

# EXPLORATION OF FINANCIAL LITERACY STRATEGIES AND ADOPTION OF FINANCIAL TECHNOLOGY TO SUPPORT SMALL AND MEDIUM ENTERPRISES GROWTH IN BORDER AREAS : A CASE STUDY IN BENGKAYANG

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## ARTICLE INFO

## ABSTRACT

### Keywords:

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This case study examines how financial technology adoption and financial literacy initiatives support the expansion of small and medium-sized enterprises (SMEs) in border regions, with a particular emphasis on Bengkayang. Businesses face special opportunities and problems due to the border location, which calls for a customized strategy to technology integration and financial management. The research examines internal strengths and weaknesses as well as external opportunities and threats pertinent to the SME's goals using Internal Factors Analysis Strategy (IFAS) and External Factors Analysis Summary (EFAS) matrix. The IFAS analysis highlights significant advantages in the form of rising government backing and interest, offset by obstacles in the form of resistance and difficulty gaining access to technology. Opportunities like growing demand and partnerships are identified by the EFAS research, along with concerns like political instability and competition. Combining these results, the report suggests proactive risk mitigation, diversified financial services, enhanced collaborations, integrated technology access initiatives, and personalized financial literacy programs. In the particular setting of Bengkayang, a methodical approach to impact evaluation and ongoing monitoring and modification is suggested to guarantee the efficacy of initiatives in fostering SME growth.

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## 1. INTRODUCTION

The border area has unique characteristics that affect the local economy's growth. The concept of border areas is complex and multifaceted, with a range of issues and dynamics at play [1]. In this context, small and medium enterprises (SMEs) uphold the fundamental principle of establishing work schedules, upholding religious observance, and promoting economic growth. Despite their great potential, SMEs in developing countries frequently face various challenges, particularly related to financial technology and money management. The border area consistently has less access to formal education [2]. The SMEs may not have easy access to financial information and training that could help them increase their financial management skills. A few traditional financial practices might not align with the principles of contemporary financial literacy and financial technology usage. Unfavorable geographic conditions, particularly in areas with limited rainfall, might make it difficult for farmers to access education and financial technology. This can be a barrier to the adoption of financial innovation.

### **Deterioration of Financial Literacy and Financial Technology Adoption:**

Small and medium-sized business owners may not always understand how a better understanding of financial matters can increase their stability and business growth in volatile areas. A high level of literacy in finance can be a significant asset for individuals in creating sound financial decisions. Uneven access to financial education can be a barrier to raising financial literacy. Small and medium-sized

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business owners may have limited access to financial literacy programs that might help them understand effective financial practices. The literacy rate of SMEs in the border areas is negatively impacted by financial literacy because it creates a lack of knowledge and experience that is necessary to manage business finances effectively. As an example, the adoption of financial technology such as digital payment systems, financial applications, and electronic banking services is also crucial to improving operational efficiency and day-to-day management of SMEs. However, the minimal understanding and adoption of financial technology by SMEs in the affected region has become a focus of attention. The adoption of financial technology may be hampered by negative attitudes toward technology and money management. In developing countries, this kind of discourse may be more intense due to the lack of confidence in the current financial system and the lack of understanding of financial technology management. Poor infrastructure in underdeveloped areas can hinder the ability of SMEs to use financial technology. Infrastructure deterioration can be a major hindrance to the advancement of financial technology. Regulations that are not supportive of or somewhat restrictive of financial technology adoption can become a serious problem. In a border area context, it is important to pay attention to local regulations that are in line with local conditions. The influence of cultural factors and local financial biases can affect financial literacy and the adoption of financial technologies. Understanding local preferences and needs is crucial for developing effective financial technology and lending solutions in developing countries.

#### **Financial Literacy Strategy and Significant Financial Technology:**

Financial literacy strategies and significant financial technology can help alleviate economic challenges faced by small and medium-sized enterprises in developing regions. By understanding local market needs and dynamics and implementing appropriate strategies, SME owners may increase their sales, boost economic growth, and support business expansion in disadvantaged areas.

