EFFECTS OF FOREIGN DIRECT INVESTMENT ON GDP GROWTH OF MYANMAR: ANALYSIS FOR THE YEAR OF 1989-2014

BY

MISS EI EI PHYU

THEESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ECONOMICS (INTERNATIONAL PROGRAM) FACULTY OF ECONOMICS THAMMASAT UNIVERSITY ACADEMIC YEAR 2017 COPYRIGHT OF THAMMASAT UNIVERSITY
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FACULTY OF ECONOMICS

THESIS

BY

MS. EI EI PHYU

ENTITLED

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was approved as partial fulfillment of the requirements for the degree of Master of Economics (International Program)

on August 10, 2018

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ABSTRACT

As Myanmar is one of the developing countries, this paper investigates mainly on how FDI promotes economic growth of Myanmar in terms of GDP and what the fundamental investment policies are to unleashing FDI potential for Myanmar. To analyze the effects of FDI on GDP growth of Myanmar before and after new foreign investment law has been enacted is the main objective of this study. Annual time series data set of Myanmar were collected from many sources for the year from 1971 to 2014.

The results from OLS regression obviously revealed that all the variables play an important role by explaining the gross domestic product. Moreover, the result from SWOT analysis discovered that the factors which the firms considered most important for evaluation investment climate of a host country are the political stability, followed by infrastructures, well established laws and regulations, administrative efficiency, availability of foreign exchange and low wages.

From these results, it can be concluded that the effects of foreign direct investment on GDP growth of Myanmar had positively significant during the study period of 1989 to 2014. The foreign investment law and exchange rate policy were significantly effects on economic growth of Myanmar.

Keywords: Foreign Direct Investment, GDP Growth, Economic Development, OLS regression, SWOT Analysis
ACKNOWLEDGEMENTS

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I retain entire responsibility for all remaining deficiencies, ambiguities and errors in this study.

Thammasat University
Bangkok, Thailand

Ei Ei Phyu

August 10, 2018
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<td>Asian Development Bank</td>
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<td>CBM</td>
<td>Central Bank of Myanmar</td>
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<td>CSO</td>
<td>Central Statistical Organization</td>
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<td>DICA</td>
<td>Directorate of Investment and Company Administration</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FIL</td>
<td>Foreign Investment Law</td>
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<td>GDP</td>
<td>Gross Domestic Products</td>
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<td>Myanmar Extractive Industries Transparency Initiative</td>
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<td>MIC</td>
<td>Myanmar Investment Commission</td>
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<td>MoC</td>
<td>Ministry of Commerce</td>
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<tr>
<td>MPED</td>
<td>Ministry of Planning and Economic Development</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>WB</td>
<td>World Bank</td>
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CHAPTER 1
INTRODUCTION

Foreign Direct Investment (FDI) is one of the important drivers for the country’s economic growth, trade and development, especially for the developing countries, and it becomes a key way out to narrow down development gaps among nations. The standard definition of foreign direct investment (FDI) is given by the Organization for Economic Cooperation and Development (OECD) that it denotes the notion of one enterprise in a certain country has extent level of control over another enterprise in a different country, as divergent to the financial capital provision. It is classed as, “investment that adds to, deducts from or acquires a lasting interest in an enterprise operating in an economy” arising from outside of the country to “have an effective voice in the management of the enterprise” (OECD, 1996).

In particular, FDI boosts technology transfer and know-how between economies. It also provides an opportunity to promote the products of the host economy more extensively in international markets. According to OECD Benchmark Condition for the Calculation of FDI as below;

\[
\text{FDI} = \text{Retained earnings} + (\text{Direct Investors Purchase-Sales of Enterprises’ Shares} + \text{Net increase in long and short-term loans, credit and other amounts given by the direct investor to the overseas enterprise} - \text{Overseas enterprise borrowing of money from host country or from their own resources in order to give to the direct investor in home country.})
\]

(Sources: Walker J, 1983 and Office for National Statistics, 1996)

As Myanmar is one of the developing countries, this paper investigates mainly on how FDI promotes economic growth of Myanmar in terms of GDP and what the fundamental investment policies are to unleashing Myanmar’s trade and FDI potential for Myanmar. Since Myanmar has opened up to the outside world, it is expected that the massive inflow of FDI would accelerate economic growth.
Currently, Myanmar is trying to establish itself as a leading manufacturing hub with the change in the political scenario. Although there are many studies on FDI and growth in developing countries, only a few studies on this issue have been done for Myanmar with time series data since the lack of statistical data set for the correspondence period. Therefore, it is not possible to do researches for a long-term perspective.

1.1 Statement of the Problem

According to literatures, FDI also creates more business opportunities for local Small and Medium Enterprises (SMEs) by linking business with Multinational Enterprises (MNEs). Myanmar has turned out to be more open to FDI and has been exploring ways of increasing inflows. In order to compete with other developing countries in attracting foreign investors, the Union of Myanmar government has offered attractive terms. For example, the new Foreign Investment Law (FIL) was adopted in 2012 to replace the previous FIL enacted in 1988 and Myanmar Special Economic Zone Law was enacted in 2014. Three Special Economic Zones (SEZs) are establishing in coastal areas which are also industrial centers opened to FDI in order to promote it. Therefore, the first statement of the problem of this paper came out that “how does FDI promote economic growth of Myanmar in terms of GDP?”

Furthermore, Myanmar has other attractive factors such as plentiful of natural resources, strong and prospective economic growth with sound macroeconomic conditions, young and cheap labors, big population market size and a strategic location from which to secure access to the Mekong six countries and ASEAN plus India. By using several fundamental resources in Myanmar, FDI is one of the factors to contribute a part of country’s economic development. Moreover, the growth of a country is also depended on the capital formation and incremental output ratio of that country. Therefore, it is a need to examine how it effects of FDI on economic growth in terms of GDP of the country.
Without knowing the basic facts of FDI, it is impossible for us to fully analyze the effects and contribution of FDI, and to judge the appropriate policies that Myanmar should pursue in order to attract more FDI. However, there are some arguments by researchers related to the effects of FDI on the economic development of a host country. The Central Statistical Organization (CSO), and Directorate of Investment and Company Administration (DICA) of Myanmar has recently improved by making more dataset available for research. This can lead to surge of research work on the important topic of FDI for Myanmar in the future.

1.2 Objectives of the Study

To analyze the effects of FDI on GDP growth of Myanmar before and after new foreign investment law has been enacted is the main objective of this study by following additional objectives to

i. Examine the relationship of inflation rate, exchange rate, interest rate, unemployment rate and FDI inflow with GDP growth of Myanmar.

ii. Investigate the causes and effects of FDI in the economy of Myanmar.

1.3 Scope of the Study

This study tries to focus on FDI inflow into Myanmar from 1971 to 2014 specifically since before the old Foreign Investment Law (FIL) in 1988 and beyond the period of new FDI law which was enacted in November 2012.

