

FDI ACTIVITIES AND INTEGRATION IN ASEAN AND EAST ASIA

**Shandre Mugan Thangavelu
Shujiro Urata
Dessie Tarko Ambaw**

JCI-JSC Working Paper

JCI-JSC-WP-2020-02

FDI Activities and Integration in ASEAN and East Asia

JCI-JSC Working Paper
JCI-JSC-WP-2020-02

July 2020.

Primary Author(s)

Shandre Mugan Thangavelu, Shujiro Urata, and Dessie Tarko Ambaw.

Editors

Woo Wing Thye
Shandre Mugan Thangavelu

The JCI-JSC Working Paper series is published to disseminate preliminary research findings and stimulate intellectual discourse on wide-ranging public policy issues, ranging from security to sustainability. The views expressed herein are those of the author(s) and do not necessarily reflect the views of the Jeffrey Cheah Institute on Southeast Asia and the Jeffrey Sachs Center on Sustainable Development.

ISBN: TBC

© Sunway University Sdn Bhd

Published by Sunway University Sdn Bhd

No. 5 Jalan Universiti
Bandar Sunway 47500
Selangor Darul Ehsan.

In collaboration with Jeffrey Cheah Institute on Southeast Asia and Jeffrey Sachs Center on Sustainable Development.

Jeffrey Cheah Institute on Southeast Asia (JCI) is an independent public policy think-tank based at Sunway University on the outskirts of the Malaysian capital, Kuala Lumpur. The Institute's research programme is grouped around three core disciplines: economic development, governance, and social progress, including education. Its mission is to develop solutions to some of the region's most pressing development problems. JCI seeks to engage policymakers, scholars and ordinary citizens through regular public lectures and discussions, and to build lasting academic partnerships in the region and the wider Asia-Pacific.

Jeffrey Sachs Center on Sustainable Development (JSC) is a regional center of excellence that advances the achievement of the 17 Sustainable Development Goals (SDGs) in Malaysia and Southeast Asia, tackling the sustainability agenda through education, training, research and policy advisory. Launched in December 2016, the Center operates out of Sunway University and was borne out of a \$10 million gift from the Jeffrey Cheah Foundation (JCF) to the UN Sustainable Development Solutions Network (SDSN).

ABSTRACT

This paper examines the FDI activities and investment integration in Asia with a particular focus on ASEAN countries. It covers the FDI literature on linkages, spillovers, global value-chain, network economy, and impact on economic growth. The paper also discusses the institutional developments in investment policy in ASEAN in terms of the ASEAN Comprehensive Investment Area (ACIA) vis-à-vis the ASEAN Economic Community (AEC). The policy recommendations for further investment integration in the region is also discussed. ■

CONTENTS

1. Introduction.....	1
2. FDI Activities and Development.....	3
2.1. Advantages and Disadvantages of FDI Activities in Domestic Economy.....	3
2.2. Foreign direct investment and productivity.....	3
2.3. Foreign direct investment and spillovers to domestic firms.....	4
2.4. Linkages between Foreign and Domestic Firms.....	5
2.5. Foreign direct investment and export.....	6
3. Foreign direct investment, wages and jobs.....	7
4. Complex Networks and FDI Activities.....	8
5. FDI Activities in ASEAN and East Asia.....	9
5.1. Trends of FDI flows for the global and ASEAN economies.....	9
5.2. Types of FDI Activities in ASEAN.....	13
6. Investment Policy and Foreign Investment in ASEAN.....	15
7. Policy Discussions.....	17
Appendix.....	20
References.....	21
Authors.....	23

FDI ACTIVITIES AND INTEGRATION IN ASEAN AND EAST ASIA

1. Introduction

Over the past five decades, East Asia and particularly the member countries of Association of Southeast Asian Nations (ASEAN) have in fact relied heavily on multinational corporations (MNCs) to maintain their competitiveness and economic growth. Firstly, foreign direct investment (FDI) directly results in an injection of capital, new technologies, marketing techniques and management skills into the domestic economy, thus potentially raising its competitiveness and output growth. Secondly, FDI could potentially create positive externalities by raising the productivity levels of domestic firms. It is highly likely that the production activities of MNCs could have a significant impact on the operational structure of domestic industries.

FDI has played an instrumental role in the economic growth of ASEAN across time from the flying-geese model of dynamic comparative advantage to the recent development of the global value chain (GVC) integrating East Asia and ASEAN to the regional and global economy. To increase the integration with the regional and global economy, ASEAN takes an active role in developing key policies, both multilaterally and unilaterally, to integrate FDI and multinational activities in the domestic economy and the region. Given the benefits of FDI, ASEAN countries compete for foreign investments by providing tax incentives, subsidising the capital investments, provide extended periods of tax holidays, creating export-processing zones, science parks and liberalising the flow of capital into the domestic economy.

A deeper understanding between the diverse countries was forged and this led to the conclusion of the agreement to set up the ASEAN Free Trade Area (AFTA) in 1992. This agreement aimed to attract more intra- as well as extra-ASEAN FDI through active liberalisation of FDI restrictions within the ASEAN countries. By 1998, the ASEAN Investment Area (AIA) was formed and it is considered to be the most significant attempt by ASEAN at liberalising FDI restrictions in the region (Plummer 2009). The ASEAN Comprehensive Investment Agreement (ACIA) was adopted in 2009 to complement the ASEAN Economic Community (AEC) and it is built from the ASEAN Investment Area (AIA) and ASEAN Investment Guarantee Agreement (IGA).

For the past two decades, ASEAN has been undergoing an important period of regional economic integration. Through the formation of the ASEAN Economic Community (AEC) in 2015, ASEAN aims to achieve “a single market and production base”, a “highly competitive economic region”, a region with “equitable economic development” and one which is “fully integrated into the global economy.” ASEAN aims to build on past agreements such as the AFTA and AIA and work towards achieving a “free and open investment regime” in the AEC to further attract both intra- and extra-ASEAN FDI, with the adoption of ASEAN Comprehensive Investment Agreement (ASEAN 2010a).

Since the 1990s, we also observe the dramatic rise in FDI flows in ASEAN with an accompanied increase in the number and intensity of regional trade agreements (RTAs) in the region, many of which include key provisions for FDI.

In recent years, the share of global FDI inflows to ASEAN is showing a declining trend. ASEAN's share of global FDI inflows from 1980 to 2009 has dropped from a pre-Asian crisis peak of 8.8% in 1991 to only 3.3% in 2009. ASEAN's share since 2000 is also notably lower than in the 1980s.

This paper examines the development of FDI activities and policies in East Asia with a particular focus on ASEAN. The literature on FDI activities on the domestic economy in terms of spillovers, linkages, global value chain, global network economy, FDI policies and regional institutional development in investment in ASEAN is discussed. The paper also provides policy discussions and recommendations for further investment liberalisation in the region. ■

2. FDI ACTIVITIES AND DEVELOPMENT

2.1. Advantages and Disadvantages of FDI Activities in Domestic Economy

FDI has several potential economic and social benefits for host countries. For example, FDI helps to create high skilled and high paid jobs, increase the transfer of knowledge, enhance domestic productivity and diversify and upgrade the value added component of export goods and services (Echandi et al. 2015). All these potential benefits help to increase a country's ability to integrate more with the global value chains and generate the gains from it.

2.2. Foreign direct investment and productivity

FDI could have direct and indirect impact on the productivity of domestic firms if the necessary pre-conditions, such as domestic absorptive capacity, exist in the host economy. This sub-section examines the literature that studies the effect of foreign direct investment on increasing productivity in the host country. We review the literature on how foreign acquisition of domestic firms affects the productivity of such firms.

One of the earliest studies in this area was Conyon et al. (2002). This paper investigates the effect of foreign ownership of manufacturing firms in the United Kingdom on firm productivity and wages. Using a specially constructed database of ownership changes for the period 1989–1994, they find that foreign owned firms pay 3.4 percent more than domestic firms. In addition, the labour productivity of foreign acquired firms' increases by about 13 percent suggesting that foreign acquisition of firms improves both wages and productivity in a developed country context. Similarly, Harris and Robinson (2003) provide additional evidence on the role of foreign owned plants on firm productivity. By using UK manufacturing data from 1974-1995, they find that foreign owned firms are more productive than domestically owned firms.

Some of the studies also investigate specific sectors within the manufacturing industry of developed countries and investigate the effect of foreign acquisition on firm productivity which helps to provide more specific evidence on the benefit of foreign acquisition on firm productivity. For example, Girma and Görg (2007) explore the relationship between foreign ownership and productivity in the electronic and food industries in United Kingdom. Using a combined propensity score and difference-in-differences approach, they show that any positive impact of acquisition is mainly due to changes in technical efficiency. Furthermore, they highlight that the pre-acquisition productivity of the target firms plays a role in mediating the rate of technology transfer from the multinational firms.

There are also several empirical studies that analyse the causal impact of foreign ownership on firm productivity in developing countries. For example, Arnold and Javorcik (2009) examined the causal relationship between foreign ownership and different aspects of plant performance using micro data from the Indonesian Census of Manufacturing. The study highlights the effect of foreign ownership in the context of foreign acquisition and privatisation. To address endogeneity problem, they use a combination of propensity score matching and difference-in-differences estimation techniques and they find that foreign ownership considerably increases the productivity of acquired firms. The productivity improvement is shown to gradually increase following the acquisition year.

