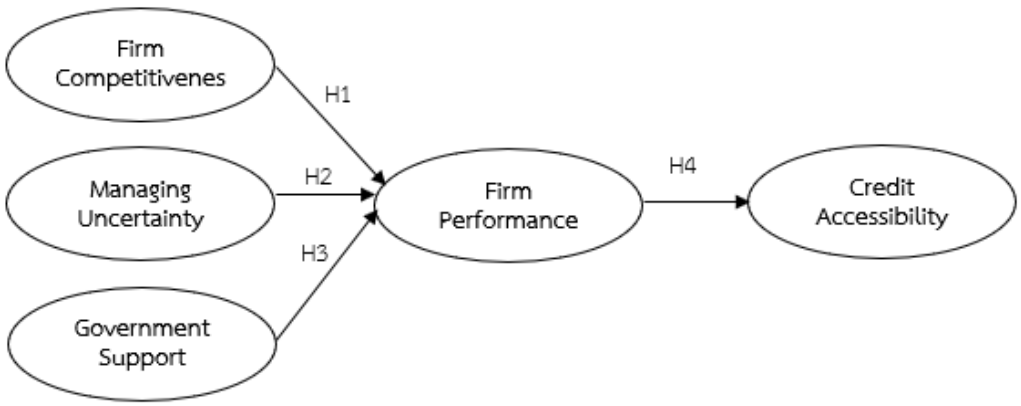
Concept of firm performance of SME and credit accessibility

Generally, business capital comes from two primary sources: debt financing and owner's equity. In addition, financial instruments can vary according to the business cycle. The most accessible funding source for entrepreneurs in the start-up phase includes short-term and long-term loans from financial institutions, personal loans such as credit cards, and loans from family and friends. Once in the growing phase, procurement of funds during the sales expansion comes from retained earnings, loans from financial institutions, or even raising funds by selling shares to the general investor. The latter is known as IPO (Initial Public Offering). Previous research discusses SME barriers to access borrowing from financial institutions and that the ability to finance each business may vary depending on their characteristics. Such range from the company's size, profitability, ability to pay interest, business location, establishment age, and collateral, which all

influence accessibility to funding (Kira and He, 2012, p. 116). SMEs with good performance and entrepreneurial ability often have access to a broader range of financing options than SMEs with poor credit history. In international businesses, networks can have significantly positive influence on SME performance and accessibility to funding (Cai and Szeidl, 2018, pp. 1269-1271; Shaista, 2019, p. 1392). Likewise, studies suggest that credit access, including microfinance accessibility, can support SME and MSME performance (Bongomin, et al., 2020, p. 760; Cheong, et al., 2020, pp. 442-445). Further, the amount of funds provided will accelerate business expansion and lead SMEs to strengthen their profitability leading to different sustainability outcomes (Jarusean, et al., 2018, p. 218). Therefore, premised on the above outline of "firm performance of SME and credit accessibility", the final (4th) hypotheses presents below:

Hypothesis 4 (H4): Firm performance has a positive influence on SMEs' access to funding.

To further the previous research summarized in Table No. 1 and the hypothesis development provided above, this study's research hypotheses model presents in Picture No. 1. It hypothesizes SME structural correlation in the form of firm competitiveness (four items), managing uncertainty (four items), government support (four items), firm performance (four items), and credit accessibility (four items).



Picture No. 1 Proposed hypothetical structural equation model

Methodology

This study's quantitative design leverages manually distributed questionnaires, confirmatory factor analysis, and structural equation modelling (SEM) to guide the findings. The research instrument focuses on 20 items as outlined in Table No. 2.