Annual time series data set of Myanmar were collected from many sources such as Central Statistical Organization (CSO), Ministry of Commerce, Directorate of Investment and Company Administration (DICA) in Myanmar, World Bank (WB), Asian Development Bank (ADB), International Monetary Fund (IMF), United Nations Conference on Trade and Development (UNCTAD) and Organization for Economic Cooperation and Development (OECD) reports period from 1971 to 2014. The data are employed to test the hypothesis of this paper. The period has chosen because the inflow of FDI in Myanmar started before and after the first FIL in 1988 although there were lack of investment promotion, economic, social development plans and statistically reliable macro data set from Myanmar government.
At the end, some personal interviews were performed by telephone conversation and send interview questions via email to whom are working for International Non-Government Organizations (INGOs), Yangon University of Economics (YUE), Directorate of Investment and Company Administration (DICA) Myanmar, Businessmen and Freelance Columnists who are focusing on contemporary economic issue of Myanmar, to find out current investment situation in Myanmar and to figure out appropriate policy implications of the study.

1.4 Organizing of the Study

This study is composed of six chapters. In the first chapter, it begins with an introduction- describing the statement of problem concerned, objectives, scope and organizing of the study. The second chapter reviews some theoretical and empirical literatures. Overview of Myanmar economy is described in chapter 3. In the fourth chapter, theoretical framework and methodology are devoted. The study results are presented in the chapter five. The last chapter contains the conclusion and recommendations.
CHAPTER 2
REVIEWS OF LITERATURE

In this part, the existing related literature on the theories and empirical studies of FDI will be briefly reviewed.

There are different results in the literature regarding to how FDI effects economic growth. Borensztein et al (1994) found that the host country must attain a certain development level that helps higher productivity advantage to have positive impacts on growth from FDI. In his et al (1998) suggested that by using an endogenous growth model, FDI is an important vehicle of technology transfer by providing more to economic growth than domestic investment.

There are several economic theories related with FDI. Among them, at first, this paper will discuss about four major economic theories of FDI in this following section. Secondly, some empirical studies on motives, characteristics, performance and technology transfer of FDI in some developing countries will be examined.

2.1 Review the Theories of FDI

Since there are a number of theories concerning with the causality of FDI, this section will review some important theories briefly. Those are international capital theory, internalization theory, location theory and eclectic theory.

2.1.1 International Capital Theory

This theory analysis was advocated by MacDougall (1958) and elaborated by Kemp (1964). It is assumed that under the perfect competitive world, international capital flow will occur from one country to another regarding to differences in the rate of capital return when there is only one commodity and capital is correspondent. In other words, capital will move from where it is relatively abundant and cheap to where it is scarce and dear and, therefore, the marginal productivity is higher.
There are several comments on MacDougall-Kemp Model and summarized by Kyoshi Kojima (1978) as follows;

i. The analysis does not perceive between foreign indirect portfolio investment and foreign direct investment. There must be different between the reason and effect of such two types of foreign investment.

ii. Transfer of capital through foreign direct investment is often combined with other resources such as technology, management and skill. The return to transfer includes the complex package rather than capital alone.

iii. There is evidence that foreign investors, even from capital-rich countries fail to bring part or all of needed capital with them when they establish production facilities abroad; instead they borrow in the local market.

iv. The theory fails to explain a new phenomenon of an increasing number of relatively capital poor countries making outward investment in other countries in the same group or in capital rich countries.

v. The theory is based on the relatively impractical assumption of perfect competition which may not be valid in case of FDI since in the present international economy because most of FDI activities of large firms operating in monopolistic or oligopolistic market.

2.1.2 Internalization Theory

This theory of internalization explains the activities of MNEs own its origin to the paper by McManus (1972) and developed by Buckley, Casson (1976) and Rugman (1981). The transaction costs which must be happened by conducting business in imperfect markets affect the essence of internalization theory.

Internalization theory has been very successful in providing an economic reason for establishing a MNEs as a response to market imperfection by utilizing transaction cost logic by Casson (1979) and Dunning (1981). They have found that there are several types of market imperfection that encourage the internalization of ownership-specific advantage.
The location-specific factors are independent on the internalization of markets across national boundaries. The firm will internalize the market within the national boundary and exploit its advantages by exporting when there is no location-specific advantage of host country. When there has host country location-specific advantages, internalization of the market will happen across national boundaries. The major constraint is that the theory emphases principally on one mode of organization. Therefore, it provides only one solution to the problem of imperfect international markets for the firm, that is, the formation of a wholly-owned subsidiary.

Teece (1981) tried to rationalize the application of international joint ventures within the framework of internalization theory. He pointed out two necessary conditions that must exist that the firm possesses a rent-yielding asset which would allow to be competitive in a foreign market, and the arrangements of joint venture are supreme to other modes for appropriating rents from the sale of this asset in the foreign market.

Thomas (1985) also argued that joint ventures may be the outcome of host-country local equity requirements as well as the preferred strategic choice of multinational firm, particularly, in the context of minimizing the risks of international operations in certain host countries.

2.1.3 Location Theory

Multinational firms choose to locate in one country rather than another because of different analytical concept. In the Heckscher-Ohlin-Samuelson’s pure theory (1919, 1933, 1949 and 1953-54), the relative fact potency of the production process determined the location together with the relative prices of production factors. There are more realistic models as the determinants of comparative advantage such as the availability of raw materials, the cost of transportation for inputs and outputs where the latter is a function of large markets proximity. The government policy like incentive or deterrent which is often used in developing countries are another important element for the choice of location.
In the location theory, there are several factors have been considered such as availability of raw material, marketing factor, trade barrier and government policy.

i. Availability of Raw Material

According to location theory, a firm considers the source of raw material and labor force as the main factor. A firm invests abroad because it wants to transfer the production plant to the source of input in order to minimize production cost to secure the source which is very scarce in the home country.

ii. Marketing Factor

It is advantage for the firm to choose a location near a market because it can reduce factor costs like transportation and can achieve some marketing objectives like market share and avoid tariff barriers from the host country. The marketing factor relies on the host country’s characteristics such as market size, market growth and level of economic development and competitiveness in the local market. These marketing factors are very important to MNEs to exploit both production and non-production economies of scale especially market size and growth are the main factors to attract MNEs to set up their subsidiaries to serve local markets.

iii. Trade Barrier

The trade policy of the host country can affect the choice between exporting and direct investment. The investment of the enterprises in a precise country or region to supply goods or services intend to market in this or its neighboring countries. Mostly, investing company previously export services to part or all of these markets either because of tariff or other cost-raising barriers imposed by host countries, or because of the size of the market justifies local production are no longer best supplied by this route. However, an enterprise may sometimes seek to replace its exports to foreign market by investing in a third country and exporting to that market form there mentioned by John H Dunning (1993).
iv. Government Policy

This is also one of the main factors. Government policies affect obviously on international trade and other activities which can substitute for FDI by affording market access. Measures which restrict these activities create motives for FDI by MNEs’ seeking to gain market access and can be instituted by either investing economy or host economy governments. For host country government, in order to attract FDI inflow, they try to create a favorable investment climate which affects the firm’s perception of risk and hence effect the location of their production. Political stability, economic growth, adequate infrastructure and investment incentives are the major elements. Home country’s policy can also affect the firm’s decision to invest abroad. For example, some American investment abroad may be influenced by the United States’ policy. In this respect, Naya, S and E. Ramstetter (1988) stated that according to the United States tariff code, if the goods with a particular level of United States content are being previously exported for repair, processing and assembly in abroad, it may be re-import duty free.