Besides the acquired firms, productivity increases and evidence of restructuring are also found in the context of foreign privatised firms.

Another similar paper in the context of export-oriented market economy is Arnold et al. (2011). This study examines the link between service sector reforms, namely, the presence of foreign providers, privatisation and the level of competition on the performance of manufacturing firms that rely on services inputs in Czech Republic. The reforms enhanced labor productivity by 43.6% and sales by 33%, after three years of the acquisition of the firms. The study also found a positive and statistically significant correlation between foreign acquisitions and downstream manufacturing firm productivity. As such, foreign entry into the service industry is used as the key channel through which services liberalisation helps to improve the performance of manufacturing sectors.

2.3. Foreign direct investment and spillovers to domestic firms

The impact of foreign direct investment on the knowledge spillover to domestic firms is studied extensively in the literature. The exhaustive empirical studies on the spillover effect of foreign direct investment can be categorised into three groups: (i) cross-country (e.g. Farole and Winkler (2014) and Alfaro and Chen (2013)); (ii) on individual developing country firms (such as Javorcik, 2004, Görg and Strobl, 2005, Fernandes and Paunov, 2012, Du, Harrison, and Jefferson, 2012, Javorcik and Li, 2013 and Kee, 2015); and (iii) on developed country specific firms (such as Javorcik and Spatareanu, 2009, Haskel, Pereira, and Slaughter, 2007, and Keller and Yeaple, 2009). The paper by Kiyota et. al (2008) carefully examines the determinants of the backward vertical linkages of Japanese foreign affiliates in manufacturing for the period 1994–2000 based on the local backward linkages and local procurement in the host country. Their study highlights that the unobserved affiliate-specific characteristics explain a large part of the variation in the backward linkages among foreign affiliates. Despite the differences in the magnitudes of the effects and the channels by which the effects are transmitted, most empirical studies show that foreign direct investment has a positive spillover effect on the productivity of host country firms.

On the cross-country empirical studies, Farole and Winkler (2014) uses a cross-section of more than 25,000 firms in low- and middle-income developing countries from the World Bank Enterprise Survey to examine the effect of foreign direct investment on the productivity spillover of domestic firms. The study considers three mediating factors of the foreign investors: (1) spillover potential from the foreign firm, (2) the domestic firm's absorptive capacity, and (3) a country's institutional framework. The study found evidence that all three forms of the foreign investors' mediating factors have a positive and statistically significant effect on the productivity of the host country firms. Similarly, Alfaro and Chen (2013) employs a rich firm-level panel dataset of 60 countries and find that market reallocation and knowledge spillover are major sources of productivity gain in the domestic country firms. Quantitatively, the study documents an increase in aggregate-weighted domestic firm productivity by about 1.6 percent within a six-year period. Both the theoretical model and the empirical results of the latter paper suggest that ignoring market reallocation leads to a strong bias in comprehending the effect of foreign direct investment on the spillover effect of domestic firm productivity.

Aside from the rich information exploited from a large cross-country study, one of the main limitations of the latter two studies is the issue of heterogeneity of firms in the study that would likely result in bias. Reaping the potential benefit of foreign direct investment requires an analytical framework that differentiates between each specific foreign direct investment in each particular country where institutional, political, and socio-economic environments are likely to be completely different (Echandi et al. 2015). To address such concerns, a large number of empirical works are conducted using firms at specific developed and developing countries.

The first influential empirical study on a developing country context is Javorcik (2004). Using unbalanced firm-level panel data from Lithuania covering the period 1996–2000, the study finds a positive productivity spillover effect from the foreign affiliates to their local suppliers in upstream

sectors—known as vertical spillover. However, the study indicates that significant spillovers are associated with projects that have a shared domestic and foreign ownership, but not with fully owned foreign investment projects. Following this seminal work, Görg and Strobl (2005) investigate whether productivity spillovers occur via the channel of worker mobility. To that end, they employ data that demonstrate whether or not the owner of the domestic firm has previous experience in a multinational and relate this information to firm productivity. The finding of the study suggests firms which are run by owners who worked for multinationals in the same industry immediately prior to opening up their own firm are more productive than other domestic firms.

More recently, Fernandes and Paunov (2012) examines the impact of large foreign direct investment inflows in producer service sectors on the total factor productivity of Chilean manufacturing firms. Using the fixed effect instrumental variable approach on 4,913 firms between 1992–2004, the study uncovers a positive and statistically significant productivity spillover effect on domestic firms from a forward linkage with the foreign owned firms. Besides fostering innovation activities, an average 7 percent causal effect increase is observed in the total factor productivity of Chilean manufacturing firms from the service FDI.

In addition, Du et al. (2012), and Javorcik and Li (2013) used Chinese and Romanian firm level data, respectively to examine the spillover effects. Du et al. (2012) shows a significant positive productivity spillovers effect through backward and forward linkages, but not through horizontal linkages. Similarly, Javorcik and Li (2013) find that a 10 percent increase in the number of foreign retail chain outlets raises total factor productivity of Romanian supplying industries by about 2.4- 2.6 percent. Kee (2015) also studies the effect of an increase in the sharing of suppliers by garment producers with foreign firms on the productivity growth of domestic garment firms in Bangladesh. On average, one-third of productivity growth in domestic garment firms and one-fourth in product scope is attributed to the increase in the sharing of suppliers by garment-producing foreign firms.

The next group of empirical studies use firm data from developed economies. For example, Javorcik and Spatareanu (2009) employ a unique dataset from the Czech Republic which contains information on actual relationships between suppliers and multinationals. The paper finds evidence consistent with the theory on both high productivity firms having a higher likelihood of supplying multinationals and suppliers learning from their relationships with multinationals. Using U.K. firm level data, Haskel, Pereira, and Slaughter (2007) provide evidence on the positive productivity spillover effect on domestic firms due to the presence of foreign affiliates in a developed country context. Keller and Yeaple (2009) also finds a substantially large positive effect of FDI spillover in the U.S. manufacturing sector. Particularly, the FDI spillover effect is strong in high-tech manufacturing sectors.

Several studies such as those in Havránek and Iršová (2011), Grima, Greenaway and Wakelin (2001), Gorg and Greenaway (2004), and Grima (2008) have also shown that many empirical studies had instead found non-significant positive spillovers or even negative effects of linkages. Hence, the authors emphasised that the presence and strength of the spillover effects are also dependent on domestic capacities and such control variables which are firm-, country- or industry-specific. A recent paper by Thangavelu and Narjoko (2014) also highlights the importance of skills development and human capital accumulation as a necessary condition for domestic linkages and spillovers from multinational activities.

2.4. Linkages between Foreign and Domestic Firms

Production linkages are important conduits for the positive impact and spillovers of multinational activities in the domestic economy. MNCs and foreign affiliates typically have more advanced technology and better distributional networks, which create a potential for productivity spillovers on domestic firms when different production linkages are formed with their foreign counter-part (Girma, Gorg and Pisu, 2008).

Production linkages, particularly the Horizontal linkages have been widely researched on and positive productivity spillovers through such intra-industry relationship can occur through 4 channels – (a) competition effects, (b) demonstration effects, (b) labour mobility and (b) exports (Crespo and Fontoura, 2007).

Competitive effects highlight the entry of foreign firms into the domestic market as a form of competition with the domestic firms. As a result, domestic firms are incentivised to enhance productivity through better utilisation of resources and usage of more advanced technology, thereby creating positive competition effects. However, as Aitken and Harrison (1999) suggests, domestic firms' market share can also be eroded by the entry of large foreign firms, especially when there is imperfect competition in the product market. Consequently, the competition effects become negative as firms either function with less efficiency due to higher average operating costs or exit the market.

The demonstration effects occur when domestic firms adopt advanced technology or imitate better practices used by foreign firms, which subsequently improved their productivity. Similarly, domestic firms may also tap on the knowledge and expertise of workers previously employed by MNCs to improve their productivity. Görg and Strobl (2005) found higher productivity of firms for owners who had worked in an MNC prior to starting their firms compared to their counterparts without MNC experience. But as Meyer and Sinani (2009) highlights, such labor mobility can be limited if foreign firms offer higher wages and attract skilled labor from domestic firms. In such cases, the entry of foreign firms may further drain the level of human capital in local companies. Lastly, the presence of MNCs and foreign affiliates can provide distributional networks and relevant knowledge which facilitate export performance.

2.5. Foreign direct investment and export

In recent years, the export sector is serving as a way to move out from poverty and underdevelopment in several least-developed countries. However, raising export volume and diversifying export products are still key challenges for a number of LDCs. Some recent studies suggest that foreign direct investment may help to address the latter challenge. Using Chinese data from 1997-2003, Swenson (2008) shows that presence of multinational firms largely increases the formation of new export destinations by local Chinese firms. The study shows that information spillover is the main channel to foster the export connection shown by local Chinese firms. Chen and Swenson (2014) exploit information on the product, geographic and trader characteristics of Chinese export to investigate how the presence of multinationals affect the quality, frequency and survival of new exports by Chinese local firms. Controlling for selection bias, they find that the presence of multinational firms is associated with more frequent, higher-valued, and longer-lasting new export transactions. Using data from 40 countries, Freund and Pierola (2016) also find that export growth and export diversification are strongly associated with the presence of foreign multinational companies as they address financial constraints by providing foreign capital. ■

3. FOREIGN DIRECT INVESTMENT, WAGES AND JOBS

The other potential benefit of foreign direct investment is providing better jobs with higher wage payments. A number of empirical studies have been carried out to examine the link between foreign direct investment and wages in both developing and developed country contexts. Even though the studies agree on the positive role of foreign investment on increasing wage payments, they differ on the explanations for why multinational companies pay higher wages compared to their domestic counterparts. Here, we review selected empirical papers that mainly focus on providing brief explanations for the domestic-foreign company wage gap.

