Asian Tiger's economic progression and Influence of Sectoral FDI

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ABSTRACT

In this paper, we scrutinize the sectoral FDI’s influence on economic progression over the period of 2006-2015 (the case study of Asian Tigers: Hong Kong, Singapore, and Taiwan). The outcomes of the paper recommend that sectoral FDI has an affirmative and noteworthy influence on the economic progression of Asian Tigers. In light of our findings we suggest, to avail the fruits of economic growth through FDI, developing countries should invest more in human capital and improve financial openness.

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1. Introduction

The two major engines of economic growth are associated with channelizing capital accumulation and technology transfer (De Mello Jr, 1997). Foreign Direct Investment (FDI) is not a new concept for people who know little about economics or the economy. For countries, it is as essential as any other source of investment. It is well acknowledged that foreign direct investment (FDI) is a contributor to long-term economic progression. Any arrivals will persuade higher economic progress to host economies as contributors to economic progression in the long term, irrespective of any channels. It was emphasized by Bwalya (2006) that FDI may certainly impact economic progression with the following three channels: (i) by providing reserve (no debt!) to sponsor the host country’s investment; (ii) by improving the host country’s technical level and (iii) by transferring host country the latest technology to its development. It is being considered that the role of the vehicle can be played by FDI that can transfer both tangible and intangible assets like advanced technology, improved organizational expertise, and state-of-the-art product strategies. Tentatively speaking, it is being considered that the engine of economic progress is the capital establishment and technological enhancement. Due to this fact, FDI is likely to support host countries’ economic progression. The progressive influence of FDI on growth is believed to be driven by the spillover effect of FDI or FDI shifting resources relating to efficiency enhancement.

The total inflows in developing countries of FDI are outstandingly rigorous. The lion's share goes to several countries. In terms of FDI inflows, the ten largest countries accounted for 71% of total world FDI inflows in 1998. Asian and Latin American countries are among most of them. China, Brazil, Mexico, Singapore, and Indonesia are the five largest host countries for FDI inflows. In emerging countries, these five countries account for 55% of the FDI inflows (Nations, 1999).
It was stated by the "World Investment Report" (Nations, 1999) that the impact of FDI may differ significantly depending on the appearance of the sector and its association with the rest of the economy, and its linkages vary across primary, manufacturing, and services sectors. The primary sector is usually capital-exhaustive, and its scope is limited between overseas companies and the rest of the economy. In comparison, the manufacturing sector has a superior impact because it has an extensive range of linkage-intensive activities. Different activities such as finance, infrastructure (electricity, water, and telecommunications), wholesale and retail, real estate as well as tourism are included in the services sector. The potential forward linkages for the sector of FDI are pretty intense because it primarily serves the domestic market, while backward linkages may vary by industry.

By reviewing the economic history of the world, we can see that the economics who truly surprised all the economic pundits of the world are Asian Tigers or Dragons; as freshly as the early 1960s, these countries (the "Asian Tigers") were considered as the part of the third world: An essential factor in the rapid progress of these economics is the Foreign Direct Investment (FDI). The history of these countries is not as rich as it is today, and they indeed worked very hard to achieve this level, but we cannot ignore the role FDI played in giving wings to a little crawling bird. Many economists referred to it as "Economic Backwardness."

With the support of swift internal policy rejoinders on both fiscal and monetary fronts, the Asian tigers quickly recovered. As stated by (IMF, 2009a), the fiscal incentive measures by the first half of 2009 amounted to around 2.6% of GDP for this group of countries. It reached up to 40% of the fiscal incentive by the end of 2009. Enormous policies stimulated the stabilization of global trade in the advanced countries; in search of high-yielding investments, the appearance of private capital flows into these economies was also witnessed by emphasizing international investor optimism about the region’s growth prospects. The appearance of asset price bubbles in these economies by stock and property prices with the flood of global liquidity inflows has started to increase.

