



SCHOOL OF
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Managing Inward FDI:
The Sustained Economic Development of Singapore
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ABSTRACT: Inward Foreign Direct Investments (FDI) is a factor of sustained economic development (UNCTAD, 2020). Developing nations have been eager to attract inward FDI in an attempt to stimulate their domestic economy. Since its independence in 1965, Singapore has transitioned from a developing country to one of the world's strongest economies whilst consistently attracting inward FDI as an intrinsic part of its development strategy. This paper uses a qualitative approach of analytical narrative to analyze the Singapore experience in the context of absorptive capacity factors to answer the research question, "How has Singapore utilized inward Foreign Direct Investments as a tool to achieve sustained economic growth?" This paper finds that Singapore's government policies were hyper-sensitive to building domestic social capabilities that were continuously updated and expanded to meet the needs and demands of foreign Multinational Corporations (MNCs).

Keywords: Foreign Direct Investment (FDI), Sustained Economic Development, Absorptive Capacity, Multinational Corporations (MNCs)

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1 Introduction

The United Nations Conference on Trade and Development, UNCTAD (2020) has suggested that inward Foreign Direct Investments (FDI) is a factor for sustained economic development. FDI is believed to produce externalities in the form of knowledge spillovers and technology transfers (Carkovic & Levine, 2002). Achieving sustainable long-term economic development has become an important mission for many countries in the developing world. Singapore, a former developing country has been able to achieve sustained economic growth whilst relying heavily on inward FDI. Singapore is one of the founders of the Association of Southeast Asian Nations (ASEAN) group and may be able to act as a model country for other developing countries in ASEAN that have the goal to achieve sustained long-term economic development (Cahyadi et al., 2004).

Inward FDI can help developing nations in accelerating their development process by promoting economic growth. This is done through the transfer of technology and knowledge spillovers from foreign multinational companies (MNCs) into host countries (Nguyen, 2011). Hence, many developing countries attempt to attract inward FDI in hopes that their economy will benefit from these technological transfers and knowledge spillover. However, benefitting from inward FDI has not been so straightforward for some developing nations. Morocco and Tunisia have failed to achieve FDI-induced economic growth (Haddad & Harrison, 1993).

The World Bank 2017 report found that inward FDI benefits developing countries by upgrading skills, technological transfers, increasing productivity, and by creating jobs. However, inward FDI is not a panacea, just because a developing country attracts inward FDI, does not mean it will automatically absorb the benefits. The report highlights that developing nations may be too focused on attracting FDI, yet neglect what needs to be done to leverage and maintain the benefits of inward FDI for sustainable economic growth (Worldbank, 2017).

Singapore has aggressively sought to attract and leverage inward FDI as part of its development

strategy. Inward FDI has helped Singapore transition from a developing nation to one of the world's leading economies today (Mondeja, 2017). FDI can help developing nations in accelerating their development process. However, to absorb the FDI "spillover", an environment characterized by factors such as macroeconomic stability, solid institutions, human capital, and developed infrastructure is needed.

1.1 Aim and Research Question

Singapore is a tiny, resource-scarce Southeast Asian country that has successfully transitioned from a developing nation to one of the world's strongest economies (Cahyadi et al., 2004). Singapore may be able to act as a model country for other developing countries in ASEAN that have the goal of achieving sustained economic development.

The overall aim of this thesis is to understand how Singapore has been able to attract, leverage, and maintain the benefits of inward FDI throughout its economic development. Overall, this thesis aims to contribute to the scholarly discourse on the relationship between inward FDI and economic growth. More specifically, this paper focuses on the conditions known as "absorptive capacity factors" that determine the ability of a host country to absorb the benefits from inward FDI. Moreover, this thesis will uncover the incentives that foreign MNCs had to locate and then develop in Singapore.

This thesis will answer the research question "How has Singapore utilized inward Foreign Direct Investments as a tool to achieve sustained economic growth?" to analyze the conditions known as "absorptive capacity factors" that have permitted Singapore to maintain FDI-induced long-term economic development.

1.2 Thesis Outline

Section 2 will provide a background on Singapore's socio-economic development. Section 3 presents the literature review which provides context on the current empirical discussions and mixed debates surrounding the relationship between economic growth and FDI. Section 4 is the theoretical framework that first discusses the general spillover effects from inward FDI. The Absorptive Capacity theory is discussed, in which human capital and institutional and infrastructural development are analyzed as factors of absorptive capacity. Section 5 discusses the methodology, including the research design, case selection, and limitations. Section 6 is the Analysis, which presents the analytical narrative. The section describes and summarizes the development phases of Singapore from 1965 till 2022, the timeline is divided into 5 stages: 1965-1980, 1980-1990, 1990-2010, and 2010-2022. The next part of the section analyzes how Singapore managed its inward FDI through the absorptive capacity factors; Human Capital and Institutions and Infrastructure that was highlighted in the theoretical framework to answer the question "*How has Singapore utilized inward Foreign Direct Investments as a tool to achieve sustained economic growth?*". Finally, in section 7, the findings of the thesis are summarized and concluded.

2 Background of Singapore

Singapore is one of the four prominent Asian Tigers that experienced substantial economic growth driven by rapid industrialization during the 1960s to 1990s (Cahyadi et al., 2004) Singapore became independent in 1965 after being forcefully expelled from Malaysia due to social-political tensions. After independence, Singapore's survival was doubted for several reasons: it was politically vulnerable, lacked human capital, and had no natural resources after being cut off from the Malaysian Hinterland (Cahyadi et al., 2004) International media viewed Singapore as a nonviable sovereign state due to its socio-economically vulnerable position. However, Singapore has managed to transform into a first-world country and is one of the strongest economies today (Prime, 2012).

The Singaporean government has created a positive business environment that has been able to consistently attract high volumes of inward FDI into Singapore’s highly developed free market economy. Singapore ranked first in the 2022 index of economic freedom and has maintained a conducive, open, and corrupt-free environment for business with an attractive tax system for FDI (The Heritage Foundation, 2022).

Figure 1 depicts the FDI inflows as a percentage of GDP for 4 Asian countries, Singapore, Malaysia, China, and Thailand over the period 1970-2020. For the most part, Singapore (red line) has consistently attracted a larger inflow of FDI as compared to the other countries.

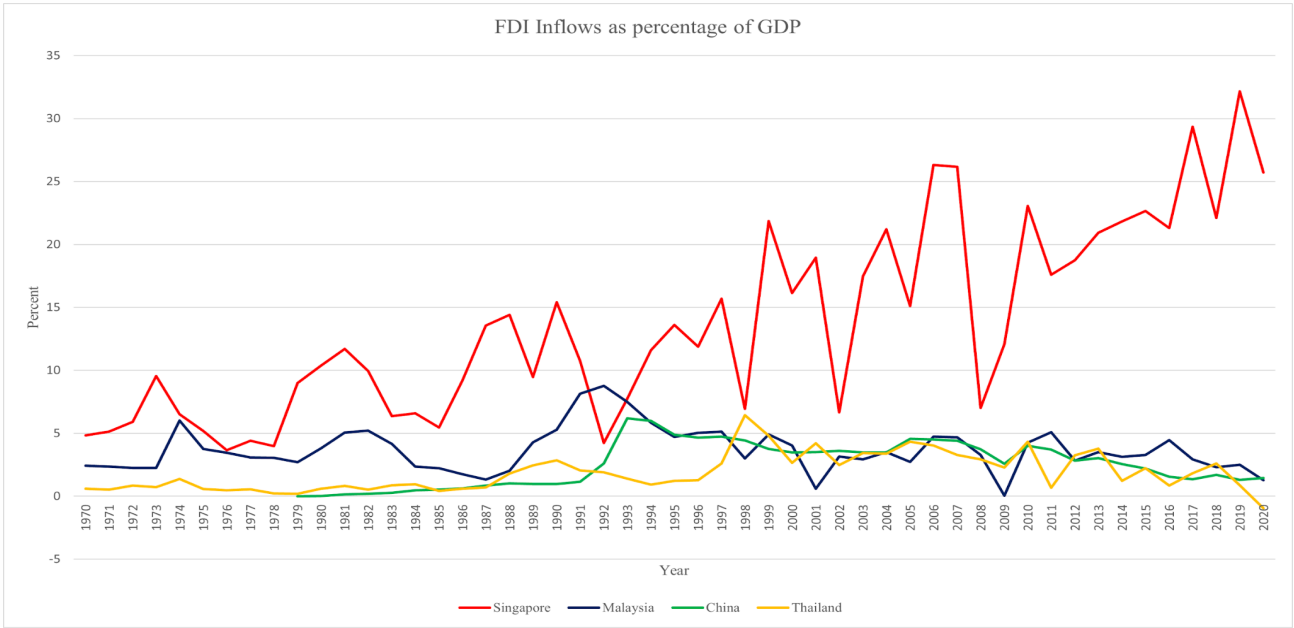


Figure 1, National Comparison of FDI inflows as a percentage of GDP (Worldbank, 2020)

3 Literature Review

The literature review aims to provide a broad overview of the current discussions regarding the relationship between FDI and economic growth in the host country, as well as provide the relevant background for my theoretical framework and methodology. The following section will describe the previous empirical findings regarding the relationship between inward FDI and its effect on economic growth in the host country to place this thesis in a broader academic dialogue. The section will begin by outlining the general discussions surrounding FDI and economic

growth. Following this is a presentation of studies with varying conclusions relating to the economic benefits generated by FDI. Finally, this section will contain a summary of all the findings presented.

3.1 Relationship between FDI and economic growth

Theoretically, FDI may improve the economic growth in host countries through shifting capital, knowledge, and technology from developed countries to poorer ones, as this leads to increased productivity (Soon & Stoeber, 1996). However, as the following empirical studies will show, there is a longstanding debate about the effects of inward FDI on the host country's economy.

Empirical studies that have concluded that FDI does not have a positive impact on economic growth: Alalaya (2010), Haddad & Harrison (1993), Irandoust, (2001), Belloumi (2014), Levine & Carkovic (2002), and Aitken & Harrison, (1999).

Empirical studies have concluded that FDI positively impacts economic growth: Iamsiraroj & Ulubaşoğlu (2015) and Zhang (2003).