Lipsey and Sjöholm (2004), Almeida (2007) and Heyman et al. (2007) use Indonesian, Portugal and Sweden firm data to examine the effect of foreign ownership on wage. They all find a large wage increase (from 2.2 up to 5 percent). Lipsey and Sjöholm (2004) highlight that foreign firms generally pay higher wages relative to local firms. This may be due to several factors: (i) host-country regulations, (ii) workers preference to locally-owned firms, (iii) or may be lack of knowledge about the local labour market by foreign employers. Almeida (2007), on the other hand, argues that the significant difference in wages is due to the fact that foreign firms “cherry pick” domestic firms that have a more educated workforce during acquisition, and hence pay higher wages for a given workforce quality.

Hijzen et al. (2013) employs firm level data from three developed (Germany, Portugal, UK) and two emerging economies (Brazil, Indonesia). They document that the effect of foreign ownership on the wage gap is larger in the case of emerging countries. They conclude that the positive effect of foreign ownership on the wage gap is not primarily driven by its impact on incumbent wages, but by its impact on the creation of high-wage jobs. Another strand of the literature analyses the effect of foreign ownership on the spillover effect of the wage rate of employees in the domestic firms. For example, Poole (2013) presents evidence which shows positive multinational wage spill overs through worker mobility in Brazil. The study shows how wages increase when workers leave multinationals and are rehired at domestic establishments. ■

4. COMPLEX NETWORKS AND FDI ACTIVITIES

There is a relatively new and growing body of literature that focuses on studying the interplay of complex networks and foreign direct activities in the host country. The literature, in particular, studies the nature and role of the two forms of FDI (i.e. horizontal and vertical FDI) on domestic firms and plants. Horizontal FDI eliminates trade costs by setting up production facilities in overseas markets, rather than exporting goods from the home country. In contrast, multinational firms carry out vertical FDI in order to exploit low-cost and abundant production factors in the host country. In this section, we review this new literature that exclusively emphasises on East Asian countries.

Hayakawa and Matsuura (2011) investigates the validity of the mechanics of complex vertical foreign direct investment (C-VFDI) in Japanese machinery FDI to East Asian countries by estimating a multiple-spatial lag model that allows control of spatial spillovers. The study does not find a robust and statistically significant relationship between geographical affiliates, thereby suggesting production activities are not strongly related among distinct geographical locations. However, they uncover a statistically significant positive relationship in wage differentials among those activities in only high-productivity firms.

Hayakawa et al. (2013) also studies the two-dimensional changes in firm behaviour and performance right before and after a foreign direct investment (FDI). The first dimension of change is the difference between horizontal and vertical FDI. The second dimension is the effect of outward FDI on firms' production and non-production activities in the home country. Using the propensity score estimation approach, their careful empirical analysis shows that the effect of outward FDI differs by FDI type and firms' production and non-production activities. They provide evidence that while horizontal FDI raises demand for non-production workers, vertical FDI increases demand for skilled production workers.

The literature explores theoretically and empirically the relative importance of the motive for engaging horizontal FDI and vertical FDI (Baldwin and Okubo, 2014; Kiyota et. al., 2008). Baldwin and Okubo (2014) for example, introduces a novel way of measuring motives in Japanese affiliates by assigning a degree of vertical-ness and a degree of horizontal-ness to each affiliate. The findings of the study can be broadly divided into three groups. Firstly, they find a vast heterogeneity in the internationalisation strategies of Japanese multinational firms. The strategies differ across regions and sectors. Secondly, North American affiliates are more horizontal than those multinational affiliates in Asia and Europe. Thirdly, in most sectors and countries, affiliates were more vertical between 1996 and 2005.

Rather than firm level data, some studies utilise plant level data to analyse the effect of vertical and horizontal FDI on domestic firms. Focusing on East Asian FDI, Hayakawa et al. (2016) shows that horizontal FDI does not have a statistically significant positive effect on home productivity in plants that have the same activities abroad. In contrast, vertical FDI has a positive and statistically significant effect on the productivity of plants with an input-output relationship where the activities are relocated from abroad. Such empirical studies with a context of more detailed plant level data helps to provide more robust evidence on the effect of different forms of FDI on the performance of host country firms. ■

5. FDI ACTIVITIES IN ASEAN AND EAST ASIA

5.1. Trends of FDI flows for the global and ASEAN economies

Figure (1) illustrates the time series regional plots of foreign direct investment. As seen for the line graphs, there are significant fluctuations in the FDI flows of global and developed economies. Although, we observe unprecedented growth of FDI flows for the global and the developed economies during 1990-2000, the FDI trends sharply declined following the 2001/2002 dotcom bubble burst. In addition, despite the sharp rise in FDI after 2003, FDI flows considerably declined due to the 2007/08 great financial crisis (GFC) for the two groups of countries. The overall trend of FDI flow for global and the developed economies remain almost stable after 2009.

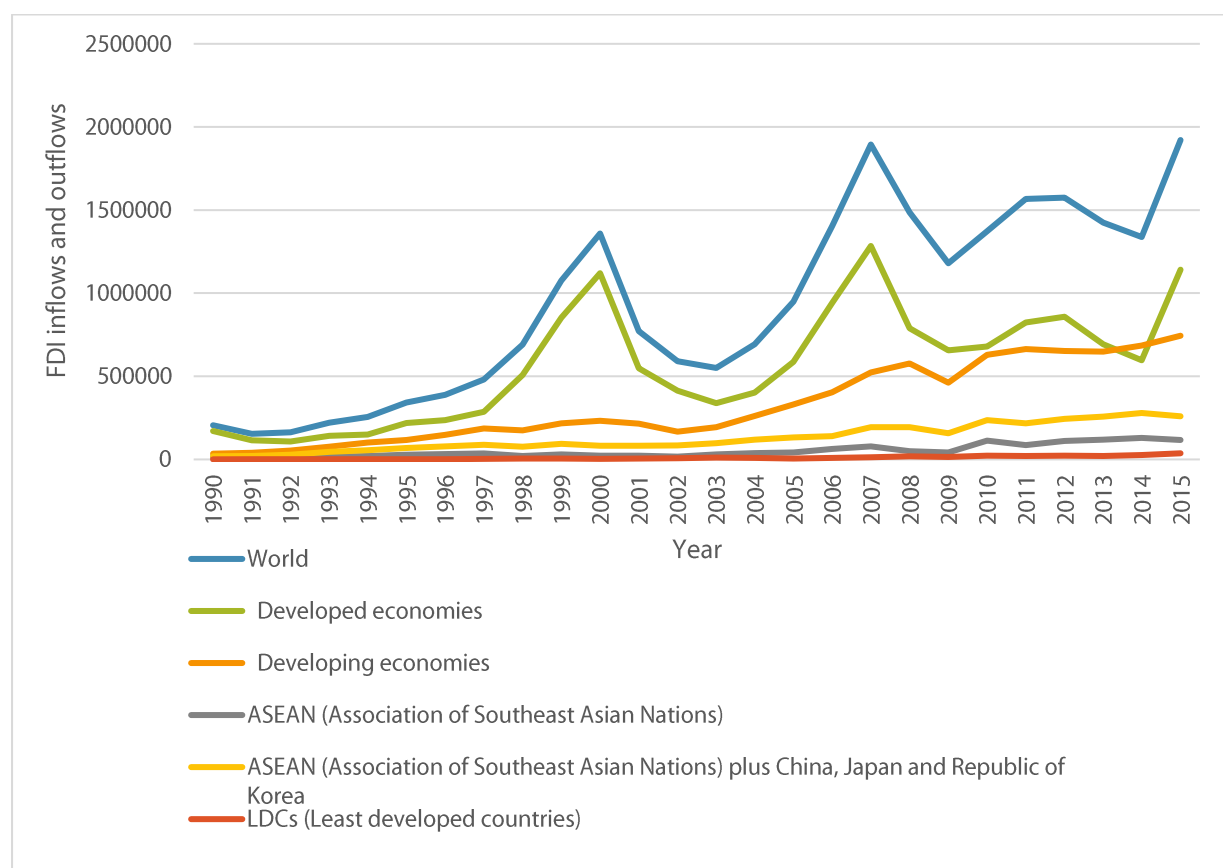


Figure 1: Annual Foreign Direct Investment Flows (Inflows + Outflows) (in Million US dollars)

Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).

Figure (1) denotes the FDI flows of ASEAN and ASEAN+3 (ASEAN plus China, Japan and South Korea) countries (shown by the dark violet and the light blue line plots respectively). The plots indicate an overall stable growth of foreign direct investment flow in the ASEAN and ASEAN+3 countries. The only exception is the large slump in FDI flow during the GFC period that affected all countries including the ASEAN countries. Although the FDI flow of ASEAN and ASEAN+3 is significantly larger than the FDI flow of least developing countries, it lags significantly far behind the FDI flow of developed economies.

