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Financial Development and Economic Growth: Credit Distribution in Southeast Asian Countries

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Abstract

Purpose: Research on financial development plays a crucial role in guiding and implementing policies for both financial development and economic growth. This study aims to evaluate the impact of financial development on the economic growth of Southeast Asian countries. Research design, data and methodology: The research utilizes data from 11 Southeast Asian countries from 2015 to 2022. Financial development data is proxied by credit distribution in private sector. Results: Based on the analysis using the FGLS model, it indicates that financial development has a positive impact on the economic growth of Southeast Asian countries. In addition, the study also examines the impact of state investment costs and FDI investment on economic growth. The results also show that foreign direct investment flows still play an important role in Southeast Asian countries (FDI has a positive impact on economic growth). State investment costs also impact economic growth, showing that the development of public investment also brings good development to countries. Conclusions: These results suggest that credit policies for financial development in general, and the development of private credit in particular, play a significant role in these countries. Building a system to promote the activities of private sector economies will help stimulate the economic development of Southeast Asian countries.

Keywords : Financial Development, Economic Growth, Credit Distribution, Southeast Asian, FGLS

JEL Classification Code : G15, O10, O23

1. Introduction

The financial market makes a significant contribution to the economy in each country, serving as a source of capital for the population and companies, as well as attracting idle funds from individuals and enterprises. It can be said that as the financial market develops, individuals and companies find it easier to access financial products and services, thereby promoting the development of production, investment, and consumption activities, and playing a crucial role in stimulating economic growth. In this study, credit distribution represents financial development. Economic growth leads to an increase in the income of the population, improving social welfare and the quality of life in the community, such as extending life expectancy, reducing malnutrition and child mortality rates, and supporting education, health, and culture. It can be argued that economic growth is a pursued goal for most countries worldwide, aiming ultimately to enhance the quality of life for a large portion of the population. Therefore,

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governments often consider this goal as a crucial factor in economic development planning.

An effective financial system is often considered a crucial foundation for building sustainable economic development (Demirguc-Kunt, 2006; Hunjra et al., 2022). However, there is still no sustained consensus on the relationship between financial development and economic growth. In the economic theory of finance, one of the main points of contention is the relationship between finance and growth, with the emergence of two main schools of thought. Advocates of the first school of thought believe that financial development is indispensable for economic growth (Goldsmith, 1969; Levine, 1997; McKinnon, 1973; Schumpeter, 1911). They argue that finance influences growth by affecting savings, investment, and technological innovation (Demirguc-Kunt, 2006). In contrast, supporters of the second school of thought, or the New Classical theorists, argue that finance is not the primary source of growth (Lucas, 1988). From this perspective, the relationship between financial development and economic growth has been emphasized in numerous studies (Christopoulos & Tsionas, 2004).

Loayza and Ranciere (2006) separate study found a statistically significant and positive long-term relationship between financial development and economic growth, while the short-term impact was statistically significant but negative. The authors hypothesized that the short-term negative effects could result from the heterogeneity among countries and the high volatility of economic cycles. Despite contrasting arguments regarding the relationship between financial development and growth presented by studies such as Singh (1997), Andersen and Tarp (2003), Ayadi et al. (2015), recently, several studies have converged on the idea that financial development has a positive impact on growth (Abaidoo & Agyapong, 2022; Beck et al., 2008; Durusu-Ciftci et al., 2017).

Some other studies on the relationship between financial development and economic growth suggest that this relationship is not straightforward. For example, research by Arcand et al. (2015) argues that the rapid growth rate of the financial sector can be detrimental to economic growth because the financial sector competes for resources with other areas of the economy (Audi & Hamadeh, 2022). Thus, the authors suggest that financial development should be a steady process, gradually accumulating rather than experiencing rapid growth. Overheated development may lead financial markets to direct capital inefficiently, reduce investment quality, and have a negative impact on economic growth.

As can be seen, financial development can have positive or negative impacts on economic growth, as discussed in some recent studies. However, the impact of financial development on economic growth in the Southeast Asia region has not been thoroughly investigated in recent times. Especially in the context of the ongoing scientific and technological revolution worldwide, the Southeast Asia region is considered a dynamic economic development area, situated at the intersection of major economies. Therefore, this region has many advantages in terms of accessing science and technology, implementing digital transformation, and developing the regional economy. Additionally, there are various opinions and conflicting results in research regarding the relationship between financial development and economic growth. Hence, this study aims to identify the influence of financial development on economic growth in Southeast Asian countries. This can be considered a pioneering study when conducted for Southeast Asian countries. The study will show how financial development affects economic growth in areas with many developing countries. At the same time, the study will compare with previous studies in other countries and regions to show similarities and differences.