Measurement of Variables

Variable criteria were developed based on multiple items adopted from Table No. 1. All the items were measured using a five-point Likert-type scale ranging from strongly agree (5) to strongly disagree (1). The questionnaire was corrected and adjusted by three experts and academics in the field of SME management. The Index of Item Objective Congruence (IOC)

yielded between 0.3 – 1. The average IOC score was 0.92, where a value of 1 indicates that all experts agree that the item is clearly measuring that objective (Turner and Carlson, 2003, p. 166). Thus, the items were considered to have a good level of accuracy. After checking the questionnaire to assess the content validity, it was pre-tested in Nong Khai Province - a total of 30 SMEs was selected. The results indicated that all items had Cronbach's alpha coefficient of 0.840. According to Taherdoost (2016, p. 33), the value of Cronbach Alpha for each item greater than 0.8 is considered high and acceptable for reliability.

Data Collection

Multistage sampling was applied based on the proportion of business type and a convenience selection. The Office of SMEs Promotion (2021) reports 13,381 registered businesses engaged in manufacturing, retail, wholesale, and service industries (transport, accommodation, hospitality, etc.) across the Nong Khai Province border zone. Four hundred SMEs in Nong Khai were approached via a personally administered paper-based questionnaire during the field survey in November and December 2020. A total of 362 valid responses were obtained, reflecting a 90.5 percent usable response rate. This sample size was sufficient for a model with several components exceeding the minimum needed ratio of 20x (Schumacker and Lomax, 2016, p. 39).

The sample consisted of respondents with different characteristics. The majority were sole proprietorship (55 per cent), partnership (23 per cent), and a company limited (22 per cent), respectively. The businesses were also categorized as wholesale and retail (51.3 per cent), service (40.0 per cent) and manufacturing businesses (8.7 per cent), respectively. Businesses had varying establishment life with those between 1 – 3 years (21 per cent), 4 – 6 years (16 per cent), 7 – 9 years (15.7 per cent) and 10+ years (47.3 per cent) respectively.

Data Analysis

The analysis used mean and standard deviation (S.D.) techniques to assess the distribution of raw data, the range of mean and S.D. was between 3.04 – 4.30 (0.745 – 1.153). All items were reported well within a tolerable range for assuming a normal distribution, the range of Skewness <± 2 and Kurtosis <± 7 (see Table No. 2). Cronbach's alpha was used to evaluate data reliability. All were above 0.8, which shows individual item reliability. Overall, the data quality obtained from the field indicates the soundness of the 20-question survey design.

Table No. 2 Preliminary analysis of data

Measurement Items	Mean (S.D.)	Skewness	Kurtosis	Cronbach's alpha
I01: Creativity and Innovation	3.98 (0.894)	-.816	.748	.882
I02: Product and Service Differentiation	4.10 (0.816)	-.595	-.254	.882
I03: Cost Effectiveness	3.86 (1.028)	-.553	-.451	.885
I04: Customer Relationship Management	4.02 (0.838)	-.450	-.539	.892

Measurement Items	Mean (S.D.)	Skewness	Kurtosis	Cronbach's alpha
I05: Economics Change	4.30 (0.827)	-1.100	1.022	.888
I06: Cultural Diversity	3.73 (0.946)	-.551	.161	.886
I07: Technology Disruption	3.81 (1.014)	-.587	-.174	.889
I08: Political Stability	3.90 (0.745)	-.320	-.121	.890
I09: Fund Special Programs	3.28 (1.054)	-.382	-.175	.881
I10: Law and Regulation Flexibility	3.38 (1.032)	-.346	-.281	.881
I11: Entrepreneurial Development Program	3.04 (1.153)	-.184	-.576	.884
I12: Tax Reduction	3.39 (0.970)	-.530	.123	.883
I13: Learning and Development Perspective	3.80 (0.989)	-.814	.496	.883
I14: Internal Process Perspective	3.87 (0.934)	-.848	.834	.882
I15: Customer Perspective	4.30 (0.841)	-1.267	1.852	.885
I16: Financial Perspective	4.07 (0.874)	-.869	.813	.881
I17: Soft Loans	3.83 (0.950)	-.604	.235	.881
I18: Credit Line	3.90 (0.765)	-.235	-.411	.890
I19: Joint Venture	3.74 (0.809)	-.255	-.374	.884
I20: Crowd funding	3.72 (0.948)	-.472	.066	.884

Confirmatory factor analysis (CFA) followed to assess how well the measured variables represent the identified measurement indicators.