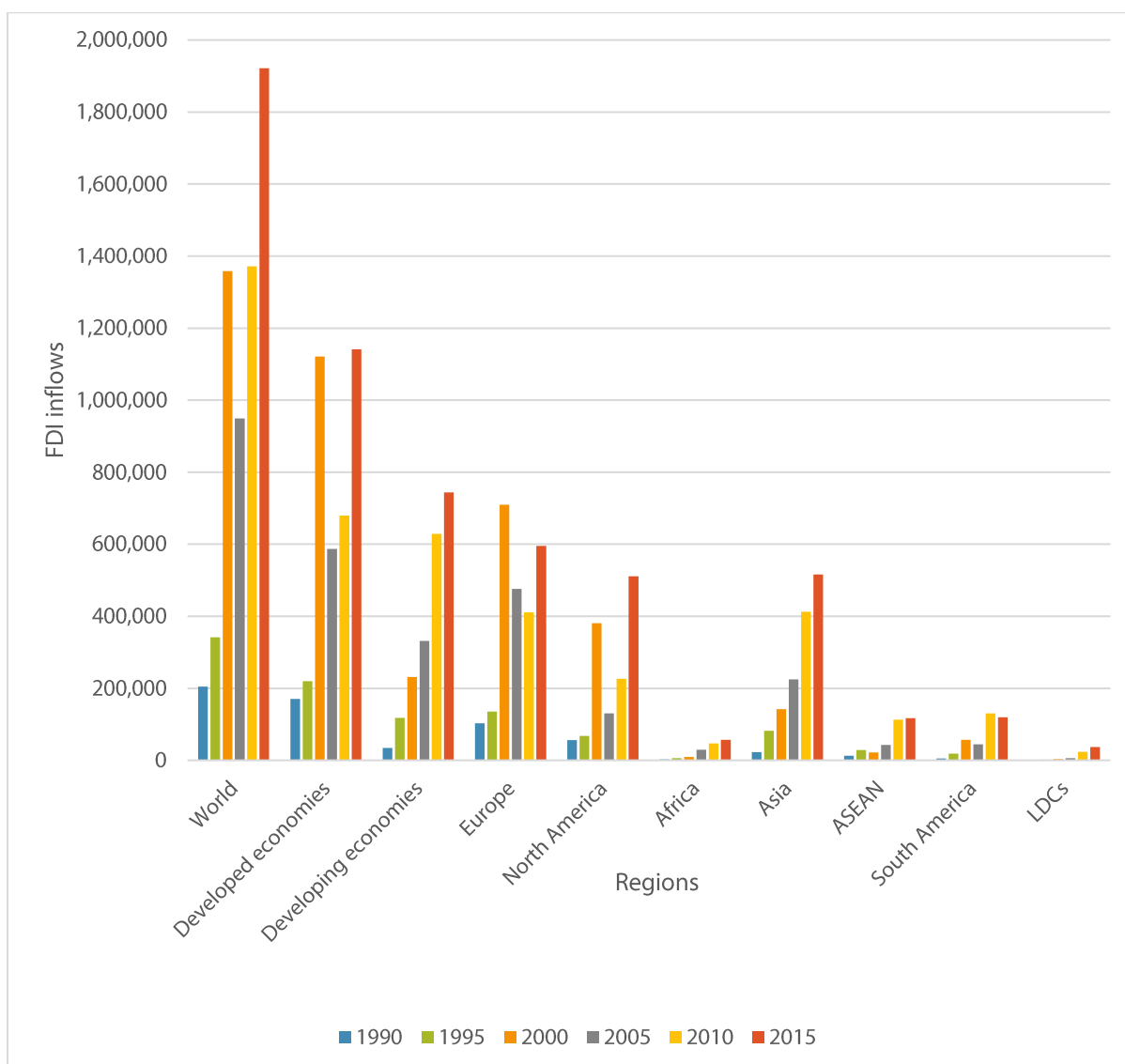


Figure 2: FDI Inflows by Region and Economy (in Million US Dollars)

Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).

Figure (2) reports the FDI inflows from the perspective of different regions and economies. As the graph indicates, FDI inflows show a minor decline in 2005 for the whole world, including developed economies, Europe, North America and South America. However, FDI flows substantially increase during the sample period for developing economies, Africa, Asia, ASEAN and LDCs. Moreover, a closer inspection of the FDI inflow of the ASEAN economy shows that the overall trend of FDI inflows did not show substantive change between 2010 and 2015 hence implying the need to conduct investment reforms for foreigners and build supportive domestic policy environments that help to attract more FDI inflows to these countries.

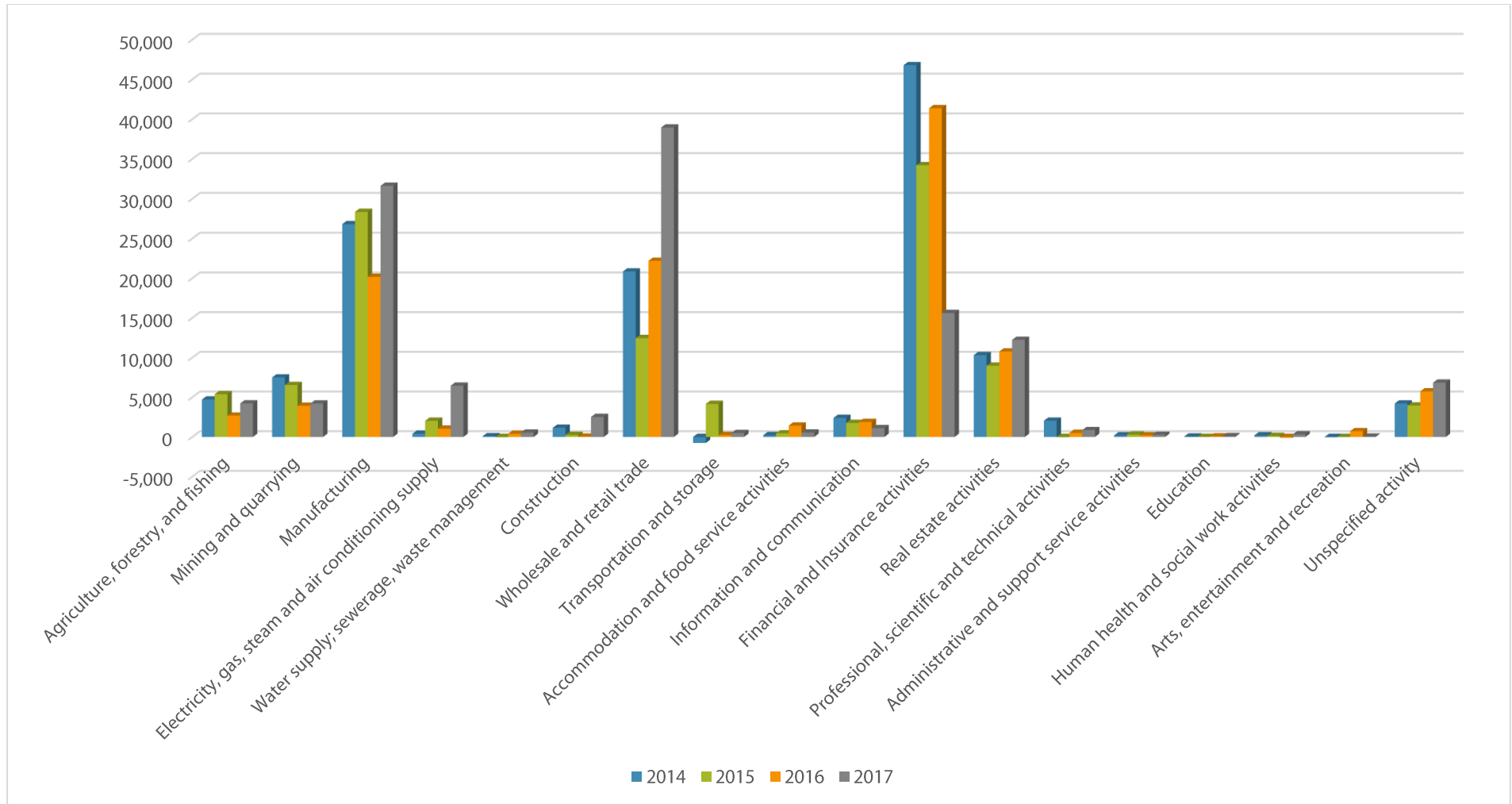


Figure 3: FDI inflows in ASEAN, by selected industries and economies, 2014-2017 (Millions of US dollars)

Source: ASEAN Secretariat

Figure (3) presents the sectoral FDI inflows for ASEAN countries from 2014 to 2017. The figure shows the rising share of FDI into services: the largest FDI recipient sector in ASEAN countries is the services sector followed by the industrial and primary sectors. More specifically, the three sub-sectors that receive biggest FDI are financial and insurance activities, wholesale and retail trades, and manufacturing activities. Despite the fact that it receives the largest FDI share in the region, the amount of FDI in financial and insurance activities have been significantly declining over the sample period. On the contrary, the FDI share of the wholesale and retail trades, and the manufacturing sub-sectors show encouraging growth in this period. Within the primary sector, mining & quarrying received the largest foreign direct investment followed by the agriculture, forestry & fishing sub-sectors.¹