2. Literature Review

2.1. Financial Development

Financial development, a cornerstone of economic progress, underwent significant transformations in recent years. The year witnessed a dynamic interplay of technological innovation, policy responses to global challenges, and a growing emphasis on sustainability. Fintech continued to reshape the financial landscape, challenging traditional models, while the rise of decentralized finance (DeFi) and exploration of digital currencies by central banks added new dimensions to the sector. Amid the lingering impacts of the COVID-19 pandemic, governments worldwide implemented measures to stabilize markets and stimulate growth, underscoring the crucial role of financial systems in navigating uncertainties and fostering resilience (Abaidoo & Agyapong, 2022; Anser et al., 2021).

This study focuses on financial development, particularly in the context of private sector credit. Schumpeter (1912) emphasized the crucial role of financial services provided by commercial banks in mobilizing and allocating capital in the economy, while enhancing the profitability rate on capital as a "guiding" factor directing capital flow into profitable industries. Views expressed by Goldsmith (1969), McKinnon (1973) advocate financial liberalization, criticizing strict government control over interest rates that could have negative consequences. Greenwood and Jovanovic (1990) further describe the positive influence of the financial market through investment opportunities and information provision. They demonstrate that individuals or businesses can choose investments with different risks and returns, and a developed financial market can efficiently allocate capital. This study raises the issue of financial development based on private sector credit, including financial sources from institutions such as banks, financial companies, insurance companies, and pension funds. National financial development indices are used to measure this development, with a focus on banks, stock markets, and the insurance industry. These measures aim to assess the contribution of finance to economic growth and risk management in capital allocation.

2.2. Financial Development and Economics Growth

Schumpeter (1934) argued that financial institutions play several roles in economic growth. First is the mobilization of idle or underutilized funds. Deposits in banks, for instance, would remain as liabilities if not mobilized. The second function is the assessment of business projects. During loan approval, banks must carefully analyze the profitability potential of new business ventures. Third, banks monitor the managers within a project. Banks want the new company to be profitable so that the loan can be repaid. Fourth, banks manage the risks associated with investment portfolios, maintaining a diverse lending portfolio. Therefore, depositors entrust their money to banks with the hope of earning interest with lower risk compared to investing on their own. Lastly, but equally important, banks provide deposit and transaction services for businesses. Conversely, Robinson (1952) contended that with economic growth, there is a high demand for financial services such as savings, investment advice, financial leasing, etc. This forces financial intermediaries like commercial banks and investment funds to innovate to capture market share, indirectly promoting the formation and development of new financial markets.

King and Levine (1993) conducted regression analysis on a group of countries, using various measures of financial development as independent variables. The first measure was the ratio of liquid liabilities to GDP. The next set of measures related to the percentage of credit issued by central banks and private banks. The idea here is that private banks, through their deposit operations, gather information about the business environment better than central banks. The last set of measures used the ratio of credit to private nonfinancial companies and the ratio of credit to private nonfinancial companies divided by GDP. Their findings indicated that a high level of financial development is correlated with faster growth, capital accumulation, and improved economic efficiency. They also discovered that the level of financial development is a predictor of future capital accumulation rates and efficiency improvements.

Since King and Levine (1993), several papers have been published commenting on the relationship between finance and growth. Rajan and Zingales (1998) found that industries that rely more on external finance will grow faster in countries with more developed financial markets. Beck et al. (2008) observed that financial development has a significant positive impact on total factor productivity growth. They also discovered that the long-term relationship between intermediary financial development and capital accumulation and savings growth is not strong. Beck et al. (2008) noted that financial development promotes industries focused on small businesses rather than those concentrating on large enterprises. In particular, they found that low financial development is disadvantageous for companies with 20 employees or fewer.

