



DISAGGREGATED CAPITAL FLOWS AND
ECONOMIC GROWTH: EMPIRICAL
EVIDENCES

BY

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ABSTRACT

The main objective of this study is to examine the impacts of disaggregated capital flows, namely foreign direct investment (FDI) and equity foreign portfolio investment (EFPI) on economic growth in ASEAN-5 countries (Indonesia, Malaysia, Philippines, Singapore and Thailand), using panel data from the period 1987 to 2008. The purpose behind this study is to investigate whether financial development is the absorptive capacity that helps the host country to capture the capital inflows in order to harness real economic growth. The study also attempted to investigate how these two different types of flows (FDI & EFPI) have different impacts on economic growth of the ASEAN-5 countries. This study employs pooled OLS and fixed effects regression estimators. Overall, the empirical results suggest that FDI or EFPI alone has statistical insignificant impact on economic growth in ASEAN-5 countries. However, lagged FDI or lagged EFPI alone which is estimated together with lagged FDI or lagged EFPI based on interaction term- e.g. financial development-, respectively, has negative impact on economic growth. On the other hand, lagged FDI or lagged EFPI with interaction term- financial development- have a positive relationship with economic growth. Consequently, financial development is the key and important variable that helps the ASEAN-5 countries capture absorptive capacity to harness real economic growth. In addition, there is no much difference between the impact of FDI and EFPI on Economic growth. As result, the finding of this study will help policy makers to design elements for more stable and sociable global regulatory infrastructure, and also formulate policies in the liberalized world economy.

خلاصة البحث

الهدف الرئيسي من هذه الدراسة هو فحص آثار تدفقات رؤوس الأموال الأجنبية المصنفة، خاصة الإستثمار الأجنبي المباشر و الإستثمار في حوافظ الأسهم الأجنبية على النمو الإقتصادي في بلدان اسيان الخمسة (أندونيسيا، ماليزيا، الفلبين، سنغافورة و تايلاند)، باستخدام لوحة البيانات في الفترة ما بين 1987 إلى 2008. الهدف من وراء هذه الدراسة هو اختبار ما إذا كانت التنمية المالية هي القدرة الإستيعابية التي تساعد البلد المضيف على جذب رؤوس الأموال من أجل تحقيق النمو الإقتصادي الحقيقي. حاولت الدراسة أيضا التحقق في التأثيرات المختلفة لهذين النوعين المختلفين من التدفقات المالية (الإستثمار الأجنبي المباشر و الإستثمار في حوافظ الأسهم الأجنبية) على النمو الإقتصادي لبلدان اسيان الخمسة. توظف هذه الدراسة تقنية الإعتيادية المربع الأقل المجمعة و مقدرات الانحدار ثابتة الآثار. عموما، فإن النتائج التجريبية تشير إلى أن الإستثمار الأجنبي المباشر أو الإستثمار في حوافظ الأسهم الأجنبية كل على حدة ليس لهما تأثير إحصائي على النمو الإقتصادي في بلدان اسيان الخمسة. ومع ذلك، فإن الإستثمار الأجنبي المباشر البطيء أو الإستثمار في حوافظ الأسهم الأجنبية البطيء وحده، و الذي يقدر جنبا إلى جنب مع الإستثمار الأجنبي المباشر البطيء أو الإستثمار في حوافظ الأسهم الأجنبية البطيء على التوالي على أساس شرط التفاعل على سبيل المثال التنمية المالية، له تأثير سلبي على النمو الإقتصادي. من جهة أخرى، الإستثمار الأجنبي المباشر البطيء أو الإستثمار في حوافظ الأسهم الأجنبية البطيء مع شرط التفاعل أي التنمية المالية، له علاقة إيجابية مع النمو الإقتصادي. بناء على ذلك، فإن التنمية المالية هي المتغير الرئيسي والمهم الذي يساعد دول اسيان الخمسة على جذب القدرة الاستيعابية لتحقيق النمو الإقتصادي الحقيقي. بالإضافة إلى ذلك، ليس هناك فرق كبير بين تأثير الإستثمار الأجنبي المباشر و الإستثمار في حوافظ الأسهم الأجنبية على النمو الإقتصادي. ونتيجة لذلك، فإن نتائج هذه الدراسة ستساعد صانعي السياسات و القرارات على تصميم عناصر لبنية تحتية تنظيمية عالمية أكثر استقرارا و تأنسا، و أيضا إلى صياغة السياسات في اقتصاد عالمي متحرر.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it confirms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Economics.