Empirical studies that have concluded that FDI-induced growth is conditional:

Blin & Ouattara (2009), Borensztein et al. (1998), Li and Liu (2005), Baharumshah & Almasaied (2009), Agbloyor et al., (2016), and Arrmah (2016).

3.1.1 No effect

Aitken and Harrison (1999) used a dataset from Venezuelan firms between 1979-1989 and found no evidence of technological spillovers from foreign MNCs to the host country which refutes the FDI spillover theory. Alalaya (2010) and Haddad & Harrison (1993) also found no evidence of accelerated growth induced by inward FDI when studying Morocco. Irandoust (2001) examined the effect of inward FDI on total factor productivity growth and found no causality link between Finland and Denmark. Belloumi (2014) found that there is no significant causality between FDI

and economic growth in Tunisia. Levine & Carkovic (2002) found that FDI does not have an independent or robust effect on the host country's economic growth across multiple countries. These empirical findings claim that inward FDI does not lead to economic development in the host country.

3.1.2 Positive effect

There are also empirical findings that have found a positive causality between inward FDI and economic growth in the host country. Iamsiraroj & Ulubaşoğlu (2015) analyzed 880 reports in 108 published studies which acted as a guide to performing an informed econometric analysis to analyze if there is a positive relationship between FDI and economic growth. They sampled over 140 countries and concluded that FDI positively affects economic growth and found that this relationship is supported on a global scale. Zhang (2003) researched the effects of inward FDI on transitional economies and used data from China during the period 1984 till 1998 and found that inward FDI has promoted economic growth and aided China's transition, he found that there were strong positive effects on coastal regions as compared to inland regions. These empirical findings claim that inward FDI leads to economic development in the host country.

In terms of analyzing economic growth in terms of long and short-term effects, Le and Le (2020) analyzed the impacts of inward FDI on Singapore's economic growth by analyzing a dataset from the period 1970-2018. They found that when looking at short-run determinants there were multiple drivers of economic growth. However, their analysis showed that only FDI and exports were long-term determinants of the economic growth in Singapore, suggesting that FDI plays a critical role in Singapore's economic development. They attest that Singapore's economic growth is due to successfully managing inward FDI and promoting trade activities.

3.1.3 Conditional effect

The following are empirical studies that have found FDI-induced economic growth in the host country to be conditional. Some studies have found that the host country needs a threshold of human capital to positively benefit from inward FDI, and the higher level of human capital in a

nation, the more benefits it can receive from FDI (Blin & Ouattara, 2009, Borensztein, De Gregorio, & Lee (1998), Li & Liu, 2005, and Baharumshah & Almasaied,2009). Borensztein, De Gregorio, and Lee (1998) used a cross-country regression framework from 69 developing countries and found that FDI contributes more growth than domestic investments. They find that FDI plays a crucial role in the transfer of technology only when the country has a minimum level of human capital. Borensztein, De Gregorio, and Lee (1998) conclude the host country must have an adequate level of absorptive capacity for inward FDI to contribute to economic growth.

Similarly, Li and Liu (2005) examined the effects of FDI on economic growth using a dataset of 84 countries from the time 1970-1999. They used single and simultaneous equation system techniques to examine the relationship and identified an endogenous relationship between economic growth and FDI. They found that FDI can indirectly affect growth via interaction factors. They found that in developing countries, the interaction between FDI and human capital demonstrates a strong positive effect on economic growth, whilst FDI with a larger technological gap between FDI and host country has a significant negative impact on economic growth. Baharumshah and Almasaied (2009) examine the role of inward FDI in economic growth in Malaysia and found that FDI has a positive effect on economic growth in Malaysia, but not as much as domestic investment has. They suggest that Malaysia should encourage both foreign and domestic investment as well as invest in factors such as human capital and financial markets to benefit more from inward FDI.

Some studies have found that countries with stronger institutions and infrastructures can absorb the benefits of FDI more as compared to countries with weak institutions. Blin and Ouattara (2009) have found that strong institutions and a proper policy environment must be in place for Least Developed Countries (LDCs) to effectively benefit from FDI. Similarly, Agbloyor et al., (2016) analyzed the role of institutions in inward FDI and found that host countries with strong institutions were able to benefit more from economic growth via inward FDI when compared to countries with weak institutions. Caudros and Alguacil (2014) sampled 28 developing countries over the period 1999-2009 and analyzed the roles of inward FDI and imports of capital goods as drivers of technological diffusion and productivity improvement. Their results suggested that

countries with a higher level of human capital and stronger institutions receive higher efficiency gains from inward FDI. Arrmah (2016) found that Ghana's economic and social infrastructure has a positive effect on net FDI inflows and suggested that Ghana should invest in its social infrastructures to attract more FDI inflows. Hence, these studies have claimed that countries with strong institutions and infrastructures benefit from FDI spillover effects.

To summarize, the empirical findings from the studies on the relationship between inward FDI and economic growth in host countries have resulted in mixed results. More recent studies have found that it is not a matter of whether FDI influences the host country's economy, but rather the conditions that exist for FDI to induce economic growth in the host country. This leads to the theory of absorptive capacity; that is, a country's capacity to absorb the benefits that inward FDI can offer (Kalotay, 2000).

4 Theoretical Framework

The following section is the theoretical framework which will act as a guide for the analysis. This section will first present how FDI can produce spillover benefits. Next, the theory of absorptive capacity is introduced to help understand the role of the host country in absorbing the spillover effects from FDI. The theory highlights the conditions that allow the absorption of inward FDI spillover effects. 2 absorptive capacity factors are highlighted; Human Capital as a factor of absorptive capacity, and Institutions and Infrastructure as a factor of absorptive capacity.

4.1 FDI Spillover Benefits

Inward FDI can directly impact the host country's economy through gross fixed capital formation and by creating jobs (Silajdzic & Mehic, 2015). However, inward FDI can also have dynamic benefits by impacting the host country's economy indirectly through "spillover" effects from foreign firms to lesser productive domestic firms in the host country (Silajdzic & Mehic, 2015). Typically, these spillover effects refer to the improvements in productivity and skills that come from the knowledge diffusion from MNCs to the host country's domestic firms (Silajdzic &

Mehic, 2015). The knowledge encompasses all types of skills and technology that is related to production. Hence, the benefits from FDI are not just capital, they are also the knowledge and technology generated through these spillover effects. Developing countries are keen to attract FDI in hopes that they would benefit from FDI spillover effects and stimulate their local economic growth. The problem is that many developing countries make the mistake of assuming that benefiting from spillover effects is a guaranteed outcome of inward FDI (Borensztein et al.,1998). In reality, spillover effects only occur when the host country's firms have the necessary conditions that allow the absorption of FDI spillover effects (Borensztein et al.,1998). Oftentimes, developing nations may not have the capability to absorb foreign technologies and skills. Hence knowledge spillovers do not end up occurring, and the host country is worse off than before the FDI due to all the wasted investments used to attract FDI in the first place (Borensztein et al.,1998). The benefits of FDI can be transferred to the host country on both a macro and micro-economic level (Hoang, 2016). The OECD (2002) report argues that the host country must maintain a minimum level of economic development and human capital before they are capable of benefiting from the positive externalities associated with inward FDI (Hoang, 2016). Domestic firms must have certain conditions such as an initial level of the skilled labor force, and institutional and infrastructural development to absorb the advanced knowledge and skills from foreign FDI's (Kalotay, 2000) This leads to the theory of absorptive capacity; the host country's capacity to absorb and benefit from FDI.

4.2 Absorptive Capacity

Absorptive capacity refers to the host country's ability to absorb the positive benefits such as technological and knowledge spillovers that come from FDI (Kalotay, 2000). To absorb FDI-induced economic benefits, the absorptive capacity theory states a series of requirements on the host country. It needs a threshold of human capital as well as formulated and effective policies which create a stable macroeconomic framework. Adler (1965) states that the term "absorptive capacity" was originally suggested to aid in understanding a country's capacity in absorbing foreign investments. Suryandari (2014) states that absorptive capacity came from the idea that an economy requires investment in the development process to add value to the host

economy; however, solely relying on investment was not enough. The capacity to utilize the investments to produce value is just as crucial as the investment.

Figure 2. Illustrates the positions of Absorptive capacity in the flow of Inward FDI to the host country.

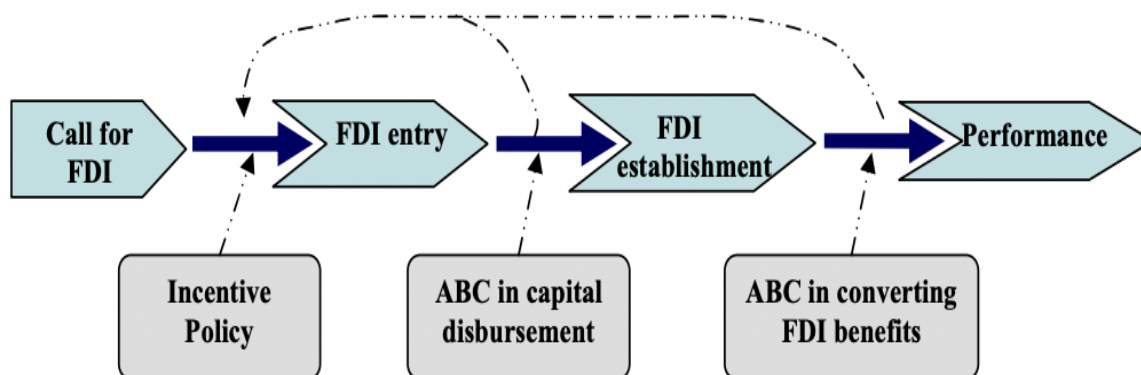


Figure 2, Position of Absorption in FDI Inflow (Nguyen et al., 2009)

Figure 2 depicts the 4 stages of inward FDI into the host country. In the first phase, proper incentive policies should be in place to attract inward FDI. MNCs are looking to make a profit, hence they require an environment that will induce profit making and host countries should have incentive policies such as tax incentives or subsidies (Nguyen et al., 2009). The next stage is typically a challenge for host countries, as they are required to support investors in capital disbursement and ensure that investors commit to actual capital investments for project implementation (Nguyen et al., 2009). The time gap between registered FDI and disbursement is an indicator of the host country's absorptive capacity, delayed time could indicate poor infrastructure & undeveloped institutions (Nguyen et al., 2009).