Goldsmith (1969) and Shaw (1973) are advocates of financial liberalization. They argue that if the government rigidly controls interest rates, it will be detrimental to the economy because, in the long run, it will depress the return on formal financial system assets, leading to an increase in the accumulation of non-financial assets such as gold or real estate and encouraging the formation of underground financial markets. Greenwood and Jovanovic (1990) explain positive effects through financial investment the opportunities and the level of information provided in the financial market as follows: Every individual/business in the economy can choose to invest in low-risk, low-return business projects or high-risk, high-return projects. A developed financial market must effectively perform the capital allocation function, as Schumpeter (1912) presented. This means prioritizing capital allocation to sectors/ industries with the highest labor productivity, helping the market establish a portfolio that can neutralize risks and generate higher profits. Greenwood and Jovanovic (1990) argue that if individuals/businesses invest according to this portfolio, the economic growth rate will increase.

Recent studies have employed theoretical approaches to endogenous growth to elucidate the role of financial sector development in economic growth. King and Levine (1993) found a statistically significant positive relationship between per capita GDP and financial development. This relationship is explained by financial development increasing profits through innovatively providing three services: assessing the efficiency of investment projects through information gathering, mobilizing and collecting savings from households to supply for developmental investments, and sharing and diversifying risks to enhance the improvement of intermediate goods. Hermes and Lensink (2003) demonstrated that the financial sector can determine the extent to which foreign companies can expand their investments in the host country, thereby increasing the spread of technology to domestic enterprises. Thus, this diffusion process becomes more effective when the host country has a more developed financial market, allowing multinational corporation subsidiaries to build investments upon entering the host country. Bittencourt (2012) examines whether financial development indeed stimulates the economy as Schumpeter's theory suggests. The results of the research acknowledge Schumpeter's theory as accurate, indicating that financial development has a positive impact on economic growth. The combination of capital flow liberalization and foreign competition is a key factor driving financial institutions toward higher levels of financial development.

3. Method

3.1. Research Model

The study uses panel data with 11 Southeast Asian countries including: Thailand, Myanmar, Laos, Cambodia, Vietnam, Singapore, Indonesia, Malaysia, Brunei, Philippines and East Timor from 2015 to 2022. The panel data model is used in this study.

Based on the previous research literature, the research model is presented as follows:

$$\begin{split} \textit{Economics growth}_{it} &= \vartheta + \beta_{j}\textit{Financial development}_{it} \\ &+ \beta_{k}\textit{Control variables}_{it} + \varepsilon_{i} + u_{it} \end{split}$$

The variables are described in Table 1.

Variables name	Content	Measure				
Dependent variable						
GDP_C	GDP capital	=GDP/population				
Independent variables						
CREDIT	Financial development	Domestic credit to private sector (%GDP)				
Control variables						
GOV_EX	Government expenditure	=Government expenditure/GDP				
FDI	Foreign direct investment	Foreign direct investment, net inflows (% of GDP)				

Table 1: Description of Variables

In this study, economic growth is measured through the indicator of per capita income (Chee & Nair, 2010). Meanwhile, financial development is assessed using the national financial development index provided by the IMF (CREDIT). Domestic credit to the private sector refers to financial resources provided by financial institutions to the private sector, such as through loans, equity securities other than shares, trade credits, and other accounts receivable. For some countries, these requirements include credit to public

enterprises. Financial institutions encompass monetary authorities and deposit money banks, as well as other financial corporations with available data (including nondepository financial corporations that may transfer funds but incur liabilities such as time and savings deposits). Examples of other financial corporations include finance and leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies.

In addition to financial development, research on financial growth emphasizes the positive role of foreign direct investment (FDI) in promoting economic growth. Hermes and Lensink (2003) argue that FDI increases capital formation in the host country and introduces advanced technologies, thereby stimulating economic growth. Lee and Chang (2009) suggest that FDI has positive outcomes such as managerial skills, modern processes, technology transfer, international networks, and the skills of local employees. De Mello (1997) asserts that there are two main channels through which FDI can influence economic growth. First, through the capital spillover effect, utilizing new technology methods to produce goods and services and improving the efficiency of domestic enterprises. Shahbaz and Rahman (2012) argue that advanced and existing foreign technologies are the most significant benefits of FDI. Second, FDI enhances economic growth through knowledge transfer and acquisition of skills, where FDI develops the quality of local employees and increases their productivity through advanced training programs. Becker (1993) argues that human productivity can be improved through training and education. Additionally, Jones (2002) points out that knowledge accumulation is a driving force for growth. Furthermore, FDI provides domestic businesses with the necessary capital for investment activities, physical capital, and managerial skills (Shahbaz & Rahman, 2012).