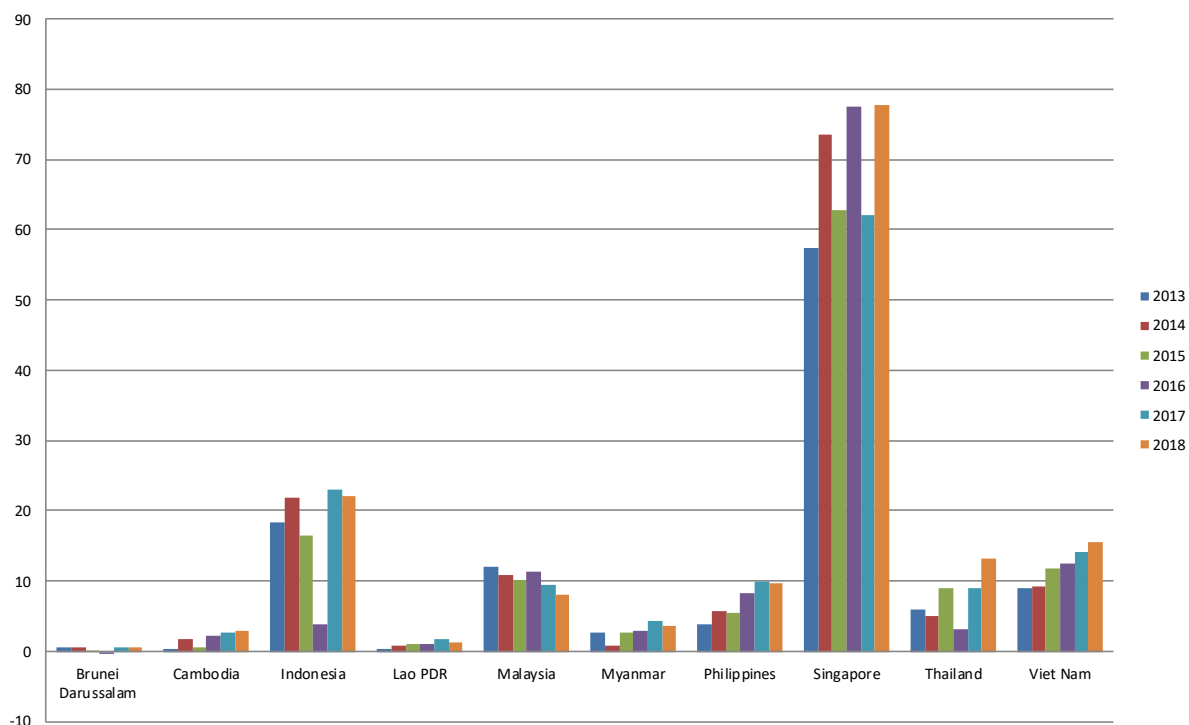


Figure 4: FDI Inflows to ASEAN Member States (\$billions)

Source: ASEAN Secretariat

The major host countries for FDI inflows in ASEAN are Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam (see Figure 4). Across ASEAN member states, Singapore is by far the largest recipient of FDI inflows followed by Indonesia and Vietnam in 2017 and 2018 respectively.

Figure 5 shows the source countries of FDI inflows into ASEAN. The major investors in ASEAN are China, the European Union, Japan, Korea and the United States. We do observe a rising trend in investments from the EU, Japan and China. There has been significant decline in United States investment in ASEAN. We also observe intra-FDI inflows within ASEAN and this accounts for around 15 percent of total investment in 2018. Most of the intra-ASEAN FDI flows are driven by Singapore, with nearly 80 percent of total intra-ASEAN FDI in 2018.

¹ Table 2 in the appendix provides the detailed the FDI inflows in ASEAN countries, by selected industries and economies, from 2014 to 2017 in Millions of US dollars.

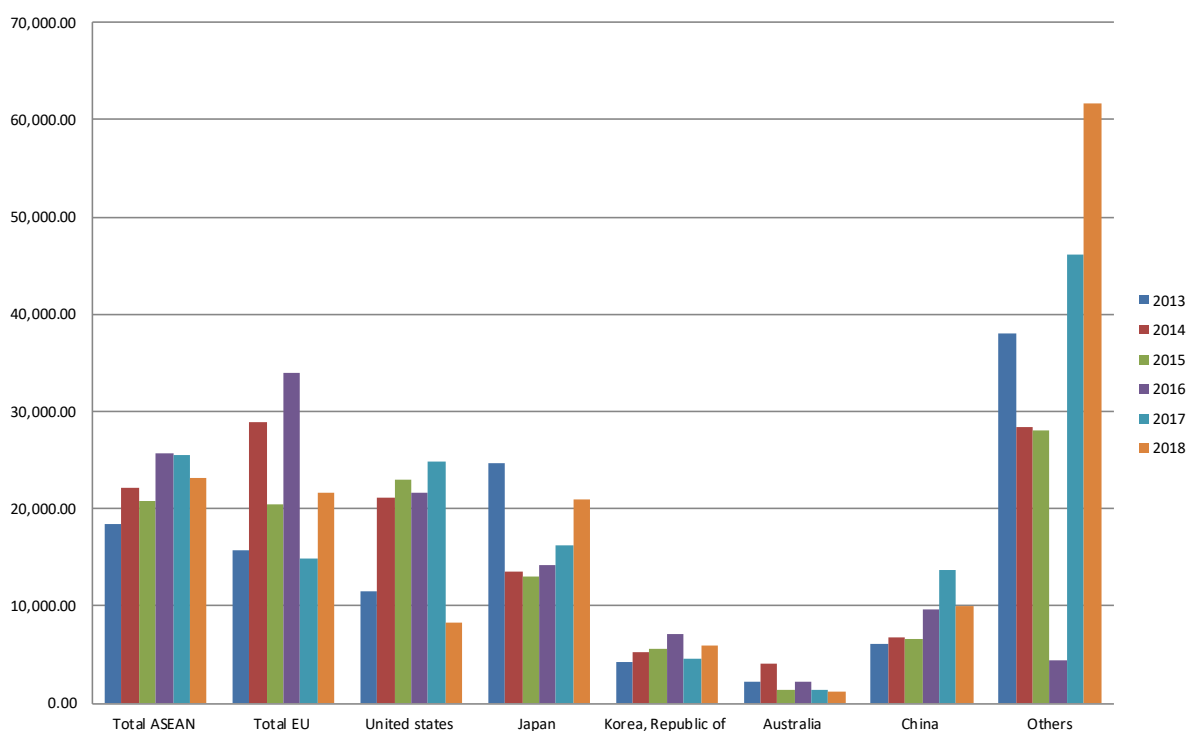


Figure 5: FDI Inflows by Source Countries (\$millions)

Source: ASEAN Secretariat

5.2. Types of FDI Activities in ASEAN

Types of FDI activities can be classified into (1) resource seeking, (2) market seeking, (3) efficiency seeking, and (4) strategic asset seeking. Although all four motives of FDI are present in the ASEAN countries, the distribution of each types of investment may not be uniform to each country. We examine the types of FDI activities in ASEAN.

The resource seeking FDI: Several MNCs invest in ASEAN countries to exploit cheap resources in the latter countries. The ASEAN Investment Report (2016) highlights that resource seeking investment in natural gas, mining and agriculture is the most common form of investment in ASEAN resource rich countries. For example, Myanmar, Indonesia and Viet Nam were the major ASEAN host countries for Korean resource seeking FDI in 2015. Moreover, oil and gas companies such as BG Group and BP from United Kingdom, Shell from Netherlands and Total from France are significantly investing in ASEAN countries in order to utilise natural resources (ASEAN Investment Report, 2017).

The efficiency seeking FDI: This motive of MNCs is primarily driven by cheap factor prices in ASEAN host countries. For example, labour cost (wage rate) tends to be relatively cheaper in ASEAN countries such as Vietnam, Indonesia and the Philippines due to their large population size. As such, MNCs from developed countries locate their production arms in these countries to exploit the skilled labor and the relatively lower labor cost. For example, European carmakers such as Audi, BMW, Volkswagen, Robert Bosch and Mainetti are actively operating in Indonesia, Thailand, Malaysia and Vietnam for the US and European markets (ASEAN Investment Report, 2017). The study by Kiyota and Urata (2008) highlights the importance of Japanese efficiency seeking FDI in East Asia and ASEAN countries. This is very essential as efficiency seeking FDI provides several important advantages for resource-rich developing countries in general and for ASEAN countries in particular. First, it helps to raise domestic employment in the host countries that may not be potentially filled by domestic firms. Second, efficiency seeking FDI may increase domestic productivity. Third, it may

help to transfer technology from foreign owned firms to domestic firms through labor turnover (Kiyota and Urata, 2008; Javorcik and Spatareanu, 2009).

The market seeking FDI: This type of FDI is mainly determined by the availability of large market size, rapid economic growth, rapid increase in middle-income consumers and large improvement in infrastructure expenditure in the FDI host countries. Different MNCs, especially from the EU operate in ASEAN countries. For instance, Siemens from Germany and Alstom from France conduct different infrastructure projects such as rail upgrading and installing geothermal plants. In particular, Siemens operates in Indonesia, the Philippines, Malaysia, Singapore, Thailand and Vietnam for the purpose of accessing markets. In addition, large car manufacturers such as BMW have sales subsidiaries in Indonesia, Malaysia, the Philippines and Thailand to exploit the region's growing market (ASEAN Investment Report, 2017).

