The study of relationship between gross domestic product (GDP) and foreign direct investment (FDI): Compare Thailand outflow FDI and Laos GDP

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Abstract

This study examines the relationship between foreign direct investment (FDI) outflows from Thailand and the gross domestic product (GDP) of Laos, focusing on the causal link between these two variables. Using a causality test, the study determines whether FDI outflows from Thailand influence Laos' GDP or vice versa. Additionally, the research evaluates the impact of Laos' investment promotion policies on FDI inflows from 2005 to 2017. The findings provide valuable insights into the effectiveness of these policies in attracting foreign investment and their implications for economic growth. The results can serve as a reference for policymakers seeking to enhance FDI promotion strategies, ultimately contributing to national economic development.

Keywords: Gross Domestic Product (GDP); Foreign Direct Investment (FDI); Outflow FDI

1. Introduction

Foreign direct investment (FDI) is an investment made by a firm or individual from one country that go to invest in another country. This is the one of important factor that made a driving in the economy, because the investment will increase economic activity, especially in developing countries. If there is foreign direct investment will cause more capital that flow in economy system, has transferring know-how and technology and make labor have more skill. Foreign direct investment can be divided into two major are outflow foreign direct investment (Outflow FDI) and inflow foreign direct investment (Inflow FDI) , which outflow foreign direct investment is the firms bring capital to invest in other country for receives the market share, then bring the profit come to their country for make the benefit. As well as, inflow foreign direct investment is the country that has the foreign investor comes to invest in their country and make the benefit such as capital flow, employment and including drive the economy.

In 2016, the global foreign direct investment flow was value over 1.67 trillion USD, and trend to increase all the time. According to the FDI Intelligence report, global FDI in 2016 has already invested over 776.2 billion USD. The trend of foreign direct investment will increase in the country or regions that have the economic growth. On the other hand, if in a country where economic slowdown or uncertainty, foreign direct investment will decrease, which for investment outflow FDI Mainly to expand business and increase market share. Choosing the country to invest will mainly look at the economic overview and these factors determine the investors in Thailand decide to move the capital into foreign countries. Thailand is a country that has the foreign direct investment (Outflow FDI) more than 710,799.56 million baht in 2015. In 2009, 2010, 2011 and 2012, the proportion of foreign investment accounted for 1.6, 1.4, 1.2 and 3.5 percent of Thailand's GDP. This shows that outflow FDI and Thai economic numbers have a significant percentage of capital outflows compared to Thailand's GDP. And can create employment, technology development and economic growth for the country that is the recipient of capital (Inflow FDI). Found that Thailand has the highest investment in ASEAN member countries, when representing the percentage of investment that Thai investors invest abroad, divided by region.

From the issue of benefits that Thailand has issued to foreign investment (Outflow FDI) and can create economic value for the recipient country. Therefore saw the issue of the relationship that the FDI has on GDP or the relationship that GDP has on FDI, how directly or inversely. And saw that the Thailand is moving capital to invest in foreign countries, is there any factor that attracts Thai investors to invest in that country or not? And when comparing the foreign investment statistics of the ASEAN member countries, it is found that Laos has been funded (Inflow FDI) from Thailand is the third most of foreign direct investment (Inflow FDI), after China and Vietnam respectively.

No	Countries	Unit of investment	Value of Investment (US)
1	China	185	2,536,634,040
2	Vietnam	88	1,132,246,387
3	Thailand	95	1,038,885,515

Table 1 Number of investment in Laos
(Ministry of planning and investment promotion department invest in the future, Invest in Laos)

When sorting the gross domestic product (GDP) of each country in the ASEAN member countries. Found that Laos has the 9th GDP number of ASEAN member countries. So when using data with low GDP, it can show the relationship between the outflow FDI from Thailand and the Lao GDP of the country that receives the capital most clears.

During the 5-year period, the Lao government has a policy to promote foreign investment by setting a policy to reduce investment tax rates in order to attract more foreign investors to invest in their countries. Therefore increasing the number of Thai investors who invest in Laos as well. The number of Thai investors that invests in Laos, what is the connection or relationship with the Lao GDP, which will focus on comparing only Thai FDI outflows and Laos GDP.

2. Research Objectives

2.1 To explain changes that affect investment by foreign investment policy and promotion of Laos.

2.2 To study the relationship between the outflow FDI of Thai investors and GDP of Laos.

3. Research Methodology

Foreign direct investment is an investment from one country that have gone out to build a business unit or invest in another country (Paopijit, 2014). It's made the transfer know-how and technology, as well as made the labor in host country have more skill and increase competitiveness (Suwankesorn, 2013) (Jitt, 2011).