However, the impact of foreign direct investment (FDI) on economic growth appears not entirely positive. Foreign companies may realize negative scale effects, adversely affecting the productivity of domestic firms. Omran and Bolbol (2003) argue that FDI enhances the productivity of domestic enterprises only when there is a significant technological gap between domestic and foreign firms. Moreover, FDI can crowd out domestic investment. Therefore, the positive impact of FDI on economic growth depends on the absorptive capacity of the host economy, such as the availability of labor, appropriate infrastructure, and financial development. Adeniyi et al. (2012) have paid more attention to recent literature on FDI growth, particularly regarding the role of an advanced financial system in strengthening the relationship between FDI and economic growth (Alfaro et al., 2004; Hermes & Lensink, 2003; Lee & Chang, 2009).

3.2. Data Collection

The data has been collected from countries in the Southeast Asia region. The data spans from the year 2000 to 2022 and has been sourced from the World Bank database. The collected data will be encoded and subjected to data analysis using the STATA software.

3.3. Data Analysis

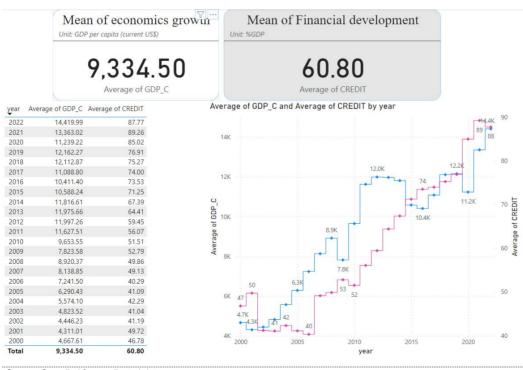
With the analysis of data from various countries during the 2015-2022 period, panel data will be used for analysis. For panel data, three models can be utilized depending on the characteristics of the research scope: (1) Pooled OLS Model is the simplest model, ignoring differences between the studied countries. It is infrequently used; (2) Fixed Effect Model: An extension of Pooled OLS, incorporating differences between countries. It considers the correlation between the model's residual and independent variables (variables or characteristics specific to each country related to the independent variables); (3) Random Effect Model: Similar to the Fixed Effect Model in considering differences between the residual and independent variables of the model.

The choice of the research model will involve using the Hausman test between the Fixed Effect and Random Effect models. If the p-value for the Hausman test is greater than 0.05, the Random Effect model is suitable. Conversely, if the p-value is less than 0.05, the Fixed Effect model is appropriate. Once the suitable model is identified, the author proceeds to assess the model's reliability through tests for heteroscedasticity and autocorrelation. In cases where these phenomena occur, the Feasible Generalized Least Squares (FGLS) model is employed for adjustment. The final selected data analysis result is then the FGLS model.

4. Result

4.1. Descriptive Variables

The data, after being collected from the World Bank, was encoded and subjected to data analysis. Initially, variables underwent descriptive evaluations to provide an overview of the data during the research period. The descriptive results indicate that the average per capita economic growth is 8,334.5 USD per person per year. On average, countries allocate 60.8% of their GDP to financial development expenditures. Simultaneously, the average expenditure ratio for the public sector is 1.91% of GDP. Regarding Foreign Direct Investment (FDI) inflows into countries, the average is 5.28% of GDP per year. Detailed results can be found in Figure 1.



Source: Compiled from collected data

Figure 1: General Description of Evaluation Indices in the Model

Additionally, the study conducted a comparison of research data by individual countries. In this context, the GDP per capita growth of Singapore appears to be the highest (approximately 48 thousand USD per year), while Myanmar has the lowest average growth at around 1 thousand USD per year. Concerning national financial development, Thailand exhibits the highest average at 138% of GDP, whereas Laos has the lowest at approximately 10% of GDP. In terms of government expenditure, Singapore has the highest at 3.6% of GDP, while Laos has the lowest at 0.4% of GDP. The Foreign Direct Investment (FDI) inflow ratio into countries indicates that Indonesia has the lowest FDI inflow at 1% of GDP, while Singapore has the highest at 21% of GDP.

