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The Contribution of International Trade and Investment to Economic Growth in Thailand

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ABSTRACT

The objective of this study is twofold: 1) to overview the international trade and investment of Thailand during the past two decades in order to investigate their trends and structural changes; 2) to study the relationship among international trade, foreign direct investment, foreign portfolio investment and economic growth. The study employed descriptive and quantitative analyses together with in-depth interview. Econometrics including cointegration and causality test was employed for the quantitative analysis. The variables used in this study were time series data including Gross Domestic Product (GDP), international trade (X+M), foreign direct investment (FDI), and foreign portfolio investment (FPI) from the period of 1998-Q1 through 2016-Q4.

The results of this study showed that 1) In the first period before the US economic crisis in 2007, Thai exports expanded by an average of 11.70 % per year, partly due to the Baht's weakening during the adjustment period to the managed float exchange rate system in 1997. It declined in the latter period (2008 - 2016) about 4.49% per year. Since then, the productivity was unable to increase in line with the higher wages in 2011. However, in the last decade, international trade and investment expanded lower than the previous. This was partly due to the decrease in Thai competitiveness and the relocation of production base from Thailand. Excluding foreign portfolio investment, it still has a good enlargement with the favorable regional stock markets. 2) all variables have a long run relationship. In the first period (1998-2007), economic growth has a positive impact on international trade and investment. At the same time, international trade and foreign portfolio investment promote

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economic growth as well. Only foreign direct investment has no impact on economic growth. For the second period (2008-2016), these variables were less correlated due to the increasing degree of openness. Therefore, many economic factors were affected by the external factors. Only international trade has a positive impact on both economic expansion and foreign portfolio investment.

Keywords: *International Trade, International Investment, Economic Growth*

Introduction

Thailand has been a country with an open economic system for a long time. The value of Thailand international trade has a tendency to be broaden alongside the expansion of world economy and world trade. Nowadays, the economic structure of Thailand tends to change significantly in comparison to the past as the country has been more open to international transactions. Hence, the foreign sector has played a big part towards the country's economic development. The amount of capital from international trade and investment from both foreign direct investment (FDI) and foreign portfolio investment (FPI) have drastically expanded and driven the economy. Apart from international trade, international investment is another channel which brings the foreign capital inflow to economic system and plays an important contribution in driving the economic growth. When considering the international trade expansion, foreign direct investment, and foreign portfolio investment, it revealed that since 1998, all of the 3 channels have continuously expanded with international trade stand out the most. Second to that were foreign direct investment and foreign portfolio investment respectively. However, it showed that the foreign direct investment expanded at about 3 times more from 1997-2017. The investments were long term investments which were desired by several countries especially developing countries where there was a shortage of savings provided that the investment would circulate within country in a long run. Foreign direct investment usually came with new technologies which will greatly help boosting production efficiency for recipient countries including the emergence of employment as well. In regards to portfolio investment, the expansion was at the lowest level and rather saw high volatility along with changes which happened mainly with investment conditions in Thailand and regional. However, larger volume of foreign portfolio investment can cause the expansion in the capital market (Eniekezimene, 2013) which will make capital accumulating through stock exchange for private companies more

convenient. The amount of capital will pass through to real economic sector causing investment expansion and new employment which eventually lead to economic growth.