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Foreign direct investment is “the investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor’s purpose being to have an effective voice in the management of the enterprise, (International Monetary Fund, 1977). There are two primary components of foreign investments which are portfolio investment and direct investment. Portfolio investment is the purchase of stocks and bonds in the markets with the main goal of obtaining the return from the funds that have been invested, whereas direct investment is an investment that gives the right to investors to control and participate in management of the firm in addition to search for better return in funds invested. However, it might be difficult to distinguish the need of management control between portfolio and direct investments. This might be because it is always not clear at what point of management control that the investors assume to have. In general, the investors expect to have participation in their investment based on the size and nature of their investment (Coyne 1995).

In 1980s, with the increasing commercial bank lending to the developing countries, most countries started to remove the restrictions on foreign investments, especially in the form of foreign direct investment (FDI) and many countries offered tax incentives and subsidies in order to attract foreign capital flows (Carkovic and Livine, 2002). The main reason that many countries, mainly in Asia, have been trying to attract foreign capital is their belief that foreign capital would bring the external

advantages like technological transfers which would benefit the economy as a whole (Carkovic and Levine, 2002). In other words, the rationale behind attracting more FDI in developing countries came from the belief that FDI has positive impacts on productivity, technology transfers, introduction of new processes, managerial skills, and know-how in domestic market, employee training, international production networks, and access to markets (Cave, 1996). Moreover, it was believed that if foreign firms bring in new products into domestic markets, the domestic firms may exploit the benefits through technology diffusion. This transmission will transfer the knowledge from foreign to domestic firms. Therefore, foreign investment can play an important role in domestic economy thereby accelerating growth in the economy (Grossman and Helpman, 1991, 1995; Barro and Sala-i-Martin, 1995, 1997).

Subsequently, in 1990s, the situation changed noticeably; when the developing countries not only allowed foreign investment in the form of FDI, but also in the form of foreign portfolio investment. In other words, most of the countries became more opened to international investments. Hence, a greater amount of foreign capital flowed into developing countries, especially in Asia and Latin America as they removed the restrictions of capital account. However, theory provides conflicting predictions on the effects of foreign capital flows on the economic growth. For example, Roff (1999) suggests that it would be better for the economy if the country can change their funding structure, from debt to equity. Moreover, Bekaert and Harvey (1998) suggest that private equity flows have a positive direct effect on macroeconomic performance in emerging markets. On the other hand, conventional wisdom suggests that FDI is the most favorable form of foreign investment because the FDI flows tend to be more stable compared to the other alternatives, and also less sensitive to the global economy shocks (Lipsey, 1999). Conversely, Borensztein *et al.*, (1998) and Carkovic and

Levine (2002) find little support that FDI has positive effects on economic growth. Moreover, Brecher and Diaz-Alejandro, (1977), Brecher (1983), Boyd and Smith (1999) propose that FDI may hurt resource allocation and slow economic growth. Even though there are lot of empirical studies that have been done, the studies do not imply that FDI per se promote economic growth. For example, de Mello (1999) suggests that several factors can influence the 'absorptive capacity' of the host countries to harness successfully FDI toward sustained expansion. Other studies identify other conditional factors including the initial level of development- with respect to income and/or education or follow complementary trade practices, (Blomstrom *et al.*, 1992), existing human capital development, (Borensztein *et al.*, 1998), and trade policy (Balasubramanyam *et al.*, 1996). Moreover, Alfaro *et al.*, (2004) also argue that FDI will play an important role in promoting economic growth only in the country with well-developed financial markets. Similarly, the FDI will promote economic growth only under certain circumstances such as national income, school attainment, domestic financial development, and openness to international trade (Carkovic and Levine, 2002).

Yet, Rajan and Zingales (1998) also find that the country which has good financial development will reduce the cost of external finance to the firm, thereby it encourages economic growth. In addition, Boyd and Smith (1992) show that in the international financial integration (IFI) countries with weak institutions and policies may induce capital outflows from capital scare-countries to capital abundant-countries with better institutions. Soto (2000) finds that there are huge benefits from foreign direct investment and portfolio equity flows. In contrast, bank inflows may have damaging effects in countries with fragile financial system. Similarly, Soto (2000) suggests that developing countries should encourage all forms of capital inflows, on

the condition that their banking systems are well-capitalized and supervised. In case this condition is not achieved, the bank inflow may have negative effects on growth.