However, it was revealed by numerous practical studies that the host countries require a certain level of absorptive capacity in order to acquire the welfare FDI brings along. Many factors can measure this absorptive capacity. Among them are institutional quality, human capital, and financial market development. It was examined by Borensztein, De Gregorio, and Lee (1998) between 1970 to 1989 in "FDI flows from OECD countries to developing countries" that only with the help of host economy's human capital can FDI achieve a certain threshold level. Institutional quality reflects as one feature of host economies' absorptive capacity by existing literature of World Bank 2001. According to (Adam 2009), these two are the primary growth ingredients. Empirical studies exhibit that FDI has an affirmative influence on the progression of those economies that have reached the minutest threshold of institutional quality (Durham, 2004), in the literature of finance, both financial liberalization and financial openness are used alternatively. Between the era of 1970 to 1990; the financial liberalization of developing economies was an essential part of government policies so that their markets performed an imperative role in economic advancement.

Here, we have examined the consequences of FDI on the disaggregate level to find out either is it really matters to invest in any particular sector or not; numerous studies are available that discuss the issue of total FDI inflows and economic progression (Balasubramanyam, Salisu, & Sapsford, 1996; Chen, Chang, & Zhang, 1995; Kasibhatla & Sawhney, 1996), but there is still a question concerning the effects of different sector-level FDI inflows in the host economy. An inexplicable issue is whether all kinds of FDI inflows inspire growth. To find the impact of FDI on economic growth with sectoral disaggregation precisely and more accurately, many researchers have put their share into it (Agénor, Alper, & da Silva, 2014; Hanafy & Marktanner, 2019; Ingham, Read, & Elkomy, 2020).

The arrival of foreign firms can impose a negative cost on the host country, or they can generate supernormal profits and transfer those profits back to their home country. Discussions of technology spillovers from FDI inflows typically focus on the manufacturing sector (Barrell & Pain, 1997; Chuang & Lin, 1999). Does FDI in non-manufacturing sectors, such as agriculture or service, have comparable impacts, or is there significant heterogeneity across sectors in the effect of FDI on growth?
The paper is distributed in the following sections. The first part is an introduction. A review of literature is given for the studies already done in the same domain. Trends analysis are given after that and in the last, conclusion and policy recommendations are provided that the author has suggested in the light of their results.

2. Literature Review

There are three different types of opinion about the influence of sectoral FDI on economic progression; some people consider FDI as a positive tool to boost the growth of an economy, while others believe that there should be some threshold to get the best benefit from foreign direct investment, because if there is some initial knowledge only then one can get benefit from it, and there are also some people who consider it as a negative effect on the economy if any FDI come. It was established by the collaborative study taken of Korean and Taiwanese investment patterns (Hong et al., 2007) between China and Korea that diplomatic relations can initiate a swift pace of trade. In recent years, China's imports of parts and components from Korea have improved since China has been Korea's principal market since 2003 and trading partner with whom Korea maintains its leading surplus. Due to this, it has become the leading trade feature between the two economies. By examining the role of FDI in Taiwan's development from 1952 to 1980, an industrial case study by (Ranis & Schive, 1985) concluded that an essential part of FDI was played in the early economic development of Taiwan, and it was confirmed that FDI is a capable channel of technology allocation to Taiwan form overseas. A survey data from 1986 to 1991 in Taiwan used by Chen, Hsu and Liu (2004) concluded that on labour productivity, FDI has no or even adverse influence when competing channels of technology implementation were examined. It was suggested that the role of FDI in Taiwan's economic development needs additional illumination through time-series data. From 1959 to 1999 Kim and Seo (2003), by using the vector autoregression models, investigated the dynamic relationship between FDI and economic progression and domestic investment in Korea and established the conclusion that FDI has some affirmative results on economic progression. It was also shown by the study's findings that FDI does not crowd out domestic investment in Korea. An optimistic spillover outcome was observed by Masron, Zulkafl, and Ibrahim (2012) in their paper "spillover effects of FDI in the manufacturing sector in Malaysia", but it was also detected that in specific sectors, FDI inflows employ an adverse effect on its sector and as well as to another sector.