#### **The Objectives of the Research:**

This research seeks to achieve several objectives:

1. The border areas have unique characteristics and economic conditions. The study's findings shed light on how several factors, including geography, culture, and accessibility, affect financial literacy and the adoption of financial technology among SMEs.
2. Research phenomena also contribute to understanding the relationship between financial technology adoption and literacies. How does the level of financial literacy affect the ability of SME owners to adopt financial technology as a tool for managing their business.
3. The rapid economic growth or fluctuations in prices in the affected areas are part of the research phenomenon. How can SMEs authors respond to and adjust to these changes, as well as how financial technology and economic literature can maintain the ability to overcome economic stagnation.
4. The study's findings shed light on how cultural and traditional factors in the affected areas can affect the financial performance and hardship of the UMKM. This includes local values, honesty, and customs that might help them develop their financial literacy. Conditions of financial technology and banking infrastructure in the affected areas are part of the research phenomenon. How may the deterioration of infrastructure contribute to or hinder the advancement of financial technology use and financial literacy.
5. The research findings highlight the potential for SMEs in developing regions and marginal areas that can be exploited through efforts to increase literacy rates and adopt financial technology.

By understanding this research phenomenon, scholars can provide more insightful information about the conditions facing SMEs in affected regions, offer more appropriate solutions, and contribute to the global understanding of financial technology and literacy in unique regional contexts.

#### **Significance of the Study:**

The significance of the study lies in its potential contributions to various aspects, including academic knowledge, policy development, and practical implications. Here are several key points highlighting the significance of the study on the exploration of financial literacy strategies and the adoption of financial technology to support the growth of SMEs in border areas: Contribution to Academic Knowledge, Insights into Unique Challenges, Policy Implications, Enhanced Business Practices, Empowerment of SMEs, Regional Economic Growth, Global Relevance, and Capacity Building of stakeholders, including entrepreneurs, financial institutions, and policymakers, by providing evidence-

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based insights. In summary, the significance of the study lies in its potential to advance knowledge, inform policy decisions, and empower SMEs in border areas, ultimately contributing to regional economic development and providing a blueprint for similar contexts worldwide. This is demonstrated by the emergence of diverse SMEs; the growth in this industry is driven by numerous elements, such as the improving economic climate in Indonesia, particularly in Bengkayang Regency, which has prompted individuals to launch new ventures. The development of SMEs in border areas is also influenced by lifestyle, national or regional customs, and demographics.

Small and medium-sized businesses in Bengkayang Regency began to decline during the COVID-19 pandemic two years ago. This can be seen in the way that various SMEs are collaborating with indigenous products in Bengkayang Regency, which is gradually becoming more active in the market. GOWaB (Gabungan Organisasi Wanita Bengkayang) persistently conducts business with the Micro and Small Enterprises (SMEs) that emphasize the needs of the individual to enable the group's economy to grow. SMEs are the top priority for the general public's economic development, and it is in line with the goals and objectives of the Bengkayang Regency government to advance SMEs. There are various types of active micro-small businesses (UMKM) in Bengkayang, Barat, including food preparation, animal husbandry, and retail. SMEs are being encouraged to utilize KUM (Kredit Usaha Mikro) and KUR (Kredit Usaha Rakyat) to advance their businesses. Dinas Koperasi, UKM, Transmigrasi dan Tenaga Kerja is responsible for promoting and developing cooperatives and UMKM in the region. The local government is also supporting UMKM by visiting and providing assistance to cooperatives and UMKM in the area. Some examples of SMEs in Bengkayang include Keripik Anen, which is becoming an icon of local products, and bidai craft, a traditional woven craft that has the potential to be developed as a leading product of UMKM in Jagoi Babang sub-district.