Finally, the testing of the hypotheses adopted a structural equation modelling (SEM) approach to examine the structural relationships among the proposed constructs simultaneously. All analyses were undertaken using Maximu m Likelihood estimation using AMOS 24.

Results

Measurement Model

The reliability and validity of this study are shown in Table No. 3. Standardized regression coefficients (β), composite reliability (C.R.) and Cronbach's alpha had acceptable internal consistency reliability. The Correlation Coefficient was used to assess the convergent validities. In contrast, the discriminant validity was assessed by examining if the Average Variance Extracted (AVE) exceeds the shared variance between all possible pairs of latent variables. The CR for all constructs were above 0.40, and the AVE of the study ranged within 0.728 and 0.90. According to Shrestha (2021, p. 5), AVE value should exceed 0.50 so that it is adequate for convergent validity.

CFA was used to assess the overall model's fit with the data for each measurement model. Several fit indices should be examined in order to evaluate the model's goodness-of-fit. Numerous scholars suggest that (x2/df) should be less than 3, all fit indices such as: GFI, CFI and IFI should exceed 0.9, whereas

SRMR should be less than 0.05 (Schumacker and Lomax, 2016, p. 112), The results of the CFA are displayed in Table No. 4. The overall measurement models seem to fit the data well as supported by the goodness of fit indices as indicated by the respondents.

Table No. 3 The reliability and validity analysis

Measurement Model	Measurement Items	β	CR	AVE	Correlation Coefficient	Cronbach's alpha
FC: Firm Competitiveness	I01: Creativity and Innovation	0.76	0.433	0.734	0.202 – 0.635	0.714
	I02: Product and Service Differentiation	0.82				
	I03: Cost Effectiveness	0.63				
	I04: Customer Relationship Management	0.29				
MU: Managing Uncertainty	I05: Economics Change	0.42	0.411	0.728	0.285 – 0.559	0.717
	I06: Cultural Diversity	0.61				
	I07: Technology Disruption	0.77				
	I08: Political Stability	0.71				
GP: Government Support	I09: Fund Special Programs	0.87	0.712	0.908	0.638 – 0.752	0.904
	I10: Law and Regulation Flexibility	0.88				
	I11: Entrepreneurial Development Program	0.76				
	I12: Tax Reduction	0.86				
FP: Firm Performance	I13: Learning and Development Perspective	0.83	0.522	0.803	0.354 – 0.774	0.795
	I14: Internal Process Perspective	0.93				
	I15: Customer Perspective	0.56				
	I16: Financial Perspective	0.47				
CA: Credit Accessibility	I17: Soft Loans	0.76	0.427	0.741	0.282 – 0.566	0.731
	I18: Credit Line	0.43				
	I19: Joint Venture	0.73				
	I20: Crowd funding	0.63				

