Economic Functions of Foreign Aid Inflows in Thailand

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Abstract

This chapter summarizes researches provided about the effect of foreign aid inflows to Thailand by mainly using time series analysis. Main results are summarized as follows. First, the aid impact to the economic growth is seen by using a growth accounting. Second, this impact is caused partly by the increase in inward foreign direct investments rather than the foreign aid itself. Third, foreign aid inflows are considered to reduce fiscal debt in Thailand without the currency appreciation, i.e., Dutch disease effect by the aid inflow. It is inferred from these results that accepted foreign aids in Thailand contribute to strengthening Thai economy. In addition, even after COVID-19 era, these fundamental functions of foreign aids are still effective to keep sustainable growth in emerging market economies.

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1 Introduction

Effect of foreign aid is still under discussion. Although two gap model for making up the capital accumulation was suggested during the 1960s, the effect was not necessarily seen regardless of the huge amount of foreign aid especially in African countries. Reflecting of these elements, foreign aid is effective only if the governance of the recipient country is good enough around the 2000s (Burnside and Dollar 2000). In contrast, Easterly (2004) shows that the foreign aid is ineffective. From this discussion, it is inferred that foreign aid does not necessarily contribute to the economic growth without any conditions.

Another idea is that social infrastructure constructed by foreign aid is the one of the opportunities to locate private firms. This effect is called "vanguard effect" of foreign aid. Since the foreign direct investment contributes to the economic growth (Borensztein 1998, Hsiao and Hsiao 2006), inviting foreign companies by foreign direct investment will be one idea for the economic growth. Since the relationship between the economic growth and the poverty reduction is estimated robustly (Dollar and Kraay 2002), the purpose of this research will be the foreign aid to promote the economic growth.

Thailand has experienced relatively stable economic growth for more than half a century. During the process, Thailand experienced the rapid growth during the late 1980s. One reason is policy change at the head of the 1980s by releasing the restriction of the investment and trade. In addition, social infrastructure was made during the 1980s by foreign aid located in the eastern area of Bangkok vicinity. After all, many Japanese companies are located in this area after the Plaza Agreement in 1985.

The author was engaged in the foreign aid section in the Government of Japan during the mid 2000s, and experienced that the against for giving foreign aid inside was strong in Japan whereas the aid facilities members were believing the effect of foreign aid. After the ministry of foreign affairs in Japan, the experience of working in Thailand caused the author to prove the effect of foreign aid in Thailand.

For proving the effect quantitatively, data restriction includes the big problem. In Thailand most statistics has been used after the 1997 financial crisis, the way of proving is not so easy. In addition, the purpose is the effect in the whole country, not each project partly because the purpose of this research is the proof of foreign aid in the country level.

This chapter focuses on the effect of foreign aid in Thailand from the following three points. First part is the relationship between foreign aid and economic growth. Considering the most of foreign aid toward Thailand is constructing the social infrastructure, productivity approach is adequate for measuring the effect toward the whole country. The research result shows that foreign aid to Thailand

contributes to the economic growth in Thailand at a certain level. Second part is the mechanism of the effect of foreign aid toward the Thai economy, which includes the vanguard effect, sectoral approach and direct effect. The research results conclude that the main reason of the effect of foreign aid is caused by increasing the productivity mainly in manufacturing sector. Third part is the effect toward the fiscal condition called by fungibility and exchange rate as Dutch disease effect. The recipient country may use other way by saved money if foreign aid is increased, which is called as the fungibility. In addition, aid inflow may cause the appreciation of the local currency as experienced in Netherland in the 1960s due to increasing the oil export. Previous research shows both effects are not seen in Thailand.

2. Previous Literatures

2.1 Relationship between foreign aid and economic growth

This sub-section is dividing into the effect of foreign aid to the economic growth and the productivity of social infrastructure since the research is mixing the third generation model of measuring the effect of foreign aid and the productivity model.