2.1.4 Eclectic Theory

The eclectic theory of FDI combines the firm-specific advantage from the industrial organization approach with the location advantages associated with the product cycle identified by John H Dunning. Dunning (1977 and 1993) has made a lot of efforts in synthesizing the existing theories of FDI in order to overcome the shortcomings of previous theories. Dunning’s eclectic theory suggests that there are three conditions, famous as OLI model or framework, which determine the tendency of a firm to involve in international production where the following three conditions must be fulfilled simultaneously.

i. The headquarter firm in one country must possess net Ownership advantages (O) over the firms of other nationalities in doing particular markets. The form of the intangible assets possession gives largely advantages to the ownership.
ii. Assume that condition one is satisfied, the enterprise possessing these advantages must have more benefits to use them itself rather than selling or leasing them to foreign firms. These are the advantages of Internalization (I) that relates to the choice between expansion within the firm and selling the rights to other firms the means of expansion.

iii. Assuming conditions one and two are satisfied, it must be profitable for the enterprise to utilize these advantages of factor endowments located in foreign countries, or else, foreign export market would be taken place entirely. The question relating to the Locational (L) advantages must occur that which expansion is best, accomplished at home or abroad.

The first condition shows that if only ownership advantages (O) are hold, a firm considers to undertake FDI, exporting and licensing equally. The second one indicates that if a firm has beneficial to internalize (I) its ownership advantages, the firm will prefer FDI and exporting to licensing. The third condition shows that, if the advantages of ownership can be commercially internalized across national boundaries due to foreign countries’ location-specific factors (L), then firm will engage in FDI. Therefore, this eclectic theory has a strong explanatory power and it indicates that all forms of international production by all countries can be explained by the above conditions.

This theory is still popular in the present study of FDI. However, there are some doubts on this theory. Some have mentioned that the eclectic theory itself is not theory but the framework of theories.
In summary, the existing theories attempt to explain FDI by MNE activities of firms outside their national boundaries. It tries to clarify why it is effective for firms to invest abroad by location, ownership and organization of these activities. International capital theory rely on that FDI will occur where there is a difference in rate of return of capital. Therefore, this theory is no more satisfactory since it fails to distinguish FDI with portfolio investment and treats foreign investment solely in terms of financial capital. Internalization theory highlights that it is the failure of the market that stimulates firms to internalize the market for inputs and outputs rather than externalize them. Location theory offers the reasons for MNEs fetching their activities in more than one locality. However, these theories only explain partially about FDI. Eclectic theory of Dunning (1979) attempts to explain why firms choose a particular form of activity such as export, licensing and foreign direct investment by linking up the inter-relationship among ownership specific advantages, internationalization incentive advantages and location specific advantages.

There is no general theory of FDI at present although there have been numerous theories to explain FDI phenomenon. There is no particular theory which is the most appropriate for Myanmar but eclectic theory and location theory are more applicable to Myanmar as most of the factors mentioned in those two theories are prevailing in Myanmar.
2.2 Review of Empirical Studies Related to FDI

In this section, some of the empirical studies on FDI has been reviewed briefly. This review of empirical study will be categorized by three parts: motives for FDI, FDI and its performance, and some other studies for effects of FDI on economic growth. There are different results in the literature regarding to how FDI effects economic growth. The difference on empirical findings may be due to the methodological differences among the various studies. Higher capital intensity of foreign-owned subsidiaries may be a reflection of the sectors in which they predominate. In all, there still have not been many studies by using appropriate econometric models about the effects of FDI on GDP growth of Myanmar. Moreover, there is no study that takes into account dynamic variables that mutually explain on GDP growth rate in a single macroeconomic model. Therefore, it is interested to have such a specific study for a particular economy reveal on Myanmar.

2.2.1 Motives for FDI

As far as host country factors are concerned, the motivating factors varied with different investing countries and industries. Kojima (1978) pointed out that the labor-oriented investment aims at establishing an export base to the investing country as well as third markets rather than import substitution. For oligopolistic FDI, Kojima (1978) observed that this type of investment was found in American investment in new manufacturing industries which produced most sophisticated and differentiated products and ranked in the top of her comparative advantages. The motive behind this type of investment is to exploit their monopolistic advantages in developing countries’ markets and to prevent their competitors capture the protected markets.
There was a survey by the United Nations, ESCAP/UNDP, in 1992, about trade and investment in the Asia-Pacific region. According to survey result, foreign-investing companies mentioned a multitude of factors affecting the selection of a particular region for their investment. Sixty-three firm out of the total of 306 firms responded that the number of firms cited as their primary motive “to use low-wage labor force in host country” and ranked first in the important level. The second in the ranking, 56 firms named “to gain access to local markets in host country” as their motive. The next ranks were “high rate of returns on investment” with 52 companies and “sidestepping export to a third market” with 20 companies. Furthermore, 28 firms chose “export back to home country” while the rest 24 firms indicated to “GSP or other preferential benefits” and “attractive incentives for foreign investors”.

For ASEAN member countries, the number of firms citing low labor cost took the largest proportion which shows that companies located in ASEAN member countries could employ a labor force at a much lower cost than above areas. The “low labor costs” was also noted as the most important factor in China and other countries in the Asia region.

The electronic products firms, textile products firms and footwear firms identified “low labor costs in host country” as their most significant factor for investment.

 Whereas “high rate of return on investment” was named by firms producing machinery, rubber and chemical products and basic necessities. Those firms investing in transportation equipment, and steel and mental products singled out “to gain access to local markets in host country” as an important factor. In the case of agricultural, forestry and fishery products, the most important motive was the stable supply of raw materials.
Additional survey of another question was posed to those firms who cited “attractive incentives for foreign investors” with a view to grasping the decisive incentive behind the decision of investment. According to the survey of United Nations, ESCAP/UNDP in 1992, recognized as the most important incentive was tax benefits (accounting for 46.2 percent of the respondents), and named as the second was financial support by host country such as equity participation and loans designed to facilitate foreign investment (accounting for 33.3 percent of the respondents). The third came the offer of production infrastructure such as industrial complexes (accounting for 15.4 percent), followed by benefits of using bonded areas was 5.1 percent.

Similar to this study, Naya and Ramstetter (1992) stated that the desire to lower labor costs has also been important for United States MNEs in Asia, especially in manufacturing. The relative labor intensity of American industries in Asia reflected the low cost of manufacturing production worker in Asia, indicated in data on majority-owned affiliates. Asian wages were only 51 percent of the developing economy average in the manufacturing aggregate and 34 percent of this average in petroleum and coal products. In the important electronics subsector this gap was smaller in as Asian wages were 82 percent of those in the developing economy aggregate, suggesting that qualitative factors, not just wages were important.

2.2.2 FDI and its Effects

2.2.2.1 FDI and Technology Transfer

Among 108 overseas Japanese projects in Southeast Asia according to the forms of technology, Allen (1973) found that the product and process embodied technology associated with Japanese overseas investments has not been very significant except possible for artificial fibers.
As for the concept of technology transfer, different writers defined it in different ways. There are three concepts which often found in the literature of Kunio Yoshihara (1988) as follows;

i. The first defined the transfer of technology as introduction into country of technologies which exist elsewhere but not yet in that country.

ii. The second considers technology to be transferred when local force is able to take charge of imported technology.

iii. Under the third concept, technology is considered to be transferred not only when the local force is able to take charge of imported technology but also when local workers can fully absorb and begin to adapt the imported technology to the specific needs of local environment, or to modify it for various purposes.