Besides, there are also a number of debates on capital mobility or international financial integration. The debates are about how to solidify the global financial architecture- the financial policy mix in emerging market and also how developing countries can benefit from financial integration. Among others, Blanchard and Fisher (1989) and Obstfeld and Rogoff (1994) show that one of the most straightforward benefits of capital market integration is the possibility of separating saving and investment decisions. This theory suggests that the countries can eliminate the saving restriction and provide benefits to domestic financing investment by borrowing abroad in order to achieve higher utility levels. Moreover, one of the rationales behind financial integration is the concept of risk sharing. Obstfeld (1994) develops a model in which international financial integration can lead to higher growth rate in a single good and frictionless world.

Regarding the financial integration, the literature has also stressed on the role of “international knowledge flows”. For example, Grossman and Helpman (1991) note that the countries may increase country’s growth rate by having interrelation with foreign countries, by this means acquiring a great body of knowledge perhaps in terms of FDI as well.

Therefore, this study raises this void in order to examine whether foreign capital flows, namely FDI and equity foreign portfolio investment (EFPI) have positive impact on economic growth, to investigate whether capital flows will promote economic growth when the country has well-developed financial systems and to discover the different impacts of FDI and EFPI on economic growth of the country.

1.2 PROBLEM STATEMENT/ THEORY

Based on the above background the main focus of this paper is to determine the effects of capital inflows on economic growth in ASEAN-5 countries: Indonesia, Malaysia, Philippines, Singapore, and Thailand, in the period of 1987 to 2008. There is a familiar question among the researchers in the field of financial economics that has always been asked; Are foreign capital flows associated with faster economic growth? There are some empirical studies that have been done on this issue, but most of the studies still face some problems in term of growth estimations. A potential growth estimation problem is simultaneous bias; there are very few studies that have fully controlled simultaneity bias as well as countries specific effects, and the routine use of lagged independent variable in growth regression. In this regard, Carkovic and Levine (2002) also argue that previous studies, which investigate the benefits of FDI on economic growth, have not fully taken the endogeneity problem into account. Thus, they conclude that the countries with a good economic performance tend to attract more FDI. However, if the endogeneity problem is not taken into account, it is unclear whether FDI drive economic growth, or vice versa.

Moreover, there are lots of studies that have been done on the determinants of a country's growth rate. However, there are very few studies have explored the impact of various types of capital inflows on economic growth, especially in term of the absorptive capacity of the flows. One possible explanation of having little empirical studies on this field is that massive capital inflows to developing countries are a relatively new phenomenon which began at the end of 1980s. The main focus of the researchers, like Borenzstein, De Gregorio and Lee (1998) is on the effects of foreign direct investment on economic growth. Nevertheless, there is very little evidence concerning portfolio and other types of flows. In other words, there is only little

econometric evidence that addresses the real effects of foreign direct investment (FDI) and equity foreign portfolio investment (EFPI) (Fischer, 1999), even after financial crises in emerging markets and substantial increases in these cross-border flows during 1990s.

In addition, most of the studies examine the effects of capital flows on economic growth, but there were no studies discussing the different impacts among different types of foreign capital flows. Furthermore, many empirical works have been done, however, most of them investigate the impact of capital flows in the form of FDI only or capital flows in aggregate on growth, except Durham (2004) and de Vita and Kyaw (2009). Durham (2004) examines the effects of foreign direct investment (FDI) and equity foreign portfolio investment (EFPI) on economic growth, but not in ASEAN-5 countries. de Vita and Kyaw (2009) investigate the impact of foreign direct investment (FDI) and portfolio investment flows on economic growth of low-, lower middle- and upper middle-income countries.

1.3 OBJECTIVE OF THE STUDY

This research examines the effects of foreign capital flows on economic growth in ASEAN-5 countries by using panel estimator (pooled OLS and fixed effects estimator) through 1987 to 2008 and provides a more accurate analysis on the subject assuming that, perhaps deeper, financial systems more effectively absorb capital inflows such as EFPI, and even FDI, especially if these flows are in fact fungible. It also attempts to conduct a more specific study on different impacts between these two different types of foreign capital flows.