The FDI entry and capital dispersion stage will be dependent on the host country's ability to absorb the technological and knowledge spillovers (Nguyen et al., 2009). Through the absorptive process, these externalities need to be converted into the host country's internalities which are determined by the host country's level of absorptive capacity (Nguyen et al., 2009). Hence, it is clear that the absorptive capacity is just as, or more essential than the initial phase of attracting FDI. The host country will only achieve substantial benefits from inward FDI if it has

a high level of absorptive capacity (Nguyen et al., 2009). At the same time, the higher level of absorptive capacity the more attractive it is to MNCs, which in turn attracts a higher quality of inward FDI. Absorptive capacity plays a vital role in inward FDI processes. Hence, developing nations looking to improve economic development should not only focus on attracting FDI, instead-but should also first analyze and improve their internal absorptive capacity (Hoang, 2016). Infrastructure and institutional framework, human capital, and openness to trade are factors that determine the host country's absorptive capacity (Blin & Ouattara, 2009, Borensztein, De Gregorio, & Lee, 1998, Li & Liu, 2005). This study will be analyzing 2 absorptive capacity factors; human capital and institutions and infrastructure.

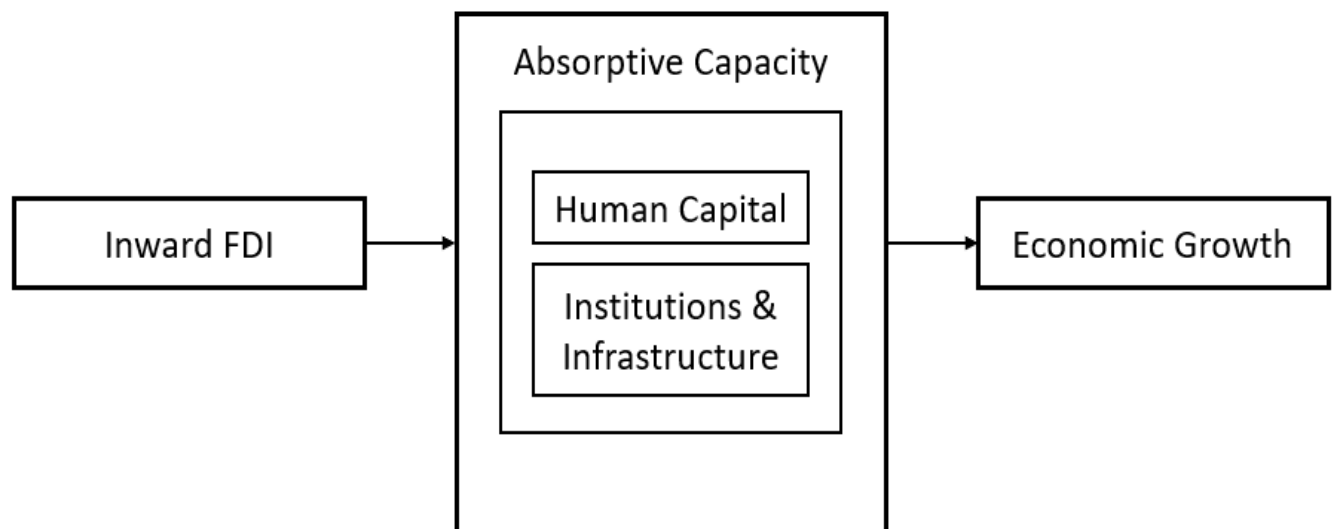


Figure 3, Author's Interpretation of Absorptive Capacity

4.2.1 Absorptive Capacity Factor: Human Capital

Human capital is determined by the knowledge of other personal traits that people embody that help them to be productive (OECD, 2002). There needs to be a threshold of human capital and education in the host country for them to absorb and adapt foreign technologies and skills from MNCs (Borensztein, De Gregorio, and Lee (1998). The relationship between human capital and

FDI is bilateral and complex. The inflow of FDI causes knowledge spillovers into the host country's labor force. The level of human capital determines how well firms in the host country can absorb them (Aitken & Harrison, 1991). Moreover, the level of human capital the host country possesses affects the amount and type of FDI it attracts (Aitken & Harrison, 1991). For example, technology-intensive MNCs would be more attracted to economies with relatively high levels of human capital. Hence, host countries with a higher cumulative human capital will attract high-skilled technology-intensive FDI that would eventually lead to extensive local learning and skill development (Aitken & Harrison, 1991). On the contrary, countries that have low levels of human capital and attempt to use FDI as a means to improve their local economy end up 1) being unable to gain any skills for development as they have a low absorptive capacity or, 2) attracting FDI that uses simple technologies and will only allow for marginal local skill development (Blomström & Kokko, 2002). The development of domestic firms also determines the extent of the host country's absorptive capacity (Nguyen et al., 2009). Human capital affects the absorptive capacity of domestic firms as the transfer of FDI benefits goes through the labor force and the more skilled the labor force is, the better procedural knowledge is spilled over from MNC to local firms (Nguyen et al., 2009). FDI is one of the most crucial vehicles for international technology transfer alongside international trade (Blomström & Kokko, 2002). MNCs own the most advanced technologies and take up a majority of the world's private Research and development (R&D) efforts (Blomström & Kokko, 2002).

Borensztein (1998) found that technological spillovers through MNCs are dependent on the host country's level of human capital. Developing human capital is concurrent with technological enhancement, a highly skilled labor force is required to operate high-skilled technologies. Technology not only increases productivity but also positively impacts economic growth (Kotey & Abor, 2019). A foreign affiliate is an enterprise resident that an MNC sets up in a foreign country to give the MNC an edge by making the parent firm more competitive with local firms that have a higher level of knowledge about the domestic market (Blomström & Kokko, 2002). Setting up a foreign affiliate does not directly lead to a transfer of technology that goes beyond the MNC. Host countries can benefit from advanced technologies only if they obtain the technological capacity to absorb the benefits. De Mello (1997) has found that the technological

gap between MNCs and host countries plays a significant role in the FDI-induced economic growth in the host country. The larger the technological gap, the lesser the impact the FDI will have on economic growth in the host country (De Mello, 1997). Host countries must first invest in their initial technological developments and level of human capital to be able to benefit from the technological spillover from MNCs (Blomström & Kokko, 2002). Hence, developing countries who are attempting to improve their domestic economic condition from FDI should invest in human capital to be able to absorb more of the FDI benefits.

To summarize, the level of human capital the host country possesses affects the amount and type of FDI it attracts and the level of human capital determines how well firms in the host country can absorb them. Developing human capital is concurrent with technological enhancement, a highly skilled labor force is required to operate high-skilled technologies.

4.2.2 Absorptive Capacity Factor: Institutions & Infrastructure

The host country should have a stable macroeconomic and political environment to attract FDI into sectors that are not endowed with natural resources (Cleeve, 2008). Good economic and institutional facilities should be in place to attract and leverage FDI benefits (Dunning, 1998). Social and economic infrastructure play a part in determining the firm's cost structures, hence they directly affect the amount of FDI being attracted to the host country (Jaiblai & Shenai, 2019). MNCs are organizations that seek to maximize their profit and minimize their costs of doing business. MNCs need an incentive, oftentimes this would be to make use of the lower costs of doing business in developing nations. However, if the developing nation has a corrupt and unreliable economic and social infrastructure, MNCs will not choose to invest (Jaiblai & Shenai, 2019). Infrastructure plays a key role in developing the investment environment for MNCs by raising the rate of return on investment by reducing investment costs by FDIs. A report by the OECD (2002b) stated that:

Given the appropriate host-country policies and a basic level of development, a preponderance of studies shows that FDI triggers technology spillovers, assists human

capital formation, contributes to international trade integration, helps create a more competitive business environment, and enhances enterprise development (OECD, 2002b, p5).

OECD (2002b) highlighted the importance of appropriate policies and the basic level of development must be in place for the host country to absorb the benefits of FDI. According to Durham (2004), institutional development encompasses the administrative framework and investment policies of a country and determines to a large extent the conditions and attitudes for development. Durham (2004) found that good institutional development has a positive relationship with FDI, as the nation is equipped with proper business regulations and property rights protections.

Nunnemkamp (2004) finds that the development of an institutional framework is necessary for a country to benefit from FDI. Hayat (2017) tested the role of institutional development on economic growth using a dataset of 104 countries and found that countries with higher institutional quality generate stronger FDI-induced economic growth as compared to countries that have weaker institutional qualities. Through testing individual institutional quality indicators, Hayat (2017) found that corruption and rule of law had significant impacts on economic growth. There is empirical evidence that good quality institutions stimulate economic development (Acemoglu, Johnson & Robinson, 2001; Rodrik, Subramanian & Trebbi, 2004). Foreign investors are looking to make a profit and are aware of the importance of institutional quality, hence more developing nations looking to attract FDI have been attempting to reform their institutions (Hayat, 2017). Good institutional quality such as efficient government has many benefits; it induces FDI-induced growth by attracting FDI with higher spillover potential, provides foreign investors with more confidence, and creates a healthy competitive environment between domestic and foreign firms (Hayat, 2017).

5 Methodology

This section depicts why the methodology of the analytical narrative was selected for this thesis as well as describes why the model country Singapore was selected for this thesis. Finally, this section will present the limitations that this thesis is subjected. To repeat, this paper uses a qualitative approach of analytical narrative to analyze the Singapore experience from a developing nation to a strong economy in the context of absorptive capacity factors to answer the research question “How has Singapore utilized inward FDI as a tool to achieve sustained economic growth?”.