2.2.2.2 FDI and Employment

Employment creation is an important objective of economic development in the LDCs. By the advantage of their existence in host nations, MNEs clearly make some contribution to increasing the level of employment. Considering the direct impact on employment in developing countries, the United Nations (UN) estimated that MNEs had created 2 million jobs by 1970. In a study relating to South Korea, Westphal and Kim (1973) concluded that employment-generation effect of export expansion achieved during the 1960s was greater than would have been attained from an equivalent amount of import substitution. This represents roughly 0.2 percent of the total active population of the LDCs, and compares with an unemployment total of about 50 million described in Sabolo (1979).

To be meaningful comparisons, there is required some assessment of whether the MNEs’ contribution to employment is greater or smaller than it might have been. This will depend partly on the choice of technique and partly on the composition of output. The choice of technology involves the controversy between using capital-intensive and labor-intensive technique. In some industries, MNEs may have a greater absorptive capacity for unskilled labor than indigenous firms.
Another aspect affecting employment creation is the composition of output. The most significant issue related to the merits of import-substitution and manufactured export-promotion policies. Labor abundant countries are likely to generate more employment by succeeding an outward-looking rather than an inward-looking strategy. The ILO (1981) presented an estimation of the share of foreign MNEs in manufacturing sector employment that were, in general, much higher than that in Thailand, for example 20 percent in Brazil in 1970, 30 to 35 percent for Kenya in 1975, 33 percent for Malaysia in 1970, 67 percent for Singapore in 1976 and 1977 and 30 to 35 percent for Zaire in 1974.

In some countries, in order to generate jobs for local workers, the host countries’ government tries to offer incentives to foreign investors who come to invest in a host country which generate more jobs for local workers. In the study by Puppahavesa (1993) about Thailand, he stated that employment generation has been a major policy in Thailand’s investment promotion, receiving an additional year of exemption from taxes. The FDI boom in the late 1980s has provided significantly to industrial employment. During 1987-1990, the investment projects promoted and operated. On average, FDI from NIEs tended to more labor intensive than those from more advanced countries; export-oriented projects tended to be more labor intensive than the import competing projects; and FDI projects tended to be less labor intensive than Thai project.
2.2.2.3 FDI and Trade

FDI is closely related to foreign trade. Production produced by investors through foreign subsidiaries of joint venture firms may either be exported or substitute imports. FDI can affect the trade pattern of the host country. In general, G. K. Helleiner (1973) found on import substitution policies in LDCs is that the industries concerned have been employing too capital intensive a technology, operating on too small a scale, and earning their countries too little in terms of income, foreign exchange or employment nor have such policies reduced the dependence of the countries concerned on foreign countries and foreign firms. With the renewed emphasis on the importance of trade (exports) in development, this is bound to become an increasingly important issue for developing countries. Sushila Nayyar (1973) found that ten countries - Hong Kong, South Korea, Mexico, Brazil, India, Singapore, Malaysia, Argentina, Pakistan and Columbia were responsible for 78 percent of export of manufactured good. Multinational firms have obviously played an important part in determining the rate of growth and the county-concentration of manufactured exports but figures are not readily available on the subject.

Another study by Kanchanapant (1985) found that direct investment is closely related to foreign trade. Stating from early 1970s, the Thai government has put more emphasis on export promotion. Various special incentives are used as a tool to promote firms engaged in exporting. The products of the foreign firms produced for export or substitute import. FDI from developing countries has contributed much to the export expansion in Thailand.

In the study of Shive (1993), foreign investment and technology transfer in Taiwan has found that among 127 foreign exporting firms, 74.8 percent utilized their parent companies’ export marketing facilities either exclusively or in conjunction with other marketing methods. The proportion of majority-owned foreign firms whose marketing was handled by parents was as high as 80 percent.

To summarize about FDI and trade, FDI companies are primarily motivated to take advantage of plentiful supplies of cheap and well-motive unskilled and semi-skilled labor, such offshore affiliates of MNEs usually record above average exports and imports than do their local competitors.
2.2.3 FDI on Economic Growth

Barro (1990), Barrel and Pain (1997) examined the effect of FDI on economic growth through the dissemination of technology by applying economic models of endogenous growth. Romer (1990) argued that FDI facilitates economic growth through reinforcement of human capital which is the most crucial factor in R&D effort. Later on, Grossman and Helpman (1991) emphasized that the growing in competition and innovation will consequence in the progress of technology and increase productivity. Then, it promotes economic growth in the long run.

Balasubramanyam et al (1996) analyzed the effects of FDI on economic growth in developing economies by using cross-section data and OLS regressions. He found that the host countries using an export promoting strategy got positive effect of FDI on economic growth but not in those countries using an import substitution strategy. De Mello (1999) did study by using both time series and panel data fixed effects estimations for a sample of 32 developed and developing countries. He found weak indications of a positive relationship between FDI and economic growth.

Zhang (2001) and Choe (2003) analyzed the causality between FDI and economic growth. In the analysis of Zhang, the data from 11 developing countries in East Asia and Latin America were applied by using co-integration and Granger causality tests. Zhang (2001) found that economic growth is enhanced by FDI in five cases but the important conditions of the host country are trade regime and macroeconomic stability. In the findings of Choe (2003), causality between economic growth and FDI runs in either direction but there is small evidence that FDI induces the growth of the host country.

Carkovic and Levine (2002) used a panel dataset of 72 developed and developing countries in order to analyze the relationship between FDI inflows and economic growth. In their study, they used both a cross-sectional OLS analysis and a dynamic panel data analysis with GMM. The paper concluded that there was no robust link running from inward FDI to the economic growth of host country.
Bengoa and Sanchez-Robles (2003) investigated by using panel data for Latin America, on the relationship between FDI, economic freedom and economic growth. They concluded that FDI has a significant positive effect on host country economic growth but the magnitude depends on host country conditions which is similar to the findings of Borensztein et al (1998).

Most researchers were done for cross section data. Some researchers used time series data such as Akinlo (2004) who applied OLS with Error Correction Model for Nigeria period 1970-2001 and concluded that extractive FDI does not enhance growth as manufacturing FDI in Nigeria. Wasantha Athukorala (2003) applied simple production approach to test time series data for Sri Lanka in the period 1959-2002 using Co-integration and Error Correction Model and pointed out that FDI inflow does not exert an independent influence on economic growth.
CHAPTER 3
OVERVIEW OF MYANMAR ECONOMY AND FDI IN MYANMAR

3.1 An Overview of Myanmar Economy

3.1.1 The Brief History of Myanmar Economy

Under colonial rule, Myanmar’s economy was transformed to suit the commercial interests of the British mercantile class. However, the majority of the indigenous populations were not the main beneficiaries of the monetized economy.

Aye Hlaing (Burma Economist) made comments in 1964 that the expansion of the economy was also accompanied by the dominance of aliens with the circle of beneficiaries confined to European and Indian business interests in general and a handful of monopolistic and oligopolistic firms in particular.