Different channels are mentioned in literature at the micro-level that allow the technological spillovers of FDI to the host economy cc: some among them are, with the labour market (i.e. training of local workers by foreign firms), with imitation, through backward or vertical spillovers or by inducing a competition effect. For all these channels, the one that plays a relevant role in the host economy's features precisely is the relative enlargement level of the host economy compared to the sending country in terms of technology and human capital etc. The significant share of East Asian countries such as Taiwan, Hong Kong, Singapore, and South Korea, which were also known as Asian Tigers, were highlighted by Bozkurt and Karaköy (2022) and discussed in detail about their economic growth while discussing their competitive advantage which they have gained in a quarter century. The study evaluated the foreign trade activities of these countries for the time 2000-2020 and examined which counties they traded with the most. Taking into account the data extracted from World Trade Organization and Trade map sites, the study concluded that the Asian tigers had gained more strength and a strong economic position every year. With significant economic policy and successful strategies, these economies had overcome the crisis, which could have caused them some damage. The study also concludes that Asian Tiger countries were considered as one of the best in foreign trade due to their export-based foreign trade policy and technology infrastructure investments.

Majerová and Pražák (2020) evaluated the linkages between macroeconomic factors and the stock market development in Hong Kong and Singapore. The study evaluated the impact of structural economic changes; it is commonly observed that economic indicators such as GDP, interest, inflation and unemployment rate, and supply of money are considered for evaluating growth. The study considers the time 2005-2016 by applying the linear regression model. The study concludes that all unemployment, interest, and exchange rate have a significant adverse effect. Moreover, the results of the Chow test affirm that the global
financial crisis in the year 2008 had a negative impact on the predictive ability of the chosen linear regression analysis in the long-term time horizon in Hong Kong and Singapore. A decline in GDP was observed during the crisis time in both countries. Hauge (2019) emphasizes the importance of FDI, specifically in the manufacturing sector, by giving an example of Asian tiger counties such as South Korea and Taiwan. The study keeps its focus on industrial policy in Ethiopia and its foreign direct investment in the manufacturing sector. It was discussed in the study that the industrial policy comprised FDI-oriented brings short-term economic benefits and has shown signs of future industrialization. In the meantime, the study also stresses the importance of learning lessons from Taiwan and South Korea’s long-term economic progress. The study emphasized the importance of transferring technologies from foreign firms to the domestic economy, including creating linkages between foreign to domestic firms.

The significance of technology transfer and capital accumulation considering a foreign direct investment is crucial in any economy’s development. This factor was highlighted by Fazaalloh (2022) by studying the role of FDI in the economic growth of Indonesia on a provincial level and the progression of sectoral growth for the period 2010-2019. The study employed the fixed effect estimator and concluded that FDI significantly and positively impacts sectoral economic growth, specifically in manufacturing, mining, water, gas, electricity, hotels, restaurants, and the real sector. Moreover, the study also confirms that only the agricultural sector was where the presence of FDI created a negative impact. The analysis was performed using the GMM model that considers the endogeneity problem. “Effect of FDI on the economic growth of China and India for the period of 1993-2009” was examined by Agrawal and Khan (2011), who constructed the basic growth model from the modified growth model. The factors that were included in the model were "GDP, Human Capital, Labor Force, FDI, and Gross Capital Formation". The results were summarized as "A 1% increase in FDI would result in a 0.07% increase in GDP of China and a 0.02% increase in GDP of India“ by running the OLS regression method. It was also established that compared to India, China’s growth is more affected by FDI. Due to China's bigger market size, foreign investors' widely held choice over India was China for investment purposes. With the help of panel data for 60 developing countries during 1970-2003, the endogenous growth model was estimated by Mallick and Moore (2008) and the conclusion was established, across all income groups, FDI inflows have an encouraging and noteworthy outcome on economic growth. The subsidiary influence of FDI on economic growth in lower-income countries through their contribution to investment could be weaker. To test the stationary of the variable, the Peron test, the ADF test and Divot and Andrew's unit-root test were used by (Chang, 2007) in Taiwan. It was concluded in the study, that there is no causal relationship between FDI inflows and economic progression by applying the Johansen Cointegration test, the multivariate error correction model, and the Granger causality test. With province-level panel data from 1986-1999, a regression model was used by Epstein and Braunstein (2002) in China; the results concluded that FDI crowded out domestic investment. Its benefits were extinct as a consequence of intense competition of FDI among the regions of China, resulting in it to enforced regions to decrease taxes, regulations on environmental protection, wages, and working conditions. In four Asian countries, the elasticity of the estimated production function of FDI was found to be significant in economic progression (Marwah & Tavakoli, 2004). According to the study’s results, 0.086 imports and foreign capital elasticity with 0.443 growth contributed in the case of Malaysia, highlighting the fact that both FDI and imports significantly impact growth. FDI in the manufacturing sector of Indonesia was analyzed by (Dhanani & Hasnain, 2001). The study highlighted the contribution of FDI in the manufacturing sector in capital formation. Moreover, domestic production, export, and employment were scrutinized. Its linkages with the domestic supplier and support industries, transfer and diffusion of technology, the balance of payment, and tax revenues were investigated using the data from 1990 to 1998. The results recommend, "FDI inflows contribute moderately to total capital formation, generating net export revenues, creating manufacturing employment, developing supplier and support industries, transferring technology and generating tax revenues". Apart from it, a deleterious relation of FDI was found concerning the balance of payments.