5.1 Research Design

This thesis will use the qualitative method of analytical narrative to help answer the research question “How has Singapore utilized inward FDI as a tool to achieve sustained economic growth?”. An analytical narrative was selected for this thesis as it would combine the economic historical narrative of Singapore with the theory of absorptive capacity to present a deeper understanding of the conditions Singapore has that allowed it to not only attract FDI but to also leverage and benefit from the benefits. This paper aims to provide an empirically supported narrative using existing literature guided by the absorptive capacity theory presented in the theoretical framework, to analyze how Singapore has managed inward FDI to achieve sustained economic growth. This analysis follows the analytical approach of Rodrik (2003), which through a country narrative attempts to understand the economic performance that is not explained by the economic growth indicators in classical growth theories. In this case, the factors of absorptive capacity: human capital, institutions, and infrastructure, act as a guide for my analysis of Singapore’s narrative

5.2 Case Selection

Singapore was selected to be a model country for this research because of a few factors. Today, Singapore is one of the world’s top recipients of inward FDI however, Singapore has been attracting inward FDI into its economy since the beginning of its independence in 1965. Singapore is viewed as a pioneering (former) developing country that has managed to attract

desirable FDI and leverage them into its development plan (Soon & Stoeber, 1996). Attracting and leveraging inward FDI has occurred despite Singapore's lack of natural resources or domestic market. Nonetheless, despite Singapore's unique size and environment, developing nations have looked to Singapore to learn how Singapore created a conducive environment to attract and maintain desirable inward FDI (Soon & Stoeber, 1996). Hence, Singapore is an ideal country to analyze when looking at inward FDI.

5.3 Limitations

This thesis is subject to limitations. First of all, the absorptive capacity theory has other factors besides human capital and institutions and infrastructure, which unfortunately did not have the space to be explored in this thesis. However to have a more holistic study of Singapore's management of inward FDI more factors of absorptive capacity should be analyzed. Furthermore, this thesis takes a qualitative approach using an analytical narrative, the Singapore experience is based on previous existing literature which may have had biases. This thesis only focuses on the management of inward FDI as a factor of economic growth however Singapore's economic development cannot merely be attributed to its benefits from inward FDI. Indisputably, inward FDI has played a substantial role in the development of Singapore's economy, however, it must be noted that other factors such as strategic geographical location and entrepot trade also play a vital factor in Singapore's economic development.

6 Analysis

In the theoretical framework, the theory of Absorptive Capacity was introduced and two main Absorptive Capacity factors were highlighted; Human Capital and Institutions. This section analyzes and investigates how the model country Singapore has managed its inward FDI by investing in Human Capital and Institutions as factors of absorptive capacity. The development timeline will be divided into 5 phases to provide a structured understanding of the different phases of Singapore's economic development strategy and journey from its independence in 1965 to 2022. This will aid in the understanding of how Singapore was able to not only attract FDI but also understand how Singapore managed Inward FDI for sustained long-term economic growth and development, which will answer the research question: *“How has Singapore used*

FDI as a tool to achieve sustained economic growth and development?"

6.1 Management of Inward FDI through Absorptive Capacity Factors

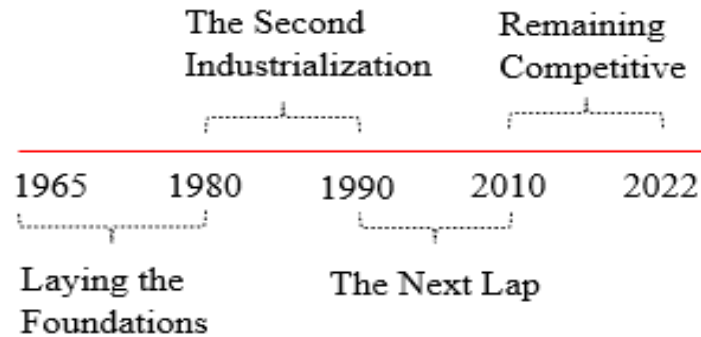


Figure 4, Author's Interpretation of Singapore's Development Timeline

6.1.1 Laying the Foundations: 1965-1980

Singapore was forcefully expelled by Malaysia in 1965 due to deep socio-economic tensions between the ruling parties of Singapore and Malaysia (Wong, 1997). This left Singapore in a vulnerable position and international media heavily doubted its ability to survive as a sovereign state. The immediate concerns after independence were unemployment, a lack of quality education, and a lack of natural resources and land. Without access to Malaysia's hinterland and natural resources, Singapore did not have its traditional source of income, as a tiny island state with essentially no natural resources the newly sovereign state was viewed as a nonviable nation-state (Wong, 1997). During the period 1965-1980, the main focus for Singapore was economic survival through industrialization by attracting foreign MNCs to labor-intensive industries to eradicate unemployment (Maitra, 2016). The Economic Development Board (EDB) was established with the priority to attract inward FDI into Singapore's economy. Before its independence, Singapore was heavily reliant on entrepot trade for the East India Company which meant that the manufacturing sector was heavily underdeveloped when it became an independent state. When Singapore became independent Unemployment was high at around 10% and by the end of the 1970s unemployment was around 3% (Maitra, 2016).

How did Singapore Invest in Institutions and infrastructure?

Due to the sudden expulsion from Malaysia, Singapore could no longer rely on a strategy of import-substituting industrialization due to its lack of a sizable domestic market, no longer being able to access Malaysia's hinterland. Instead, Singapore made a bold decision to attempt an export-oriented strategy, one of the first developing nations to try this (Huff,1994). The first main development phase for Singapore was to create jobs for Singaporeans (Blomqvist, 2000). At the beginning of Singapore's independence in 1965, the majority of citizens were uneducated and Unemployment levels were around 12% which posed a threat of civil unrest due to the lack of jobs (Boon & Gopinathan, 2008).

The role of governmental institutions was crucial during this time, the Singapore's government knew that it had to rely on foreign investors for the economy to prosper hence another strong focus during this phase was to begin building a solid relationship with the west (Maitra, 2016). Singapore set up an Institution that would focus on developing smooth foreign investment in Singapore and allow FDI to bypass government bureaucracies to make Singapore more attractive for FDI (Cahyadi et al., 2004). The Economic Development Board (EDB) was established in the early 60s, and the main priority for the EDB was to attract FDI into Singapore's economy (Maitra, 2016). In efforts to promote Singapore to western MNCs, EDB officers traveled to western Europe and the United States to Pitch Singapore as the ideal location to invest and build their low-cost manufacturing (Mondeja, 2017).

In the late 1960s, to encourage FDI into Singapore, the Economic Expansion Incentives Act was passed, this act allowed the EDB to grant tax benefits to foreign corporations which lowered production costs by around 20% (Maitra, 2016). This act was very successful in attracting inward FDI into Singapore's market. Through the 70s, the EDB continuously renewed the tax incentives scheme with the incentive of always making Singapore attractive to FDI (Mondeja, 2017). Another measure to attract FDI was the development of Jurong Industrial Town which was a manufacturing base ready to move factories (Mondeja, 2017). Apart from tax incentives, other supporting institutions were established to develop Singapore's physical and non-physical

infrastructure. To encourage the transfer of skills and technology from FDI to Singapore, the EDB created incentives for FDI to create training centers for Singaporean workers (Maitra, 2016). Phillips was one of these foreign firms that agreed to set up training institutes. In exchange, the EDB protected these firms, by agreeing to not allow firms of the same line to establish their base in Singapore. These training centers encouraged the transfer of knowledge and skill to Singaporean workers (Maitra, 2016).

How did Singapore Invest in Human Capital?

In terms of education Boon and Gopinathan (2008) described the education system during this phase as “survival-based education”. Similar to its economic state, Singapore’s main priority was to survive (Boon & Gopinathan, 2008). English became the medium of instruction in schools and students had to learn their mother tongue, either Chinese, Malay, or Tamil (Boon & Gopinathan, 2008). The decision to make English the de facto language was to ensure the multicultural population would have a unified language. It was also to make Singapore more attractive to western foreign investors and access to the western markets (Boon & Gopinathan, 2008). Bilingualism being compulsory created a population that could communicate to both Western and Asian markets. The government knew that Singapore would need to rely on FDI if the resource-lacking city-state was going to prosper economically (Maitra, 2016). During this time, the English language was associated with the idea of 'modernity' progress, capitalism, and science and technology (Boon & Gopinathan, 2008). . In efforts to develop human capital and education, a large portion of Singapore's budget was set towards building an educated workforce (Boon & Gopinathan, 2008).

6.1.2 The Second industrialization: 1980-1990

During the 1980s, neighboring Southeast Asian countries began to emerge and compete for inward FDI in low-skilled labor-intensive industries (Maitra, 2016). Singapore could no longer compete in terms of low-cost labor and hence needed to shift its strategy to remain competitive (Maitra, 2016). The *Second Industrial Revolution* began in 1981, and Innovative capabilities were developed to stay ahead of the regional competition (Boon & Gopinathan, 2008).

Singapore began an aggressive shift from labor-intensive to high-skilled industries. During this phase, Singapore wanted to attract Foreign MNEs due to their access to highly advanced technologies and foreign markets. Singapore needed to invest heavily in its human capital to create a high-skilled workforce that would attract high-skilled industries (Maitra, 2016). The level of highly skilled employees increased from 11% at the end of the 1970s, to 22% in 1985 (Maitra, 2016).

How did Singapore Invest in Institutions and infrastructure?

During the 1980s, it was clear that there was an increasing demand for FDI in labor low-skilled intensive industries, and competition for FDI grew in the Southeast Asian region (Maitra, 2016). As Singapore’s geographical Southeast Asian neighbors were also trying to achieve sustainable development by attracting foreign FDI into their labor-intensive industries, Singapore had to shift to high-skilled industries to remain competitive for inward FDI. Figure 5 depicts the inflow of FDI in East Asia compared to other regions such as North America and Latin America and the Caribbean to show the competitiveness of the inflow of FDI in East Asia.

