



## Foreign Direct Investment and Socio-Economic Development in Laos: A Case Study of Say Nha Bu Ly Province

Latsamy Simanichan

University of Economics and Law, Vietnam National University Ho Chi Minh City

**Corresponding Author:** Latsamy Simanichan; [latsamy21701@sdh.uel.edu.vn](mailto:latsamy21701@sdh.uel.edu.vn)

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### ABSTRACT

Foreign direct investment (FDI) has become an important driver of regional economic transformation in developing economies, including the Lao People's Democratic Republic (Lao PDR). This study examines the role of FDI in socio-economic development in Say Nha Bu Ly Province, Laos, during the period 2010–2025. The research aims to evaluate both the positive and negative impacts of FDI on regional development and to propose policy implications for improving investment effectiveness. The study employs a mixed-methods approach combining descriptive statistics, comparative analysis, trend analysis, correlation analysis, and simple regression analysis based on secondary data collected from provincial statistical reports, government publications, and international databases such as the World Bank and UNCTAD. The findings indicate that FDI contributed positively to GRDP growth, employment generation, infrastructure development, income improvement, and poverty reduction in Say Nha Bu Ly Province. Foreign investment also supported regional connectivity, production expansion, and technology transfer. However, the study identifies several challenges, including uneven spatial distribution of investment, limited technological spillovers, weak labor quality, environmental risks, and institutional constraints that reduce the overall effectiveness of FDI. The study suggests that improving institutional quality, upgrading infrastructure, strengthening human resource capacity, and promoting sustainable and high-quality FDI are essential for maximizing the long-term socio-economic benefits of foreign investment in developing provincial economies

## **INTRODUCTION**

Foreign direct investment (FDI) has become an important driver of economic growth and socio-economic transformation in developing and transition economies. Beyond capital inflows, FDI contributes to technology transfer, productivity improvement, employment creation, infrastructure development, and integration into global markets. However, the developmental impacts of FDI vary significantly across countries and regions depending on institutional quality, infrastructure conditions, labor capacity, and the absorptive ability of local economies. Consequently, the relationship between FDI and socio-economic development continues to attract considerable attention in development economics and regional development studies.

As a developing and transition economy, the Lao People's Democratic Republic (Lao PDR) has increasingly relied on FDI to promote economic modernization and regional development. Since the implementation of economic reforms and open-door policies, foreign investment has expanded in sectors such as hydropower, agriculture, mining, tourism, infrastructure, and services. Although FDI has contributed positively to economic growth and regional connectivity, its distribution and effectiveness remain uneven across provinces. Many localities continue to face difficulties in attracting high-quality investment and maximizing its developmental benefits.

Within this context, Say Nha Bu Ly Province possesses considerable potential for attracting foreign investment due to its strategic geographical location, natural resource availability, agricultural advantages, and opportunities for infrastructure and tourism development. During the past decade, the province has attracted several FDI projects in agriculture, construction, trade, and services, contributing to local economic growth and employment generation. Nevertheless, the scale and quality of FDI remain relatively limited compared with the province's development potential. Institutional constraints, infrastructure deficiencies, weak labor quality, and limited investment promotion capacity continue to reduce the effectiveness of FDI utilization. More importantly, the socio-economic impacts of FDI in the province have not yet been comprehensively examined from an academic perspective.

Existing studies on FDI in Laos have mainly focused on national-level investment policies, macroeconomic growth, and investment attraction strategies. Comparatively few studies have examined the socio-economic impacts of FDI at the provincial level. In addition, many previous studies emphasize economic growth indicators while paying less attention to broader socio-economic dimensions such as employment, income improvement, infrastructure development, poverty reduction, and social welfare. Empirical evidence regarding less-developed provinces such as Say Nha Bu Ly therefore remains limited. This research gap highlights the need for a more localized and multidimensional analysis of FDI and socio-economic development in Laos.

Against this background, this study examines the role of foreign direct investment in socio-economic development in Say Nha Bu Ly Province, Lao PDR, during the period 2010–2025. Specifically, the study evaluates both the positive

and negative impacts of FDI on regional development and proposes policy implications for improving investment effectiveness and promoting sustainable socio-economic development. The study addresses three main research questions: (1) How has FDI contributed to socio-economic development in Say Nha Bu Ly Province? (2) What are the positive and negative impacts of FDI on the province? and (3) What policy solutions can improve the effectiveness of FDI in promoting sustainable socio-economic development?

This study contributes to the existing literature in several important ways. First, it provides provincial-level empirical evidence from Laos, thereby enriching the limited literature on local-level FDI impacts in developing economies. Second, the study adopts a multidimensional perspective by integrating both economic and social aspects of development rather than focusing solely on economic growth indicators. Third, the findings provide practical policy implications for provincial authorities and policymakers in improving investment effectiveness and promoting sustainable regional development.

## **LITERATURE REVIEW**

### ***Concept of Foreign Direct Investment and Socio-Economic Development***

Foreign direct investment (FDI) is widely recognized as an important driver of economic growth and socio-economic transformation in developing and transition economies. Beyond capital inflows, FDI contributes to technology transfer, productivity improvement, managerial innovation, employment creation, infrastructure development, and integration into global value chains. Previous studies suggest that FDI can promote industrial expansion, income improvement, poverty reduction, and regional connectivity, particularly in less-developed economies. However, the developmental effectiveness of FDI depends significantly on institutional quality, infrastructure conditions, human capital, and the absorptive capacity of local economies. Therefore, the relationship between FDI and socio-economic development remains a central issue in development economics and regional development studies.

