FDI in Thailand under the COVID-19 Pandemic

Siwapong Dheera-aumpon
Department of Economics, Faculty of Economics, Kasetsart University, Bangkok, Thailand

Piyaphan Changwatchai*
Department of Economics, Faculty of Economics, Kasetsart University, Bangkok, Thailand

ABSTRACT

Inward foreign direct investment (FDI) is vital to the Thai economy, contributing more than 60% of GDP in 2019. However, the recent COVID-19 pandemic led to a worldwide economic downturn which impacted foreign investment by multinational enterprises (MNEs). In 2020, Thailand's net inward FDI turned negative, with investment increase less investment decline, while net inward FDI from some source countries remained positive. This study analyzed the influence of the COVID-19 pandemic on Thai inward FDI from 38 source countries using a logistic model and secondary data from 2020. The model estimated the probability that the net inward FDI from a source country was negative. Results indicate that a higher number of deaths from COVID-19 led to a higher probability of negative net inward FD1, while a higher GDP of the source country led to a lower probability of negative net inward FDI. The findings suggested that the Thai Government should support FDI from high GDP nations and create an action plan to mitigate the negative impacts of a future pandemic on FDI.

Keywords: COVID-19; Foreign direct investment; Epidemic; Thailand.

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1. INTRODUCTION

Inward foreign direct investment (FDI) is crucially important for the Thai economy, with stocks of inward FDI in 2019 greater than 60% of GDP and net inward FDI remaining consistently positive (Figure 1). The COVID-19 pandemic had a global influence in numerous ways, including reducing FDI. Negative demand shocks delayed market-seeking investments by multinational enterprises (MNEs), with decreased profits in their foreign affiliates resulting in lower reinvested earnings (UNCTAD, 2020). The COVID-19 pandemic also led to a worldwide economic downturn, negatively impacting MNE foreign investment. In 2020, Thailand's net inward FDI turned negative, with investment increase less than investment decline during this period (Figure 1), falling from US$5,518.71 million in 2019 to -US$4,947.47 million in 2020. When broken down by industry, finance and insurance activities had the largest negative net FDI flow in 2020, with a net value of -US$6,774.80 million. In terms of source nations, the UK had the largest negative net FDI flow in 2020, totaling -US$9,590.94 million (Bank of Thailand, 2023). Nevertheless, net inward FDI from some source countries was still positive, especially Japan, the US, and Singapore which comprise Thailand's top source countries of inward FDI stocks. Thus, the goal of this research was to examine the influence of the COVID-19 pandemic on

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Thailand's inward FDI from 38 source countries in 2020 using a logistic model and secondary data collected from 2020. Results will provide a guideline for mitigating the undesirable impacts of future pandemics.

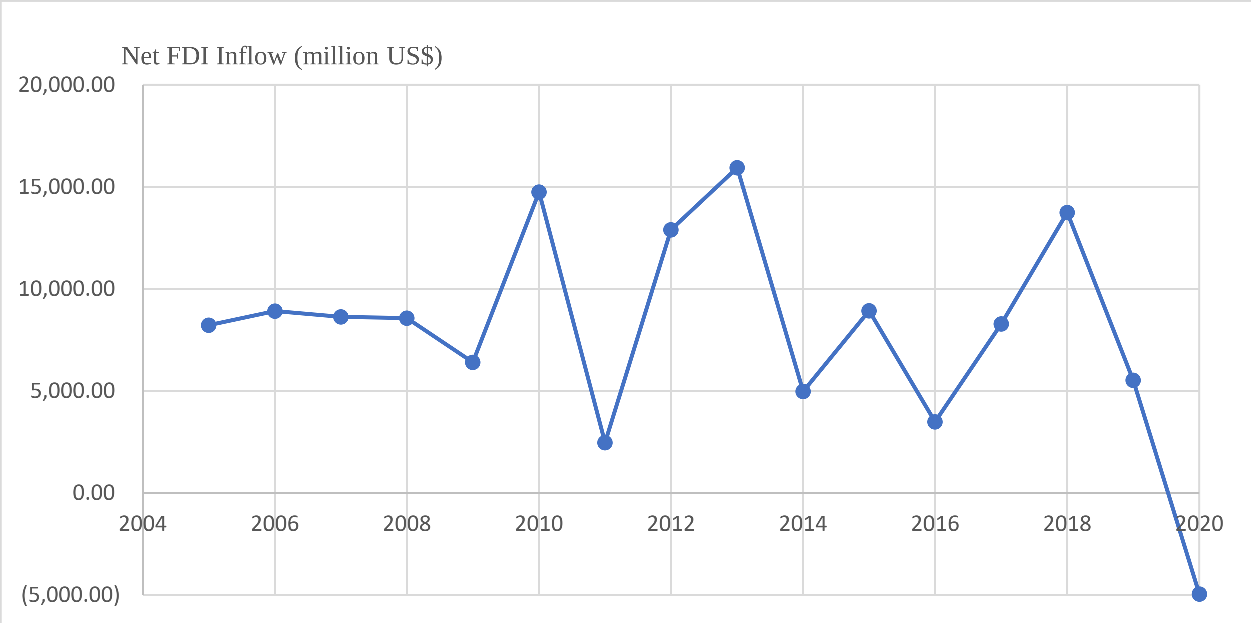

Figure 1 Net Thai FDI inflow between 2005 and 2020
Source: Bank of Thailand (2023)