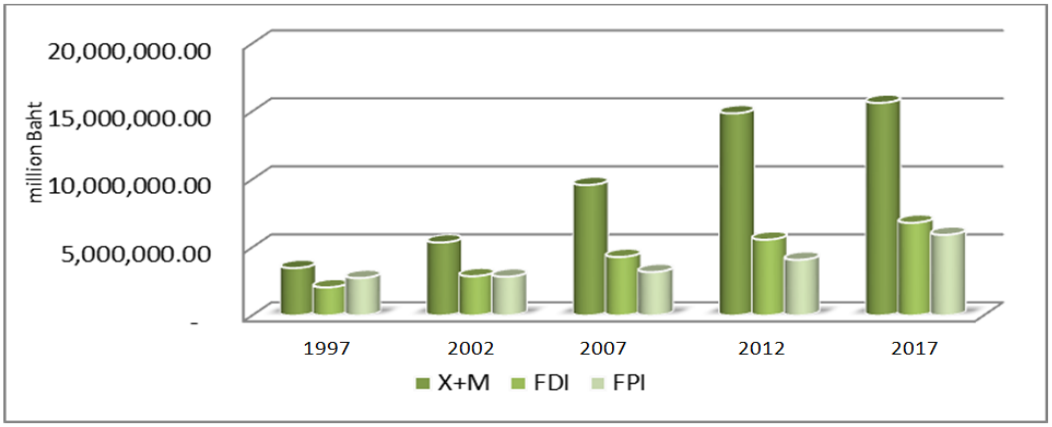

Figure 1 International Trade and investment of Thailand

Source: Bank of Thailand (2018)

Moreover, there are some previous studies like Lipsey et al., (2002) and Ghatak et al. (2007) which identified that the advantages of foreign trade and investment obtained by each country were not a universally fixed formula and quite diverse from one country to another. The benefits received for some countries were varied mainly due to country's fundamental economic factors and human resources. However, most of the previous studies based their research on one individual section. For instance, the research by Josheski and Lazarov (2012) which focused their study on exploring the relationship between international trade and economic growth, the study conducted by Borensztein et al. (1998), Ghatak and Halicioglu (2006), and Ayanwale et al. (2007) which studied about the effects of foreign direct investment towards the host country as well as the research of Duasa and Kassim (2009) which studied the relationship between the capital from the portfolio investment and economic growth etc.

According to the changing of trade and investment structure of Thailand, this study would like to focus on the roles of international trade, foreign direct investment, and foreign portfolio investment and studied the level of influence regarding the contributions of each channel to the economic growth of Thailand. The research was

done by making a comparison between the contributions of each channel during the time before and after 2007 in order to investigate changes occurred during pre and post economic crisis of the United States. It is expected that there will be changes in international trade and investment. This will later be utilized as guidelines in determining the problem solving process and trade and investment promotions.

Research objectives

The objectives of this research are as follows:

1. to study the general conditions of international trade and investment of Thailand from 1998 - 2016 in order to investigate trends as well as structural and role changes of international trade and international investment

2. to study the relationship among international trade, foreign direct investment, foreign portfolio investment and economic growth in order to be able to compare the contributions of each channel

Literature Review

There are various literatures reviewing the contribution of international trade and investment to Thailand economic growth. They are related to both theoretical approach and empirical study domestically and internationally.

International trade and economic growth approach

The approach regarding international trade has been constantly developed since 16th century. Classical school of economics identified that international trade emerged because all related parties obtained mutual interests. This approach reflected that international trade happened because parties involved in the trading activities gained advantages from the trade and led to the increase in the overall social welfare. This school has started from Adam Smith (Adam Smith, 1776). He was a British economist who was considered to be the prominent founder of international trade. He published the book called “The Wealth of Nations” which later became very well-known in academic world. He expressed his opinion on international trade that there should be a promotion of a free market. His argument countered with the mercantilism’s belief of intervention, control, and monopolizing economic activities. Smith presented the absolute advantage theory and encouraged a free system of international trade. He described that country should only produce goods that they have absolute

advantage in other words this is to create international division of labor according to expertise and resources and then they exchange production goods among each other. In order words, each country produces products that have absolute advantage for export purpose and import products that lack the absolute advantage which will cause productivity improvement from specialization. Furthermore, the division of labor decreases production time and increases productivity and leads to the prosperity of the nation Government should not intervene and only have a duty to oversee and accommodate such international trade activities.