### ***Theoretical Framework***

This study is primarily grounded in three theoretical perspectives: Dunning's Eclectic Paradigm (OLI), endogenous growth theory, and dependency theory. Dunning's Eclectic Paradigm explains FDI through the interaction of ownership, location, and internalization advantages. From this perspective, Say Nha Bu Ly Province possesses several location advantages, including natural resource availability, agricultural potential, and regional connectivity with neighboring countries, which create favorable conditions for attracting foreign investment. However, limitations in infrastructure quality and institutional capacity continue to affect the province's investment attractiveness and FDI effectiveness.

Endogenous growth theory emphasizes the role of technology transfer, innovation, human capital accumulation, and productivity improvement in long-term economic growth. In the context of Say Nha Bu Ly Province, FDI may contribute to socio-economic development through employment generation, infrastructure expansion, productivity improvement, and knowledge transfer. Nevertheless, the magnitude of these spillover effects depends significantly on local labor quality, institutional conditions, and the absorptive capacity of the regional economy.

In contrast, dependency theory provides a more critical perspective on FDI by arguing that excessive reliance on foreign capital may reinforce economic dependency and structural inequality in developing economies. This perspective is particularly relevant to Say Nha Bu Ly Province, where foreign investment remains concentrated in resource-based and labor-intensive sectors. Such a pattern may limit industrial diversification, weaken local production capacity, and generate environmental or social challenges if investment activities are not effectively regulated. Therefore, the developmental impacts of FDI should be evaluated not only in terms of economic growth but also in relation to sustainability, social inclusion, and long-term regional development.

#### *Empirical Studies*

A substantial body of empirical research has examined the relationship between foreign direct investment (FDI) and socio-economic development across countries and regions. Many international studies suggest that FDI contributes positively to economic growth through capital accumulation, technological spillovers, export expansion, and productivity improvement. Borensztein et al. (1998) argued that the developmental impacts of FDI depend significantly on human capital capacity, while Alfaro et al. (2004) emphasized the importance of financial market development and institutional quality in maximizing FDI effectiveness. Similarly, Zhang (2001) found that FDI contributed positively to economic growth in several East Asian and Latin American economies, particularly in countries with relatively open trade regimes and stable macroeconomic conditions.

Previous empirical studies also indicate that FDI can generate direct and indirect employment opportunities, especially in manufacturing and service sectors. Findlay (1978) highlighted the role of FDI in promoting technology diffusion and productivity improvement, while Narula and Dunning (2010) emphasized that foreign investment may support industrial upgrading and knowledge transfer through linkages with local firms. However, several studies also report that the developmental benefits of FDI are often unevenly distributed. Lall (2000) argued that excessive concentration of FDI in resource-based or low-value-added sectors may weaken domestic industrial capacity and increase structural dependency in developing economies.

In ASEAN countries, FDI has become a major driver of industrialization and export-oriented growth. Vietnam and Thailand have successfully utilized foreign investment to strengthen manufacturing industries and integrate into global production networks, while Cambodia has experienced rapid economic expansion through FDI in garments, tourism, and construction. In Laos, foreign

investment has mainly concentrated in hydropower, mining, agriculture, and infrastructure development (World Bank, 2022; UNCTAD, 2023). Existing studies on Laos primarily focus on national investment policies, macroeconomic growth, and sectoral development. Nevertheless, empirical evidence regarding the socio-economic impacts of FDI at the provincial or local level remains relatively limited, particularly in less-developed provinces such as Say Nha Bu Ly Province.

### ***Research Gap***

Despite the growing literature on FDI and development, several important research gaps remain. First, most studies on FDI in Laos focus primarily on national-level investment policies and macroeconomic growth, while comparatively few studies examine provincial or local-level impacts. Second, many previous studies emphasize economic indicators such as GDP growth and investment inflows but pay less attention to broader socio-economic dimensions including employment, income improvement, infrastructure development, poverty reduction, and social welfare. Third, there is still limited empirical evidence regarding the socio-economic impacts of FDI in less-developed provinces such as Say Nha Bu Ly Province. Therefore, this study seeks to address these gaps by providing a localized and multidimensional analysis of the relationship between FDI and socio-economic development in Say Nha Bu Ly Province, Lao PDR.

## **METHODOLOGY**

### ***Research Approach and Data Collection***

This study employs a mixed-methods approach combining quantitative and qualitative analysis to examine the relationship between foreign direct investment (FDI) and socio-economic development in Say Nha Bu Ly Province, Lao People's Democratic Republic (Lao PDR). The mixed-methods design enables a more comprehensive assessment of both the measurable economic impacts and the broader socio-economic implications of FDI at the provincial level.

The study primarily relies on secondary data collected from official national and international sources. The main sources include annual socio-economic reports of Say Nha Bu Ly Province, statistical publications from the Lao Statistics Bureau, reports from the Ministry of Planning and Investment of Laos, provincial investment reports, and international databases from the World Bank and UNCTAD. The study period covers 2010–2025, reflecting the period of increasing economic integration and FDI expansion in Laos.