2. LITERATURE REVIEW

2.1 Conceptual Framework

The three major factors that favor FDI are ownership benefits (or O), location benefits (or L), and internalization benefits (or I in the OLI) (Dunning, 1980). The degree of COVID-19 severity in the home country can have an unfavorable influence on investment. Businesses might experience greater obstacles at home that require urgent attention, resulting in reduced investment abroad. In nations where the COVID-19 loss was substantial, the cost of investment also significantly increased (Hayakawa, Lee and Park, 2022). Thus, the COVID-19 pandemic affected the ownership advantage of investors.

2.2 Previous Studies

Moosa and Merza (2022) stated that the COVID-19 outbreak slowed capital expenditure by multinational companies, with some shutting down production facilities and operating at lower capacity during the COVID-19 pandemic, as also suggested by Tibon (2023). The pandemic had an indirect effect by reducing the profits of overseas affiliates, resulting in decreased reinvested earnings. Koçak and Barış-Tüzemen (2022) found that the COVID-19 pandemic adversely influenced FDI in low- and middle-income host countries but had less impact in high-income host countries. Hayakawa, Lee and Park (2022) also suggested that the degree of COVID-19 in host countries harmed FDI inflow in the manufacturing

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industry for all modes of entry, while the influence of COVID-19 in home countries on FDI was negligible.

The harshness of COVID-19 in the host and home countries had a significant adverse effect on greenfield FDI. Hussain (2020) reported that results during the first quarter of 2020 recorded the greatest adverse effect, followed by a surge in FDI inflow into India due to new policies that appealed to foreign investors. Truong (2022) found a negative effect of COVID-19 cases and deaths in home countries, along with COVID-19 deaths in Vietnam on inward FDI, with the consequences of COVID-19 cases far less damaging than those of COVID-19 deaths. Kalotay and Sass (2021) indicated that the COVID-19 pandemic only accelerated already-present trends that substantially impacted FDI such as digitalization, the increasing significance of sustainability, and international fragmentation policy-making.

By contrast, some studies found that the COVID-19 outbreak had positive effects. Nandy and Sussan (2022) declared that digital payment companies in the United States benefited from the declaration of a national emergency during the COVID-19 pandemic, while Ji and Zhang (2022) reported that the number of COVID-19 cases had a positive influence on e-commerce companies in China.

3. DATA COLLECTION AND ANALYSIS

3.1. Data Collection

This research utilized secondary cross-sectional data that related to 2020 results from 38 sources/home countries supplying Thai inward FDI to collect data for each variable as:

- Net inward FDI from each source/home country (IFDI) in 2020, obtained from the Bank of Thailand
- Number of deaths from COVID-19 (DEAD) in 2020, obtained from the World Health Organization
- Real GDP of each source/home country (GDP) in 2020, obtained from the World Bank
- Stocks of inward FDI from each source/home country (SFDI) in 2019, obtained from the Bank of Thailand
- Trade openness (OPEN) in 2020, obtained from the World Bank
- Relative wage between source/home country and Thailand (RWAGE) in 2020, calculated by using real GDP per person employed for each country’s wage; real GDP per person employed obtained from the World Bank

3.2. Data Analysis

A logistic model was used to analyze the impact of the COVID-19 pandemic on Thailand’s inward FDI to examine the probability that net inward FDI from a source country was negative as follows:

$$ln\left(\frac{P_{Y_i}}{1-P_{Y_i}}\right) = f(\text{lnDEAD}_i, \text{lnGDP}_i, \text{lnSFDI}_i, \text{lnOPEN}_i, \text{lnRWAGE}_i)$$

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where

P_{Y_i}	is the probability that net inward FDI from the source/home country i to Thailand was negative in 2020
$lnDEAD_i$	is the number of deaths from COVID-19 in the source/home country i in 2020 in a natural logarithmic form
$lnGDP_i$	is the real GDP of the source/home country i in 2020 in a natural logarithmic form (control variable)
$lnSFDI_i$:	is the stock of inward FDI from the source/home country i to Thailand in 2019 in a natural logarithmic form (control variable)
$lnOPEN_i$:	is trade openness of source/home country i in 2020 in a natural logarithmic form (control variable)
$lnRWAGE_i$:	is relative wage between source/home country i and Thailand in 2020 in a natural logarithmic form (control variable)

4. RESULTS

Results of the inward FDI flow to Thailand from 38 source countries in 2020 showed that 12 source countries had a negative flow (Table 1). Singapore, Japan, and China were the top three source countries with the highest positive net FDI inflow to Thailand in 2020, whereas the UK, Netherlands, and Denmark were the top three source countries with the largest negative net FDI inflow.