Foreign direct investment and economic growth approach

In general, foreign direct investment is significant for recipient countries especially developing countries because they have a low saving level which are insufficient for the need of domestic investment. Therefore, the amount of capital from foreign investment is necessary. However, in regards to the impacts on the recipient countries, there are two main schools of thought: the first one views foreign direct investment and its effects in a positive way. The approach is called the Benign Model of FDI, while the latter disagrees and argues that the foreign direct investment is the main cause of negative impacts. This approach is called the Malign Model of FDI.

The Benign Model of FDI views foreign direct investment as beneficial in various aspects for recipient countries in both economic growth and equality in income distribution. The FDI is one of the major factors which plays important role in the economic growth and development of the country especially in the developing countries which lack savings and investment due to the fact that the country has low revenue and low saving rate. Hence, it is necessary to depend on foreign investment. This approach believes that multinational corporations will bring new innovative and effective technologies including good management, marketing skill and new technologies which lead to the modification and improvement in productivity in host countries. Such results will penetrate into other production companies as well. This is called Technology spillover (Caves 1996, Borensztein et al. 1998) through competition, imitation, and knowledge from multinational corporation's employees who were well-trained and were transferred to work in the local companies as such. This influenced the increase of overall productivity of the country. Moreover, the expansion in production leads to the increasing of national income and employment. People in the country earn more income and better standard of living. Hence, it can be said that foreign direct investment cause positive economic growth.

The Malign Model of FDI is an alternative approach which is totally against the first one. This approach believes that FDI rather causes negative effects on both economic growth and income inequality. In other words, the incoming investments of multinational corporations usually lead to long term monopoly because they have higher competitiveness than local companies, making the local businesses incompetent and eventually have to fade away from such industry. This causes overall reduction in the amount of domestic market producers and domestic investment, lower product volumes, higher price. In addition, It also has less or none actual transfer of technology due to copyrights and patents which may prevent Technology spillover to local companies. Furthermore, in some cases, the imports of raw materials from abroad will affect in a negative way to the Balance of Payments.

Empirical Study

There has been a lot of studies about international trade and economic growth and mostly agreed upon the fact that international trade causes a positive impact towards the economic growth. For example, Josheski and Lazarov (2 0 1 2) studied the relationship between international trade and economic growth of more than 200 countries through a determination of the degree of openness with the growth of economy. The study found that international trade has positive results to the economic growth due to the fact that the more production supply than demanded domestically. It caused new employment and higher revenue to the people. This coincides with the work of Higgins and Prowse (2 0 1 0) which specified that the openness of the country to international trade and investment. Trade integration will lead to positive economic growth and at the same time, there needs to be the acceptance of the negative consequences from such activities as well, that is the economic fluctuation caused by the dependency of foreign factors. This included the effect to balance of payment, domestic price level and exchange rate including but not limited to the effects from investment fluctuation and speculation in the world market which affect in-country economic variables. In addition, it is believed that the higher degree of openness, the more fluctuated from external factors will get. However, there are some studies which showed that international trade had negative or no relationship with economic growth such as Shan and Sun (1998) which stated that there was no significant relationship between international trade and economic growth.

In regards to Foreign Direct Investment and the economic growth, it is found that FDI usually leads to positive economic growth to the host country in some level. For the impacts

on the technology transfer and employment is varied and has no fixed formula for the recipient countries. All of these will base on the level of technology used, copyrights, patents, and the sincerity in data disclosure of headquarters. Moreover, the level of receiving will depend on the readiness and capability of local businesses in transferring and obtaining technologies like in the instance when the company has better quality of human resources. It is easier to improve the level of technology and knowledge within a short timeframe or when the country has a good fundamental economic structure, advanced financial market, or governmental policies which promote economic activities and encourage technology transfer etc. (Lipsey et al., 2002) However, Bacic et al. (2004) revealed that FDI has a negative effect on the economic growth of some central and eastern European countries.