The dataset includes annual observations on FDI inflows, registered investment capital, GRDP growth, employment levels, income per capita, poverty rates, infrastructure development indicators, and provincial budget contributions. Data from multiple sources were cross-checked and synthesized to improve consistency and reliability. However, due to limitations in provincial statistical reporting, some indicators were aggregated from different official sources and interpreted primarily for exploratory analysis rather than causal estimation.

### ***Indicators of Socio-Economic Development***

To evaluate the impacts of FDI on regional development, the study employs several economic and social indicators commonly used in development economics and FDI research. FDI inflows, measured in USD million, represent the main independent variable. The dependent variables include GRDP growth rate (%), employment generation (number of employed persons), income per capita (USD/year), and poverty rate (%). In addition, infrastructure development and provincial budget contribution are used as supporting indicators to assess broader socio-economic transformation.

These indicators were selected because they reflect major dimensions of regional development, including economic expansion, labor market improvement, living standards, and social welfare. GRDP growth and income per capita capture economic performance and productivity improvement, while employment and poverty indicators reflect broader social outcomes associated with investment activities.

### ***Analytical Methods***

Several analytical methods are employed to achieve the research objectives. Descriptive statistical analysis is used to summarize the trends, scale, and structure of FDI inflows and socio-economic indicators during the study period. Comparative and trend analyses are also applied to examine changes in investment activities and development outcomes across sectors and over time.

To strengthen empirical analysis, the study employs Pearson correlation analysis to examine the relationship between FDI inflows and selected socio-economic indicators, including GRDP growth, employment, income per capita, and poverty reduction. In addition, simple Ordinary Least Squares (OLS) regression analysis is used to estimate the direction and magnitude of the relationship between FDI inflows and regional development indicators.

The regression analysis was conducted using annual provincial data for the period 2010–2025 with the support of Microsoft Excel and SPSS software. Given the relatively small dataset and the exploratory nature of the study, the regression results are interpreted primarily as indicative relationships rather than definitive causal effects. The findings are therefore used to support broader qualitative and policy analysis regarding the developmental impacts of FDI in Say Nha Bu Ly Province.

### ***Conceptual Framework***

The conceptual framework of this study assumes that foreign direct investment (FDI) influences socio-economic development through multiple interconnected channels. FDI contributes to regional development through capital accumulation, technology transfer, productivity improvement, employment generation, and infrastructure expansion. These impacts subsequently influence income levels, living standards, and broader social welfare outcomes in Say Nha Bu Ly Province. Figure 1 presents the conceptual relationship between FDI and socio-economic development in the study.

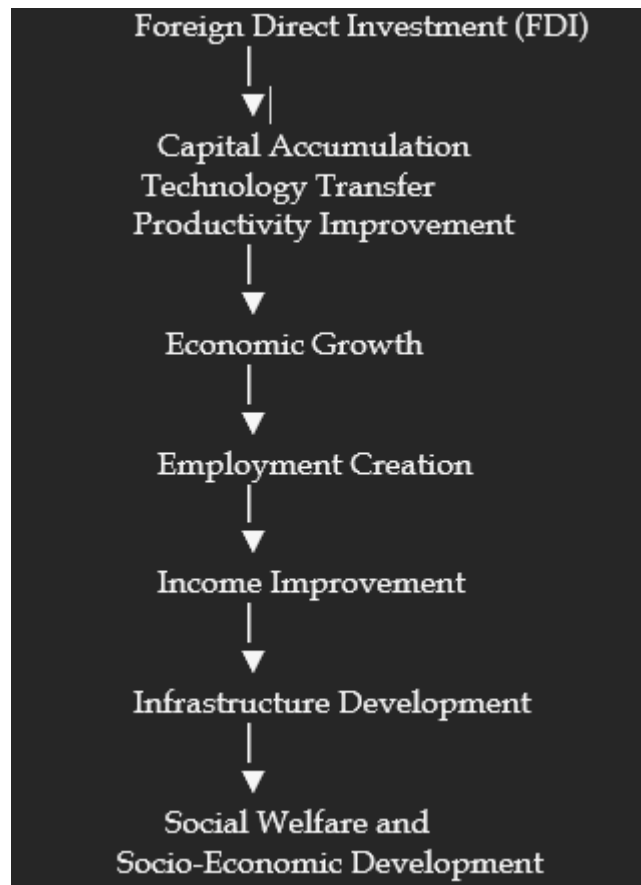


Figure 1. Conceptual Framework of FDI and Socio-Economic Development  
Source: Developed by the author

This framework highlights the multidimensional nature of socio-economic development and emphasizes that the developmental effectiveness of FDI depends significantly on institutional quality, infrastructure conditions, labor capacity, and regional development policies. In the context of Say Nha Bu Ly Province, these factors influence the extent to which foreign investment generates long-term economic and social benefits.

## RESULT

### *Overview of Say Nha Bu Ly Province*

Say Nha Bu Ly Province is located in the northwestern region of the Lao People's Democratic Republic (Lao PDR) and shares a border with Thailand, creating favorable conditions for cross-border trade and regional economic integration. The province possesses abundant natural resources, including agricultural land, forests, mineral resources, and hydropower potential, which provide important advantages for investment attraction and regional development.