Table 1 Source countries categorized by net FDI inflow to Thailand in 2020

Source countries with negative net FDI inflow to Thailand			Source countries with positive net FDI inflow to Thailand		
Indonesia	Myanmar	UK	Brunei Darussalam	Malaysia	Philippines
Belgium	Cyprus	Denmark	Singapore	Vietnam	Austria
Finland	Ireland	Netherlands	France	Germany	Italy
Iran	Bahamas	Panama	Luxembourg	Spain	Sweden
			Kuwait	Oman	Qatar
			Saudi Arabia	UAE	Australia
			China	India	Japan
			New Zealand	Russia	South Korea
			Switzerland	United States	

Source: Bank of Thailand (2023)

The descriptive data statistics used in the logistic model are shown in Table 2. The number of deaths from COVID-19 in the source nation increased the probability of negative net FDI flow to Thailand (Table 3). By contrast, higher GDP of the source country reduced the likelihood of negative net FDI flow to Thailand (Table 3). A 1% increase in the number of COVID-19 deaths in the source country increased the probability of negative net FDI flow to Thailand by 11.96%, whereas a 1% increase in the source country's GDP reduced the probability of negative net FDI flow to Thailand by 27.49% (Table 4).

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Table 2 Descriptive statistics

Variable	Mean	Standard deviation	Minimum	Maximum
DEAD	27,610.29	62,695.36	3	352,004
GDP	1.72e+12	3.81e+12	9.58e+09	1.92e+13
SFDI	6,146.308	17,549.73	9.82	98,593.28
OPEN	97.06641	77.4867	23.38376	365.2158
RWAGE	0.949952	0.503756	0.118686	2.49788

Source: Authors' calculation

Table 3 Analysis of the influence of the COVID-19 pandemic on the probability of negative net FDI inflow

Variable	Odds ratio	Std. error	z	P-value
Constant	7.82e+16	1.83e+18	1.66	0.097*
lnDEAD	2.224136	0.84726	2.10	0.036**
lnGDP	0.159206	0.14279	-2.05	0.040**
lnSFDI	1.60192	0.58612	1.29	0.198
lnOPEN	0.96662	1.20115	-0.03	0.978
lnRWAGE	0.69850	0.58745	-0.43	0.670
Number of obs:	38			
LR $chi^2(5)$:	12.97			
Prob > chi^2:	0.0237			
Pseudo R^2:	0.2736			

** significant at the 5% level and *significant at the 10% level.
Source: Authors' calculation

Table 4 Marginal effect/influence of the COVID-19 pandemic on the probability of negative net FDI inflow

Variable	Marginal effect	Delta-method std. error	z	P-value
lnDEAD	0.1196	0.0456	2.62	0.009***
lnGDP	-0.2749	0.1087	-2.53	0.011**
lnSFDI	0.0705	0.0509	1.39	0.166
lnOPEN	-0.0051	0.1859	-0.03	0.978
lnRWAGE	-0.0537	0.1241	-0.43	0.665

*** significant at 1% level and ** significant at the 5% level.
Source: Authors' calculation

The negative influence of the number of deaths from COVID-19 in the source nations on Thai net FDI inflow indicated that the severity of COVID-19 reduced the margin of FDI. As a result, it limited the source countries' ability to invest abroad, concurring with Moosa and Merza (2022), Hayakawa, Lee and Park (2022), and Truong (2022). Furthermore, this result implied that some FDI deals were put on hold (OECD, 2020). However, the positive

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effect of the source nations' GDP indicated that high-income source countries were more likely to engage in FDI during a pandemic than low-income source countries. The source countries' GDP indicated the ownership advantage of the source countries (Dunning, 1980). Thus, high-income countries tended to have a higher ability to engage in FDI. As for policy recommendation, the government should encourage FDI from high-income countries by providing incentives for FDI related to sustainable growth, facilitating investment process, and improving infrastructure. Furthermore, the government should attract FDI from various source countries in order to diversify the risk of pandemic effects on source countries.

5. CONCLUSIONS AND RECOMMENDATIONS

Inward FDI is indispensable for the Thai economy, with the country historically experiencing a positive net inflow. However, the net inward FDI turned negative as a result of the COVID-19 epidemic in 2020. This study used a logistic model together with secondary data to analyze the influence of the COVID-19 pandemic on Thailand's inward FDI from 38 source nations in 2020. Findings showed that a higher number of COVID-19 deaths in the source country led to a higher probability of negative net inward FDI, whereas a higher GDP of the source nation led to a lower probability of negative net inward FDI. Results suggested that the government should encourage FDI from high-income countries and develop an action plan strategy to mitigate the detrimental consequences of a future pandemic on Thai FDI.

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