For the Foreign Portfolio Investment and the economic growth, there have several opinions about it such as Duasa and Kassim (2009) that study the relationship between capital from FPI and Malaysia economic growth by using the dada from 1991-2006. The results showed that Foreign Portfolio Investment did not expand Malaysian economy. In regards to the research conducted by Eniekezimene (2013)which studied the impacts of the FPI in Nigerian capital market by using the information from 1980-2010, the results revealed that the amount of capital from Foreign Portfolio Invest positively affected the expansion of capital market. It also promoted the capital market to be expanded more in width and in depth. The fundraising through capital market can be done more conveniently which will influence the expansion of private investment and eventually lead to economic expansion.

Research Methodology

The methodology of this study was divided into 2 parts: descriptive study and quantitative analysis with the following details as follows:

1. Descriptive analysis explained general conditions of international trade and investment of Thailand. The data of this study was collected by using in-depth interview and purposive sampling method in 2018 from related international trade and investment sectors which consisted of government sector, private sector, and academic officers. As international trade and investment is about knowledge, capability, and specialization utilization, hence, the subjects who can give away information have to be the one who work in such organizations such as Bank of Thailand, Ministry of finance , Stock exchange of Thailand, and the closely followers of specialized matter with the total number of 30 people.

2 . Quantitative analysis This quantitative analysis was employed to find the relationship between economic growth and international trade, foreign direct investment and foreign portfolio investment to see how each channel influence the economic growth by using modern econometrics which were improved from the tradition one including 1) unit root test 2) co-integration method and 3) causality method which can solve the problem of time series data variables that are non-stationary or stochastic process leading to a more efficiency results and more consistent. Quarterly time series data from 1998-2016 were used and variables employed in this study consisted of gross domestic product (GDP), International trade (X+M), foreign direct investment, (FDI) and foreign portfolio investment (FPI).

Research Results

The results show that in the past decade, international trade and investment of Thailand had a tendency to expand continuously but slower than the prior decade. Part of that resulted from world economy conditions, economy of trading countries, price of agricultural good and consumption goods in world market which still not recovering and stabilize at a low level in the past period. On top of that, Thailand has encountered the withdrawal of Generalized System of Preferences (GSP) from European Union for every goods since 2015 causing the competitiveness of Thailand' goods in the market to decrease. Regarding the import situation in Thailand, it tends to be higher as per the country economy expansion but the fluctuation is upon the economic condition in each period. Most of the imports were raw materials and semi-manufactured materials to use in the industry for export. Second to that were the import of the capital goods such as machine and other equipments that cannot manufacture in the country or very costly to do so. For this decade foreign direct investment in Thailand has the tendency to decline in comparison to the prior decade. Its expansion rate in the period of 2007-2016 was a lot lower than in the period of 1997-2006. This was partially because of the competition to attract foreign investment of other countries such as China, Indonesia, and Viet Nam. Furthermore, the political instability and drastic change in minimum wage lessen the confidence of investors. At the same time, other countries in the region have better rate of economic expansion. For the foreign portfolio investment, there was a constant expansion during the period from 2007-2012 but it was at a lower rate and was stable at around 3 Trillion Baht. However, after 2013, there was noticeably high amount of capital inflow to portfolio investment in Thailand and was fluctuated according to the stock market at certain periods.

In regards to the quantitative analysis, the details of the results were as follow:

Unit Root Test

In this section, the gross domestic product (GDP), international trade (X+M), foreign direct investment (FDI), and foreign portfolio investment (FPI) data are brought in to test for stationary by using unit root test. The results are divided into 2 periods: first period is from 1998-2007 and second period which is from 2008-2016 can be displayed in Table 1 and Table 2 below:

Table 1 Unit Root Test by using ADF and PP Test of data from 1st period

Unit Root Test	ADF-test		PP-test	
	No trend	Trend	No trend	Trend
GDP	1.0704	-1.9922	3.8953	-2.6666
X+M	0.0855	-2.6798	0.7960	-3.0278
FDI	3.4757	1.0881	4.5912	1.5914
FPI	3.5186	0.9574	3.5237	0.1818
ΔGDP	-10.3032*	-14.0948*	-7.1457*	-10.5998*
Δ (X+M)	-5.5953*	-5.7458*	-5.4189*	-5.4099*
ΔFDI	-1.8206	-3.4365*	-3.1257*	-4.8033*
ΔFPI	-3.3111*	-4.1338*	-7.8475*	-9.8145*

Remark: *at the significant level of 5 %and Δ means the 1st difference

Source: Author's Calculation

Table 2 Unit Root Test by using ADF and PP Test of data from 2nd period

Unit Root Test	ADF-test		PP-test	
	No trend	Trend	No trend	Trend
GDP	-0.4003	-4.0730*	-0.2276	-4.0301*
X+M	-1.6188	-2.5297	-1.6009	-2.6571
FDI	-1.1349	-2.3151	-1.1229	-2.3914
FPI	0.6235	-1.7097	0.6084	-1.7055
ΔGDP	-6.0790*	-5.9756*	-15.972*	-17.030*
Δ (X+M)	-6.6672 *	-5.1079*	-11.4567*	-13.4298*
ΔFDI	-6.5007*	-6.4441*	-6.9609*	-6.9340*
ΔFPI	-5.8821*	-6.1671*	-5.8993*	-6.1752*

Remark: *at the significant level of 5 %and Δ means the 1st difference

Source: Author's Calculation

The results reveal that all variables from both periods have non-stationary at the significant level of 5% which show that they have the unit root at their level. However, after doing first difference of these data by conducting the unit root process again and finds that all the data possessed stationary. Therefore, all the data have stationary at the first difference.

Cointegration Test

The cointegration test is to test whether variables have a long-run equilibrium relationship. The test was employed by using the method initiated by Johansen and Juselius (1990) under Vector Auto Regressive (VAR) model and then selected appropriate 6th lag according to AIC (Akaike Information Criterion).The results of the long-run equilibrium relationship are displayed as below:

Table 3 Cointegration Test from Trace statistic and Maximum Eigen value

Hypothesized No. of CE(s)	1st period				2nd period			
	Trace statistic	P-value	Max-Eigen statistic	P-value	Trace statistic	P-value	Max-Eigen statistic	P-value
None *	62.579	0.001	35.589	0.003	47.891	0.049	31.184	0.016
At most 1	26.989	0.101	18.541	0.110	16.707	0.661	11.645	0.582
At most 2	8.448	0.418	8.445	0.335	5.061	0.802	4.960	0.746
At most 3	0.002	0.955	0.002	0.955	0.100	0.750	0.100	0.750

Remark: Trace test and Max-eigen value test indicate 1 co-integrating eqn(s) at the 0.05 level* denotes rejection of the hypothesis at the 0.05 level

Source: Author's Calculation

Cointegration test from Trace Statistic and Maximum Eigen statistic found that both statistical values identified all variables in this study had long-run equilibrium relationship. In other words, when taking into consideration, Trace Statistic value was equaled to 62.579 and Max-Eigen statistic value was equaled to 35.589 in the first period. The value of Trace Statistic was equaled to 47.891 and Max-Eigen statistical value was equaled to 31.184 in the second period. The results rejected the hypothesis at 5% significant level and had 1 cointegrating equation.