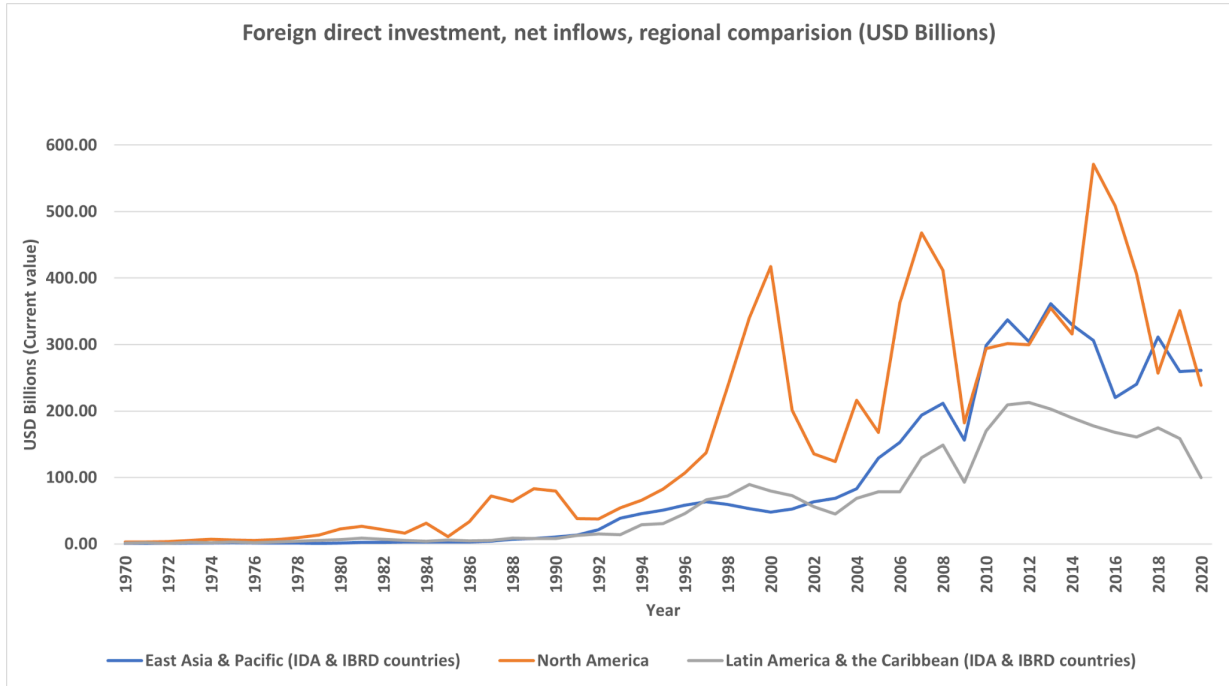


Figure 5, FDI Net Inflows, Regional Comparison (USD Billion) (Worldbank, 2020)

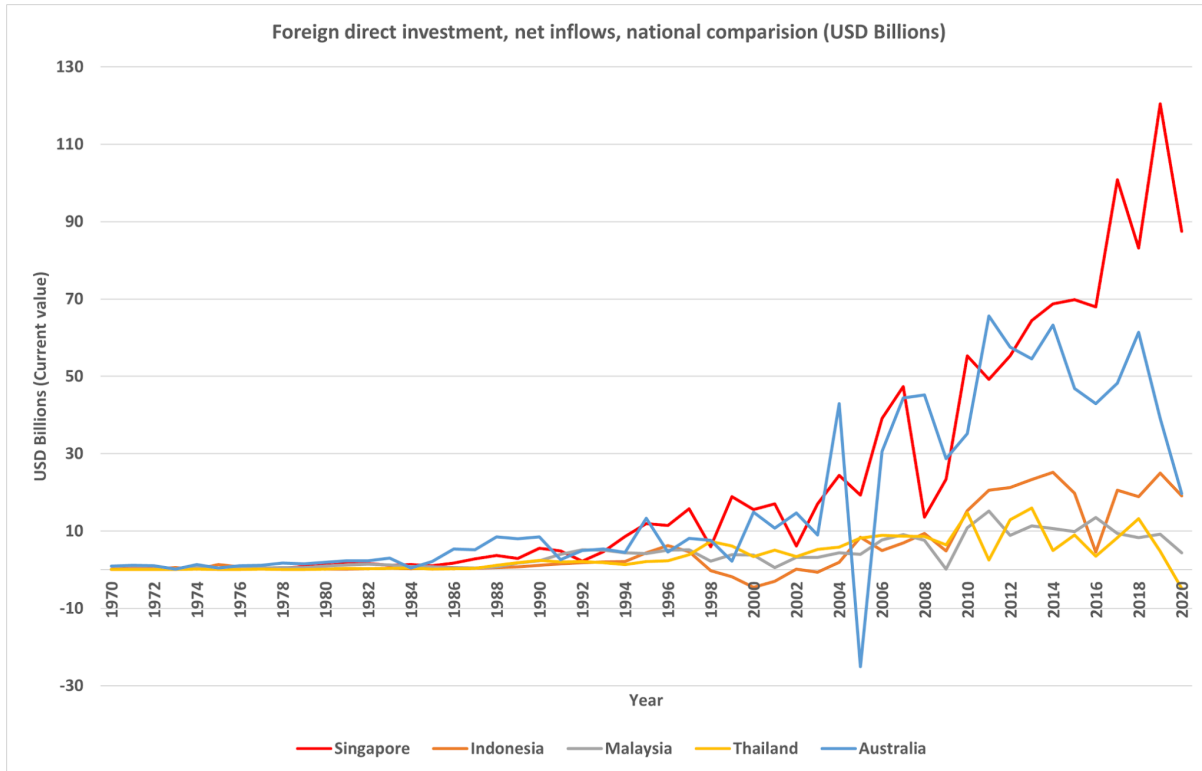


Figure 6, FDI, Net Inflows, National Comparisons in Southeast Asian Region and Australia (Worldbank, 2020)

Due to increasing competition for inward FDI from East Asia and surrounding nations as seen in Figure 6, Singapore could no longer rely on its low-skilled low-cost labor-intensive industries. Singapore had to restructure and diversify, the EDB began to shift its strategy from focusing on labor-intensive industries to becoming a modern industrial economy based on higher skills such as science and technology (Mondeja, 2017). Hence, the second industrial revolution was launched in 1981 to shift Singapore out of the labor-intensive industries into a capital-based economy with a technological base (Mondeja, 2017). The goal was to take Singapore out of competition with low-wage countries for FDI in labor-intensive industries and push the nation into technological advancement (Prime, 2012). The early entry into regional networks put Singapore in a great position to take advantage of the changing production patterns caused by China's entrance into the global market. Singapore, alongside other ASEAN nations, began exporting to China as they took increasing advantage of the expanding Chinese demand (Prime,

2012). China's growing position in global manufacturing incentivized Singapore to further rapidly increasing Singapore's local skills as well as further develop the sophistication of Singapore's industrial base to stay ahead of China's capabilities (Prime, 2012)

How did Singapore Invest in Human Capital?

The changing industrial structure required upgrading local skills and increasing productivity. The development of local skills was crucial to meet the needs of targeted foreign investors who were in high-tech industries such as “computers, computer peripherals, electronic medical instruments, automotive components, specialty chemicals, and pharmaceuticals, and optical and photocopying equipment” (Prime, 2012, p13).

During this shift towards higher-skilled industries, the education system was reformed to produce a very high-skilled workforce, however technical training was an option for those who could not keep up. Singapore's education system has had a clear goal from the beginning, which was to build a strong education system with tough competition through categorization and streaming based on merit to ensure a high-skilled workforce that can supply foreign MNCs (Boon & Gopinathan, 2008). At the same time, Singapore saw the need to make sure every citizen that comes out of the education system can provide for the economy hence technical training was still available to students who did not meet the merits of Advanced, or A level and hence can make up the semi-skilled manufacturing workforce (Boon & Gopinathan, 2008). The Skills Development Fund (SDF) alongside many other programs was initiated throughout the 80s with the purpose to upgrade local skills, finance the retraining of workers, and promote labor-saving investments (Boon & Gopinathan, 2008). The EDB set up technical training centers and cooperated with developed nations such as the Japan-Singapore institute of Software technology to establish training centers geared towards higher-skilled industries (Boon & Gopinathan, 2008).

6.1.3 The Next Lap: 1990-2010

The previous decade launched the ‘Second Industrial Revolution in 1981 which proved successful, by the end of the 1990s (Prime, 2012). In the quest to continue Singapore's shift towards a technologically based economy, 2 main strategies were: 1) Continuously attract FDI

into Singapore's high-technology industries, and 2) Invest and promote Science and technology such as R & D (Prime, 2012). There was an emphasis on developing sophisticated innovation-driven industries in Research & Development (R&D), Information and Communications Technology (ICT) (Prime, 2012). Singapore relocated labor-intensive industries offshore to Malaysia and Indonesia which was another measure to make Singapore a predominantly high-skilled based economy (Prime, 2012). The 'The Next Lap' was introduced as a government development plan for the upcoming 30 years, which alongside other points, a strong focus was on technological upgrading and Human Capital. In the 1990s the economy grew at an average annual 8% however due to the Asian financial crisis in 1998 there was a recession that contracted by 1% (Prime, 2012).

How did Singapore Invest in Institutions and infrastructure?

'The Next Lap' is a government development plan launched in the 1990s by the Long Term National Development Committee, which was set out to address Singapore's development framework for the upcoming 30 years (Prime, 2012). Alongside other points, an emphasis was on technological upgrading and investing in human capital. During this Phase, Singapore's national innovation system had been heavily relying on the presence of foreign Transnational corporations (TNCs) that were taking part in high-tech innovation (Mondeja, 2017). Singapore was fortunate to benefit from the spillovers from Foreign corporations (Wong, 2003). The Technology Investment Fund was set up to aid Singaporean innovators, entrepreneurs, and firms to innovate throughout the Singaporean economy. High spending by the Singaporean government was put into developing effects on technology industries.

In 2000, aggressive initiatives of reforms to attract FDI in high-value innovative industries (Wong, 2003). In 2002, The Standards, Productivity, and Innovation (SPRING Singapore) focused on a shift toward an innovation-driven economy with a new purpose of encouraging creativity to achieve continued sustainable growth for Singapore (Wong, 2003). A substantial amount of S\$6 billion was committed from 1991 to 2000, for technological development plans (Wong, 2003).

During this phase, there was a re-emphasis on innovation and the creation of local firms to foster

the creation of a knowledge-based economy. Singapore developed a cluster of high technology institutions such as the Biopolis (Lim & Gregory, 2004). The Biopolis is a biomedical industrial park in Singapore that was built near the National University of Singapore (NUS) and has residential spaces for researchers and scientists (Lim & Gregory, 2004). One of the goals during this phase was to strengthen human capital and local firm capabilities by creating a biomedical cluster of local existing small and medium-sized enterprises (SMEs) and start-ups (Lim & Gregory, 2004). Attracting FDI in the biotech industry to the cluster was also instrumental, and to not fully rely on local capabilities. In 2004, the Competition Act was introduced to establish a system promoting innovation and competition in Singaporean markets.