World War II destroyed the majority of what little industry Myanmar had developed. The fighting destroyed many factories while other were either dismantled by their owners or looted in the succeeding disorder. During the Japanese occupation, oil wells and mines attained only a small fraction of their former production levels. Meanwhile, handicraft industries continued to function at a subsistence level.

During 1948 to 1962, under parliamentary rule, Myanmar’s first-generation political leaders who embraced socialism as a guiding ideology seemed to believe that the only way to develop Myanmar’s backward economy and achieve economic independence was to replace private capital with state-controlled investment. The idea of the state dictating the pace and direction of economic activities had tremendous appeal in the light of negative experiences of the laissez-faire colonial economy.

The Myanmar government announced, on 1 April 1948, a two-year economic plan. The outbreak of uprising prevented its implementation. In the first two years, nationalization and indigenization measures together with the rice export monopoly and foreign exchange restrictions constituted the state’s attempt to control the strategic sectors.¹

¹ Tin Maung Maung Than (2007, Handbook on the Northeast and Southeast Asian Economies)
In 1951, Prime Minister U Nu engaged foreign consultants to conduct a national economic and engineering survey leading to a comprehensive economic development program. It formed the basis of the so-called Pyidawtha (Eight-year) Plan announced with much fanfare at Pyidawtha Conference held in Yangon from 4-17 August 1952. The economic targets were based on the Harrods-Domar growth model, employing a fixed incremental capital-output ration. A doubling of the GDP by the end of the plan period, to 7-billions Myanmar Kyats (MMK) in 1950-51 prices, was predicted.²

The main thrust of the economic policy of the military junta known as the Revolutionary Council (1962-74) which assumed power takeover on 2nd March 1962. Revolutionary Council was oriented to establish state control over the national economy through nationalization and attempted to expand state-owned enterprises in commerce and industry.

During 1974-88, the overall economic strategy, adopted by the Burma Socialist Program Party’s (BSPP) first congress of 1971 and elaborated in the party’s “long-term and short-term economic policies” was to substantially increase commodity production. The BSPP government welcomed multilateral assistance from the International Monetary Fund (IMF), the World Bank (WB) and the Asian Development Bank (ADB) as well as official development assistance (ODA) from Western countries and Japan.

The economy under direct military rule (1988-2010), the State Law and Order Restoration Council (SLORC) later superseded by a reorganized junta, renamed the State Peace and Development Council (SPDC) in November 1997, and inherited a rather hostile economic situation in 1988. It decided to abandon socialism as the organizing principle. Consequently, it opened up the economy to private initiatives, invited foreign direct investment (FDI), overhauled the bureaucracy and divested some loss-making State Owned Enterprises (SOEs). Meanwhile, substantial labor-intensive infrastructure development in irrigation, electric power, roads, bridges and public buildings, together with relatively large state investments in developing business parks and industrial zones, were initiated in the early 1990s.³

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² Tin Maung Maung Than (2007, Handbook on the Northeast and Southeast Asian Economies)
³ Myat Thein (Economic Development of Myanmar, 2004)
In the mid-1990s, the military leadership endorsed the economic objectives as a policy guideline for its economic development efforts.

3.2 Role and Trend of FDI in Myanmar

Foreign direct investment flowed into the country increased gradually up to 1997 despite with some fluctuations. Then, the flow was back to low because of Asian Crisis from 1998 to 2005. FDI net inflow to Myanmar rapidly high in 2011 when Semi-Military Government had been appointed. FDI inflow in Myanmar amounted to US$ 2,519.81 million in 2011. As the volume of trade also increased, Myanmar expanded trade relations with neighboring countries and integrated into regional markets.

Until 1988, foreign investment was largely prohibited, but there has been significant foreign investment in Myanmar since then, particularly from Asian countries such as China and South Korea. In recent years, Thailand has emerged as Myanmar’s largest official foreign investor.

As per World Bank data, FDI net inflow in Myanmar rose $ 901.13 million in 2010 to $2519.81 million in 2011. It hit the highest during 2010 and 2014. Although there were not all foreign companies have fully invested the approved investment amount according to DICA.

Most FDI in Myanmar are operated in the resource-based sectors. There are over 50% in power projects, more than 35% of all FDI in oil and gas, and about 8% in mining. There is substantially less in tourism sector. In order to create jobs for Myanmar citizens, the manufacturing sector is instantly needed more FDI. FDI in agriculture is currently less than 1% while over 70% of people reside in rural areas and work in agriculture. The following Figure 3.1 is shown FDI approved amount by Sector from the fiscal year of 1989-90 to 2013-14.
Figure 3.1 FDI Yearly Approved by Sector from 1989 to 2014

Source: Author’s calculation based on DICA data

As part of the liberalization of foreign exchange controls, the official exchange rate (6.5 MMK=$1US) has been abolished since April 2012. Under the new managed float, Central Bank of Myanmar announced a reference rate for the Myanmar Kyat against the US dollar following daily foreign exchange auctions conducted with authorized domestic dealer banks. It also allows FDI to be set at market exchange rates which has been fluctuating around 850 to 990 Kyats equivalent to $1US since January 2013.4 (The table of the approved amount of FDI by Sector from 1988-89 to 2013-14 can be seen in Appendix C.)

In July 2013, the President of Myanmar signed a new law granting the Central bank of Myanmar more independence from the Ministry of Finance. In the same month, the Securities Exchange Law was passed which facilitates the establishment of a stock exchange. The following Table 3.1 of official and unofficial/market exchange rates were recorded by different sources can been shown clear vision. The data are only from year 2001 to 2014.

Table-3.1 Exchange Rate (Official and Unofficial/Market Rate) 2001-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>UNCTAD Rate⁵</th>
<th>EIU Rate⁶</th>
<th>Unofficial Rate⁷</th>
<th>Official Rate⁸</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>464.83</td>
<td>616.00</td>
<td>650.00</td>
<td>6.749</td>
</tr>
<tr>
<td>2002</td>
<td>542.50</td>
<td>921.00</td>
<td>860.00</td>
<td>6.642</td>
</tr>
<tr>
<td>2003</td>
<td>777.50</td>
<td>966.00</td>
<td>900.00</td>
<td>6.139</td>
</tr>
<tr>
<td>2004</td>
<td>885.42</td>
<td>988.00</td>
<td>1,000.00</td>
<td>5.806</td>
</tr>
<tr>
<td>2005</td>
<td>1,029.83</td>
<td>1,060.00</td>
<td>1,300.00</td>
<td>5.818</td>
</tr>
<tr>
<td>2006</td>
<td>1,216.67</td>
<td>1,270.00</td>
<td>1,450.00</td>
<td>5.843</td>
</tr>
<tr>
<td>2007</td>
<td>1,279.92</td>
<td>1,272.00</td>
<td>1,300.00</td>
<td>5.617</td>
</tr>
<tr>
<td>2008</td>
<td>1,130.25</td>
<td>1,045.00</td>
<td>1,250.00</td>
<td>5.441</td>
</tr>
<tr>
<td>2009</td>
<td>1,029.13</td>
<td>1,063.00</td>
<td>1,055.00</td>
<td>5.576</td>
</tr>
<tr>
<td>2010</td>
<td>959.75</td>
<td>973.00</td>
<td>900.00</td>
<td>5.635</td>
</tr>
<tr>
<td>2011</td>
<td>799.95</td>
<td>980.00</td>
<td>850.00</td>
<td>5.444</td>
</tr>
<tr>
<td>2012</td>
<td>840.13</td>
<td>851.00</td>
<td>640.00</td>
<td>640.65</td>
</tr>
<tr>
<td>2013</td>
<td>933.57</td>
<td>966.00</td>
<td>934.00</td>
<td>852.00</td>
</tr>
<tr>
<td>2014</td>
<td>984.35</td>
<td>984.00</td>
<td>984.00</td>
<td>967.00</td>
</tr>
</tbody>
</table>

Source: UNCTAD, EIU, CSO (see footnote in detail)

⁵ UNCTAD secretariat calculations, based on UN DESA Statistics Division, National Accounts Main Aggregates Database; IMF, International Financial Statistics; and other international and national sources. National currency per US dollars exchange rates are used to derive explicit exchange rates for each of the countries presented with regard to any other country.