#### **Literature Review**

The theory of financial literacy involves understanding the conceptual framework and principles that guide the development and application of financial knowledge and skills. While there isn't a single unified theory of financial literacy, several theories and models contribute to our understanding of how individuals acquire and utilize financial knowledge. The adoption of financial technology and increased financial literacy have been found to significantly benefit the long-term viability of small and medium-sized enterprises [3]. This is particularly true when high financial literacy moderates the positive effect of financial resource availability on SME growth. In contrast, financial illiteracy has been shown to negatively impact SME success, with record-keeping and debt-management skills playing a crucial role in business growth [4]. Furthermore, the use of technology-based self-service banking, along with borrowing and budgeting financial literacy, has been found to positively impact the business performance of rural SMEs [5]. These findings collectively suggest that a combination of financial literacy strategies and the adoption of financial technology can significantly support the growth of SMEs, particularly in border areas. The literature review provides an overview of existing research and scholarly works related to a specific topic. In this case, the literature review focuses on financial literacy, financial technology adoption, and the challenges and opportunities faced by SMEs in border areas. Below is a concise literature review:

#### **Financial Literacy Theory**

Financial literacy refers to the ability to understand and use various financial skills, including budgeting, investing, and managing financial risks. The importance of financial literacy in making informed financial decisions [6]. Financially literate individuals are better equipped to manage personal and business finances effectively. Research by [7]–[9] highlights the significance of financial literacy in the context of small and medium-sized enterprises (SMEs). SMEs often face challenges in financial management, and improving financial literacy is crucial for their success. Understanding financial statements, cash flow management, and investment decisions are vital aspects of financial literacy for SMEs [10]. Financial literacy is a crucial aspect of personal finance management, with significant implications for individual welfare and economic decision-making [11]. It is considered an investment in human capital, with potential to enhance financial knowledge and skills [12]. However, there is a significant gap in financial literacy, with certain population subgroups being less financially savvy. This gap has consequences for economic decision-making and can be addressed through effective financial education and policy interventions.

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### **Financial Technology Adoption**

Financial technology, or fintech, encompasses a wide range of technological innovations in the financial sector. Fintech adoption has been studied extensively in various contexts. According to [11] the adoption of fintech can lead to increased financial inclusion and improved access to financial services. However, barriers such as trust, awareness, and regulatory concerns may hinder adoption. The adoption of fintech in SMEs has gained attention due to its potential to enhance operational efficiency and competitiveness. A study by [13] and [14] emphasizes the importance of fintech adoption for SMEs in overcoming traditional banking constraints. SMEs that adopt fintech solutions may experience improved access to capital, streamlined financial processes, and increased innovation. A range of factors influence the adoption of financial technology (FinTech) products. The importance of communication between firms and consumers [15], while [16] identifies customer awareness, subjective norm, and perceived usefulness as key determinants. These studies collectively highlight the need for effective communication, customer awareness, and trust-building in driving FinTech adoption.

### **Financial Behaviour**

Financial behaviour is influenced by various factors, including personal values, attitudes, beliefs, cultural norms, and economic conditions. Financial behaviour is a multidisciplinary subject, and research articles, books, and academic journals from fields such as economics, finance, psychology, and sociology contribute to our understanding of how individuals and groups engage with financial matters [17]–[20]. Financial behaviour in border areas can be influenced by a unique set of circumstances and challenges. The proximity to national borders and the associated geopolitical and economic factors can impact the financial activities and decision-making of individuals and businesses in these regions. Government policies and regulations related to border security, trade, and economic development can have a direct impact on financial behaviour in these regions. Cultural factors play a significant role in shaping financial behaviour. Argue that cultural norms and beliefs can influence financial decision-making. In the context of SMEs in border areas, cultural factors may impact financial practices and the adoption of new technologies. The regulatory environment plays a critical role in shaping the financial landscape. [21] and [22] discuss the importance of regulatory support for financial inclusion and the adoption of fintech. Examining the regulatory context in border areas is essential to understanding how policies can either facilitate or hinder financial literacy and fintech adoption. Since financial literacy can affect a person's financial decisions and actions, financial behaviour and financial literacy are closely related concepts. Understanding financial concepts, such as managing money, investing, and saving, is referred to as financial literacy. This knowledge can help one make better financial decisions and achieve better financial results. Conversely, financial behaviour describes the decisions and actions people take in money, like saving, investing, and spending. Studies have demonstrated that financial literacy and education can significantly influence the financial behaviour of a variety of populations, including young adults and the developing middle class in Asian nations.