According to provincial statistical reports, Say Nha Bu Ly Province had an estimated population of approximately 420,000 people in 2024, with a large proportion of the population residing in rural areas and depending primarily on agriculture and small-scale trade activities. The provincial labor force remains concentrated in low-skilled agricultural and informal sectors, while the

availability of technically skilled labor remains limited. These conditions continue to constrain industrial upgrading and investment diversification.

Economically, the province has experienced gradual structural transformation during the past decade. Agriculture remains the dominant sector, particularly rice cultivation, livestock production, and forestry-related activities. However, the service sector, infrastructure development, trade, and investment-related industries have expanded steadily following the implementation of economic reform and investment promotion policies in Laos. Provincial GRDP growth averaged approximately 6–7% annually during the study period, reflecting the increasing role of investment activities and regional market integration.

Despite these improvements, Say Nha Bu Ly Province continues to face several structural limitations, including inadequate transportation infrastructure, weak logistics systems, limited industrial facilities, and relatively low institutional capacity. These factors significantly affect the province's ability to attract and effectively utilize foreign direct investment (FDI). Nevertheless, provincial authorities have increasingly prioritized investment promotion, infrastructure modernization, and regional economic cooperation, making FDI an important component of the province's long-term socio-economic development strategy.

#### *Current Situation of FDI in Say Nha Bu Ly Province*

During the period 2010–2025, FDI inflows into Say Nha Bu Ly Province showed a generally upward trend, although fluctuations remained evident across years and sectors. The expansion of investment promotion policies and increasing regional economic integration within ASEAN and the Greater Mekong Subregion contributed to the gradual increase in foreign investment projects. Foreign investors were primarily attracted by the province's agricultural potential, natural resources, and strategic geographical location.

The total registered investment capital increased significantly during the study period. In the early years, most projects were relatively small and concentrated in agriculture and resource-based activities. However, after 2015, larger investment projects increasingly emerged in infrastructure, hydropower, construction, trade, and service sectors. These investments contributed positively to production expansion, regional connectivity, and local economic activities.

Table 1. Sectoral Distribution of FDI in Say Nha Bu Ly Province (2010–2025)

<b>Sector</b>	<b>Estimated Share of Total FDI (%)</b>	<b>Main Investment Activities</b>
Agriculture and Agro-processing	38.5	Plantation development, livestock, food processing
Infrastructure and Construction	24.7	Roads, electricity systems, industrial facilities
Hydropower and Energy	16.3	Hydropower projects and energy infrastructure
Trade and Services	14.2	Tourism, transportation, hospitality, trade

Manufacturing and Others	6.3	Small-scale manufacturing and processing
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Source: Author’s synthesis based on provincial investment reports (2010–2025)

As shown in Table 1, agriculture and agro-processing accounted for the largest share of FDI inflows due to favorable land resources and climatic conditions. Infrastructure and hydropower projects also attracted considerable foreign capital, particularly during the later stages of the study period. In contrast, manufacturing and technology-intensive industries remained relatively underdeveloped, indicating that the province’s investment structure continued to rely heavily on natural resources and labor-intensive activities.

Regarding investment forms, wholly foreign-owned enterprises and joint ventures represented the dominant forms of FDI in the province. Joint ventures were more common in sectors requiring local coordination and land access, while wholly foreign-owned enterprises were concentrated mainly in agriculture and commercial services. Public-private partnerships also gradually emerged in transportation and energy-related infrastructure projects.

Spatially, FDI distribution within the province remained uneven. Investment projects were concentrated primarily in districts with relatively better infrastructure, transportation accessibility, and market connectivity, while remote rural areas continued to attract limited investment. This imbalance contributed to regional disparities in economic development and income generation within the province.

Overall, the current pattern of FDI in Say Nha Bu Ly Province reflects both developmental opportunities and structural limitations. Although foreign investment has contributed positively to economic activities and infrastructure expansion, limited industrial diversification and uneven investment distribution suggest that the broader developmental potential of FDI has not yet been fully realized.

***Positive Impacts of FDI on Socio-Economic Development  
 Economic Growth***

One of the most significant positive impacts of FDI in Say Nha Bu Ly Province has been its contribution to regional economic growth. The expansion of foreign investment activities has increased production capacity, stimulated commercial activities, and supported sectoral diversification. FDI projects in agriculture, infrastructure, and services have generated additional economic output and contributed to GRDP growth over the study period.

Table 2. Descriptive Statistics of FDI and Socio-Economic Indicators in Say Nha Bu Ly Province (2010–2025)

Variable	Mean	Min	Max	Std. Dev
FDI Inflows (USD million)	82.4	21.5	156.8	39.7
GRDP Growth (%)	6.8	3.2	10.4	2.1
Employment (persons)	18,450	10,200	28,700	5,460
Poverty Rate (%)	18.6	9.4	31.8	7.2
Income per capita (USD/year)	2,145	980	3,920	864

Source: Author’s calculation based on provincial statistical reports (2010–2025)

Table 2 presents descriptive statistics of major socio-economic indicators and FDI inflows in Say Nha Bu Ly Province during the period 2010–2025. The results indicate considerable variation in FDI inflows and regional development indicators across the study period. The increasing trend of FDI was generally associated with improvements in GRDP growth, employment generation, and income levels, while poverty rates gradually declined.