The formation of Singapore-Johor-Riau (SIJORI) was established in 1990 and was another measure to make Singapore a predominantly high-skilled based economy by Relocating labor-intensive industries offshore to Malaysia and Indonesia (Cahyadi et al., 2004). In the 90s Singapore was no longer a low-wage low-skilled workforce however the formation of SIJORI allowed Singapore to use low-wage labor and land resources of Malaysia and Indonesia, whilst Singapore could offer its capital and expertise (Cahyadi et al., 2004). The SIJORI was coined the 'triangle of growth' as it combines the competitive strength of the 3 regions making the subregion more attractive to FDI and Singapore's role as the financial center of the triangle (Cahyadi et al., 2004).

How did Singapore Invest in Human Capital?

During this phase, there was a focus on sustaining a knowledge-based economy. The education system was revised and used as a vehicle to provide the skills, education, and attitudes of the Singaporean workforce. In 1991, The Agency for Science and Technology (A*STAR) was founded with the focus to increase the level of science and technology and promote Singapore as a knowledge-based economy (Lim & Gregory, 2004). The transition toward building a knowledge-based economy was proven successful in the development of the education system. By 1995 the Singaporean education system was producing impressive results (Boon & Gopinathan, 2008). In 1995 the Trends in International Mathematics and Science Study (TIMSS) examines mathematics and science level in over 40 countries Singapore was the top scorer for

both mathematics and science followed by Korea and Japan (Boon & Gopinathan, 2008). The key findings were that home factors such as education resources played a vital role in the math and science achievements of the TIMSS country (Boon & Gopinathan, 2008). Hence, it is clear that Singapore's education system was successful in developing an education that produced hard-working, highly-skilled students.

6.1.4 Remaining Competitive: 2010-2022

Today, Singapore is one of the world's strongest economies with low corruption, political and economic stability, and a high-skilled workforce. Singapore has become a trusted business hub for FDI (Singapore Economic Development Board, 2022). Singapore continuously ranks among the top in the world in the World Bank's Ease of Doing Business report (Worldbank, 2020). According to UNCTAD's World Investment Report (2019), Singapore has become one of the largest global recipients of inward FDI just behind China and USA (UNCTAD, 2019). Singapore has climbed 19 places since the UNCTAD's World Investment Report in 2007, which shows that attracting inward FDI continues to be a crucial factor in Singapore's development (UNCTAD, 2007).

In terms of high-skilled technological exports, which are products that require a high level of R&D intensity to be produced. In Figure 7 it is clear that Singapore has increased its high-technology exports from 2007-2020 (Worldbank, 2020). This shows that Singapore continues to expand its development in shifting towards being a high-skilled country. In terms of human capital, Singapore has achieved impressive results, in the 2020 World Bank Human Capital Index (HCI), Singapore ranked first place, with the highest global HCI score (Worldbank, 2020). Figure 8 depicts the life expectancy at birth in Singapore from 1960 to 2020, life expectancy at birth is an indicator of human capital (Worldbank, 2020). In figure 8, it is clear that life expectancy at birth in Singapore has had a drastic linear increase.

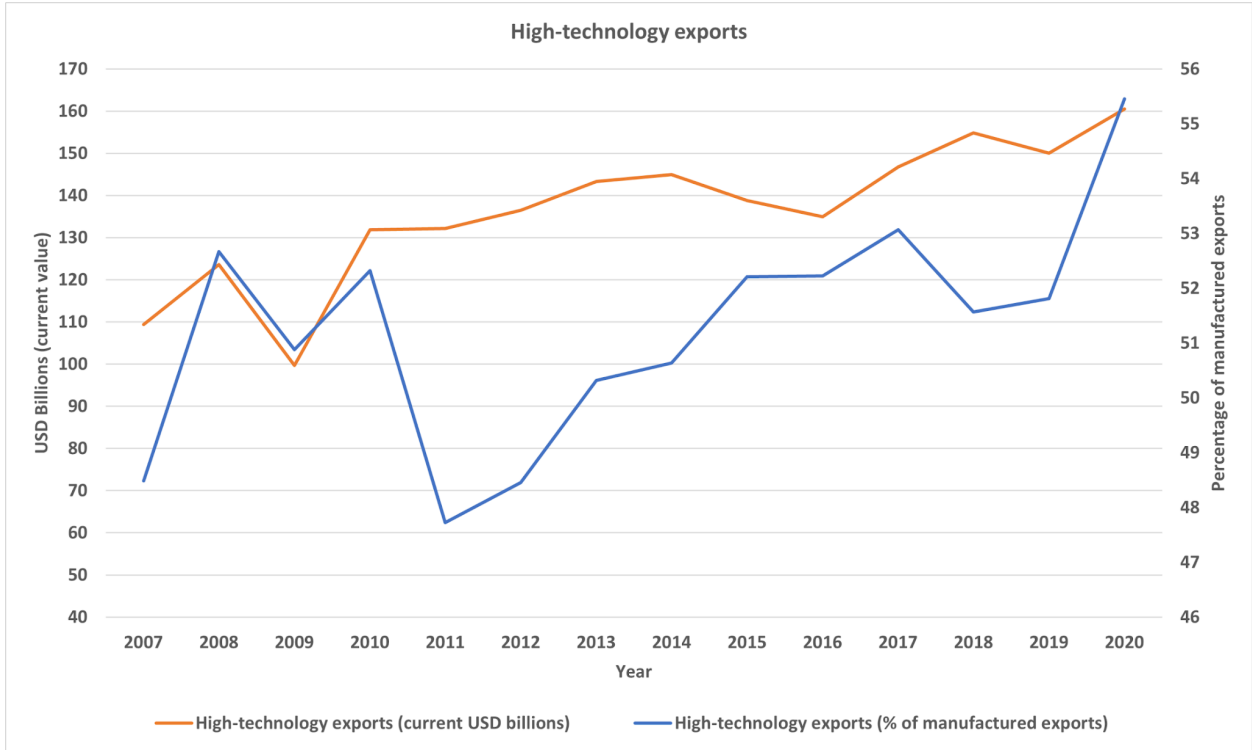


Figure 7, High Technology Exports in Singapore (Worldbank, 2020)

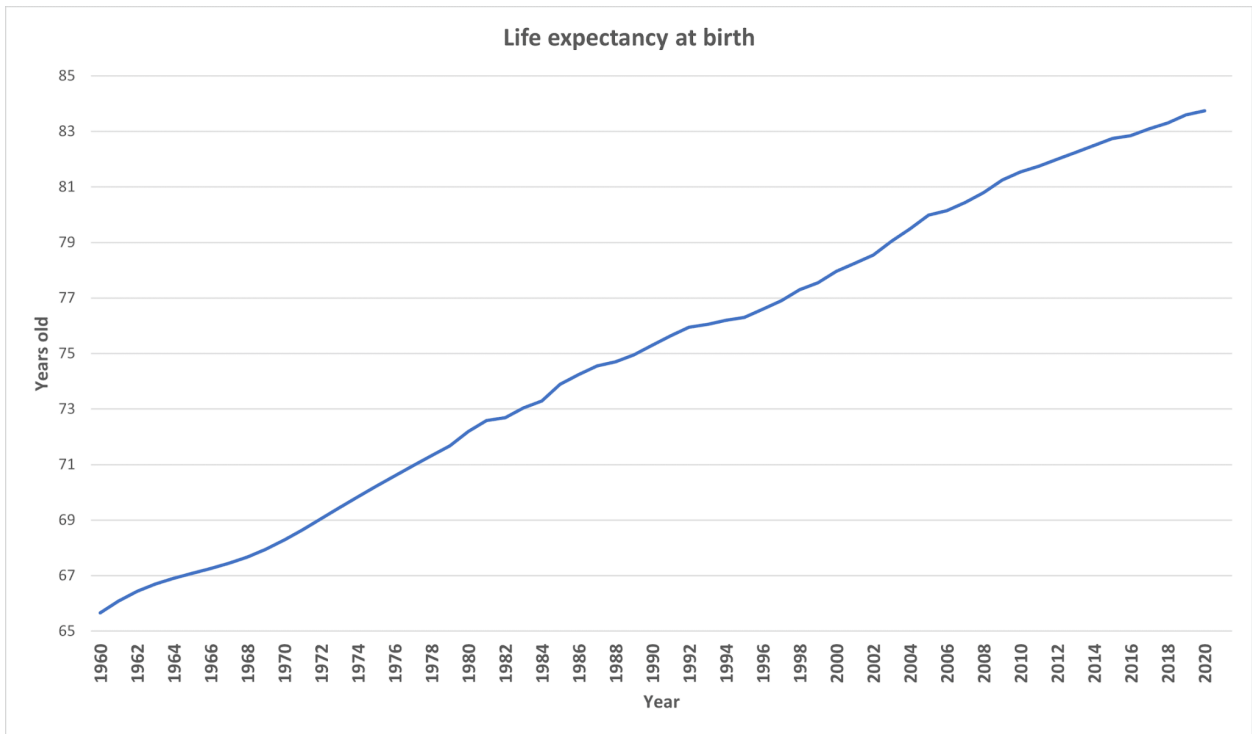


Figure 8, Singapore Life Expectancy at Birth (Worldbank, 2020)

6.2 Discussion about Absorptive Capacity Theory

To restate, absorptive capacity refers to the host country's ability in absorbing the positive benefits such as technological and knowledge spillovers that are a product of FDI (Kalotay, 2000). In terms of the host country's economic growth, the level of absorption capacity is just as, or more important than attracting inward FDI (Kalotay, 2000). The host country will only achieve substantial benefits from inward FDI through its absorptive capacity (Hayat, 2017). A nation with weak absorptive capacity will be unable to fully reap the benefits that inward FDI can bring, which in turn determines the economic growth of the nation (Hayat, 2017). In the theoretical framework, I have highlighted 2 main Absorptive Capacity factors; Human Capital and Institutions. From the section above, we see that throughout the period 1965-1980, 1980-1990, 1990-2010, and 2010-2022, Singapore has consistently prioritized the investment in Human Capital and the development of strong Institutions whilst continuously attracting inward FDI as part of its development strategy.