First part is the previous literature of the relationship between the foreign aid and the economic growth. From the macroeconomic point of view, the way of measuring effect is divided into four generations (Arndt et al., 2016; Nowak-Lehmann and Gross, 2021). The first generation examines the relationship between domestic savings to finance investment and foreign aid as a complement to savings (Hansen and Tarp 2000). The second generation is an aid-investment link using the Harrod-Domar model. Constant investment and productivity of capital determine economic growth. In this model, all savings and aid are used to finance investment. However, previous studies show that a substantial portion of the aid is consumed rather than invested (Hansen and Tarp, 2000; Nowak-Lehmann et al., 2012). The third generation is that the aggregate effect of aid directly impacts per capita income or economic growth using the Solow growth model. The results of the aid effectiveness are divided into positive and negative (Burnside and Dollar, 2000; Easterly et al., 2004). The fourth generation pursues the effectiveness of the different types of aid (Rajan and Subramanian, 2008).

Second part is the effect of the social infrastructure. Productivity approach is mainly used to measure the efficiency of social infrastructure. In the U.S., Aschauer (1989) estimated the productivity of the public social infrastructure in the U.S. since such infrastructure was too old to use due to the constructed during the 1960s. In Japan, this approach was popular since the social infrastructure in the rural area was considered to be inefficient at the beginning of the 1990s. Miyagawa et al. (2013) revised this approach since Japan also has the problem of deteriorate social infrastructure in the 2010s.

2.2 source of the extending the economic growth

Second, This sub-section is divided into three parts: the vanguard effect, sectoral approach and direct effect.

First, vanguard effect is that foreign aid leads to foreign direct investment. from the regional studies, Kimura and Todo (2010) examined foreign aid as a vanguard using the gravity model in the

East Asia region and found positive results.

Second, sectoral approach is used. Relative to this concept, a "macro-micro problem" exists. Although foreign aid has an impact on the recipient, it is difficult to measure the impact on the entire country, even when a huge amount of money is distributed. This was introduced by Mosley (1987) and extended by Arndt et al. (2010). Still, it is difficult to extend further, partly due to data restrictions in areas such as cities or provinces, and partly due to other effects such as spillover effects. In this regard, the effect of foreign aid appears relatively easier to grasp for each industry in a country because acquiring whole-country industrial data is easier than acquiring semi-macro data. Selaya and Thiele (2010) examined the relationship between foreign aid and sectoral growth using panel data from Burnside and Dollar (2000) and showed that foreign aid has an impact on secondary and tertiary industries.

Third, direct effect and indirect effect toward the poverty reduction as another methodology of seeing the effect of foreign aid. The assumption is that the effect of foreign aid to the poverty reduction is divided into two parts: direct effect and indirect effect through the increasing the income. This idea was shown by Mosley et al. (2004) and Alvi and Senbeta (2012) extended this methodology.

2.3 effect toward the fiscal and exchange rate

One of the conditions to ensure the effect of foreign aid is used efficiently. In this regard, the problem of fungibility is known. In addition, foreign aid as a huge amount of capital inflow increasing the real effective exchange rate will offset the effect due to diminishing the manufacturing industry. This sub-section deals with the following two categories.

First, fungibility is a problem to offset the effect of foreign aid due to increase mainly the governmental consumption expenditure when a recipient country receives foreign aid. It means that the recipient country uses foreign aid as a substitute of investment by the country. The example of the fungibility is shown in Nurkse (1953), which describes that the recipient country constructed the Opera house by saved money when the donor country gave the power plant. From the theoretical point of view, Fiscal Response Model (FRMs) we developed and Franco-Rodriguez et al. (1998) completed. The difficulty of the FRMs model is that the shock to affect the fiscal condition must be known beforehand. In this point, it is better to estimate the relationship between the fiscal data and the foreign aid and to check the background especially this relationship was changed since this approach does not need to know the effect beforehand. This approach is described in Morrissey et al. (2007) more in detail. African countries are known to see the relationship between foreign aid and governmental consumption expenditure (Aiyar and Rutbah 2008, Martins 2010). The example is shown in Osei et al. (2005) by using Ghana data.