Table No. 4 The results of the first-order confirmatory factor analysis

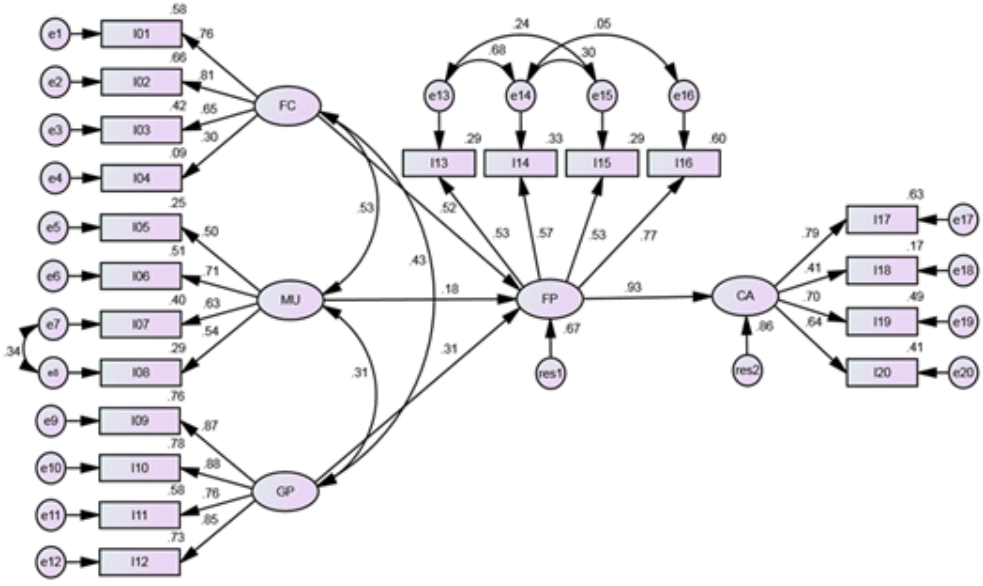
Measurement Model	x^2	p-values	df	x^2/df	GFI	CFI	IFI	SRMR	RMSEA
Firm Competitiveness	3.110	0.211	2	1.555	0.996	0.996	0.996	0.024	0.043
Managing Uncertainty	4.001	0.135	2	2.000	0.994	0.992	0.992	0.023	0.058
Government Support	3.650	0.161	2	1.825	0.994	0.998	0.998	0.010	0.053

Measurement Model	x^2	p-values	df	x^2/df	GFI	CFI	IFI	SRMR	RMSEA
Firm Performance	11.958	0.003	2	5.979	0.980	0.977	0.978	0.044	0.129
Credit Accessibility	2.201	0.333	2	1.100	0.996	0.999	0.999	0.016	0.018

Structural Model

As suggested by several authors (Blunch, 2008, pp. 111-118; Byrne, 2016, p. 90; Schumacker and Lomax, 2016, p. 112), this study employed the ratio of x^2 to its degree of freedom (df), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Standardized Root Mean Squared Error (SRMR), and Root Mean Squared Error of Approximation (RMSEA) to evaluate the adequate fit of the constructed model. The results of the SEM analysis summarize as follows. The initial model fit indices were x^2 = 434.071, df = 163, x^2/df = 2.66, P-value = 0.000, GFI = 0.864, CFI = 0.895, IFI = 0.896, SRMR = 0.075, RMSEA = 0.075. These indicate the need for the re-specification of the original model to fit the sample data better.

Firstly, the standardized residual covariances assessment was found between -2.332 to 5.082, and regression weights were in the range between 0.31 to 0.89. Furthermore, modification indices (MI) showed that measurement item 13 and 14 (MI = 66.526), 14 and 16 (MI = 12.039), 14 and 15 (MI = 7.965), 13 and 15 (MI = 6.415), and 7 and 8 (MI = 5.458) had large error covariance. All items were retained in the construct for the above reasons, but two arrows linked items with large error variances to improve the overall goodness-of-fit indices. The modified structural equation modeling analysis model fit indices were x^2 = 279.304, df = 158, x^2/df = 1.768, P-value = 0.000, GFI =0.914, CFI = 0.954, IFI = 0.953, SRMR = 0.055, RMSEA = 0.051. The standardized residual covariances were decreased to the range between -2.474 to 3.464. Overall, the constructed model consisting of five factors with 20 items similarly appeared to fit the data well (see Picture No. 2).



Picture No. 2 The results of the structural equation model

The results of the structural model for SME in the Border Zone, Nong Khai Province, Thailand, are shown in Table No. 5.