Causality Test

This study employed the causality test to investigate pairwise relationship between variables. That was to study whether there was any correlation among all 4 variables and in what way in order to explain the contribution of international trade and international investment to the economic growth. The relationship among economic growth and the channel in raising capital by using causality test in 2 periods of time were as follow:

Table 4 The Causality Test for this Study in First Period and Second Period

Variable	Relationship			F-statistic	P-value
First period					
Δ GDP and Δ FPI	Δ GDP	→	Δ FPI	3.3489*	0.0478
	Δ FPI	→	Δ GDP	6.7037*	0.0037
Δ GDP and Δ FDI	Δ GDP	→	Δ FDI	5.7809*	0.0072
Δ GDP and Δ X+M	Δ GDP	→	Δ X+M	4.9783*	0.0131
	Δ X+M	→	Δ GDP	6.2112*	0.0053
Δ FPI and Δ X+M	Δ FPI	→	Δ X+M	4.1417*	0.0251
All of the rest has no relationship					
Second period					
Δ X+M and Δ FDI	Δ X+M	→	Δ FDI	3.4032*	0.0475
Δ GDP and Δ X+M	Δ X+M	→	Δ GDP	3.4353*	0.0463
All of the rest has no relationship					

Remark: A → B means variable A causes the change in variable B

** At the significant level of 5 %*

Source: Author's Calculation

Bringing the causality in table 4 to display using variable correlation diagram:

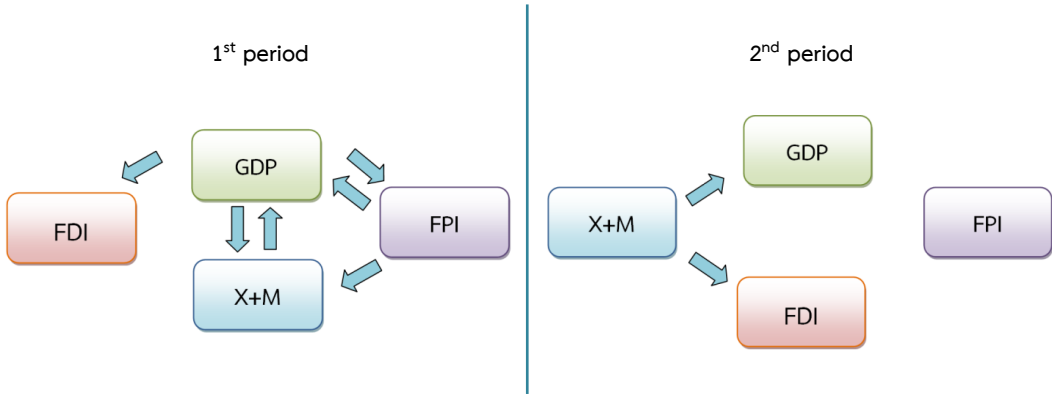

Figure 2 The Relationship between Variables

Source: Author's Study

The test of relationship between variables by using causality found that in the 1st period of the economic growth leaded to positive impacts to international trade and

international investment. At the same, international trade (X+M) and foreign portfolio investment (FPI) both has positive impact towards the growth of the economy. In regards to foreign direct investment (FDI) did not significantly affect the economic expansion. For the period after 2007, the variables used in this study have empirically and drastically less relationship towards each other. It was partially because of a more Thailand's degree of openness. Economic factors affected greatly from external factors such as the economic crisis, the adaptation of competitors, and international trade policy of partner countries leading to the decreasing of the degree of relationship between variables in according with economic theory approach. The results in this period specified that only international trade had positive impact to the economic growth because Thailand international trade sector covering agricultural and industrial activities in both large businesses and small and medium enterprises (SMEs) and causing broad area of employment. Hence, it was a great drive in economic expansion.

Contribution of International Trade and Investment to Economic Growth

In conclusion, contribution of international trade and investment to economic growth between the 1st and 2nd periods are different because of the change in an economic structure. It was resulted from the more openness economy both in the trade and financial liberalization. Thus, Thailand has a more open economic system than in the past. Therefore, foreign factors will affect the relationship between domestic economic variables increase upon degree of openness. The results of such study can be summarized as follow:

Table 5 Summary of factors which influence economic expansion

Summary of factors which influence economic expansion	1st period (1988-2007)	2nd period (2008-2016)
International Trade (X+M)	*	*
Foreign Portfolio Investment (FPI)	*	
Foreign Direct Investment (FDI)		