Second, Dutch disease effect may occur due to the inflow of the foreign aid. Dutch disease effect itself is the phenomenon seen in the 1960s Netherland, which extended the oil export found in Northern sea caused the appreciation of the national currency and manufacturing industry was weakened. Fielding and Gibson (2013) shows the Dutch disease effect by using African countries from 1970 to

2000. In contrast, Fielding (2010) shows that the Dutch disease effect does not seen in Southern Pacific island countries regardless of the aid inflow will cause the exchange rate.

3. Research Results 1: foreign aid and economic growth

3.1 Relationship between foreign aid and economic growth

Sakurai (2021a) studied the relationship between aid and economic growth in Thailand using the third generation model and also found a positive relationship for the following two ways.

First is using the whole country data of Thailand. Estimation period is used from 1971 to 2013 by Thai governmental data. Considering the capital accumulation and most constituted by social infrastructure, foreign aid is accumulated. Using the Cobb-Douglas function, foreign aid is estimated positively effective. In contrast, public expenditure is not estimated effectively partly because it is used in the rural area.

Second way is constructing the area panel data. Since Thai government does not make capital accumulation in each province, capital accumulation is divided into four area: north, northeast, central, and south. Although central area has been divided after the 1980s due to the development, four area is defined by the natural characteristics. Foreign aid is used the Yen loan from Japan and divided by the evaluation report. Panel data is made from 1985 to 2014. This estimation is partly estimated effectively and this result is to be seen more carefully.

Similar methodology is used to foreign aid in Vietnam. In Sakurai (2020), the effect of foreign aid in the whole country from 1994 to 2017 and the effect of yen loan from Japan in 34 provinces out of 63 from 2001 to 2016 are estimated. Both ways does not have any relationships with foreign aid and economic growth partly because foreign aid in Vietnam was concentrated in a shorter time compared with Thailand.

From these estimations, foreign aid in Thailand has contributions to the economic growth in Thailand.

3.2 source of extending the economic growth

3.2.1 vanguard effect

Sakurai (2023b) estimates vanguard effect in Thailand by using the following two ways. First is the relationship between foreign aid and investment from 1075 to 2020 adding to trade, savings, and growth. The estimated results shows that OLS is positively effective whereas VAR model is ineffective. From the result, it is inferred that foreign aid has positive relationship with the investment relatively long term. Second way is estimating the relationship between foreign aid and foreign direct investment by using the VAR model, Granger causality from 1970 to 2020, which is positively estimated in effective. Seeing from these results, it is inferred that foreign aid in Thailand was set with foreign direct investment.

In contrast, Sakurai (2023a) estimates the relationship between the total factor productivity (TFP) and foreign aid in Thailand directly, and showed that ineffectively estimated, which means that

introducing only foreign aid does not contribute to the productivity.

Together with results of Sakurai (2023a) and Sakurai (2023b), it is inferred that foreign aid in Thailand is one of the opportunities to invite the foreign direct investment although foreign aid itself is not directly promote the economic growth.

3.2.2 aid and sectoral growth

If vanguard effect of foreign aid works, the contribution of foreign aid will be mainly weighted on the manufacture industry. Sakurai (2024a) examined the effect of foreign aid on sectoral growth in Thailand from 1960 to 2021 following Selaya and Thiele (2010) to show the effect of foreign aid in Thailand. The estimation way is seeing the relationship with foreign aid and each industrial GDP. Research result shows that foreign aid and second industry as well as foreign aid and tertiary industry is positively estimated whereas foreign aid and primary industry is ineffectively estimated. This is consistent with previous studies.