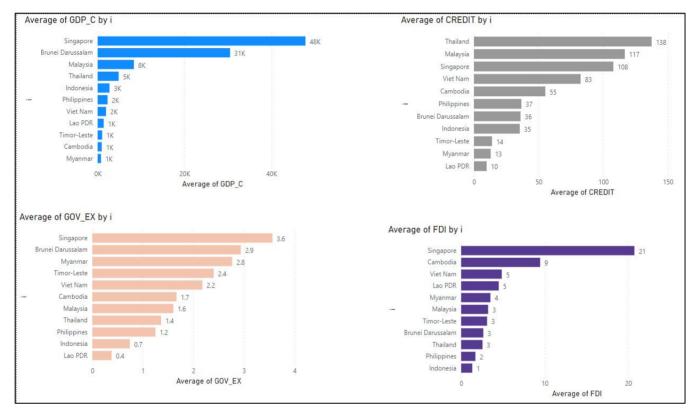


Figure 2: Data Comparison Across Countries

4.2. Correlation

The correlation matrix the relationship between two quantitative variables. In this context, the correlation coefficient indicates the direction (positive or negative) and the magnitude of the correlation between two variables. A positive correlation coefficient indicates a direct relationship, while a negative coefficient indicates an inverse relationship between the two variables. The correlation analysis results show that economic growth is positively correlated with financial development (correlation coefficient = 0.301 with statistical significance at 5%). Economic growth also has a positive correlation with government expenditure (correlation coefficient = 0.477 with statistical significance at 5%). Furthermore, economic growth is correlated with Foreign Direct Investment (FDI) (correlation coefficient = 0.607 with statistical significance at 5%). Among these correlations, economic growth has the strongest correlation with FDI, followed by correlations with GOV_EX (government expenditure) and CREDIT (financial development). However, correlation coefficients do not indicate the direction of causation between variables. To clarify the impact of financial development on economic growth, the study proceeds to regression analysis in the subsequent steps.

Table 2: Correlation matrix

	GDP_C	CREDIT	GOV_EX	FDI
GDP_C	1			
CREDIT	0.301**	1		
GOV_EX	0.477**	0.152**	1	
FDI	0.607**	0.348**	0.471**	1
	0.607**	0.348**	0.471**	1

Source: The result from STATA software

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4.3. Regression

The initial regression analysis results were used with two basic models, Fixed Effects Model (FEM) and Random Effects Model (REM). Subsequently, a Hausman test was conducted to identify the model that is more suitable for the research data. The Hausman test results indicate that the FEM is more appropriate than REM (p-value = 0.000). The further study examines autocorrelation and heteroscedasticity on the FEM. The results reveal the presence of both autocorrelation and heteroscedasticity (pvalues of both tests are less than 0.05). Therefore, the Feasible Generalized Least Squares (FGLS) model is utilized in this study. The results of the models and tests are presented in Table 3.

Table 3:	The Regre	ession Result
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Economico Growth	(1)	(2)	(3)
Economics Growth	FEM	REM	FGLS
CREDIT	37.63**	36.35**	35.98*
	(17.22)	(17.22)	(19.65)
GOV_EX	4,402***	4,150***	3,746***
	(565.5)	(569.5)	(930.0)
FDI	592.0***	638.0***	1,193***
	(126.5)	(126.9)	(169.4)
Constant	13,175***	12,005***	-5,884***
	(1,463)	(3,977)	(2,055)
Observations	197	197	197
R-squared	0.351	0.351	0.351
Number of i	11	11	11
Hausman test		0.0006	
Autocorrelation test		0.0002	
Heteroskedasticity test		0.0000	

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: The result from STATA software

The results of the regression analysis indicate that financial development positively influences the economic growth of Southeast Asian countries (with a positive beta coefficient and statistical significance). Additionally, the study reveals a positive impact of government expenditure on economic growth (positive beta coefficient and statistical significance). Finally, foreign direct investment (FDI) into the countries also has a positive impact on economic growth (positive beta coefficient and statistical significance).

The conclusion of this study is that financial development will promote economic growth. This conclusion aligns with the findings of Ketteni et al. (2007) and Thangavelu et al. (2004) but contradicts the research by Moyo et al. (2018). The effective establishment and operation of the stock market enable individuals and businesses to diversify risks and allocate capital more efficiently, focusing on high-productivity sectors with

significant profit margins, thereby promoting business development. Governments of the countries have gradually accumulated capabilities, management experience, and utilized various tools in their operations. To address the inherent contradiction between economic growth and inflation, countries have employed countercyclical or mixed fiscal policies to neutralize "instabilities" from the financial market. Depending on the development goals of each stage, if the choice is to expand monetary policy, then fiscal policy should be applied cautiously, and vice versa.