The strategic asset seeking FDI: According to ASEAN Investment Report (2017), advanced infrastructure and a strong knowledge economy are the central factors for strategic asset seeking FDI. Compared to the other nine countries, Singapore attracts the largest strategic asset seeking related FDI in ASEAN. Delphi's (United Kingdom) autonomous cars investment, GlaxoSmithKline's high-level pharmaceutical R&D projects and Dyson's (United Kingdom) \$561 million technology centre are some of the major strategic asset seeking FDI in Singapore. ■

6. INVESTMENT POLICY AND FOREIGN INVESTMENT IN ASEAN

Governments around the world have followed different investment policies that help attract FDI. Broadly, government incentives are grouped into locational and behavioural incentives. Locational incentives include corporate tax reduction, investment tax credits, tax holidays, export incentives, grants, customs duty exemptions and other efforts to attract higher investment. Behavioural incentives, which include subsidy for R&D, training, import subsidies of intermediate capital goods, IP (intellectual and property rights) protection, increase in foreign equity ownership, and regional investment facilitation help to transfer technology, increase job growth, increase export and skill development at both domestic and regional level. This section reviews selected recent literature on the effect of investment policy on FDI.

There is a clear regional framework for investment in ASEAN under the ASEAN Comprehensive Investment Agreement (ACIA). ASEAN Member States adopted the ACIA framework in 2009 and amended it in 2014 to complement the ASEAN Economic Community that was formed in 2015. ASEAN cooperation in investment is implemented by the ASEAN Investment Area (AIA) that was adopted in 1998 and the investment protection agreement under ASEAN Investment Guarantee Agreement (IGA). ACIA builds on both AIA and IGA to make ASEAN a globally competitive and forward-looking investment area.

Under ACIA, industries in manufacturing, agriculture, fishery, forestry and mining and quarrying sectors and services incidental to these sectors shall be open and national treatment be granted to investors. The exceptions are listed by ASEAN Member States in the Temporary Exclusion Lists (TEL) and Sensitive Lists (SL). The list in the TEL is periodically phased-out on agreed timelines. The list in the SL does not have a timeline for phasing-out but are reviewed periodically.

The key areas of focus by ACIA is given at Table 1. The focus areas are (a) investment protection, (b) facilitation and cooperation, (c) promotion and awareness, and (d) liberalisation.

It is important to highlight that merely focusing on quality of FDI rules does not necessarily indicate a more liberalised policy on foreign investment as these rules have to be implemented transparently and effectively. Further, effective implementation of the liberalised investment regime requires a regular monitoring, coordination and assessment mechanism to be established. ACIA provides the regional framework for transparent and effective coordination of FDI activities in the region. ■

Investment Protection	Actions
Provide enhanced protection to all investors and their investments to be covered under the comprehensive agreement.	<ol style="list-style-type: none"> 1. Investor-state dispute settlement mechanism 2. Transfer and repatriation of capital, profits, dividends, etc. 3. Transparent coverage on expropriation and compensation 4. Full protection and security 5. Treatment of compensation from losses resulting from strife
Facilitation and Cooperation	Actions
Transparent, consistence, predictable investment rules, regulation, policies and procedures	<ol style="list-style-type: none"> 1. Harmonise investment policies to achieve industrial complementation and economic integration 2. Streamline and simplify procedures for investment applications and procedures 3. Promote dissemination of investment information: rules, regulations, policies and procedures, including one-stop investment centres and investment promotion boards 4. Strengthen database on all forms of investment covering good and services to facilitate policy formation 5. Strengthen coordination among government ministries and agencies 6. Consultation with the private sector to facilitate investment 7. Identify and work towards areas of complementation of ASEAN-wide as well as bilateral economic integration
Promotion and Awareness	Actions
Promote ASEAN as an integrated investment area and production network.	<ol style="list-style-type: none"> 1. Create the necessary environment to promote all forms of investment and new growth areas into ASEAN 2. Promote intra-ASEAN investments, particularly investment from ASEAN-6 to CLMV 3. Promote the growth and development of SMEs to MNEs 4. Promote industrial complementation and production networks among MNCs in ASEAN 5. Promote joint investments that focus on regional clusters and production networks 6. Extend the benefits of ASEAN industrial cooperation initiatives to the AICO scheme to encourage regional clusters and production networks 7. Establishing an effective network of bilateral agreements on avoidance of double taxation among ASEAN countries
Liberalisation	Actions
Progressive liberalisation of AMS's investment regime to achieve free and open investment	<ol style="list-style-type: none"> 1. Extend non-discriminatory treatment, including national treatment and most-favoured nation treatment, to investors in ASEAN 2. Reduce and eliminate restrictions on entry to investment on priority integration sectors 3. Reduce and eliminate restrictive investment measures and other impediments including performance requirements

Table 1: ASEAN Comprehensive Investment Agreement (ACIA): Key Elements

Source: <https://cil.nus.edu.sg/wp-content/uploads/2014/03/Teaching-Material-Investment.pdf>

7. POLICY DISCUSSIONS

There are several FDI policies that are adopted regionally and also by ASEAN. The key objectives and actions undertaken by ASEAN is given in Table 1. However, several policy challenges still exist in ASEAN in investment promotion and moving the region to the next stage of development of growth.

Behind-Border-Issues are important to address the effectiveness of investment policies and incentives. The effectiveness of FDI and multinational activities is dependent on domestic absorptive capacity and also domestic rules and regulations. According to Echandi et al (2015), although investment incentives constitute 55 percent of liberalisation, promotion, and facilitation measures used by countries to attract FDI, their effectiveness tend to decrease by the unfavourable investment climate condition in the host country. For example, investment incentives in the form of tax holidays are less effective when there are unfavourable investment climates such as macroeconomic instability, poor infrastructure development and weak government and market institutions. Several empirical papers examine the effectiveness of investment incentives in the context of developed countries on attracting FDI. For instance, using a meta-analysis De Mooij and Ederveen (2008) demonstrates that a 1 percentage point increase in the tax rate decreases FDI by around 3.3 percent. Similarly, Desai, Foley and Hines (2002) shows that a 10 percent increase in corporate income tax rates reduces FDI by eleven American-owned foreign affiliates by about 5 percent. Thus, there is a need to review both the border and behind-border-issues in East Asia and ASEAN.

An effective investment promotion agency is essential to attract FDI. Increasingly, investment promotion agencies have to develop key platforms to coordinate activities in both manufacturing and services investment. This is one of the key agendas in ASEAN as investments in the services global value chain is increasing and the development of a network economy is important to integrate to the global economy.

ASEAN has adopted the investment single-windows that allows foreign investors to gather information on rules and regulations in the domestic and regional economies. The respective ASEAN Member States have developed key investment promotion and coordination statutory boards such as Economic Development Boards in Singapore and Malaysia that coordinate foreign investment in the domestic economy.

Investment promotion and coordinating agencies are critical for ASEAN LDCs where the development of key GVC activities is critical to move key industries into more value-added activities. Several recent studies have investigated the effectiveness of investment promotion agencies in boosting foreign investment. For example, Harding and Javorcik (2011a) employs data from 124 countries and demonstrates that the existence of an investment promotion agency is strongly correlated with larger FDI inflows. This is especially higher in the context of sectors that are more targeted by the investment agency and in developing countries where investment asymmetry and more red tape is prevalent. Hence, the provision of investment related information through investment promotion agencies helps to reduce information asymmetry thereby boosting FDI in developing countries.

Similarly, using the World Bank's Global Investment Promotion Benchmarking (GIPB) data of 156 countries, Harding and Javorcik (2011b) study the effect of the quality of investment promotion agencies on attracting FDI. Their study reveals that countries with more professional investment

promotion agencies and high-quality websites tend to attract more FDI than others. More specifically, a 60-percentage point increase in GIPB score on average raises FDI by 25 percent.

Recently Gómez-Mera et al (2015) conducted a survey on 713 investors and potential investors from Brazil, India, South Africa and Republic of Korea. The study shows that around 70 percent of investors rely on investment promotion agencies to decide on investments. The services provided by investment promotion agencies are more helpful for smaller firms since getting investment related information is costly. However, the study reveals that investment promotion agencies have played a limited role for investors in developing countries.

Liberalisation of Services and development of services GVC is very critical for ASEAN and East Asia. A recent study by Thangavelu, Wang and Oum (2018) highlight the servicification of manufacturing activities in ASEAN and also the importance of service activities in the global value-chain. However, there is lack of services liberalisation and a need to deepen the services liberalisation and investment in the region. Despite the large-scale economic liberalisation and globalisation efforts in several countries in the world, strong protectionist measures are still observed in the service sectors of many developing and developed countries. According to the World Economic Forum (2013), the two main rationales for such strong protectionist tendencies are maintaining national interests and strategically sensitive industries, particularly in-service sectors. UNCTAD (2014) also highlighted that from 2000-2013 the share of FDI restrictions and excessive regulation in policy to regulate FDI has increased from 6% to 27%. The study indicates that almost half of these FDI barriers are imposed on service related sectors. Many countries also follow sophisticated FDI protection techniques such as introducing and raising local content requirements.

Both cross-country and country level analysis confirm the adverse effect of entry barriers on FDI and trade in services. Barattieri, Borchert and Mattoo (2016) explore the effect of policy and economic structure in influencing international mergers and acquisitions (M&A) in the service sectors. The study uses bilateral sectoral M&A flow data and detailed information on policy barriers from a new source. They find that restrictive investment policies significantly reduce the probability of M&A inflows. Another study by Arnold et al (2015) on services liberalisation finds that banking, telecommunications, insurance and transport reforms have a significantly positive effect on the productivity of manufacturing firms.