Source: Author's Study

Conclusion and Policy Implication

The study of the contribution in international trade and investment to economic growth in Thailand had objectives to study general conditions of international trade and investment of Thailand in the past period and to analyze the relationship among international trade, foreign direct investment, and foreign portfolio investment to economic growth to compare the contribution of each channel by using secondary data from documents, textbooks, articles, and internet along with the collection of field work by conduction in-depth interview from related parties. The results of the study found that international trade and investment had a tendency to expand continuously and fluctuated according to world economy and domestic circumstances. However, the expansion in international trade and investment in this decade has a tendency to slow down from prior decade. Part of that resulted from prices of agricultural goods and consumption goods in world market which still not recovering and stabilizing at a low level. On top of that, Thailand has encountered the withdrawal of Generalized System of Preferences (GSP) from European Union for all goods since 2015 causing the competitiveness of Thailand' goods in the market decrease. Also, there was a strong competition in attracting the investment from abroad such as China, Indonesia, and Viet Nam. Furthermore, the decline in economic, social, and political conditions in Thailand such as higher labor wage from the minimum wage adjustment by leaps and bounds in the past period and the political instability in Thailand causing the investor to lose confident to invest in the country. Meanwhile, other countries in the region were seen to have higher rate of economic expansion.

In regards to quantitative analysis to find the relationship among variable, it stated that all of the variables had cointegrating relationship in both periods. For causality test, it found that the result from both periods were different. That is to say in the 1st period, both international trade and foreign portfolio investment has caused positive impact towards the economic growth. Meanwhile, the economic expansion led to positive effect on international trade, foreign direct investment, and foreign portfolio investment. For the 2nd period, these variables have empirically and drastically less relationship towards each other. It was possibly because of a more degree of openness of Thai economy. Economic factors got affected greatly from external factors such as the economic crisis, the adaptation of competitors, and international trade policy of partner countries leading to less degree of relationship between variables in according with economic theory approach. The results in this period specified that only international trade had positive impact to the economic growth because Thailand

international trade sector covering agricultural and industrial activities in both large businesses and small and medium enterprises (SMEs) and causing broad area of employment.

Policy Implication

Even though the contribution of international trade and investment initiated some advantages to economic system in the production and employment, it also created inequality in resource allocation. Most of the interests often concentrated among some groups such as industrial sector or urbanites than sub-urbanites or skilled labor rather than unskilled labor. However, for the ultimate benefits to Thailand as a host country for investment, the following are some of the recommendation:

Government sector must have a role to facilitate infrastructure for private sector and clearly determine the direction of economic and social development along with planning public utilities, laws, and other regulations to accommodate international trade and investment. In the past period, the government determined directions and created mid-term and long term plan for a clearly economic and social development such as a 7-year investment promotion strategy (2015-2 021) , the 12th National Economic and social development plan (2017-2021), Thailand 4.0 policy, and 20-year National Strategy (2 017–2036). From the point where Thailand lacks a clear direction in development and long term goals to drive the country forward. However, once the goals and plans are clear, the execution still matters. Bureaucracy must work effectively to follow and assess periodically. There should be a bureaucratic reform to make the system more modernize and effective to promote the expansion of international trade and investment. Moreover, there will be more coverage of the distribution of benefits from trade and investment to various groups.

There is also a need for increasing productivity of the private sector by adopting appropriate production technology for effective production and competitive capability improvement. For production and marketing, there should be an emphasis on making differences in the goods, adding value, and creating worthiness. Furthermore, the formation of business network to increase the competitiveness in the cluster which is the conglomerate of companies and the cooperation in various aspects from supplier, service provider, producer, and specific fundamental structure. For foreign investment, there must be the process of creating knowledgeable, talented, and highly-performed employees to compensate with higher wage so that they can respond to new technology utilization and can learn about

technology brought by foreign investment or joint-venture to adopt and develop further for the goods of Thailand.

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