Regarding the underground economy's impact on the official economic growth rate, Alm and Embaye (2013) and Duc and Thinh (2014) suggest that the activities of the underground economy and the official economy both have overlapping and opposing effects. Both areas need to use inputs such as resources, energy, and especially labor. Therefore, it is natural that when the scale of one region increases, the scale of the other region tends to decrease. It is noteworthy that for countries with incomplete institutional quality, tax evasion and avoidance are conditions for development. This serves as an incentive for the growth of the underground economy.

The development of finance plays a crucial role in promoting the economic growth of Southeast Asian countries, bringing about many positive impacts on the region's economy. One of the significant influences is the creation of investment capital, stimulating the development of industries and services. Businesses can easily access capital to expand production, upgrade technology, and enhance competitive capabilities. Furthermore, financial development also promotes the financialization process, strengthening risk management and reducing dependence on foreign capital. This makes Southeast Asian countries more flexible in managing financial resources and facing international market fluctuations. Financial development also drives the modernization of banking and financial systems, providing diverse and convenient financial services for both individuals and businesses. Strengthening access to financial services helps improve living standards and creates numerous new business opportunities. Another noteworthy point is the development of the stock market and derivatives markets. This not only enhances liquidity for the financial market but also creates investment and trading opportunities for investors within and outside the region.

The results demonstrate the positive impact of public investment on economic growth, highlighting the crucial role of public investment activities in Southeast Asian countries. The positive effects of public investment are evident in various aspects. Firstly, the focus on construction and improvement of transportation infrastructure helps connect regions and enhance transportation efficiency, promoting international economic growth. Secondly, public investment targets the development of key industries,

thereby fostering technological innovation and improving production capacity, creating high-quality products and services, and enhancing competitiveness in the international market. The generation of new employment opportunities and income improvement is another significant impact of public investment. Infrastructure projects and related industries not only help reduce unemployment rates but also stimulate consumption and economic growth. Furthermore, public investment provides a more favorable environment for foreign investment, thereby supplying crucial capital and technology to the Southeast Asian economy. Lastly, the development of rural areas is an important aspect of public investment, offering opportunities for improving living conditions and enhancing the quality of life for the farming communities. In conclusion, public investment not only plays a crucial role in promoting economic growth but also contributes to sustainable development and improved quality of life in the Southeast Asian region.

The regression results indicate that the Foreign Direct Investment (FDI) variable has a positive and statistically significant impact on economic growth at the 5% significance level. This finding aligns with the research outcomes of De Mello (1999), Alfaro et al. (2004), and Chee and Nair (2010). Therefore, FDI has indeed contributed positively to economic growth, suggesting that FDI inflows have facilitated the economic growth of the countries in the study sample. Foreign Direct Investment is playing an increasingly crucial role in stimulating economic growth in Southeast Asian countries. FDI not only brings in substantial investment capital but also has positive and multidimensional effects on the regional economy. One of the most significant impacts of FDI is its contribution to investment capital for economic development projects. Foreign enterprises choose Southeast Asia as an investment destination due to its stable environment, low labor costs, and significant market potential. This enhances the production and competitiveness of local businesses while creating new employment opportunities and improving skills for the workforce. FDI also plays a vital role in technology and management transfer. Foreign companies often bring international standards, modern production processes, and advanced techniques, thereby enhancing the quality of products and services. Another advantage of FDI is its connection to the international market. Foreign enterprises typically establish global supply chains, linking production and consumption across borders, thereby boosting exports and expanding markets. Furthermore, FDI promotes infrastructure development. To attract and retain FDI, many Southeast Asian countries have invested in infrastructure such as seaports, airports, and roads, creating a favorable business environment.

5. Conclusion

The research has successfully achieved its research objectives and addressed the research questions posed. At the same time, in this study, credit distribution represents financial development. Firstly, the study systematically organized the relevant theoretical foundation regarding financial development and economic growth. Financial development of a nation was measured through domestic credit to the private sector (financial resources provided by financial institutions to the private sector, such as through loans, non-equity securities, trade credits, and other accounts receivable). In some countries, these requirements include credits for state-owned enterprises. Financial institutions include monetary authorities and deposit money banks, as well as other financial institutions with available data (including non-deposit-taking institutions that can transfer funds but must bear debt-like time and savings deposits). Secondly, the research constructed a model and demonstrated that financial development has a positive impact on the economic growth of Southeast Asian countries. Based on these research findings, the study puts forth several recommendations for the development of the financial market as well as economic growth.