Through the development of strong institutions, Singapore has managed to maintain political and macroeconomic stability, making it an attractive location for FDI. Macroeconomic and political stability is the main factor when foreign MNEs decide where to locate their affiliate (Cleeve, 2008). Corrupt or turbulent political environments may cause economic instability which is not ideal for foreign MNEs looking to make fixed investments. Host countries should have a stable macroeconomic and political environment to attract FDI in sectors that are not endowed with natural resources (Cleeve, 2008). Singapore is a tiny island without any natural endowments, hence it has been especially important for the Singaporean government to establish strong institutions that could contribute to attracting and maintaining quality inward FDI by providing foreign investors with more confidence in investing in Singapore (Prime, 2012). Nations that have higher institutional quality generate stronger FDI-induced economic growth and attract FDI with higher spillover potential as compared to nations that have weaker institutional qualities (Hayat, 2017). Good institutional quality has a positive relationship with FDI, as the nation is equipped with proper business regulations and property rights protections (Durham, 2004). Singapore utilized policies and institutions to enhance and build social capabilities. The Singaporean government used “hyper-sensitive” policies to provide conducive conditions for

foreign firms to thrive (Prime, 2012). Policies were continuously adapted or changed to accommodate the demands and needs of foreign companies. This not only created an incentive for foreign firms to invest in Singapore but also created a conducive environment for foreign firms allowing them to stay and upgrade in Singapore. These policies were manner in which encouraged spillover benefits from FDI (Mondeja, 2017). Through the development of human capital, Singapore has built a knowledge economy though with the deliberate intention of attracting quality FDI that can benefit the nation's economy. Without any natural resources, Singapore understood early on that the mobilization and development of its people was a crucial factor in its development (Boon & Gopinathan, 2008).

Laying the foundations: 1965-1980

Singapore's main focus was to reduce unemployment and this was done so by attracting labor intensive industries into the country to provide low wage jobs for Singapore's unskilled labor force (Boon & Gopinathan, 2008).

The Second Industrialization: 1980 -1990

During the 'second industrial revolution,' the main aim was to shift from labor intensive industries towards high-skilled industries (Prime, 2012). The goal was to take Singapore out of competition with low-wage countries for FDI in labor intensive industries and push the nation into technological advancement. Hence, Singapore needed to invest heavily in its human capital to create a high-skilled workforce that would attract high-skilled industries and foreign MNCs (Prime, 2012). During this phase, Singapore wanted to attract Foreign MNEs due to their access to highly advanced technologies and foreign markets. Spillover effects from MNEs would provide Singapore with technological advancement and economic growth due to Singapore's high level of absorptive capability (Prime, 2012).

The Next Lap: 1990-2010

Aggressive initiations of reforms to attract FDI in high-value innovative industries. The 'Next Lap' development plan was introduced as a government development plan for the upcoming 30 years (Prime, 2012). Alongside other points, The Next Lap development plan described a strong

focus on technological upgrading, Human Capital, and building strong institutions (Prime, 2012). During this phase, there was a re-emphasis on innovation and the creation of local firms to foster the creation of a knowledge-based economy (Prime, 2012).

Remaining competitive: 2010-2022

As its economy grows, Singapore continues to attract and leverage inward FDI. Today, Singapore is one of the world's strongest economies with low corruption, political and economic stability, and a high-skilled workforce, Singapore has become a trusted business hub for FDI (Singapore Economic Development Board, 2022).

Since the beginning of its independence, Singapore has had an aggressive open-door policy to attract FDI. Inward FDI has been a crucial factor in Singapore's economic development strategy. Today, Singapore is one of the world's strongest economies today with low corruption, political and economic stability, and a high-skilled workforce, and Singapore has become a trusted business hub for FDI (Prime, 2012). Singapore's strategy has always been to attract FDI into the nation and absorb the knowledge and technological spillover effects from the foreign MNCs.

Singapore understood FDI is not a panacea, and that it could not merely rely on inward FDI without developing internally. The nation has relied on foreign firms to establish and develop its industries and skills, whilst at the same time developing a domestic knowledge economy (Prime, 2012). Singapore has indisputably benefited from its large inflow of FDI and it has helped Singapore transition from a developing nation to an economic powerhouse (Maitra, 2016). Inward FDI can help developing nations in accelerating their developing process, however without the correct environment to foster the benefits of FDI to the host country such as macroeconomic stability, solid institutions, and policies, and human capital the FDI 'spillover' will not be absorbed by the host country (Borensztein, De Gregorio, & Lee, 1998). Developing nations should not merely focus on attracting FDI if these conditions are not in place. The case of Singapore shows that to benefit from inward FDI, domestic investment in human capital and the development of strong institutions should also be in place. When discussing Singapore's economic success, its local advantage is often brought up. Singapore's strategic locational

advantage at the crossroads of East-West trade has indisputably contributed to its economic development, however, it has not caused Singapore's economic development (Prime, 2012). Many other economies such as Malaysia and other Southeast Asian nations neighboring Singapore are also endowed with the same strategic location, yet they have not witnessed the same economic prosperity and many are still struggling to achieve economic stability (Soon & Stoeber, 1996). The fact that Singapore's location has allowed it to become one of the world's most successful business hubs is a consequence of its success, not a cause of it.

7 Conclusion

This paper has taken a qualitative approach to answer the question "How has Singapore used inward FDI as a tool for sustained economic growth and development?". The Literature review has depicted the mixed findings regarding the relationship between inward FDI and its effect on economic growth in the host country. Empirical research has found that FDI has a conditional positive effect on the host country's economic growth. The theory of absorptive capacity was introduced as the theoretical framework, which to restate refers to the host country's ability to absorb the positive benefits such as technological and knowledge spillovers that come from FDI (Kalotay, 2000). Two main Absorptive Capacity factors were highlighted; human capital and institutions and infrastructure. Using an analytical narrative approach, the management of inward FDI in Singapore was investigated.

Leveraging the benefits of inward FDI is difficult for many countries, Singapore has managed to successfully manage inward FDI to optimize and leverage its benefits. Since the beginning of its independence, Singapore has been a developmental state with hyper-sensitive policies that focus on the advancement of human capital and building strong institutions and infrastructure (Boon & Gopinathan, 2008). Through the development of strong institutions, Singapore has managed to maintain political and macroeconomic stability, making it an attractive location for FDI. The successful development of Singapore's economy has largely been due to the consistent upgrade and expansion of human capital and social capability to ensure the workforce meets the needs of foreign MNCs (Boon & Gopinathan, 2008). The Singaporean government has placed a large

focus on its economic strategy concerning how to position the nation in a global context (Prime, 2012). The efficiency of the Singaporean government demonstrated in creating clear strategic development goals and taking the necessary steps to reach them has been impressive and has given Singapore international recognition as one of the 4 Asian Tigers; alongside Hong Kong, Taiwan, and South Korea. The Asian Tigers maintained a growth rate of more than 7% between the 1960s - 1990s (Boon & Gopinathan, 2008).

Blomqvist (2000) suggests that Singapore's government has acted in a manner that is similar to business where it was responsive with clear strategic goals whilst being proactive. This does not mean that Singapore has not received criticism, the one-party authoritarian state has been accused of micromanaging its citizens and been coined the "nanny state" with strict and stringent laws and the death penalty still being in practice today. (Ng, 2015). The Singapore government has a low tolerance for speech and assembly and criticisms towards the government, in the Code of Criminal Procedure the 'scandalizing the judiciary act is an arrestable offense Ng, 2015).

Inward FDI can help developing nations in accelerating their developing process, however without the correct environment to foster the benefits of inward FDI to the host country, namely; solid institutions and infrastructure, and human capital, the FDI 'spillover' will not be absorbed by the host country. Developing economies have been attempting to attract FDI to their economy as a means to achieve economic growth and development. Singapore is a pioneer in using and attracting FDI as a means to increase technological development and stimulate economic growth. Singapore has indisputably benefited from its large inflow of FDI and it has helped Singapore transition from a developing nation to an economic powerhouse. The case of Singapore shows that to benefit from inward FDI, domestic investment in human capital and the development of strong institutions should also be in place (Boon & Gopinathan, 2008). Moreover, the Singapore case demonstrates that a small resource-scare nation can upgrade skills and shift to a high-skilled industry with primary reliance on inward FDI.

The case of Singapore shows that to benefit from inward FDI, domestic investment in human capital and the development of strong institutions should also be in place. The core of

Singapore's success has been government attention to Government policies that were hyper-sensitive to building domestic social capabilities that were continuously updated and expanded to meet the needs of foreign companies (Boon & Gopinathan, 2008). Government policies were hyper-sensitive to providing the conditions for foreign firms to be successful. Hence, the Singapore case demonstrates that a small country can upgrade skills and move up the production-value chain in an open market context with primary reliance on foreign direct investment (FDI).

References

- Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American economic review*, 91(5), 1369-1401. Available at: <https://www.aeaweb.org/articles?id=10.1257/aer.102.6.3077>
- Adams, S. (2009). Foreign direct investment, domestic investment, and economic growth in Sub-Saharan Africa. *Journal of policy modeling*, 31(6), 939-949. Available at: <https://doi.org/10.1016/j.jpolmod.2009.03.003>
- Adegboye, F. B., Osabohien, R., Olokoyo, F. O., Matthew, O., & Adediran, O. (2020). Institutional quality, foreign direct investment, and economic development in sub-Saharan Africa. *Humanities and social sciences communications*, 7(1), 1-9. Available at: <https://www.nature.com/articles/s41599-020-0529-x>
- Agbloyor, E. K., Gyeke-Dako, A., Kuipo, R., & Abor, J. Y. (2016). Foreign direct investment and economic growth in SSA: The role of institutions. *Thunderbird International Business Review*, 58(5), 479-497. Available at: <https://doi.org/10.1002/tie.21791>
- Aitken, B. J., & Harrison, A. E. (1999). Do domestic firms benefit from direct foreign investment? Evidence from Venezuela. *American economic review*, 89(3), 605-618. Available at: <https://www.aeaweb.org/articles?id=10.1257/aer.89.3.605>
- Akalpler, E., & Adil, H. (2017). The impact of foreign direct investment on economic growth in Singapore between 1980 and 2014. *Eurasian Economic Review*, 7(3), 435-450. Available at: <https://doi.org/10.1142/S0217590808003105>
- Andrew, M. (2003). 'Review of *Foreign Direct Investment for Development: Maximizing Benefits, Minimizing Costs*, by Organization for Economic Co-operation and Development', *Development in Practice*, 13(5), 580-582. Available at: <http://www.jstor.org/stable/4029951>