3. Trends Analysis

Although the praise of the "Asian Miracle” has declined in academia after the 1997 Asian Financial Crisis, still no one could have projected 50 years ago; that the Tigers could stand as an exceptional case of countries who have positively "developed” as these and even at a noticeably significantly quicker rate than any of other recent third-world developing
country. Nevertheless, the question is, "Is the economic progression of these countries still an example to follow?" From the 1960s through to the 1990s, these countries experienced a swift economic progression, and modern-day development has changed a great deal. East Asian tigers accepted an open trade policy and experienced ‘miracle’ rates of economic progression. Because of this, their Real Gross Domestic Product (GDP) grew at an average annual rate of 8-9 percent, while on the contrary, the United States and Western Europe during the same period had a growth rate of 2-3 percent. It was witnessed that, at that time, other developing economies followed the strategy of import-substituting industrialization and experienced comparatively low rates of economic progression.

Every country has its priorities and expertise concerning the investment it receives in terms of FDI from different countries. In the following section, we will see the trends of FDI in different sectors of the economy of the Asian tigers. We will first compare all countries in primary, manufacturing, services, and another sector, then we will see every country separately in terms of inflow of FDI received sectoral basis.

**Figure 1: Share of Developed and developing economies in World FDI**

![Figure 1: Share of Developed and developing economies in World FDI](data:image/png;base64,base64_encoded_image)

Data source: UNCTAD

The developed and developing economies have fiercely competed against each other for FDI. We can see from the figure 1 that where the world FDI share of developing countries has increased, it has decreased for developed economies. In 1998 the gap between developing and developed economies was at its peak, but it kept reducing and increasing with time. The latest data shows the gap at its minimum as both developed and developing economies are taking their share in FDI.

**Figure 2: Share of Individual Asian Tiger Economy in World FDI**

![Figure 2: Share of Individual Asian Tiger Economy in World FDI](data:image/png;base64,base64_encoded_image)

Data source: UNCTAD
According to the figure 2, Singapore is receiving the highest percentage of the World’s FDI while both Hong Kong and Taiwan are almost at the same level.