6. Implications, Limitations and furture research

Based on the current situation and research results, the research team proposes implications to enhance the effectiveness of financial development with the aim of promoting economic growth in Southeast Asian countries.

The development of credit in the private sector is influenced by a variety of economic, political, social, and technological factors. A stable political and legal environment creates favorable conditions, allowing banks and financial institutions to feel secure in providing credit services. Financial infrastructure, including both banking institutions and financial markets, plays a crucial role in establishing an efficient and secure financial system. Information technology and Fintech are driving innovation, optimizing lending processes, reducing risks, and offering advanced financial products. Financial education and credit awareness play a significant role in reducing the risk of bad debts, creating financially savvy consumers. Policies that support small and medium-sized enterprises (SMEs) also contribute to the development of credit in the private sector. An effective risk management system helps protect financial organizations from hidden risks and enhances trust from borrowers. All these factors converge to create a positive financial environment, promoting the development of credit in the private sector, making the financial system more flexible, and supporting global economic growth.

The development of financial markets and financial intermediaries should follow a proactive and phased approach, aiming to create equal financial access opportunities for vulnerable groups, small businesses, and economically challenged regions. To foster financial development, it is crucial to curb monopolistic practices and financial crimes within the financial and banking sectors. Therefore, the government needs to establish rules and standards that align with international norms and standards. Simultaneously, there should be robust monitoring mechanisms and sanctions to address fraud and group interests within the financial and banking domain.

Improving both formal and informal institutional frameworks is essential, with a particular focus on enhancing the regulatory environment and creating favorable business conditions for entrepreneurial activities. This helps reduce underground economic activities. Additionally, the government should work towards limiting the concentration of economic power, promoting fair competition, and facilitating financial inclusion for marginalized groups, small enterprises, and regions facing socio-economic challenges.

Although the research has achieved its research goals and addressed the research questions, certain limitations persist in this study. Firstly, the study was conducted only in Southeast Asian countries, leading to constraints in the spatial scope due to the limited number of countries (11 countries), resulting in sample size limitations. Moreover, within the Southeast Asian region, countries are categorized as developed and developing, making it challenging to analyze them based on developmental groups due to the small sample size. Secondly, the study stopped at addressing the issues of autocorrelation and heteroscedasticity through FGLS (Feasible Generalized Least Squares) without addressing the potential endogeneity that might occur in the research model.

From these limitations, the research suggests several recommendations for future studies with a similar theme of financial development and economic growth. First, future studies could expand their dataset to cover a broader geographical area (e.g., Asian countries) and analyze countries within the categories of developed and developing nations to provide a more detailed assessment. Second, subsequent studies may focus on addressing the potential endogeneity issues that might occur in the research model. Drawing on modern models, investigating endogeneity could enhance the reliability of research outcomes.

Reference

Abaidoo, R., & Agyapong, E. K. (2022). Financial development and institutional quality among emerging economies. *Journal* of Economics and Development, 24(3), 198-216.