Armah, M. K. (2016). *Infrastructure and foreign direct investment inflows: Evidence from Ghana*. *Journal of Emerging Trends in Economics and Management Sciences*, 7(1), 57-66. Available at: <https://hdl.handle.net/10520/EJC187442>

Asghar, A., Ellington, R., Rice, E., Johnson, F., & Prime, G. M. (2012). Supporting STEM education in secondary science contexts. *Interdisciplinary Journal of Problem-Based Learning*, 6(2), 4. Available at: <https://doi.org/10.7771/1541-5015.1349>

Athukorala, P. C. (2008). Singapore and ASEAN in the new regional division of labor. *The Singapore Economic Review*, 53(03), 479-508. Available at: <https://doi.org/10.1142/S0217590808003105>

Azam, M., Khan, S., Zainal, Z. B., Karuppiah, N., & Khan, F. (2015) 'Foreign direct investment and human capital: evidence from developing countries. *Investment Management and Financial Innovations*, 155-162. Available at: <https://doi.org/10.1142/S0217590808003105>

Baharumshah, A. Z., & Almasaied, S. W. (2009). *Foreign direct investment and economic growth in Malaysia: Interactions with human capital and financial deepening*. *Emerging Markets Finance and Trade*, 45(1), 90-102. Available at: <https://doi.org/10.2753/REE1540-496X450106>

Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. *Economic systems*, 38(2), 269-287. Available at: <https://doi.org/10.1016/j.ecosys.2013.09.002>

Blin, M., & Ouattara, B. (2009). Foreign direct investment and economic growth in Mauritius: Evidence from bounds test cointegration. *Économie internationale*, (1), 47-61. Available at: <https://doi.org/10.3917/ecoi.117.0047>

Borensztein, E., De Gregorio, J., & Lee, J. W. (1998). How does a foreign direct investment affect economic growth?. *Journal of International Economics*, 45(1), 115-135. Available at: [https://doi.org/10.1016/S0022-1996\(97\)00033-0](https://doi.org/10.1016/S0022-1996(97)00033-0)

Cahyadi, G., Kursten, B., Weiss, M., & Yang, G. (2004). Singapore's economic transformation. *Global Urban Development: Singapore Metropolitan Economic Strategy Report*, 2-25.

Carkovic, M., & Levine, R. (2005). Does foreign direct investment accelerate economic growth. *Does foreign direct investment promote development*, 195, 220.

Cleeve, E. A., Debrah, Y., & Yiheyis, Z. (2015). Human capital and FDI inflow: An assessment of the African case. *World Development*, 74, 1-14. Available at: <https://doi.org/10.1016/j.worlddev.2015.04.003>

Cuadros, A., & Alguacil, M. (2014). Productivity spillovers through foreign transactions: The role of sector composition and local conditions. *Emerging Markets Finance and Trade*, 50(sup2), 75-88. Available at: <https://doi.org/10.2753/REE1540-496X5002S205>

Dunning, J. H. (1998). Globalization and the new geography of foreign direct investment. *Oxford Development Studies*, 26(1), 47-69. Available at: <https://doi.org/10.1080/13600819808424145>

Feridun, M., & Sissoko, Y. (2011). Impact of FDI on Economic Development: A Causality Analysis for Singapore, 1976-2002. *International Journal of Economic Sciences & Applied Research*, 4(1). Available at: <http://hdl.handle.net/10419/66624>

Forte, R., & Moura, R. (2013). The effects of foreign direct investment on the host country's economic growth: theory and empirical evidence. *The Singapore Economic Review*, 58(03), 1350017. Available at: <https://doi.org/10.1142/S0217590813500173>

Fosu, Prince (2016): *Infrastructure and Foreign Direct Investment Inflows: Evidence from Ghana*. Published in: *Management and Economic Journal* No. 2 (30 March 2016): pp. 79-93. Available at: <https://mpra.ub.uni-muenchen.de/100375/>

Guo, J. J., & Yuen, Y. L. (2012). Productivity spillovers to local manufacturing firms from foreign direct investment. *Economic Survey of Singapore, First Quarter*, 16-27.

Haddad, Mona & Harrison, Ann. (1993). Are There Positive Spillovers From Direct Foreign Investment?: Evidence From Panel Data for Morocco. *Journal of Development Economics*. 42. 51-74. 10.1016/0304-3878(93)90072-U. Available at: [https://doi.org/10.1016/0304-3878\(93\)90072-U](https://doi.org/10.1016/0304-3878(93)90072-U)

Hanushek, E.A. (2013). Economic growth in developing countries: The role of human capital, *Economics of Education Review*, 37, pp. 204-212. Available at: <https://doi.org/10.1016/j.econedurev.2013.04.005>

Hsu, L. (2012). Inward FDI in Singapore and its policy context. *Inward and Outward FDI Country Profiles*, 1. Available at: [http://ccsi.columbia.edu/files/2014/03/Singapore_IFDI - FINAL - 31 May 2012.pdf](http://ccsi.columbia.edu/files/2014/03/Singapore_IFDI_-_FINAL_-_31_May_2012.pdf)

Iamsiraroj, S., & Ulubaşoğlu, M. A. (2015). Foreign direct investment and economic growth: A real relationship or wishful thinking?. *Economic modelling*, 51, 200-213. Available at: <https://doi.org/10.1016/j.econmod.2015.08.009>

Irاندoust, J. E. M. (2001). On the causality between foreign direct investment and output: a comparative study. *The International Trade Journal*, 15(1), 1-26. Available at: <https://doi.org/10.1080/088539001300005431>

Jaiblai, P., & Shenai, V. (2019). The Determinants of FDI in Sub-Saharan Economies: A Study of Data from 1990–2017. *International Journal of Financial Studies*. Available at: <https://doi.org/10.3390/ijfs7030043>

Khordagui, N., & Saleh, G. (2016). Absorptive capacity factors that mediate foreign direct investment spillovers: A sector-level analysis from emerging economies. *International Journal of Business and Globalization*, 16(2), 188-201. Available at: <https://doi.org/10.1504/IJBG.2016.074486>

Kinoshita, Y., & Lu, C. H. (2006). On the role of absorptive capacity: FDI matters to growth. Available at: <http://dx.doi.org/10.2139/ssrn.944580>

Kotey, R., & Abor, J. (2019). The role of technology as an absorptive capacity on economic growth in emerging economies: a new approach. *European Journal of Applied Economics*, 16(2), 59-78. Available at: <https://ssrn.com/abstract=3475839>

Le, H. C., & Le, T. H. (2020). Foreign direct investment inflows and economic growth in Singapore: An empirical approach. *Economics Bulletin*, 40(4), 3256-3273.

Lecraw, D. J. (1985). Some determinants and effects of FDI in Singapore. *Asia Pacific Journal of Management*, 2(2), 71-80. Available at: <https://doi.org/10.1007/BF01734689>

Li, X., & Liu, X. (2005). Foreign direct investment and economic growth: an increasingly endogenous relationship. *World development*, 33(3), 393-407. Available at: <https://doi.org/10.1016/j.worlddev.2004.11.001>

Lim, E. G. (2001). Determinants of, and the relation between, foreign direct investment and growth a summary of the recent literature. Available at: <https://ssrn.com/abstract=880230>

Lim, L. P., & Gregory, M. J. (2004). Singapore's biomedical science sector development strategy: Is it sustainable?. *Journal of Commercial Biotechnology*, 10(4), 352-362. Available at: <https://doi.org/10.1057/palgrave.jcb.3040093>

Maitra, B. (2016). Investment in Human Capital and Economic Growth in Singapore. *Global Business Review*, 17(2), 425-437. <https://doi.org/10.1177/0972150915619819>

Majeed, M. T., & Ahmad, E. (2008). Human capital development and FDI in developing countries.

Mold, A. (2003). Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.

Ng, I. Y. (2015). Being poor in a rich " nanny state": Developments in Singapore social welfare. *The Singapore Economic Review*, 60(03), 1550038. Available at :<https://doi.org/10.1142/S0217590815500381>

Nguyen, H. T., Duysters, G., Patterson, J. H., & Sander, H. (2009, October). Foreign direct investment absorptive capacity theory. Georgia Institute of Technology. Available at: <http://hdl.handle.net/1853/35267>

Nguyen, T. N. (2011). Foreign direct investment in real estate projects and macroeconomic instability. *ASEAN Economic Bulletin*, 74-96. Available at: <https://doi.org/10.1142/S0217590815500381>

Organization for Economic Co-operation and Development Staff. (2002). *Education at a glance: OECD indicators 2002*. Paris: OECD. Available at: <http://hdl.voced.edu.au/10707/27041>.

Ridzuan, A. R., Ismail, N. A., & Che Hamat, A. F. (2017). Does foreign direct investment successfully lead to sustainable development in Singapore?. *Economies*, 5(3), 29. Available at: <https://doi.org/10.3390/economies5030029>

Rodrik, D. (2003). Institutions, integration, and geography: In search of the deep determinants of economic growth. *In Search of Prosperity: Analytic Country Studies on Growth*, Princeton University Press, Princeton, NJ. Available at: <https://tinyurl.com/ydxyjgs>

Soon, T.W & Stoever, W.A. (1996). Foreign Investment and Economic Development in Singapore: A Policy-Oriented Approach. *The Journal of Developing Areas*, 30(3), 317–340. Available at: <http://www.jstor.org/stable/4192566>

Stoever, W. A. (1996). Foreign investment and economic development in Singapore: a policy-oriented approach. *The Journal of Developing Areas*, 30(3), 317-340. Available at: <https://www.jstor.org/stable/4192566>

Vu, K. M. (2011). Sources of Singapore's economic growth, 1965-2008: trends, patterns and policy implications. *ASEAN Economic Bulletin*, 315-336. Available at: <https://www.jstor.org/stable/41445396>

World Bank. (2017). How developing countries can get the most out of the direct investment. Available at: <https://www.worldbank.org/en/topic/competitiveness/publication/global-investment-competitiveness-report>

Xu, B. (2000). Multinational enterprises, technology diffusion, and host country productivity growth. *Journal of development economics*, 62(2), 477-493. Available at: [https://doi.org/10.1016/S0304-3878\(00\)00093-6](https://doi.org/10.1016/S0304-3878(00)00093-6)