It is important to manage the political and economic risk in the domestic economy from external shocks. The major concern regarding investment decisions by foreign firms is economic shocks and the ensuing policy response of the host country. According to the World Bank Group's Multilateral Investment Guarantee Agency (2014) report, political risk is the main obstacle for foreign investment. Several econometric evidences also show the effectiveness of international investment agreements (IIAs) such as bilateral investment treaties (BITs) and regional trade agreements (RTAs) on attracting foreign direct investment (Sauvant and Sach, 2009).

The key to FDI and investment policy is to create the necessary and sufficient conditions for transfer of knowledge and technologies to domestic economy and firms. As discussed above, FDI has multiple benefits for host countries. An essential prerequisite to reap the benefits of FDI to host countries is to understand the transmission channels through which FDI is linked with domestic production. In this context, Farole and Winkler (2014) highlight that absorptive capacity and host country characteristics play the largest roles in determining FDI spillovers. By employing the data for more than 25,000 manufacturing firms, they find that market seeking foreign investment is more likely to develop linkages with suppliers and customers than efficiency and resource seeking FDI.

Sánchez et al (2015) shows that export-oriented FDI and foreign owned companies that depend on foreign technologies are less likely to develop links with domestic firms. Furthermore, their analysis

demonstrates that some sectors (such as food, wood, automobile, and auto-parts) are less likely to develop backward linkages than others (such as textiles and electronics). Besides the type of FDI and sector-specific characteristics, the size of the host economy also matters a lot. For example, foreign owned subsidiaries do not procure many service-oriented domestic inputs due to the absence of competent local suppliers that cannot provide sufficient and quality services.

Although export-oriented firms tend to create less linkages and technology spillover to domestic firms, recent studies suggest that higher participation in supply chains may lead to larger transmission of technical knowledge in host country firms (Piermartini and Rubínová, 2014). Higher participation in supply chains leads to higher transmission of technical knowledge through the channel of foreign R&D spending on patent applications in host countries. The positive effect tends to increase when the intensity of the link in the production network between the source and host countries increases.

The next stage of growth of East Asia and ASEAN is in the services GVC and the service linkages between services and manufacturing sectors. The liberalisation of trade and investment in the service industries will be critical to develop and create competitive activities in the GVC. The liberalisation of services and domestic capacity to absorb will be crucial for sustainable and inclusive growth from multinational activities in the domestic economy and the region.

The development of skills and human capital is a critical and necessary condition for attracting FDI and increasing the effectiveness of global value-chain. The returns from FDI inflows depend on the domestic absorptive capacity of the economy and region. The domestic economy must, in turn, align its infrastructure, human capital and technologies to provide MNCs with the necessary linkages to the global network and move up the value-chain seamlessly with them. If the domestic absorptive capacity can be better aligned to take advantage of the activities of the MNCs, FDI flowing into the region would likely have a greater impact on output growth through productive spillovers (Thangavelu and Narjoko, 2014). At a regional level, ASEAN could play a pivotal role in harmonising tariff and non-tariff measures within ASEAN and reducing the technical barriers to trade by harmonising technical standards across ASEAN countries. This is crucial for ASEAN integration and sustainable growth.

There is also a need to increase and improve intra-ASEAN investment in the region and deepen the integration of the East Asia and ASEAN. In a globalising world, which is driven by technological changes, it is essential for firms to move up the value chain to survive. Moreover, within a globally integrated production system which involves intra-firm division of labour, it is possible for any part of an enterprise to remain fully integrated in the same corporate network while being located abroad. MNCs will thus continue to look for investment opportunities in developing economies to enhance their access to markets and resources, and ultimately, their competitiveness. Improving and increasing intra-ASEAN FDI is important for ASEAN member states from several dimensions. Southeast Asia, in an era of globalisation, is a region which has to compete with other emerging markets, including Mercosur, “Greater China” and India. It therefore needs to stress its critical mass as a community of closely co-operating economies as opposed to a club of individual and individualistic nation states. This would make ASEAN more competitive and an attractive destination for foreign investments. Second, ASEAN is maturing and represents a growing market to which MNCs are responding, often by taking advantage of the regional division of labor. This is a natural process that should be encouraged. Lastly, as ASEAN’s homegrown MNCs mature, not only can they invest in other ASEAN countries, they can also become potential targets or partners for non-ASEAN MNCs or their subsidiaries to invest in the region. ■

APPENDIX

Sector / Year	2014	2015	2016	2017
Agriculture, forestry, and fishing	4,716.71	5,389.02	2,683.33	4,220.57
Mining and quarrying	7,491.95	6,542.01	3,921.40	4,209.00
Manufacturing	26,801.51	28,344.67	20,167.95	31,618.89
Electricity, gas, steam and air conditioning supply	406.34	2,039.92	1,047.34	6,453.12
Water supply; sewerage, waste management and remediation activities	89.32	-40.23	397.47	548.13
Construction	1,156.69	248.83	40.81	2,519.65
Wholesale and retail trade; repair of motor vehicles and motor cycles	20,846.12	12,456.79	22,188.93	38,950.71
Transportation and storage	-758.26	4,167.25	242.04	490.25
Accommodation and food service activities	229.64	449.12	1,431.16	549.97
Information and communication	2,396.29	1,763.55	1,888.02	1,107.40
Financial and Insurance activities	46,786.53	34,205.41	41,377.24	15,610.26
Real estate activities	10,308.47	8,977.94	10,768.83	12,233.91
Professional, scientific and technical activities	2,047.80	-36.20	515.95	859.08
Administrative and support service activities	200.58	298.23	209.90	269.86
Education	53.02	1.44	65.20	96.48
Human health and social work activities	206.34	127.00	-105.20	326.75
Arts, entertainment and recreation	-35.27	-14.86	727.20	41.33
Unspecified activity	4,215.22	3,961.84	5,736.93	6,837.02

Table 2: FDI inflows in ASEAN, by selected industries and economies, 2014-2017
(Millions of US dollars)

REFERENCES

- Aitken BJ, Harrison AE (1999) Do domestic firms benefit from direct foreign investment? Evidence from Venezuela. *Am Econ Rev* 89(3):605–618
- Alfaro, L. and Chen, M.X., 2013. *Market reallocation and knowledge spillover: The gains from multinational production*. Harvard Business School.
- Almeida, R., 2007. The labor market effects of foreign owned firms. *Journal of international Economics*, 72(1), pp.75-96.
- Arnold, J.M. and Javorcik, B.S., 2009. Gifted kids or pushy parents? Foreign direct investment and plant productivity in Indonesia. *Journal of International Economics*, 79(1), pp.42-53.
- Arnold, J.M., Javorcik, B.S. and Mattoo, A., 2011. Does services liberalization benefit manufacturing firms? Evidence from the Czech Republic. *Journal of International Economics*, 85(1), pp.136-146.
- Arnold, J. M., Javorcik, B., Lipscomb, M., & Mattoo, A. (2015). Services reform and manufacturing performance: Evidence from India. *The Economic Journal*, 126(590), 1-39.
- ASEAN Investment Report, 2016. Foreign Direct Investment and MSME Linkages. (Jakarta and Geneva: ASEAN Secretariat and UNCTAD).
- ASEAN Investment Report, 2017. Foreign Direct Investment and Economic Zones in ASEAN. United Nations Conference on Trade and Development.
- Baldwin, R. and Okubo, T., 2014. Networked FDI: Sales and sourcing patterns of Japanese foreign affiliates. *The World Economy*, 37(8), pp.1051-1080.
- Barattieri, A., Borchert, I., & Mattoo, A. (2016). Cross-border mergers and acquisitions in services: The role of policy and industrial structure. *Canadian Journal of Economics/Revue Canadienne d'économique*, 49(4), 1470-1501.
- Berger, A., Busse, M., Nunnenkamp, P., & Roy, M. (2013). Do trade and investment agreements lead to more FDI? Accounting for key provisions inside the black box. *International Economics and Economic Policy*, 10(2), 247-275.
- Colen, L., Persyn, D., & Guariso, A. (2014). What type of FDI is attracted by bilateral investment treaties?
- Conyon, M.J., Girma, S., Thompson, S. and Wright, P.W., 2002. The productivity and wage effects of foreign acquisition in the United Kingdom. *The Journal of Industrial Economics*, 50(1), pp.85-102.
- Crespo, N. and Maria P. Fontoura, 2007. "Determinant Factors of FDI Spillovers – What do we really know?", *World Development*, vol. 35 (3), 2007.
- Du, L., Harrison, A. and Jefferson, G.H., 2012. Testing for horizontal and vertical foreign investment spillovers in China, 1998–2007. *Journal of Asian Economics*, 23(3), pp.234-243.
- Echandi, R., Krajcovicova, J., & Qiang, C. Z. (2015). The impact of investment policy in a changing global economy: a review of the literature.
- Egger, P., & Merlo, V. (2012). BITs bite: An anatomy of the impact of bilateral investment treaties on multinational firms. *The Scandinavian Journal of Economics*, 114(4), 1240-1266.
- Farole, Thomas, and Deborah Winkler. 2012. "Foreign Firm Characteristics, Absorptive Capacity and the Institutional Framework: The Role of Mediating Factors for FDI Spillovers in Low- and Middle-Income Countries." Policy Research Working Paper 6265. World Bank, Washington, D.C.
- Farole, T. and Winkler, D., 2014. The Role of Mediating Factors for FDI Spillovers in Developing Countries: Evidence from a Global Dataset. *Making Foreign Direct Investment Work for Sub-Saharan Africa: Local Spillovers and Competitiveness in Global Value Chains*, pp.59-86.
- Freund, C. and Pierola, M.D., 2016. The Origins and Dynamics of Export Superstars.
- Fernandes, A.M. and Paunov, C., 2012. Foreign direct investment in services and manufacturing productivity: Evidence for Chile. *Journal of Development Economics*, 97(2), pp.305-321.
- Girma, S. and Görg, H., 2007. MULTINATIONALS' PRODUCTIVITY ADVANTAGE: SCALE OR TECHNOLOGY? *Economic Inquiry*, 45(2), pp.350-362.
- Girma, S., 2005. 'Absorptive capacity and productivity spillovers from FDI: a threshold regression analysis', *Oxford Bulletin of Economics and Statistics*, 67, 3 281-306.
- Girma, S., Greenaway and Wakelin, K., 2001. 'Who benefits from foreign direct investment in the UK?' *Scottish Journal of Political Economy*, 48, 19-33.
- Görg, Holger and David Greenaway (2004), "Much ado about nothing? Do domestic firms really benefit from foreign direct investment?", *World Bank Research Observer*, Vol. 19, pp. 171-197.
- Görg, H. and Strobl, E., 2005. Spillovers from foreign firms through worker mobility: An empirical investigation. *The Scandinavian journal of economics*, 107(4), pp.693-709.
- Grima, S., Holger Gorg, Mauro Pisu, 2008. "Exporting, Linkages and Productivity Spillovers from Foreign