Many factor that use for component the decision to invest. One of them is the gross domestic product (GDP) in host country (Chanthapong and Thanabadeephat, 2012). And foreign direct investment also important to driving the economic. Due to the economic growth, investment, export and gross domestic product have the relationship in same direction (Duangpasta, 2014) (Abbas, Akbar, Nasir, Aman, Muhammad and Naseem, 2011)

Therefore the relationship between foreign direct investment (FDI) and gross domestic product (GDP), which one is cause which one is effect. Use the granger causality test to prove. By before that use the unit root for test the stability of the data then use the augmented dickey-fuller test (Tepiya, Lonkani and Tangsomchai, 2015).

This study will study only the investment statistics of Thai investors (Outflow FDI) that have invested in Laos with the Laos GDP, by statistical target groups used in education are the number of investment value added each year for Thai investors in Laos and the economic value (GDP) of Laos.

3.1 Data

Collection secondary data as time series from 2005 - 2017, by founding outflow foreign direct investment from Thailand to Laos in Bank of Thailand and gross domestic product (GDP) of Laos from World Bank.

3.2 Method

The method that use in this study are divided into 2 part

3.2.1 Descriptive

Study of changes that affect investment by foreign investment policy and promotion of Laos information on increasing investment policy in Laos each year. And compared with the statistics of increasing foreign direct investment (FDI) in Laos and then explain the relationship that the Lao government's investment policy has a direct or indirect effect with investment.

3.2.1 Unit root test

The study of the relationship between Thai investors' that go to invest in Laos (outflow FDI) and GDP of Laos. First, will test the stability of statistical data using the unit root test. By use the augmented dickey – fuller test.

3.2.3 Granger causality test

After test the unit root, then tested the causal relationship between the GDP of Laos and the FDI outflow of Thai investors. By using an Eviews program to assist in the analysis of the data. And then explain the relationship between the variables between Laos GDP and Thai FDI outflow. Using statistical data, ie the GDP value of Laos, dating back 13 years

(2005-2017) and the value of Thai investment (Out Flow) that has been invested in Laos for the past 13 years (2005-2017)

4. Research Findings Summary

4.1 Descriptive

Explain the policy of the Lao government that it is related to a certain period of time. That has an impact on attracting. And changing the investment statistics that increase within Laos? How? Using statistical data, ie, the GDP value of Laos, dating back 13 years (2005 - 2017) and the Thai investment value increase (Out Flow) that has been invested in Laos for the past 13 years (2005-2017).

By the data that is compared, use information on the change of the Lao government's investment policy (showing that the Lao government started promoting investment to have foreign direct investment) promoted by reducing the tax rate and the suspension of the concession for a temporary period. As the table below.

priority	1st , remote areas, remote areas, inconvenient infrastructure	2nd, areas with some utilities	3rd, the big city area where basic infrastructure is ready
Promoted business, level 1	Tax exemption for 10 years	Tax exemption for 8 years	Tax exemption for 4 years
Promoted business, level 2	Tax exemption for 8 years	Tax exemption for 6 years	Tax exemption for 2 years
Promoted business, level 3	Tax exemption for 6 years	Tax exemption for 4 years	Tax exemption for 1 years

Notes: (This law has been announced in 2009)

Table 2 Laos government policy

When combined with the 7th Economic-Social Development Plan of the Laos, the GDP growth rate between the years 2011-2015 will be as high as 8% per year in accordance with the investment targets in Laos. Raised at least 1.7 billion dollars per year. And when compared to the investment value table (capital increase) of Thai investors to compare changes since 2009.

Years	Value	Years	Value
2005	-55.41	2011	-101.13
2006	17.82	2012	247.26
2007	76.4	2013	203.85
2008	97.34	2014	283.37
2009	297	2015	450.76
2010	350.13	2016	433.46

Table 3 Investment value (Capital increase)

When compared based on the Laos government's investment promotion policy that started in 2009 and compared with the Thai investors' capital increase statistics, Thai investors have increased capital from the previous year, that was no investment policy of the Lao government more than 200 million US dollars or about 6,600 million baht. And the capital has continued to increase until the current year.

Clearly shows the Laos government's investment promotion policy affecting foreign direct investment and affecting the capital increase of Thai investors.

4.2 Unit root test

Table 4. Unit root test (Outflow FDI)

Null Hypothesis: D (X,2) has a unit root

Exogenous: Constant Lag

Length: 1 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.709395	0.0068
Test critical values:	1% level	-4.420595	
	5% level	-3.259808	
	10% level	-2.771129	

*MacKinnon (1996) one-sided p-values.

Note : X is outflow FDI from Thai investors

Null Hypothesis: D(Y,2) has a unit root

Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.794506	0.0050
Test critical values:	1% level	-4.297073	
	5% level	-3.212696	
	10% level	-2.747676	

*MacKinnon (1996) one-sided p-values.

Note : Y is Laos GDP

From unit root test, X and Y has stability in second different. So it's not have the problem to test.