⁶ Economic Intelligence Unit (EIU) calculations

⁷ Unofficial/Market Rate calculated by private records for annual average rate

⁸ Official Rate published by Central Statistical Organization (CSO) Myanmar
3.2.1 Characteristics of FDI in Myanmar

Myanmar is heavily endowed with natural and agricultural resources with about 40\% of the GDP attributed to the sectors of agriculture, fishery and forestry. Manufacturing constitutes about 20\% of GDP with the rest ascribed to services. Myanmar’s real GDP growth in recent years has been fairly steady. After growing at 5.9\% in 2011, the economy of Myanmar is higher by 7.3\% in 2012, 8.2\% in 2013 and 8.5\% in 2014 according to 2015 reports from IMF and ADB. Robust economic growth in recent years has been driven by the increase in natural gas production, commodity exports and FDI inflows. The political and economic reforms in Myanmar over the past three years have led to the suspension of most Western economic sanctions. Continued liberalization progress of Myanmar is expected to encourage greater FDI inflows from Western countries while currently all of the major foreign investors come from Asia.

The new Foreign Investment Law (FIL) foster a more investment-friendly environment. In a bid to upgrade the infrastructure, Myanmar government liberalized telecom sector and allowed foreign investors to bid for the national telecom licenses. In January 2014, two licenses were granted to international telecoms operators namely as Telenor (originally from Norway) and Ooredoo (from Qatar) for a license period of 15 years. The opening up of the telecoms sector is considered an important step for economic reforms and infrastructure upgrading. According the World Bank, the mobile subscriptions rate of Myanmar was 13\% in 2013 which is far below of Cambodia 134\% and 66\% in Laos.
Reforms and opening up in Myanmar caught the attention of foreign companies intending to relocate some of their labor-intensive production facilities to this country with a good supply of low-wage workers. In June 2012, as a temporary measure, Myanmar introduced a minimum wage of US$ 65 per month (including overtime and allowances) for workers in industrial zones. In March 2013, the Myanmar National Assembly adopted a new Minimum Wage Law, laying out the broad framework for determining the minimum wages across various industries for the whole country, including workers employed in special economic zones (SEZs). A designated committee appointed by the president will set the minimum wage level for each sector. In August 2015, the Ministry of Labor set the official minimum wage, which is the country’s first-ever minimum wage of 3,600 Kyats per day, which is approximately equal to US$ 2.8. This announcement only stated the wage-rule for a “standard eight-hour work day” but it did not mention compensation for overtime. According to the International Labor Organization, the minimum monthly pay of Myanmar would be around $67 based on a six-day work a week under the newly-established level.

Foreign Direct Investment in Myanmar increased to US$ 4,107 million in the fiscal year of 2013 and 2014 from US$1,419 million in the year of 2012 and 2013. FDI in averaged US$1777.9 million from 1988 until 2014, reaching maximum of US$ 19,998.97 million in the period of 2010 and 2011, and the lowest inflow of US$ 5.89 million in 1991-92. As it is clearly shown in the following Figure-3.2 and Figure-3.3, the FDI inflows have been on the increase since the early 1990s. Investment were high in the periods from 1997 to 1998 and again in 2011 when there was government election. Similar to other host countries receiving FDI, Myanmar experienced a relative up and down movement of FDI inflows during the studied period.

It showed that the average of FDI was US$ 1,777.9 million from 1988 to 2014. Meanwhile, FDI reached the maximum of US$ 19,998.97 million in the period of 2010 and 2011. The lowest FDI inflow occurred in the fiscal year of 1991-92 with US$ 5.89 million. The FDI inflows had been increased since the early 1990s. Investment were high in the periods from 1997 to 1998 and again in 2011 when there was government election. Similar to the other FDI receiving countries, the movement of FDI inflows in Myanmar was relatively up and down during the study period.
Figure 3.2: Approved FDI Amount in Myanmar (1988-89 to 2013-14)

Source: DICA
Figure 3.3 Yearly FDI Net Inflow in Myanmar 1989 to 2014

Source: UNCTAD

Ref. code: 25605704090017GJH
By the end of August 2014, FDI in telecom sector was 31 percent, 23.8 percent in oil and gas, and 18.4 percent in real estate. There were 13.3 percent of foreign investment in hotels and tourism sector, and 8.1 percent went into manufacturing sector. During the fiscal year to March 2014, total FDI was US$ 4.1 billion that was sharply up from US$ 1.42 billion.

In 2014, Malaysia brought about US$ 500 million for Nissan cars manufacturing and it was the biggest investor in terms of size during 2014-2015. As of August 31, 2014, foreign investment in Myanmar was more than US$ 43 billion according to DICA.

It can be seen in the following figure that the power sector occupied the largest share with US$ 19 billion followed by oil and gas at US$ 14 billion. Among the principal investors, approved foreign investment amount as of December 2014, China ranked the largest with US$ 14.42 billion investments, followed by Singapore (approximately to US$ 8 billion), Hong Kong (US$ 6.9 billion), Republic of Korea, Thailand and U.K (over US$ 3 billion each).
Myanmar is set to experience strong growth starting from 2014, to be powered by major investments in telecommunications, oil & gas, and various infrastructure projects. There has recently reached two major telecom deals of over US$18billion investment. The progress of awarding similar multi-billion investments for its offshore and onshore oil and gas blocks during 2014.