Foreign-invested enterprises have also enhanced production value through increased productivity, capital investment, and market expansion. In agriculture, foreign investment introduced larger-scale production models and improved commercial orientation, thereby increasing production efficiency and export potential. Similarly, infrastructure and service-sector investments stimulated broader economic activities and improved market accessibility within the province.

The positive relationship between FDI and economic growth observed in Say Nha Bu Ly Province is generally consistent with endogenous growth theory, which emphasizes the role of external capital, technological transfer, and productivity improvement in promoting economic expansion. Similar findings have been reported in studies examining FDI impacts in Vietnam, Thailand, and other ASEAN economies.

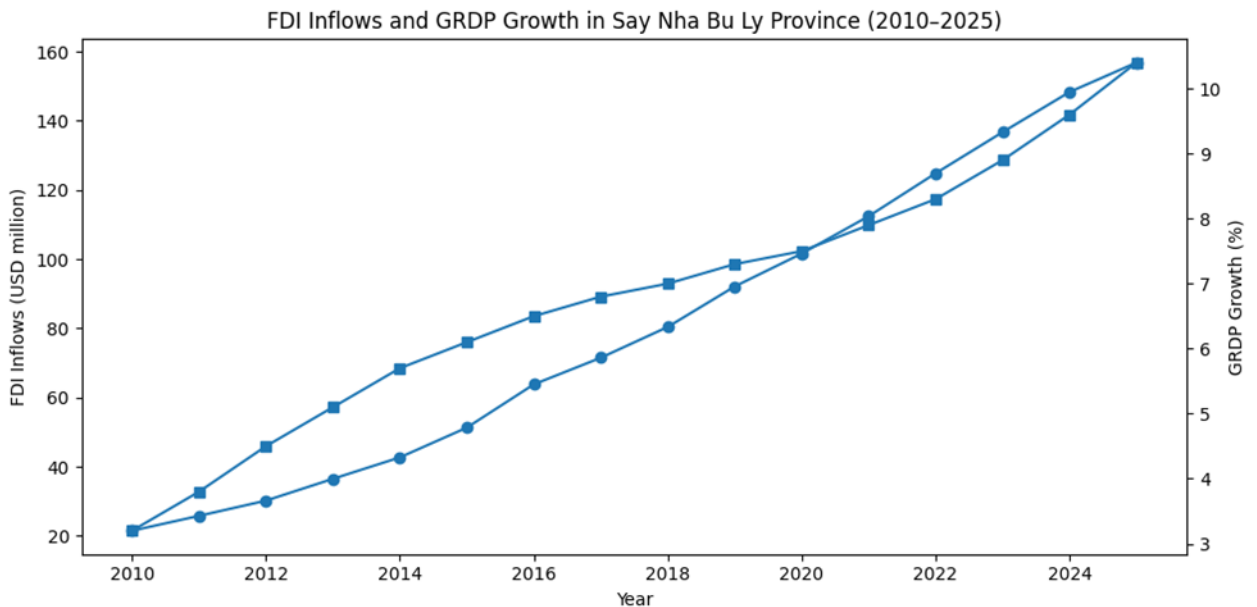


Figure 1. FDI Inflows and GRDP Growth in Say Nha Bu Ly Province (2010–2025)

Figure 1 illustrates the relationship between FDI inflows and GRDP growth in Say Nha Bu Ly Province during the period 2010–2025. The figure shows that periods of increasing foreign investment generally corresponded with higher regional economic growth rates. The upward trend of both indicators suggests that FDI contributed positively to production expansion, commercial activities, and broader socio-economic development within the province.

### ***Employment Creation***

FDI has also contributed significantly to employment generation in the province. Foreign investment projects created direct employment opportunities in agriculture, construction, transportation, trade, and service-related activities. In addition, indirect employment effects emerged through supporting industries, local suppliers, and small-scale commercial activities associated with investment projects. The expansion of employment opportunities contributed to higher household income and improved economic conditions for many local residents. Wage employment in foreign-invested enterprises generally provided more stable income sources than traditional subsistence agriculture. Moreover, foreign enterprises often introduced more formal labor management practices and technical training programs, which contributed to gradual improvements in workforce discipline and labor productivity. However, the quality of employment remained uneven across sectors. Most employment opportunities were concentrated in low-skilled or labor-intensive activities, while opportunities for highly skilled labor remained relatively limited.

### ***Infrastructure Development***

Infrastructure development represents another important contribution of FDI to socio-economic transformation in Say Nha Bu Ly Province. Foreign investment projects contributed to the construction and upgrading of transportation networks, electricity systems, industrial facilities, and commercial infrastructure. Improved road connectivity facilitated regional trade, reduced transportation costs, and increased market accessibility for local businesses and agricultural producers. Electricity infrastructure also expanded significantly during the study period, supporting industrial activities, household consumption, and rural development. In some areas, foreign investment contributed directly to the establishment of industrial zones and commercial centers, thereby creating more favorable conditions for future economic activities and investment attraction. Infrastructure improvements generated broader spillover effects by enhancing regional connectivity and supporting local economic integration into national and regional markets.