Consequently, this study consists of three main specific objectives as follows;

1. To examine the impacts of two capital inflows (FDI & EFPI) on economic growth by using pooled OLS and fixed effects panel estimator.
2. To test the hypothesis whether financial development is the absorptive capacity of foreign capital flows in accelerating growth or otherwise.
3. To investigate how these two different types of capital flows (FDI & EFPI) have different impacts on economic growth of the countries.

1.4 SIGNIFICANCE OF THE STUDY

Most of previous studies focus on the effects of FDI which is a long-term investment on economic growth, whereas very few studies pay attention to other types of foreign capital flows such as equity foreign portfolio investment (EFPI) which is short term investment, especially in ASEAN countries. Hence, this study attempts to fill this gap by examining the effects of two types of capital flows which are FDI and EFPI on economic growth, using new yearly panel data set for ASEAN-5 countries (Indonesia, Malaysia, Philippines, Singapore, and Thailand) with observations covering the period between 1987 to 2008 by means of pooled OLS and fixed effects panel estimators.

Moreover, based on the assumption which states that the more developed the financial systems are, the more effective they will be in absorbing foreign capital inflows; mainly EFPI and FDI, consideration of the initial financial depth might help explain possibly divergent outcomes across division of national income. In other words, in order to get the benefit from the foreign capital inflows, the countries must have well-developed financial systems or good absorptive capacity to harness flows and accelerate growth. Therefore, this research attempts to enrich the literature by further investigating the role of financial system when enforced with massive capital inflows.

In addition, it is noteworthy that nowadays almost all developing countries, especially Asian and African countries, are taking advantage from international funds, specifically FDI and FPI. Nevertheless, no studies have been done in terms of comparison of the different impacts of FDI and EFPI on growth. Therefore, this study attempts to consider different impacts of different types of flows. Yet, this study will not contrast the types of flows to each others. It is believed that both have their own advantages that can benefit to the host country economies.

1.5 SCOPE AND LIMITATION

The main concern of this research is to determine the impact of capital inflows into ASEAN-5 countries without deeply studying its effect on growth as a representative of whole world economy. In this regard, the limitation of this study is that it uses only five East Asian countries as a sample which is very specific and small sample size. Therefore, the result from this study may not be applicable/ or able to apply to other countries because the data set that has been chosen in the study are very specific, and narrow. This is because the result will not represent the effects of capital on economic growth for the whole developing countries. In other words, different countries may have different capability in absorbing the benefit of the flow and harnessing toward real expansion.

In addition, this study does not discuss the effects of free foreign capital flows on the host country economic crisis that a number of authors have been pointing out. A number of academics have argued that free(er) mobility of private capital during the 1990s was behind the succession of crises the emerging markets experienced during that decade (Edwards, 2001). Moreover, many global-skeptics have argued that there is no evidence supporting the view that a higher degree of capital mobility has a

positive impact on economic growth in emerging economies (Rodrik, 1998). Calvo (1998), the banks which have poor regulations will intermediate the capital inflows in an inefficient or even in corrupt way that probably leads the countries to face problems like financial crises. In contrast, during first half of 1990s, the capital flows increased into emerging markets steadily which helped stock markets in these markets generate significant booms cycle. However, this phenomenon led to the appreciation of these countries' currencies which would reduce the country's competitiveness in exports. This may eventually cause the countries to face an external crisis (Calvo, Leiderman, and Reinhart, 1993). Paul Krugman pointed out that crisis is usually followed by two-way of capital flows; on the one hand, short-term portfolio ("hot") capital flows out, and on the other, FDI flows in, when the foreign investors only try to take advantage of new opportunities to buy local firms. However, all these effects of the crisis on the economy are beyond the scope of this study. Therefore, this study is not going to discuss on several field issues. Yet, it may be able to further the discussion in the future studies.

1.6 ORGANIZATION OF THE STUDY

The remaining of this study is organized as follows:

Chapter II reviews key literature on growth and foreign capital flows. This chapter is divided into two components. First, it explains and discusses theoretical background on growth, foreign direct investment and portfolio foreign investment flows, and absorptive capacity theory. Second, it reviews both theoretical and empirical literatures, on the issue of international financial integration and foreign capital inflows, with special emphasis on the effects of foreign direct investment and equity foreign portfolio investment inflows on growth.