- Direct Investment", *Canadian Journal of Economics*, vol. 41 (1), 2008.
- Havranek T, Irsova Z (2011) Estimating vertical spillovers from FDI: Why results vary and what the true effect is. *J Int Econ* 85(2):234–244
- Harris, R. and Robinson, C., 2003. Foreign ownership and productivity in the United Kingdom: estimates for UK manufacturing using the ARD. *Review of Industrial organization*, 22(3), pp.207-223.
- Haskel, J.E., Pereira, S.C. and Slaughter, M.J., 2007. Does inward foreign direct investment boost the productivity of domestic firms? *The review of economics and statistics*, 89(3), pp.482-496.
- Hayakawa, K. and Matsuura, T., 2011. Complex vertical FDI and firm heterogeneity: Evidence from East Asia. *Journal of the Japanese and International Economies*, 25(3), pp.273-289.
- Hayakawa, K., Matsuura, T., Motohashi, K. and Obashi, A., 2013. Two-dimensional analysis of the impact of outward FDI on performance at home: Evidence from Japanese manufacturing firms. *Japan and the World Economy*, 27, pp.25-33.
- Hayakawa, K., Matsuura, T. and Motohashi, K., 2016. How Does FDI Affect Productivity at Home? Evidence from a Plant-Level Analysis. *Journal of Industry, Competition and Trade*, 16(4), pp.403-422.
- Heyman, F., Sjöholm, F. and Tingvall, P.G., 2007. Is there really a foreign ownership wage premium? Evidence from matched employer–employee data. *Journal of International Economics*, 73(2), pp.355-376.
- Hijzen, A., Martins, P.S., Schank, T. and Upward, R., 2013. Foreign-owned firms around the world: A comparative analysis of wages and employment at the micro-level. *European Economic Review*, 60, pp.170-188.
- Javorcik, B.S. and Li, Y., 2013. Do the biggest aisles serve a brighter future? Global retail chains and their implications for Romania. *Journal of International Economics*, 90(2), pp.348-363.
- Javorcik, B.S. and Spatareanu, M., 2009. Tough love: Do Czech suppliers learn from their relationships with multinationals? *The Scandinavian Journal of Economics*, 111(4), pp.811-833.
- Kee, H.L., 2015. Local intermediate inputs and the shared supplier spillovers of foreign direct investment. *Journal of Development Economics*, 112, pp.56-71.
- Keller, W. and Yeaple, S., 2009. Multinational enterprises, international trade, and technology diffusion: a firm-level analysis of the productivity effects of foreign competition in the United States. *Review of Economics and Statistics*, 91(4), pp.821-831.
- Kiyota, Kozo, Toshiyuki Matsuura, Shujiro Urata, Yuhong Wei, 2008. "Reconsidering the Backward Vertical Linkages of Foreign Affiliates: Evidence from Japanese Multinationals" *World Development*, vol. 36(8), pp 1398-1414.
- Kiyota, Kozo and Shujiro Urata, 2008. "The role of multinational firms in international trade: The case of Japan", *Japan and the World Economy*, vo. 20(3), pp. 338-353.
- Lipsey, R.E. and Sjöholm, F., 2004. Foreign direct investment, education and wages in Indonesian manufacturing. *Journal of Development Economics*, 73(1), pp.415-422.
- Meyer KE, Sinani E (2009) When and where does foreign direct investment generate positive spillovers? A meta-analysis. *J Int Bus Stud* 40(7):1075–1094
- Poole, J.P., 2013. Knowledge transfers from multinational to domestic firms: Evidence from worker mobility. *Review of Economics and Statistics*, 95(2), pp.393-406.
- Piermartini, R., & Rubínová, S. (2014). *Knowledge spillovers through international supply chains* (No. ERSD-2014-11). WTO Staff Working Paper.
- Sánchez-Martín, M. E., De Piniés, J., & Antoine, K. (2015). *Measuring the determinants of backward linkages from FDI in developing economies: is it a matter of size?*The World Bank.
- Swenson, D.L., 2008. Multinationals and the creation of Chinese trade linkages. *Canadian Journal of Economics/Revue canadienne d'économique*, 41(2), pp.596-618.
- Swenson, D.L. and Chen, H., 2014. Multinational exposure and the quality of new Chinese exports. *Oxford Bulletin of Economics and Statistics*, 76(1), pp.41-66.
- Smarzynska Javorcik, B., 2004. Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American economic review*, 94(3), pp.605-627.
- Thangavelu, S.M. and D. Narjoko, 2014. "Human Capital, FTAs and Foreign Direct Investment Flows into ASEAN", *Journal of Asian Economics*, vol. 35, pp. 65-76.
- Thangavelu, S.M., Wenxiao Wang, Sothea Oum, 2018. "Servicification in Global Value-Chain: Case of Asian Countries", *The World Economy*, vol. 41, issue 11, pp. 3045-3070, 2018.
- Urata, S., 2015 *Impacts of FTAs and BITs on the Locational Choice of Foreign Direct Investment: The case of Japanese firms*, RIETI Discussion Paper Series 15-E-06

AUTHORS

Professor Shandre Mugan Thangavelu is the Vice President of the Jeffrey Cheah Institute on Southeast Asia at Sunway University. Before his appointment, he was a Regional Director at Centre for International Economic Studies at the Institute of International Trade in the University of Adelaide and the Director of the Asia Growth Research Centre at the university. He is an active researcher on human capital development, technology transfer, foreign direct investment, trade, government infrastructure investment, productivity and economic growth. He has written extensively on ASEAN integration, FDI, human capital development, technology transfer and economic growth and has published his research in major international journals. He has written several books on trade, investment, integration and outsourcing in Asia. He has also worked on several international projects commissioned by UNDP, World Bank, ASEAN Secretariat, APEC, and Asian Productivity Organization (APO).

Shujiro Urata is the Senior Research Advisor to the President of ERIA. Shujiro Urata received his PhD in Economics from Stanford University in 1978. Before joining ERIA as a senior research advisor, he was affiliated with Waseda University wherein he served as professor since 1988. His focus of research is in international and development economics.

Dessie Tarko Ambaw is a Postdoctoral Researcher at the Institute for International Trade (IIT), the University of Adelaide. His areas of research interest are Development Economics, International Trade, Applied Econometrics and Political Economy. He has completed his PhD in Economics at the University of Adelaide.

Comments on the working paper can be directed to shandret@sunway.edu.my.



The Jeffrey Cheah Institute on Southeast Asia is an independent public policy think tank, based at Sunway University on the outskirts of the Malaysian capital, Kuala Lumpur. The Institute's research programme is grouped around three core disciplines: economic development, governance and social progress, including education. Its mission is to develop solutions to some of the region's most pressing development problems. JCI seeks to engage policymakers, scholars and ordinary citizens through regular public lectures and discussions, and to build lasting academic partnerships in the region and the wider Asia-Pacific.

✉ jci@sunway.edu.my  [jeffreycheahinstitute](https://www.facebook.com/jeffreycheahinstitute)
 www.jci.edu.my  [jeffreycheahinst](https://www.youtube.com/jeffreycheahinst)



The Jeffrey Sachs Center on Sustainable Development is a regional center of excellence that advances the achievement of the 17 Sustainable Development Goals (SDGs) in Malaysia and Southeast Asia, tackling the sustainability agenda through education, training, research and policy advisory. Launched in December 2016, the Center operates out of Sunway University and was borne out of a \$10 million gift from the Jeffrey Cheah Foundation (JCF) to the UN Sustainable Development Solutions Network (SDSN).

✉ jsc@sunway.edu.my  [jeffreysachscenter](https://www.facebook.com/jeffreysachscenter)
 www.jeffreysachs.center  [jeffreysachscenter](https://www.twitter.com/jeffreysachscenter)