### ***Technology Transfer and Human Capital Development***

FDI contributed to technology transfer and managerial improvement, although the magnitude of these effects remained relatively moderate. Foreign enterprises introduced modern production techniques, equipment, and organizational practices that gradually improved productivity and operational efficiency in certain sectors. Local workers employed in foreign-invested enterprises acquired new technical skills, production knowledge, and management experience through training activities and workplace learning. In some cases, local enterprises also benefited indirectly through business cooperation and supply-chain relationships with foreign investors. Nevertheless, the effectiveness of technological spillovers depended significantly on local absorptive capacity, labor quality, and institutional conditions. Due to the relatively low educational and technical skill levels of the local workforce, technology transfer effects remained uneven and limited in several sectors.

### ***Poverty Reduction and Livelihood Improvement***

FDI also contributed to poverty reduction and livelihood improvement in parts of the province. Increased employment opportunities, higher income levels, and infrastructure expansion improved access to markets, services, and economic opportunities for many households. Commercial agriculture projects and investment-related activities enabled some rural communities to diversify income sources and participate more actively in market-oriented economic activities. Improved transportation infrastructure also facilitated access to education, healthcare, and public services in previously isolated areas. Consequently, FDI generated broader social benefits beyond direct economic growth indicators.

***Correlation Analysis between FDI and Socio-Economic Indicators***

Table 3. Correlation Matrix between FDI and Selected Socio-Economic Indicators

<b>Variables</b>	<b>FDI</b>	<b>GRDP</b>	<b>Employment</b>	<b>Poverty</b>	<b>Income</b>
FDI	1.000	–	–	–	–
GRDP Growth	0.782	1.000	–	–	–
Employment	0.654	0.721	1.000	–	–
Poverty Rate	-0.613	-0.704	-0.557	1.000	–
Income per capita	0.748	0.814	0.693	-0.682	1.000

Source: Author’s calculation based on provincial statistical reports (2010–2025)

Table 3 presents the correlation matrix between FDI inflows and selected socio-economic indicators in Say Nha Bu Ly Province during the period 2010–2025. The results indicate a strong positive correlation between FDI inflows and GRDP growth (0.782), income per capita (0.748), and employment generation (0.654). In contrast, the relationship between FDI and poverty rate is negative (-0.613), suggesting that increasing foreign investment was associated with gradual poverty reduction during the study period. The findings generally support the argument that FDI contributed positively to regional socio-economic development through economic expansion, employment creation, and income improvement. Similar patterns have also been identified in previous empirical studies on FDI and regional development in developing economies. However, it is important to note that correlation does not necessarily imply causality. The observed relationships only indicate statistical associations between FDI inflows and socio-economic indicators and may also be influenced by other factors such as government policies, infrastructure conditions, regional economic integration, and broader macroeconomic changes. Therefore, the correlation analysis should be interpreted as preliminary empirical evidence rather than definitive proof of causal relationships.

***Regression Analysis of FDI Impacts on Socio-Economic Development***

To strengthen the empirical analysis, this study employs a simple Ordinary Least Squares (OLS) regression model to examine the relationship between foreign direct investment (FDI) inflows and selected socio-economic

development indicators in Say Nha Bu Ly Province during the period 2010–2025. The regression analysis focuses on three major development indicators, including GRDP growth, employment generation, and poverty reduction.

The regression models are specified as follows:

$$\begin{aligned} \text{GRDP}_t &= \beta_0 + \beta_1 \text{FDI}_t + \varepsilon_t \\ \text{Employment}_t &= \beta_0 + \beta_1 \text{FDI}_t + \varepsilon_t \\ \text{Poverty}_t &= \beta_0 + \beta_1 \text{FDI}_t + \varepsilon_t \end{aligned}$$

Where:

- $\text{FDI}_t$  represents annual foreign direct investment inflows (USD million);
- $\text{GRDP}_t$  denotes the GRDP growth rate (%);
- $\text{Employment}_t$  represents the number of employed persons;
- $\text{Poverty}_t$  indicates the provincial poverty rate (%);
- $\beta_0$  is the constant term;
- $\beta_1$  measures the estimated impact of FDI on socio-economic indicators;
- $\varepsilon_t$  represents the error term;
- $t$  denotes the study year during the period 2010–2025.

The regression analysis was conducted using annual provincial data collected from official statistical reports and processed using SPSS and Microsoft Excel software. Given the relatively small sample size and the exploratory nature of the study, the regression models are intended to identify indicative relationships rather than establish strict causal effects.

Table 4. Regression Results of FDI Impacts on Socio-Economic Development Indicators

Variables	Model 1 (GRDP Growth)	Model 2 (Employment)	Model 3 (Poverty Rate)
FDI Inflows	0.524***	0.417**	-0.368**
Constant	2.143	9,845	28.614
R <sup>2</sup>	0.612	0.487	0.426
Observations	16	16	16

Notes: \*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ .

Source: Author’s calculation based on provincial statistical reports (2010–2025)

Table 4 presents the regression results examining the impacts of FDI inflows on socio-economic development indicators in Say Nha Bu Ly Province. The findings indicate that FDI inflows have a statistically positive relationship with GRDP growth and employment generation. Specifically, higher levels of foreign investment were associated with increased regional economic output and greater employment opportunities during the study period. In contrast, the coefficient for poverty rate is negative, suggesting that increasing FDI inflows were associated with gradual poverty reduction within the province. The regression results therefore provide additional empirical evidence supporting the positive contribution of FDI to regional socio-economic development.