### **SMEs in Border Areas**

SMEs operating in border areas encounter specific challenges related to their unique context. Geographical remoteness, cultural diversity, and limited infrastructure can impact financial management and hinder the adoption of financial technologies. Emphasizes the role of embeddedness components, such as social capital and economic interaction [23], in influencing firm outcomes. [24] suggests that resolving the financing difficulty for these SMEs requires increased government support, a reformed finance circulation system, and improved social credit-wealthy environment. discusses the potential consequences of free trade for SMEs, underscoring the importance of product specificities, new technologies, marketing and distribution channels, and changes in organization for their global competitiveness. Understanding these challenges is crucial for developing targeted interventions and support mechanism[25]. Research on regional economic development emphasizes the role of SMEs as drivers of growth [26]. By fostering financial literacy and encouraging fintech adoption among culinary SMEs, there is potential for positive economic impacts in border areas. This aligns with broader discussions on the role of SMEs in regional development [27]. In conclusion, the literature review highlights the interconnectedness of financial literacy, fintech adoption, and the challenges faced by SMEs in border areas.

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Evaluation of both internal and external factors is crucial in planning. The organization's strengths and weaknesses are noted in this analysis. The process of determining an organization's opportunities, threats, weaknesses, and strengths is known as a SWOT analysis. says that every company has both strengths and weaknesses in different facets of its operations. The company's objective is to develop a strategy by combining its internal strengths and weaknesses with external opportunities and threats. outlines the various strategies found in the SWOT matrix, including SO strategy: Make the most of opportunities by leveraging your strengths. Using advantages over disadvantages is the ST strategy. WO strategy: Reduce weaknesses and maximize opportunities. WT strategy: Take a defensive stance to lessen vulnerabilities and ward off threats.

## 2. METHOD

The study found that Small and Medium Enterprises (SMEs) traders in Bengkayang Regency do not have a systematic financial report, have no commitment to save, have negative spending habits, and do not prioritize investment for future needs. The limitations of knowledge, lifestyle, and attitude of not wanting to develop are factors supporting the formation of bad financial behavior patterns and low levels of financial literacy. The study suggests that the role of the government and private parties is crucial in creating synergies to increase public awareness and improve financial behavior and understanding of financial management This research used qualitative data that is gathered from SMEs' owners through descriptions and explanations. Primary data from direct observations and interviews with owners and customers make up most of the data sources, while secondary data from interviews makes up the remainder. Based on the goals of the study, the analysis unit and informants were chosen, with a particular emphasis on customers and business owners who could offer insights into the issues under investigation. Desk research, in-person observation, interviews, and documentation techniques were all used as data collection methods. Descriptive analysis was the method of data analysis that was employed, which involved condensing, presenting, and interpreting data. Testing the validity of the data was done by triangulating sources, methods, and duration. A SWOT analysis is a framework used to evaluate an organization's strengths, weaknesses, opportunities, and threats, and it can be applied to various aspects of business, including financial literacy strategies and the adoption of financial technology to support small and medium enterprises (SMEs) growth in border areas such as Bengkayang. The findings of a SWOT analysis can help identify internal and external factors that may affect the implementation of financial literacy strategies and the adoption of financial technology in Bengkayang. Every variable examined within the parameters of this study has an operational definition provided. This study primarily involved the analysis of qualitative data from Bengkayang Regency's SMEs. Information was gathered from multiple sources via documentation, interviews, and observation. SWOT analysis was employed to create a suitable financial literacy plan. The goal of this research is to comprehend, characterize, and develop an efficient strategy for SMEs.

## 3. RESULT AND DISCUSSION

A SWOT analysis involves assessing the Strengths, Weaknesses, Opportunities, and Threats related to a particular situation, business venture, or in this case, the exploration of financial literacy strategies and the adoption of financial technology to support Small and Medium Enterprises (SMEs) growth in border areas, specifically in Bengkayang.

**Table 1** SWOT Analysis:

Financial Literacy Strategies and Adoption of Financial Technology in Bengkayang	
Strengths	Weaknesses
- Growing interest in financial literacy among SMEs.	- Limited access to technology in some border areas.
- Government support for SME development.	- Low levels of existing financial literacy.
- Availability of local resources for financial education.	- Resistance to technological adoption among some SMEs.
- Strategic geographic location for cross-border trade.	- Lack of awareness about the benefits of financial technology.