According to the news from DICA, the power and transports industries are also progressively engaging in multiple investment deals in accordance with the sector blueprints, largely assisted by the international agencies including the World Bank, the Asia Development Bank, and the JICA. The power and transport projects include nationwide electrification, as well as modernization and development of new roads, railways and airports. The Directorate of Investment and Company Administration (DICA) estimates up to US$5billion FDI inflow in FY2014-2015 as telecom, manufacturing, tourism sectors are expected to see strong volumes of foreign investments.
There were $16.25 billion US Dollar for investing in Oil and Gas sector as at December 2014. Power sector was the second largest one with $13.29 US Dollar in billion which was 31.08% of total existing enterprises at the end of the year 2014. The third rank was Manufacturing which was invested for over $3 billion US Dollar and follow by Transport and Communication Sector by taking a share of 6.68% out of total in 11 sectors. (See Figure-3.5 in detail: “Foreign Investment of Existing Enterprises as of December 31, 2014 by Sectors”)

**Figure-3.5**
Foreign Investment of Existing Enterprises as of December 31, 2014
By Sectors

![Foreign Investment of Existing Enterprises as of December 31, 2014 By Sectors](image)

Source: Author’s Calculation based on Data from DICA

Since the 1988-89 fiscal year, 895 firms from 38 countries had been approved to invest $54.24 billion in Myanmar. As of March 31, 2015, out of 12 sectors, the power sector covering electricity generating had been approved to make investment of $19.32 billion or 35.63 per cent of aggregate FD. This was followed by the oil and gas sector which won the approved investment of $17.59 billion or 32.44 per cent; $5.49 billion or 10.12 per cent in manicuring sector; $3.18 billion or 5.87 per cent in transport and communications; and $2.87 billion or 5.29 per cent in mining sector respectively.
3.2.2 FDI Policy of Myanmar

As many scholars mentioned that Foreign Direct Investment (FDI) is an important source of economic growth of a country. Accordingly, Myanmar has been striving to get a hold of a large amount of FDI from the world over the last two decades. Correspondingly, foreign direct investments started to flow into Myanmar after the country was transformed into a market-oriented economy.

There are several key determinants of FDI factors in host countries categorized by economic conditions, MNEs Strategies and host country’s policies. Under the economic conditions, three components of Markets, Resources and Competitiveness are relatively concerned. In Myanmar, these determinants are strongly existing with big market size of the country itself, plenty of natural resources and human capital where national competitiveness grows continuously. The strategies of MNEs are also dominant into host country for risk perception, location, sourcing and integration transfer. MNEs perceive lower levels of risk when market potential is greater, infrastructure is better established, lower level of corruption, and large human capital with competitive low wage rate among host country’s region.

As one of the determinants for host country’s policies, to attract FDI, Myanmar government revised policies of foreign investment law, promote in private sector and openness of trade. The most determinants of FDI in Myanmar concerns the variables of GDP, foreign exchange rate, interest rate, inflation, economy openness, location, shared border with neighboring countries and economic, political and social globalization following with eclectic paradigm concept. Investment promotion and facilitation can help to increase both domestic and foreign investment.
To achieve the policy objectives, the new FIL provides the following incentives:

- Exemption from income taxes for up to three years
- Accelerated depreciation of assets
- A reduction of up to 50 percent on income taxes due on the investor’s produce exported from Myanmar
- Exemption form customs duty on machinery and other capital goods imported as part of the invested capital
- Guarantees against nationalization
- Right to repatriate profits and invested capital
- Carry forward losses for up to 3 years
- Exemption from customs duty on the raw materials imported for the first 3 years of operation

The government revealed 12-point economic policy in July 29, 2016. In its seventh point, it is mentioned that foreign direct investment is favorably invited and it is being prepared a more detailed policy note on this. In briefly, it will promote responsible business by creating a stable environment where companies feel secure to invest, and improving property rights and the rule of law according to the speech by Daw Aung San Suu Kyi, the State Counsellor and Minister of Foreign Affairs of the Union of Myanmar, in Naypyidaw on 29th July, 2016.

Under the new FIL, foreign investment can be made in the form of 100% foreign ownership of joint venture. Sectors that are open to foreign investment include manufacturing, services, infrastructure construction, retail and wholesale businesses. Moreover, foreign firms may be entitled to a tax holiday for the first five years of operation and other forms of tax reliefs may also be available. Investors can lease land from the government or authorized private owners for up to 50 years (extended from 30 years under the 1988 FIL).
The Myanmar government is embarking on the motivated path of reform with many favorable factors to attract foreign investors’ attention. Myanmar’s recent efforts to promote the small and medium-sized enterprise (SME) sector and the role of special economic zones in the state investment promotion strategy are parts of improving the investment climate in Myanmar. The promotion of private investment as a source of capital, technology, knowledge and innovation to support economic development is a vital element in the policy mix.
CHAPTER 4
THEORETICAL FRAMEWORK AND RESEARCH METHODOLOGY

4.1 Theoretical Framework

4.1.1 Neoclassical Approach

According to Solow and De Mello, studies based on the neoclassical approach argue that FDI affects only the level of income and it leaves the long-run growth unchanged. They defend that long-run growth can only arise because of technological progress and population growth by considering both as exogenous. Therefore, FDI will be growth advancing only if it affects technology positively and permanently according to neoclassical models of economic growth.

4.1.2 Growth Accounting Approach

Most of these studies have typically adopted standard growth accounting framework for analyzing the effect of FDI inflows on growth of national income along with other factors of production. Within the framework of the neo-classical models (Solow, 1956) the impact of the FDI on the growth rate of output was constrained by the existence of diminishing returns in the physical capital. However, the new theory of economic growth concludes that FDI may affect not only the level of output per capita but also its rate of growth. Host countries with high rate of savings, open trade regime and high technological product would benefit from increased FDI to their economies.

In the neoclassical view of Solow (1957), pioneering contribution to growth theory has generated the theoretical basis for growth accounting, we can break down the contribution to output growth of the growth rates of inputs such as technology, capital, labor, inward FDI. On the other hand, we can decompose by incorporating a vector of additional variable in the estimating equation such as imports, exports, institutional dummies, etc.
Then, the growth accounting approach can be derived from the following equation:

\[ Y = Af(K, L, \Omega) \]  \hspace{1cm} (4.1)

where \( Y, K, L \) and \( A \) are output, capital, labor and the efficiency of the production, respectively. \( \Omega \) is a vector of ancillary variables.

### 4.1.3 Cobb-Douglas Production Function

By applying Cobb-Douglas form, assuming and taking the logarithms and time derivatives of equation (3.1) yields:

\[ g_Y = g_A + \alpha g_K + \beta g_L + \gamma g_\Omega \]  \hspace{1cm} (4.2)

where \( g_Y \) is the rate of growth of \( A, K, L \) and \( \Omega \) (the subscripts are defined in per capita terms), and \( \alpha, \beta, \gamma \) are the elasticities of output with respect to physical capital, labor and the ancillary variables respectively.

Therefore, we could consider an economy where technical progress is the result of “capital deepening” in the form of an increase in the number of varieties of capital goods available according to Romer (1990), Grossman and Helpman (1991) and Barro and Sala-i-Martin (1994).

By closely following the specification of Barro and Sala-i-Martin (1994), the economy produces a single consumption good according to the following technology:

\[ Y_t = AH_t^\alpha K_t^{1-\alpha} \]  \hspace{1cm} (4.3)

where “\( A \)” represents the exogenous state of technology, “\( H \)” stands for human capital, and “\( K \)” denotes physical capital. We assume that human capital “\( H \)” is given endowment. Physical capital consists of an aggregate of different varieties of capital goods, and hence capital accumulation takes place through the expansion of the number of varieties.
At each instant in time, the stock of domestic capital is given

\[ K = \left\{ \int_{0}^{N} x(j)^{1-\alpha} d(j) \right\}^{1/(1-\alpha)} \]  

(4.4)

This means total capital is a composite of different varieties of capital goods and each one is being denoted by \( x(j) \), it represents the \( j^{th} \) capital good and \( N \) is the number of capital goods in the economy.