Chapter III presents an overview of the East Asian and ASEAN-5 economies (Indonesia, Malaysia, Philippines, Singapore, and Thailand), the conduct of foreign capital inflows as well as the growth rate in these regions. This chapter emphasizes on the evolution of foreign capital inflows that have significant effects on the growth in these five countries.

Chapter IV is dedicated to elaborating the econometric method in the estimation of the study, using new statistical techniques which are called the pooled OLS and cross-section fixed effects estimator developed for panel data in order to derive consistent and efficient estimates of the impact of capital inflows on economic growth.

Chapter V presents the empirical results of the panel estimators and discusses them in details to conclude whether foreign capital flows (FDI and EFPI) in ASEAN-5 countries accelerate economic growth.

Chapter VI is remarkable conclusion of the study which presents a summary of the research and its implication to the relevant policy recommendations and also suggestions for further research in this area.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

A lot of studies exist in the literatures regarding the effects of foreign capital flows on economic growth. Majority of these studies however provides conflicting result in this area. As such, this issue has degenerated into hot debate among the researchers. This chapter discusses the literature on macroeconomics background in general and economic growth in particular with much emphasizes on foreign capital flows in the form of foreign direct investment (FDI) and equity foreign portfolio investment (EFPI), and absorptive capacity. In addition to this, several studies on capital flows and economic growth have been reviewed in this chapter. This chapter is divided into two sections. Firstly, it explains and discusses the theoretical frameworks of macroeconomics, economic growth, capital flows and absorptive capacity. This section consists of four parts; firstly, macroeconomic theory which is one of the important theoretical backgrounds of studying economic growth is discussed. Secondly, the section also discusses economic growth. Though, economic growth can be approached from demand side and production side, this research emphasize more on demand side. The output in this research is mainly *gross domestic product*, GDP. GDP has been defined as the value of all final goods and services produced in the country within a given period (Dornbusch, Fischer, and Startz, 2004). Thirdly, the study reviews the theory of capital flows and economic growth which is the most related area to this study. There are many theories that can be referred to analyses the linkages between capital flows and economic growth. However, the most famous

theory applicable for investigating the relation between foreign capital flows and economic growth in developing countries is the orthodox paradigm or modernization theory. This theory is capable of making standard estimation possible. Lastly, this section ends up by analyzing the theoretical framework and reviewing the theory of absorptive capacity. Next, second section of this chapter will deal with the reviews of various empirical literatures about different types of capital flow, economic growth, financial liberalization, and absorptive capacity with special emphasize on foreign direct investment and equity foreign portfolio investment.

2.2 THEORITICAL FRAMEWORK

2.2.1 Macroeconomics

Macroeconomics is a field of the economic subject that is concerned about the behavior of economy as a whole, among which include, the economy's total output of goods and services, the growth of output, the rate of inflation and employment, balance of payments, exchange rate, and with expansion and recessions. It also encompasses business cycle that includes long-run growth and short-run fluctuation (Dornbusch, Fischer, and Startz, 2004).

National Income Accounting

There are two main reasons of studying national income accounting. Firstly, the national income accountings provide the formal structure for macroeconomic theory models which divide output into production side and demand side. On the production side, output is paid out in the form of wage for labor, and interest and dividends for capital. Moreover, labor and capital are part of inputs that is transformed by production of the economy into output (i.e. GDP). These are otherwise referred to as

factors of production. The payments that are given to these factors are called factor payments. On the demand side, output is consumed and invested for the future. These two sides of accountings are necessary to be balanced. Besides, looking at the real output, the effect of inflation must be put into consideration. Secondly, studying national income accounting involves learning a few ballpark numbers that help to characterize the economy in order to link the theory to the real world. In addition to this, this research takes national income as proxy to GDP. Thus, the study refers to national income and GDP as income or output interchangeably.

2.2.2 Outlay and Components of Demand

This study mainly focuses on economic growth or GDP growth. As such, the study will stress more on the demand side (Dornbusch, Fischer, and Startz, 2004). The aggregate demand for domestically produced goods and services consist of four components which are; household consumption spending (C), investment spending by household and business (I), government purchase of goods and services (G), and foreign demand for our net export (NX). These four categories certainly account for spending. The fundamental national income accounting identity can be calculated using the following formulae:

$$Y \equiv C + I + G + NX \quad (2.1)$$

Consumption (C)

In general, chief component of demand is consumption spending by household sector. Spending on anything from food to golf lessons are included in this component, however, this component also includes the consumer spending on durable goods such