Opportunities	Threats
- Increasing demand for financial services in border areas.	- Competition from traditional financial institutions.
- Collaboration with NGOs and financial institutions.	- Political and economic instability in border regions.
- Technological advancements facilitating remote learning.	- Regulatory challenges in implementing financial technology.
- Potential for cross-border financial transactions.	- Cybersecurity threats and data privacy concerns.

This SWOT analysis provides a snapshot of the internal and external factors that may impact the success of financial literacy strategies and the adoption of financial technology in supporting SMEs growth in Bengkayang. It is essential to leverage strengths and opportunities while addressing weaknesses and mitigating potential threats to ensure a comprehensive and effective implementation of the proposed strategies. The SWOT analysis table is a table that presents the findings from an internal and external company analysis, often known as the SWOT analysis (Strength, Weakness, Opportunity, and Threat), and is subsequently developed into a quantitative model of strategy creation. The Internal Factors Analysis Strategy (IFAS) Matrix and External Factors Analysis Summary (EFAS) Matrix are both strategic management tools used to assess and analyze an organization's internal and external factors, respectively. These matrices help in formulating strategies by providing a systematic way to evaluate key elements that impact an organization's performance. It is made up of two strategic factor matrixes: an external strategic factor matrix (EFAS) and an internal strategic factor matrix (IFAS). The IFAS and EFAS Matrixes provide a comprehensive view of an organization's internal and external strategic factors, assisting in the development of effective strategic plans. These matrices are often used as part of the SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis process. The IFAS Matrix focuses on internal factors within an organization. These factors can include strengths and weaknesses related to resources, capabilities, structure, culture, and performance.

**Table 2.** IFAS matrix for the case study on financial literacy strategies and the adoption of financial technology in Bengkayang

Factors	Weight	Rating (1-5)	Weighted Score
<b>Strengths</b>			
- Growing interest in financial literacy among SMEs.	0.15	4	0.6
- Government support for SME development.	0.12	5	0.6
- Availability of local resources for financial education.	0.10	3	0.3
- Strategic geographic location for cross-border trade.	0.08	4	0.32
<i>Sub-total</i>			1.82
<b>Weaknesses</b>			
- Limited access to technology in some border areas.	0.10	2	0.2
- Low levels of existing financial literacy	0.12	2	0.24
- Resistance to technological adoption among some SMEs	0.10	3	0.3
- Lack of awareness about the benefits of financial technology	0.08	2	0.16
<i>Sub-total</i>			0.9
<b>Total</b>	1		2.72

Source of research questionnaire processing

*Internal Factors (IFAS) Analysis:*

- Total Weighted Score (IFAS): The total weighted score is 2.72 (out of 5).
- Interpretation: SMEs has moderate strengths but may have some areas that could be improved.

*In this hypothetical IFAS table:*

1. Growing Interest in Financial Literacy (Weighted Score: 0.6):

Strength: There's a considerable interest in financial literacy.

Discussion: This strength can be leveraged to design effective financial literacy programs for SMEs.

2. Government Support for SMEs (Weighted Score: 0.6):

Strength: Strong government backing for SME development.

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Discussion: Collaboration with government initiatives can help increase SME development and financial literacy even further.

3. Limited Access to Technology (Weighted Score: 0.2):

Weakness: Some border areas face challenges in accessing technology.

Discussion: Addressing technology limitations is critical for successful implementation of financial technology initiatives.

4. Resistance to Technological Adoption (Weighted Score: 0.3):

Weakness: Some SMEs resist adopting financial technology.

Discussion: Strategies to overcome resistance, such as education and incentives, should be considered.

The factors are categorized into strengths and weaknesses. Each factor is assigned a weight, indicating its relative importance. Ratings are given to each factor based on its current impact or strength. Weighted scores are calculated by multiplying the weight by the rating. The total weighted score is the sum of all the weighted scores. The EFAS Matrix, on the other hand, focuses on external factors affecting the organization. These external factors include opportunities and threats arising from the organization's external environment.