Table 1: FDI as Percentage of GDP

<table>
<thead>
<tr>
<th>No. of Years</th>
<th>Hong Kong</th>
<th>Taiwan</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>8.25</td>
<td>0.08</td>
<td>6.95</td>
</tr>
<tr>
<td>1999</td>
<td>15.30</td>
<td>0.96</td>
<td>21.85</td>
</tr>
<tr>
<td>2000</td>
<td>31.79</td>
<td>1.49</td>
<td>15.35</td>
</tr>
<tr>
<td>2001</td>
<td>17.15</td>
<td>1.37</td>
<td>19.27</td>
</tr>
<tr>
<td>2002</td>
<td>2.20</td>
<td>0.47</td>
<td>5.77</td>
</tr>
<tr>
<td>2003</td>
<td>11.05</td>
<td>0.14</td>
<td>16.75</td>
</tr>
<tr>
<td>2004</td>
<td>17.24</td>
<td>0.55</td>
<td>19.41</td>
</tr>
<tr>
<td>2005</td>
<td>18.76</td>
<td>0.43</td>
<td>13.89</td>
</tr>
<tr>
<td>2006</td>
<td>21.60</td>
<td>1.92</td>
<td>25.22</td>
</tr>
<tr>
<td>2007</td>
<td>27.60</td>
<td>1.91</td>
<td>23.55</td>
</tr>
<tr>
<td>2008</td>
<td>26.59</td>
<td>1.31</td>
<td>6.10</td>
</tr>
<tr>
<td>2009</td>
<td>25.95</td>
<td>0.72</td>
<td>9.55</td>
</tr>
<tr>
<td>2010</td>
<td>30.85</td>
<td>0.56</td>
<td>23.96</td>
</tr>
<tr>
<td>2011</td>
<td>38.86</td>
<td>-0.40</td>
<td>14.28</td>
</tr>
<tr>
<td>2012</td>
<td>26.72</td>
<td>0.65</td>
<td>20.37</td>
</tr>
<tr>
<td>2013</td>
<td>26.95</td>
<td>0.70</td>
<td>18.43</td>
</tr>
<tr>
<td>2014</td>
<td>38.78</td>
<td>0.53</td>
<td>23.28</td>
</tr>
<tr>
<td>2015</td>
<td>56.35</td>
<td>0.45</td>
<td>19.38</td>
</tr>
<tr>
<td>2016</td>
<td>36.59</td>
<td>1.78</td>
<td>22.04</td>
</tr>
<tr>
<td>2017</td>
<td>32.44</td>
<td>0.58</td>
<td>24.77</td>
</tr>
<tr>
<td>2018</td>
<td>28.82</td>
<td>1.17</td>
<td>20.36</td>
</tr>
<tr>
<td>2019</td>
<td>20.16</td>
<td>1.35</td>
<td>30.68</td>
</tr>
<tr>
<td>2020</td>
<td>11.94</td>
<td>1.32</td>
<td>26.80</td>
</tr>
</tbody>
</table>

Data Source: UNCTAD

Table 1 reveals yet another exciting fact about the FDI of Hong Kong, Singapore, and Taiwan. In the year 1998, Hong Kong had 8% FDI as its percentage of GDP, while both Singapore and Taiwan were merely receiving 7% and 0.08%, respectively. However, in 2020, it is now converted into 12% for Hong Kong and 26.8% and 1.32% for Singapore and Taiwan, respectively. With time they have gained a considerable share of FDI in terms of the percentage of their respective GDP.

Figure 2: Share of services in FDI for Singapore, Hong Kong and Taiwan

Data source: Respective Statistical departments

Singapore’s share of FDI in the services sector has shrunk from 12% to 8% in the past five years. While for Hong Kong, it has swollen from 1% to 3%. Taiwan has significantly reduced its share from 8.5% to only 2%, demonstrating a minor dependency on FDI, especially in the services sector.
Figure 4: Share of Primary Sector in FDI

Data source: Respective Statistical departments

Figure 4 representing the share of FDI in primary sector of all countries. It is clearly visible from figure 4.

Figure 5: Share of Manufacturing Sector in FDI

Data source: Respective Statistical departments

No change has been witnessed in past five years in the manufacturing sector FDI.

Figure 6: Share of Services Sector in FDI

Data source: Respective Statistical departments

However, we can see that FDI in the services sector dominates in Taiwan and Hong Kong; though the difference is not huge in Hong Kong, it is still higher compared to 2015. Based on the finding of the analysis, it is established that the involvement of FDI, particularly in the Services sector, has a positive and significant impact on the economic growth of the economy.
4. Conclusion and Policy Recommendation

The world today is rapidly changing with every single minute. There is advancement in technologies and techniques to do work on. We are living in an era that has witnessed the swiftest changes. It's not very far and away in the past that countries with a low level of growth suddenly rapidly progressed among those hardworking nations, Asian tigers. In our study, we have explored the effect of sectoral FDI on the economic progression of Asian Tigers for the era of 2006-2020. The outcomes show that the effect of manufacturing and services FDI on economic progression is positive and substantial. Many developing countries are vying for the title of Next Asian Tiger, such as Pakistan's purpose, in Vision 2025, to be the next Asian Tiger economy. Pursuing CPEC is evidence that Pakistan is imitating the growth model of Asian Tigers. Although pillar one of Vision 2025, “putting people first: developing Human and Social capital,” shows Pakistan perceives human capital as a factor for sustainable growth, financial openness is entirely ignored. This study concludes that FDI is beneficial for economic progression. However, the benefits of FDI can be sustained with the development of the duo, that is, human capital and financial openness.

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