Table No. 5 Results of hypotheses testing

Hypotheses	Standardized regression coefficients	p-values	Results
H1: FC → FP	0.52	0.000*	Supported
H2: MU → FP	0.18	0.016*	Supported
H3: GP → FP	0.31	0.000*	Supported
H4: FP → CA	0.93	0.000*	Supported

Notes: *Implies significant at $p < 0.05$

According to the significant of path coefficients, the results revealed that credit accessibility was influenced positively and significantly by the firm performance regarding H4 (0.93, p-values < 0.05). These results indicate that successful credit accessibility depends on how well SME performs in learning and development, internal process, customer focus, and financial status. In terms of hypotheses H1, H2 and H3, they are concerned with factors influencing firm performance. The results showed positive effect of firm competitiveness, managing uncertainty and government support on firm performance, their respective effects were 0.52 (p-values < 0.05), 0.18 (p-values < 0.05), and 0.31 (p-values < 0.05). These results indicate that those factors lead to the enhancement of firm performance, particularly SMEs. Subsequently, as displayed in Table No. 4, all hypotheses proposed are confirmed.

Discussion, Recommendations, and Contributions

This research aimed to investigate whether the proposed concept of the firm performance model affects credit accessibility for border zone SMEs of Nong Khai Province, Thailand. SMEs were divided into three business categories (wholesaling and retailing business, service businesses and manufacturing businesses). The results have provided two important insights into the financing of firms in Thailand.

Firstly, the empirical results show that the proposed construct of firm performance was influenced by three distinct components (firm competitiveness, managing uncertainty and government support). Unsurprisingly, the finding reveals that government support has significant effect on SME performance. As indicated earlier in Table No. 1, numerous studies show that government assistance is essential in the SME sector. The government is paying increased attention to the performance of SMEs in developing countries (Shamsuddoha, et al., 2009b, p. 418). Specifically, government financial assistance aids SME performance enhancement (Xiang and Worthington, 2017, pp. 455-457). This research also demonstrates that the ability to manage uncertainty and enhance creativity and innovation, product and service differentiation, cost effectiveness, and customer relationship management can help increase

the overall competitiveness of SMEs. Similarly, Appiah, et al. (2019, p. 316) asserted that SMEs' competitiveness, particularly in overseas markets, has become a critical concern. According to their findings, reducing costs, strengthening alliances with abroad partners, and enhancing access and capacity to better serve international consumers will increase SMEs' overall competitiveness.

Secondly, to make a unique contribution by focusing on the border economic zones in Thailand, the results demonstrate that there is a significant positive relationship between firm performance and credit accessibility. These findings support previous SME and financial literature that similarly report the relationship between access to finance and SME growth in developing nations where SME has played an essential role in creating employment that stimulates the economy and society better (Okello , et al., 2017, p. 531; Meyer and Meyer, 2017, p. 138). However, the novel contribution of the study is in its theoretical implications.

Theoretical implications

From the theoretical viewpoint, this study contributes to the growing body of SME literature in two ways. Firstly, to the best of our knowledge, no previous study has reported combining the three distinct components on firm performance. However, many studies report the influence of a firm performance model in different dimensions. This study highlights two influences in terms of entrepreneurial ability and government assistance when measuring firm performance. Zulu-Chisanga, et al. (2020, p. 187) found that firm performance in developing countries varied from a high positive relationship to lower positive relationships, and even no significant relationship between government supports on SME financial performance. However, many researchers argue that continuous government financial assistance helps SME improve current and future performance Xiang and Worthington (2015b, p. 528). For example, government export assistance programs play an important role in SME internationalization in developing nations for better success in their international operations (Appiah, et al., 2019, p. 310; Shamsuddoha, et al., 2009a, p. 417). Furthermore, theoretical discussion attribute contributions of strategic entrepreneurship additionally bolster firm performance. The common key findings show that strategic entrepreneurship's exploration and exploitation concept is one of the possible roots for creating a successful SME firm in an emerging economy country (Shirokova, et al., 2013, p. 189). For example, product diversification can enhance SME performance in emerging market contexts. Similar to Wahyuni and Sara (2020, p. 55), marketing strategy and innovation lead SMEs to gain competitive advantage and firm performance. While the study of Jin and Jung (2016, p. 824) found that personal networks, business networks and market knowledge affected the international performance of SMEs.