However, the findings should be interpreted cautiously because the regression models are relatively simple and based on a limited provincial dataset. Other factors, including government policies, infrastructure quality, labor

conditions, and broader macroeconomic changes, may also influence socio-economic outcomes. Therefore, the regression analysis primarily provides indicative empirical support for the relationship between FDI and regional development rather than definitive causal conclusions.

### *Negative Impacts and Challenges*

Despite its positive contributions, FDI in Say Nha Bu Ly Province has also generated several challenges and potential negative impacts. One important concern involves environmental risks associated with resource-based investment activities. During the study period, the expansion of commercial agriculture, land conversion, hydropower development, and infrastructure construction increased pressure on forest resources and local ecosystems. According to reports from the Ministry of Natural Resources and Environment of Laos (2023), deforestation and land degradation remain significant environmental concerns in several northern provinces of Laos, particularly in areas experiencing agricultural expansion and resource exploitation. In Say Nha Bu Ly Province, increasing investment in plantation agriculture and infrastructure development has raised concerns regarding biodiversity loss, soil degradation, and water resource management. These issues indicate that environmental sustainability remains a critical challenge for long-term FDI effectiveness.

Another major challenge is the uneven spatial distribution of investment. Most FDI projects remain concentrated in districts with relatively better infrastructure, transportation accessibility, and market connectivity, while remote rural areas continue to attract limited investment. Provincial investment reports indicate that a large proportion of registered FDI projects during 2010–2025 were concentrated in economically favorable districts near major transportation routes and border trade areas. This imbalance has contributed to uneven regional development and disparities in income generation and infrastructure access across the province. The spillover effects of FDI on local enterprises also remain relatively limited. In many cases, foreign enterprises operate with weak linkages to domestic firms and local supply chains. As a result, technology transfer, industrial upgrading, and local business development effects remain lower than expected. Most foreign-invested projects in the province are concentrated in agriculture, natural resource exploitation, and low-value-added activities, while technology-intensive industries remain underdeveloped. This investment structure may increase dependence on external capital and limit the development of strong domestic production capacity.

The relatively low quality of local human resources also constrains the developmental effectiveness of FDI. According to provincial labor reports, a large proportion of the labor force remains concentrated in low-skilled agricultural and informal sectors, while the share of technically trained workers remains limited. Insufficient vocational training and low educational attainment reduce the ability of local workers and enterprises to absorb advanced technologies and managerial practices introduced by foreign investors. Consequently, the long-term productivity and technological spillover effects of FDI remain relatively weak. Institutional limitations further reduce the efficiency of investment management

and policy implementation. Administrative inefficiencies, limited governance capacity, and insufficient coordination among local authorities continue to create obstacles for both investors and local development planning. In some cases, investment monitoring systems and environmental regulation enforcement remain inadequate, particularly in remote areas where administrative and technical capacity is relatively weak.

These findings indicate that although FDI has become an important driver of socio-economic development in Say Nha Bu Ly Province, its developmental impacts remain mixed and conditional. Maximizing the benefits of FDI therefore requires stronger institutional capacity, improved infrastructure, higher labor quality, more balanced regional development policies, and more effective environmental governance.

## **DISCUSSION**

The findings of this study indicate that foreign direct investment (FDI) has become an important driver of socio-economic development in Say Nha Bu Ly Province during the period 2010–2025. The results show that increasing FDI inflows were positively associated with regional economic growth, employment generation, infrastructure expansion, income improvement, and poverty reduction. These findings are generally consistent with endogenous growth theory and previous empirical studies in ASEAN economies, which emphasize the role of external capital, technology transfer, and productivity improvement in promoting regional economic transformation. One of the most important findings concerns the relationship between FDI, economic growth, and employment generation. Foreign-invested projects contributed to production expansion and created both direct and indirect employment opportunities in agriculture, construction, trade, and services. Increased labor demand helped improve household income and local livelihoods, particularly in rural areas. However, most employment opportunities remained concentrated in relatively low-skilled and labor-intensive sectors. This suggests that although FDI supported economic expansion, the quality of employment and long-term productivity gains remained constrained by limited human capital and technical capacity.

The study also indicates that the spillover effects of FDI in Say Nha Bu Ly Province remain relatively limited. Although foreign enterprises introduced modern production methods and managerial practices, technology transfer and industrial upgrading effects were weaker than expected. Many foreign-invested enterprises operated with limited linkages to domestic firms and local supply chains, while manufacturing and technology-intensive industries remained underdeveloped. The concentration of FDI in agriculture, natural resource exploitation, and low-value-added activities therefore increased the province's dependence on external capital and reduced opportunities for stronger domestic industrial development. Another important finding is that the developmental effectiveness of FDI depends significantly on institutional quality and local governance capacity. Despite possessing favorable geographical conditions and natural resources, the province continues to face important structural constraints,

including inadequate infrastructure, weak administrative capacity, limited investment promotion mechanisms, and insufficient regulatory enforcement. These institutional limitations reduce the province's ability to maximize the long-term benefits of foreign investment. In addition, uneven spatial distribution of investment projects has contributed to regional disparities, as districts with better infrastructure and market accessibility continue to attract the majority of FDI inflows.