- Adeniyi, O. A., Omisakin, D. O. A., Egwaikhide, F., & Oyinlola, A. (2012). Foreign direct investment, economic growth and financial sector development in small open developing economies. *Economic Analysis & Policy*, 42(1), 105-127
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of international economics*, 64(1), 89-112.
- Alm, J., & Embaye, A. (2013). Using dynamic panel methods to estimate shadow economies around the world, 1984–2006. *Public Finance Review*, 41(5), 510-543.
- Andersen, T. B., & Tarp, F. (2003). Financial liberalization, financial development and economic growth in LDCs. *Journal* of International Development: The Journal of the Development Studies Association, 15(2), 189-209.
- Anser, M. K., Khan, M. A., Zaman, K., Nassani, A. A., Askar, S. E., Abro, M. M. Q., & Kabbani, A. (2021). Financial development during COVID-19 pandemic: the role of coronavirus testing and functional labs. *Financial Innovation*, 7(1), 1-13.
- Audi, M., Ali, A., & Hamadeh, H. F. (2022). Nexus Among Innovations, Financial Development and Economic Growth in Developing Countries. *Journal of Applied Economic Sciences*, 17(4), 1-33.
- Arcand, J. L., Berkes, E., & Panizza, U. (2015). Too much finance?. Journal of Economic Growth, 20(2), 105-148.
- Beck, T., Feyen, E., Ize, A., & Moizeszowicz, F. (2008). Benchmarking financial development. World Bank Policy Research Working Paper, 4638(1), 1-45
- Becker, G. S. (1993). Nobel lecture: The economic way of looking at behavior. *Journal of political economy*, 101(3), 385-409.
- Chee, Y. L., & Nair, M. (2010). The impact of FDI and financial sector development on economic growth: Empirical evidence from Asia and Oceania. *International Journal of Economics* and Finance, 2(2), 107-119.
- Christopoulos, D. K., & Tsionas, E. G. (2004). Financial development and economic growth: evidence from panel unit root and cointegration tests. *Journal of development Economics*, 73(1), 55-74.
- De Mello Jr, L. R. (1997). Foreign direct investment in developing countries and growth: A selective survey. *The journal of development studies*, 34(1), 1-34.
- Demirgüç-Kunt, A. (2006). Finance and economic development: Policy choices for developing countries. World Bank Policy Research Working Paper, 3955(1), 1-54.
- Duc, V. H., & Thinh, L. H. (2015). Underground economy & corruption in Southeast Asian countries. Ho chi minh city open university science journal - economics and business administration, 10(2), 78-90.
- Goldsmith, R. W. (1969). *Financial structure and development*. Yale University Press.
- Greenwood, J., & Jovanovic, B. (1990). Financial development, growth, and the distribution of income. *Journal of political Economy*, 98(1), 1076-1107.
- Hermes, N., & Lensink, R. (2003). Foreign direct investment, financial development and economic growth. *The journal of development studies*, 40(1), 142-163.
- Hunjra, A. I., Azam, M., Bruna, M. G., & Taskin, D. (2022). Role of financial development for sustainable economic development in low middle income countries. *Finance*

Research Letters, 47(1), 102793.

- Jones, C. I. (2002). Sources of US economic growth in a world of ideas. American economic review, 92(1), 220-239.
- Ketteni, E., Mamuneas, T. P., Stengos, T., & Savvides, A. (2007). Is the financial development and economic growth relationship nonlinear?. *Economics Bulletin*. 15(14), 1-12.
- King, R. G., & Levine, R. (1993). Financial intermediation and economic development. *Capital markets and financial intermediation*, 1(1), 156-189.
- Lee, C. C., & Chang, C. P. (2009). FDI, financial development, and economic growth: international evidence. *Journal of applied* economics, 12(2), 249-271.
- Levine, D. P. (1997). Knowing and acting: on uncertainty in economics. *Review of Political Economy*, 9(1), 5-17.
- Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of* monetary Economics, 46(1), 31-77.
- Loayza, N., Ouazad, A., & Ranciere, R. (2018). Financial development, growth, and crisis: is there a trade-off?. *Research Working Paper*, 24474(1), 1-42.
- Lucas, R. E. (1988). On the Mechanics of Economic Development. Journal of Monetary Economics, 22(1), 3-42.
- McKinnon, R. I. (2010). Money and capital in economic development. Brookings Institution Press.
- Moyo, C., & Le Roux, P. (2021). Financial development and economic growth in SADC countries: A panel study. *African Journal of Economic and Management Studies*, 12(1), 71-89.
- Omran, M., & Bolbol, A. (2003). Foreign direct investment,

financial development, and economic growth: evidence from the Arab countries. *Review of Middle East Economics and Finance*, 1(3), 37-55.

- Rajan, R. G., & Zingales, L. (2000). The great reversals: the politics of financial development in the 20th century economics department, Working papers-organisation for economic cooperation and development economics department. 1(1), 1-256.
- Robinson, J., & Gibbons, N. E. (1952). The effect of salts on the growth of Micrococcus halodenitrificans n. sp. *Canadian Journal of Botany*, 30(2), 147-154.
- Schumpeter, J. A. (1912). *The Theory of Economic Development. Cambridge*, MA: Harvard University Press.
- Schumpeter, J. A. (1934). Theory of economic development. Cambridge, MA: Harvard University Press.
- Shahbaz, M., & Rahman, M. M. (2012). The dynamic of financial development, imports, foreign direct investment and economic growth: cointegration and causality analysis in Pakistan. *Global Business Review*, 13(2), 201-219.
- Shaw, E. S. (1973). Financial deepening in economic development. Oxford University Press, New York.
- Singh, A. (1997). Financial liberalisation, stockmarkets and economic development. *The economic journal*, 107(442), 771-782.
- Thangavelu, S. M., Beng Jiunn, A., & James. (2004). Financial development and economic growth in Australia: An empirical analysis. *Empirical Economics*, 29(1), 247-260.