Second, this research provides evidence that the success of credit accessibility depends on how SMEs operate their business. The literature widely discusses the significance of the relationships. For example, several authors identified SME performance strongly

aligns with a firm's capability to access finance (Ali, Gongbing and Mehreen, 2018, p. 159; Hussain, et al., 2018, p. 998; Lu, et al., 2021, p. 796). As a point of difference, this study's novel contribution is its empirical showing that SME performance is significantly related to the "balanced-scorecard" concept that links firm performance measures in the area of customer, internal, innovation and learning, and financial perspective. Subsequently, specific dimensions of credit accessibility, i.e., soft loans, credit line, joint venture, and crowd funding, as identified through this study, offer further SMEs opportunities. Such innovative financial solutions provided by financial institutions provide alternative finance access that helps lower capital cost (Ali, Gongbing and Mehreen, 2018, p. 162).

Managerial implications

The results of this study offer several managerial implications for SME management, especially for those in border zones. First, in examining what factors influencing firm performance, the study shows that firm competitiveness, managing uncertainty and policies, and support mechanisms from the government are the three most significant direct drivers to form excellent SME performance. Thus, there is a need for SME entrepreneurs to critically focus on establishing a competitive advantage by collaboration and managerial ties to improve performance, rather than only acting as independent identities. Additional interpretation suggests that firm performance would significantly increase in terms of learning and development, internal process, customer, and financial perspectives.

Second, in accord with pressures from increasing global competition to improve SME competitiveness, the study provides new evidence on how to create the first driver. Entrepreneurs must balance a concentration of improvement through creativity and innovation, product and service differentiation, cost-effectiveness, and customer relationship management. These four dimensions have a positive influence on firm competitiveness and can lead to competitive advantage.

Third, with the efficient management of uncertainty as a further driver to lift firm performance, entrepreneurs must cope with the impact external factors in terms of economic change, cultural diversity, technology disruption and political turbidity. Such dimensions can have a direct effect on superior performance but also indirect effects. SMEs should be vigilant and aware of their operating environment and prepare emergency plans to treat different circumstances helping to manage any possible risks and continue performing daily business operations.

Fourth, both practical and policy implications for improving SME performance are shown to develop as a third driver. Government policy can extend to funding special loan programs, law and regulation flexibility, entrepreneurial development programs, and tax reduction. In the past five years, household's consumption was stimulated, affecting the growth of e-commerce and the growth of the tourism industry. Subsequently, this study proposes that government support to SME entrepreneurs will assist them in accessing funding, mainly through reducing loan applica-

tion conditions, facilitating SME independence and sustainability under various "crisis" circumstances.

Finally, firm performance was found to be significantly related to the ability of credit accessibility. Hence, SMEs should develop collaborative strategies constituted on the three drivers to stimulate superior firm performance. Enhancing SME performance builds achievement of financial acquisition, an outcome derived through soft loans, credit lines, joint venture or crowd funding mechanisms. Importantly, there is a need for SMEs to build a credible image of their business before entering the process of funding acquisition.

In summary, the study contributes to the existing body of knowledge in two ways. First, it adds to the performance literature by providing novel insights to performance theory highlighting SME performance is determined through three specific drivers: "firm competitiveness", "ability to manage uncertainty", and "government support policy". Second, it demonstrates the relationship between SME performance and credit accessibility offering critical insight into the efficacy of entrepreneurs in the border zones of Thailand.

Limitations and Future Research

This study was conducted with SMEs in Nong Khai Province, a vital border zone in Thailand. Such geographic constraint limits generalizability to other areas and across SMEs in developed economies. In addition, while relevant to SMEs, the findings may differ for large businesses. Therefore, future research opportunity extends to replicating the method among larger enterprises and then comparative analysis with SME. Second, the conceptual framework developed in this research can also be tested in various geographies and, by extension, by exploring internal and external environmental factors, beyond the three drivers of SME performance. Finally, there is a need to test the causal relationships between firm competitiveness and credit accessibility, government support, and credit accessibility. Such analysis would strengthen understanding of the influence and reliability of this model.

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