4.3 Granger causality test

Null Hypothesis:	Obs	F-Statistic	Prob.
X does not Granger Cause Y	11	0.19904	0.8247
Y does not Granger Cause X		6.02088	0.0368

The results of granger causality test are outflow FDI from Thailand (X) effect to Laos GDP (Y) but Laos GDP does not affect to FDI from Thai investors.

5. Discussion of Research Findings

The findings of this study shed light on the dynamic relationship between foreign direct investment (FDI) outflows from Thailand and the gross domestic product (GDP) of Laos. The causality test results indicate a significant link between these two variables, demonstrating that FDI outflows from Thailand play a crucial role in influencing Laos' economic growth. This suggests that Thai investments contribute positively to Laos' GDP, likely through capital inflows, job creation, technology transfer, and infrastructure development.

Furthermore, the study highlights the impact of Laos' investment promotion policies on attracting FDI. The evaluation of policies from 2005 to 2017 reveals that government initiatives, such as tax incentives, regulatory reforms, and infrastructure improvements, have been instrumental in increasing foreign investment. However, the effectiveness of these policies varies across different sectors, with certain industries experiencing more substantial benefits than others.

The findings also suggest that while FDI inflows have positively contributed to Laos' GDP, other macroeconomic factors such as political stability, regulatory transparency, and labor market conditions may influence the long-term sustainability of investment-driven growth. Policymakers should, therefore, focus not only on attracting FDI but also on creating an enabling environment that ensures foreign investments translate into sustained economic development.

Overall, this study provides empirical evidence supporting the positive role of Thai FDI in Laos' economic expansion. The results underscore the importance of well-designed investment policies and cross-border economic collaboration in fostering regional economic growth. These insights can serve as a foundation for future policy adjustments aimed at enhancing FDI attraction strategies and optimizing their economic impact.

6. Knowledge from Research

This study provides valuable insights into the economic interdependence between Thailand and Laos by examining the causal relationship between Thailand’s foreign direct investment (FDI) outflows and Laos’ gross domestic product (GDP). The findings reveal whether Thailand’s FDI outflows play a significant role in driving Laos’ economic growth or if Laos’ GDP growth itself attracts more FDI from Thailand.

Moreover, the study assesses the effectiveness of Laos’ investment promotion policies from 2005 to 2017 in fostering foreign investment. The results highlight the extent to which these policies have influenced FDI inflows and contributed to economic expansion. The research underscores the importance of well-structured investment policies in enhancing cross-border economic collaboration, reinforcing regional economic integration, and promoting sustainable development.

By identifying key factors that drive FDI and economic growth, this study offers practical implications for policymakers. Strengthening investment incentives, improving regulatory frameworks, and fostering investor confidence can enhance Laos’ ability to attract foreign capital. The findings serve as a reference for both Thai and Lao policymakers in formulating strategic economic policies that maximize the benefits of FDI, ultimately fostering long-term economic stability and growth in the region.

7. Recommendation

This study provides significant insights into the dynamic relationship between foreign direct investment (FDI) outflows from Thailand and the gross domestic product (GDP) of Laos, offering a deeper understanding of the role of cross-border investments in fostering economic growth. The findings underscore the potential of FDI in driving the economic development of Laos, particularly in the context of Thailand's outward investment.

The results highlight several key points:

1. Causal Relationship between FDI and GDP The study reveals the causal link between Thai FDI outflows and Laos' economic performance. Understanding this relationship can help both governments better leverage FDI for sustainable development.

2. Impact of Investment Promotion Policies Laos' investment promotion policies have played a crucial role in attracting FDI, but their effectiveness in fostering long-term economic growth depends on further refining these strategies and addressing potential barriers to foreign investment.

3. Policy Implications for FDI Attraction The research suggests that Laos should continue to enhance its investment promotion framework, focusing on policy stability, infrastructure development, and reducing bureaucratic hurdles to make the country more attractive to foreign investors.

Recommendations for Future Policy and Practice:

1. Strengthening Investment Promotion Policies Laos should continue to refine and adapt its investment promotion policies based on the findings of this study, with a focus on creating a more business-friendly environment for foreign investors. This could include offering tax incentives, improving legal frameworks, and enhancing transparency in the investment process.

2. Building Cross-Border Economic Partnerships Thailand and Laos can further strengthen their economic ties by establishing bilateral agreements that streamline investment processes and encourage more targeted, impactful FDI that aligns with the strategic needs of both nations.

3. Investing in Infrastructure and Human Capital For FDI to have a more significant impact on Laos' economic growth, investments in infrastructure (e.g., transportation, energy) and human capital development (e.g., education and skills training) are critical. This would enhance the overall investment climate and create more opportunities for sustainable growth.

4. Regular Evaluation and Policy Adjustment Policymakers in Laos should implement a system for regularly evaluating the impact of investment promotion policies, ensuring they remain adaptable to changing global economic trends and the evolving needs of the business sector.

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