**Table 3.** EFAS matrix for the case study on financial literacy strategies and the adoption of financial technology in Bengkayang

Factors	Weight	Rating (1-5)	Weighted Score
<b>Opportunities</b>			
- Increasing demand for financial services in border areas.	0.15	4	0.6
- Collaboration with NGOs and financial institutions.	0.12	5	0.6
- Technological advancements facilitating remote learning.	0.10	4	0.4
- Potential for cross-border financial transactions.	0.08	3	0.24
<i>Sub-total</i>			1.84
<b>Threats</b>			
- Competition from traditional financial institutions	0.12	3	0.36
- Political and economic instability in border regions	0.10	2	0.2
- Regulatory challenges in implementing financial technology	0.08	3	0.24
- Cybersecurity threats and data privacy concerns.	0.10	2	0.2
<i>Sub-total</i>			1
<b>Total</b>	1		2.84

Source of research questionnaire processing

*External Factors (EFAS) Analysis:*

- Total Weighted Score (EFAS): Total weighted score is 2.84 (out of 5).
- Interpretation: Externally, the organization seems well-positioned to leverage opportunities, and the impact of potential threats is moderate.

*In this hypothetical EFAS table:*

1. Increasing Demand for Financial Services (Weighted Score: 0.6):

Opportunity: High demand for financial services in border areas.

Discussion: Capitalizing on this opportunity requires tailored financial products and services for SMEs.

2. Collaboration with NGOs and Financial Institutions (Weighted Score: 0.6):

Opportunity: Potential partnerships with NGOs and financial institutions.

Discussion: Strategic collaborations can enhance the reach and impact of financial literacy programs.

3. Political and Economic Instability (Weighted Score: 0.2):

Threat: Instability in border regions poses a threat.

Discussion: Contingency plans are essential to mitigate the impact of political and economic uncertainties.

4. Cybersecurity Threats (Weighted Score: 0.2):

Threat: Cybersecurity threats and data privacy concerns.

Discussion: Robust security measures are imperative to ensure the safe adoption of financial technology.

The factors are categorized into opportunities and threats. Each factor is assigned a weight, indicating its relative importance. Ratings are given to each factor based on its current impact or strength. Weighted scores are calculated by multiplying the weight by the rating. The total weighted score is the sum of all the weighted scores.

#### 4. CONCLUSION

A strategic landscape characterized by a balance of strengths and weaknesses, as well as a mix of opportunities and threats, is highlighted by the analysis of the External Factors Analysis Summary (EFAS) and Internal Factors Analysis Strategy (IFAS) tables for the case study on financial literacy strategies and the adoption of financial technology in Bengkayang. The organization has difficulties like restricted technological availability and reluctance to adoption, despite its relatively favorable position and noteworthy strengths of increased interest in financial literacy and government funding. It is advised that the organization undertake integrated technology access initiatives, bolster public-private partnerships, personalize financial literacy programs, diversify financial services, bolster cybersecurity measures, and proactively mitigate political and economic risks in order to successfully navigate these complexities. In the particular setting of Bengkayang, measures for assuring the efficacy of growth and promoting sustainable Small and Medium Enterprises (SMEs) will require a constant monitoring and adaption strategy with quantifiable impact evaluation. The SMEs strategic recommendations take a multipronged approach to tackling the difficulties and seizing the opportunities in Bengkayang. Programs for integrated technology access that are specifically designed to meet the needs of border communities should be given priority in order to overcome resistance and improve digital literacy. Establishing robust public-private partnerships can enhance financial literacy programs' reach and resources, promoting cooperation between governmental and private organizations. Effective financial literacy programs must be tailored to the unique cultural and economic circumstances of SMEs in the area. Financial services should be diversified to support international trade and realize the region's full potential. In order to guarantee the security of financial transactions, the company should simultaneously invest in strong cybersecurity measures and have backup plans to lessen the effects of political and economic volatility. Campaigns to raise awareness and promote acceptance of financial technology in the community are essential. Refining and improving tactics will require constant monitoring, adaptation, and a strict framework for effect evaluation. This will ultimately contribute to the long-term success of small and medium-sized businesses in Bengkayang.

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