3.2.3 foreign aid and poverty reduction

Inferring from the former results, poverty reduction is caused mainly by increased income due to inviting foreign companies as foreign direct investment. From that reason, foreign aid itself does not have necessarily direct effect to the poverty reduction. Instead, foreign aid to Thailand has indirect effect by way of inviting foreign direct investment to reduce poverty. Sakurai (2024b) estimated the poverty ratio and foreign direct investment from 1961 to 2022 and insignificantly estimated.

3.3 effect toward the fiscal and exchange rate

3.3.1 fungibility

Sakurai (2021b) estimated the fungibility for the following three ways. First, the relationship between foreign aid and fiscal conditions including domestic borrowings, governmental revenue, and governmental expenditure and using the VAR model and the Granger causality tests from 1961 to 2014. The result shows that the increasing foreign aid causes the decreasing domestic borrowings. Second, governmental expenditure in the fiscal condition is divided into governmental consumption expenditure and governmental capital expenditure, and estimated by using the VAR model and the Granger causality tests. The result shows that the increasing foreign aid will cause the decreased domestic borrowings. Third, the no effect was seen if the estimation period is limited to the 1960s and the 1970s.

From these estimations, the effect of foreign aid toward the fiscal condition in Thai government is seen to reduce the domestic borrowings. Previous literature also shows that the foreign aid is easily effective to the domestic borrowings whereas effect to the governmental expenditure is more difficult to see since expenditure is affected by political situation. In addition, the relationship between foreign aid and governmental revenue is difficult to see the relationship both theoretical and empirical approach.

3.3.2 Dutch disease effect

Sakurai (2017) estimated the relationship among foreign aid inflow, real effective exchange rate, and manufacturing GDP ratio from 1972 to 2014 by using VAR model, the Granger causality test, and the impulse response test. Result showed that the aid inflow does not occur the local currency (Thai

baht) appreciation. Rather, strengthened manufacturing sector was causing Thai baht appreciation. In this regard, Dutch disease effect by aid inflow does not occur: rather normal appreciation by strengthened manufacturing occurred.

In addition, Sakurai (2022) shows that foreign aid to Vietnam does not cause the Dutch disease, either. Together of the research result of Fielding (2010) in the research of the Southern and small islands, it looks to have an effective way not to cause the local currency appreciation.

4. Conclusion

This chapter focuses on the effect of foreign aid in Thailand from the following three points: the relationship between foreign aid and economic growth, the mechanism of this relationship, and the effect toward the fiscal and exchange rate.

Research results are summarized as follows. First, foreign aid in Thailand contributes to the economic growth in Thailand at a certain extent. Second, the mechanism of contributing to the economic growth is mainly by the developing and extending the second and third industry including foreign direct investment. Third, foreign aid will help toimprove the fiscal condition mainly by decreasing the domestic borrowings without causing the Dutch disease effect.

In conclusion, foreign aid to Thailand has been well organized so far. It is considered that foreign aid together with the foreign direct investment has contributed to the macroeconomic growth through the industrial sector. National income has been increased by increasing number of employees in the second and the third industrial sector. The inflow of foreign aid has not been worsened the fiscal deficit, and has not caused the currency appreciation. Through this history Japan and Thailand has a strong relationship. Now nearly 7,000 Japanese companies are located in Thailand and nearly 100,000 Japanese are living in Thailand.

Research results shown in this chapter infer the following two points. First point is the possibility to extend the similar method for developing to other countries. Second point is that this approach is still effective even after the COVID-19 period. In this regard, it is still useful for continuing this research topic.

Finally, remained problems are summarized as follows. First, after COVID-19, this relationship has been changed as long as seeing the business sentiment among Japanese companies. Sakurai (2024c) denotes the lowered business companies partly explained by GDP in Thailand in the short term, and trend showed by dummy variable was decreased during the COVID-19 period. Recovering and connecting the new relationship between Thailand and Japan is desired. Second, Thailand is still located in upper middle income countries in the country classification by the World Bank. As a result, still income disparity is relatively large under the insufficient pension system compared with developed countries. Although it looks technologies owned by their own from given by others for becoming the developed countries, the research is still under discussion.