Overall, the findings suggest that FDI has contributed positively to socio-economic development in Say Nha Bu Ly Province, but its impacts remain conditional and uneven. Maximizing the long-term developmental benefits of FDI therefore requires stronger institutional reform, improved labor quality, enhanced infrastructure, and policies that promote stronger linkages between foreign investors and the local economy.

### ***Policy Implications***

The findings of this study indicate that foreign direct investment (FDI) has contributed positively to socio-economic development in Say Nha Bu Ly Province through economic growth, employment generation, infrastructure expansion, and livelihood improvement. However, the effectiveness of FDI remains constrained by institutional limitations, inadequate infrastructure, low labor quality, uneven investment distribution, and environmental challenges. Therefore, maximizing the developmental benefits of FDI requires a more comprehensive and strategic policy framework at both provincial and national levels.

First, improving the investment environment remains a critical priority for enhancing investment effectiveness and regional competitiveness. Administrative inefficiencies, bureaucratic procedures, and limited institutional coordination continue to create obstacles for foreign investors. Simplifying licensing procedures, strengthening "one-stop service" mechanisms, improving governance transparency, and ensuring more consistent policy implementation would help reduce transaction costs and increase investor confidence. In addition, investment promotion strategies should focus not only on increasing the quantity of projects but also on improving investment quality and long-term developmental impacts.

Second, infrastructure development plays a fundamental role in supporting investment attraction and socio-economic transformation. Upgrading transportation systems, logistics networks, electricity supply, and digital infrastructure would improve regional connectivity and production efficiency while reducing development disparities between districts. Improved infrastructure may also facilitate market integration, trade expansion, and investment diversification. Given the province's financial limitations, stronger cooperation with national authorities, international development organizations, and private investors is essential for mobilizing infrastructure investment resources.

Third, improving human resource quality is necessary for increasing the absorptive capacity and spillover effects of FDI. The findings suggest that limited technical skills and low labor productivity remain important constraints on

technology transfer and industrial upgrading. Expanding vocational training programs and strengthening cooperation between educational institutions and foreign enterprises would help develop a more skilled workforce capable of meeting the requirements of modern industries. Human capital development is particularly important for attracting technology-intensive and higher-value-added investment projects.

Fourth, environmental sustainability should become a central component of provincial investment strategy. While FDI contributes to economic expansion, some investment activities may generate environmental degradation and resource-related risks if regulatory mechanisms remain weak. Strengthening environmental monitoring systems, improving the implementation of environmental impact assessments, and encouraging environmentally responsible investment projects are therefore essential. Sustainable investment sectors such as renewable energy, green agriculture, and environmentally friendly production models should receive greater policy support.

Finally, the province should adopt a more selective and strategic approach to attracting FDI. Rather than relying heavily on resource-based and low-value-added investment activities, policymakers should prioritize projects that contribute to technological upgrading, industrial diversification, productivity improvement, and sustainable regional development. Stronger linkages between foreign enterprises and local firms should also be encouraged in order to enhance technology transfer, local supplier development, and long-term economic resilience. Overall, the findings suggest that FDI can become a more effective driver of socio-economic development in Say Nha Bu Ly Province if supported by institutional reform, infrastructure modernization, human capital development, environmental sustainability, and a more strategic investment attraction policy.

## **CONCLUSIONS AND RECOMMENDATIONS**

This study examined the relationship between foreign direct investment (FDI) and socio-economic development in Say Nha Bu Ly Province, Lao People's Democratic Republic, during the period 2010–2025. Using a mixed-methods approach combining quantitative and qualitative analysis, the study evaluated the impacts of FDI on regional economic growth, employment generation, infrastructure development, income improvement, and poverty reduction. The findings indicate that FDI has become an important driver of socio-economic transformation in Say Nha Bu Ly Province. Foreign investment contributed positively to GRDP growth, production expansion, employment creation, and infrastructure improvement, while also supporting regional connectivity and local economic activities. The results further suggest that FDI contributed to higher household income and gradual poverty reduction within the province. In addition, foreign-invested enterprises introduced new production methods and managerial practices that created opportunities for technology transfer and productivity improvement.

However, the study also reveals several important structural challenges. FDI activities remained concentrated in resource-based and labor-intensive

sectors, while technology-intensive industries and industrial diversification remained limited. Uneven spatial distribution of investment, weak human capital, institutional inefficiencies, and limited absorptive capacity reduced the broader developmental effectiveness of FDI. Environmental sustainability and dependence on external capital also continue to represent important long-term development concerns. Overall, the study highlights that the developmental impacts of FDI are not determined solely by the scale of investment inflows but also by institutional quality, infrastructure conditions, labor capacity, and regional development policies. Therefore, maximizing the long-term benefits of FDI requires stronger institutional reform, improved infrastructure, higher labor quality, more effective environmental governance, and a more strategic approach to attracting sustainable and high-quality investment.

This study contributes to the existing literature by providing localized empirical evidence regarding the socio-economic impacts of FDI in a less-developed province of Laos. The findings also provide practical policy implications for provincial authorities and policymakers seeking to improve investment effectiveness and promote sustainable regional development.

#### **FUTURE STUDY**

This study primarily relied on secondary data and provincial-level analysis. Some socio-economic and environmental impacts of FDI may therefore require more detailed investigation using firm-level or household-level data. Future research could employ comparative regional analysis and more advanced econometric methods to further examine the long-term developmental impacts of FDI in Laos and other developing economies.

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