We assume in this section that the stock of human capital is given while the stock of physical capital is equal to the total values of capital goods produced in the economy in order to focus on effect of FDI on growth. Moreover, we also assume that the total number of varieties of capital goods “\( N \)” is produced by two types of firms, domestic and foreign firms, which present in the economy. Thus, the domestic firms produce “\( n \)” varieties out of the total number “\( N \)” and the foreign firms produce “\( n^* \)” varieties such that:

\[ N = n + n^* \]  

(4.5)

We assume that specialized firms produce each variety of capital good and rent it out to final goods producers at a rental rate “\( m(j) \)”. The demand for each variety of capital good “\( x(j) \)” is given by the equality between the rental rate and the marginal productivity of the capital good in the production of the final good. That is:

\[ m(j) = \frac{\partial y(K, H)}{\partial x(j)} = \frac{\partial A H^\alpha}{\partial x(j)} \int_{0}^{N} x(j)^{1-\alpha} d(j) = A H^\alpha (1 - \alpha) x(j)^{-\alpha} \]  

(4.6)
For the developing countries, the shortest way to produce a new type of capital goods is to apply modern technology which is transferred through FDI from foreign and particularly multinational enterprises. Thus, an expansion in the number of capital goods requires the adaptation of technology available in more advanced countries that permits the introduction of a new type of capital goods. We assume that this process of technology adaptation is costly because it requires a fixed setup cost “F” before production of the new type of capital can take place.

At the same time, we assume that the fixed setup cost is inversely proportional to the number of capital goods produced by foreign firms operating in the host economy. This assumption could capture the notion that foreign firms bring to the developing economy an advance in “knowledge” applicable to the production of new capital goods that may be already available in other countries. For a poor country, production of existing capital goods is cheaper than that of a capital good is entirely new to the world market. Therefore, FDI is the main channel of technological progress in this framework by making it easier to adopt the technology of production new capital varieties.

4.1.4 Function between FDI and Economic Growth

Additionally, there is the theory of convergence which states that poorer economies tend to grow at faster rates than richer economies. Thus, all economies should in the long run converge in terms of per capita income and productivity. Developing countries have the potential to grow at a faster rate than developed countries as they can replicate production methods, technologies and institutions currently used in developed countries. This addition of capital allows them to rapidly increase productivity and incomes in order to achieve a higher growth rate than developed countries and therefore converge in the long-term. By which, the setup cost depends negatively on how many varieties are produced domestically compared to those produced in more advanced countries that was denoted by N*. It means such costs will be higher in those countries who produce fewer capital goods. Then, we could claim the following functional form for the setup cost:

\[ F = f\left(n^*, \frac{N}{N^*}\right), \text{where } \frac{\partial F}{\partial n^*} < 0 \text{ and } \frac{\partial F}{\partial \left(\frac{N}{N^*}\right)} < 0 \]  

(4.7)
An alternative interpretation of (4.7) can be given in terms of “quality ladders” as stated in Grossman and Helpman (1991) that the increase in the number of varieties could be interpreted as an improvement in the quality of existing goods. Therefore, the presence of MNEs would reduce the cost of improving the quality of existing goods by generation the same negative relationship between FDI and set-up costs. To add the fixed setup cost, the owner must spend variables costs and the opportunity cost of this fund with interest rate “r” in order to produce capital goods. To be simple, we assume that average variable cost remains constant that is marginal cost is equal to 1. Assuming a steady state where the interest rate “r” is constant, profits for the producer of a new variety of capital “j” are:

\[
\Pi(j)_t = -f\left( n_t, \frac{N_t}{N_{r,t}} \right) + \int_t^\infty [m(j)x(j) - x(j)]e^{-r(s-t)} ds \quad (4.8)
\]

The first term on the right hand side expression of (4.8) is fixed costs and the sending one on the left hand side represent the total revenue from one unit of capital good after subtracting variable costs with discounted at the interest rate.

To maximize equation (4.8) subject to the demand equation (4.6) yields the following equilibrium level for the production of each capital good “x(j)”:

\[
x(j) = \frac{HA^{1/\alpha}(1 - \alpha)^{2/\alpha}}{(1 - \alpha)} \quad (4.9)
\]

Note that “x(j)” is independent of time at each instant the level of production of each new good is the same. Substituting equation (4.9) into the demand function (4.6), we obtain the rental rate:

\[
m(j) = \frac{1}{1 - \alpha} \quad (4.10)
\]

which gives the rental rate as a markup over maintenance costs.
If we assume that there is free entry, the rate of return “r” will be such that profits are equal to zero and to solve for the zero profits condition of $\Pi(j)_t = 0$ obtain:

$$r = \mu f \left( n^*, \frac{N}{N^*} \right)^{-1} H$$

(4.11)

where $\mu = A^{1/\alpha} \alpha (1 - \alpha)^{(2-\alpha)/\alpha}$

Finally, we obtain the following expression for the rate of growth of the economy by driving more specific theoretical model using Cobb-Douglas production function:

$$g = \frac{1}{\sigma} [\mu f \left( n^*, \frac{N}{N^*} \right)^{-1} H - \rho]$$

(4.12)

where $\sigma, \rho > 0$ and $\sigma \neq 1$, $\rho$ is the subjective rate of time preference and $\sigma$ is the consumption elasticity of marginal utility and is a constant. The rate of growth of output is denoted by “g”.

Equation (4.12) shows that FDI which is measured by the number of products produced by foreign firms “n*” reduces the costs of introducing new varieties of capital goods. The application from this model is that economic growth is determined by various factors. However, the most important inference from the model is the existence of direct relationship between FDI and economic growth.

Throughout FDI, new capital goods are created which increases the stock of physical capital in the economy with lower production costs. Economic growth is positively affected consequently. The growth rate is also inversely proportional to the gap in technology between host and home countries of FDI flows. Furthermore, the effect of FDI on the growth rate of the economy is positively associated with the level of human capital which means the higher the level of human capital in the host country, the higher the effect of FDI on the growth rate of the economy. The high level of human capital “H” raises the rate of growth “g” as shown in equation (4.12).

Hence, the model (4.12) provides a theoretical background to examine the effects of FDI on economic growth at a macro level. The impact of FDI explains why poorer countries may catch up with the richer one in terms of economic growth and why the poor countries make huge efforts to attract FDI inflows.
4.2 Methodology of the Study

The direct effects of FDI on growth are usually channeled via investment and can be estimated using growth model at the macro-level. This research concentrates the effect of FDI on economic growth based on analytical framework. Firstly, the endogenous growth model is estimated. It purposes to answer the question whether FDI substitute or complement domestic investment and thus strengthening the role of FDI on economic growth. The investment equation including FDI will be estimated to perform this objective.

In order to test the impact of FDI on economic growth, this paper used approximate equation of above theoretical framework growth model (4.12) as follows:

\[ g_t = \alpha_0 + \alpha_1 FDI_t + \alpha_2 (FDI \times H)_t + \alpha_3 H_t + \epsilon_t \]  

(4.13)

where \( g_t \) denotes economic growth measured by the growth rate of real GDP per capita, \( FDI_t \) represents foreign direct investment measured by the ration of implemented FDI in GDP, the variables \( H_t \) stands for the stock of human capital measured the effect of human capital on growth. The interaction term \((FDI \times H)_t\) helps to explain the role of human capital on the contribution of FDI to economic growth.

The stock of human capital in a host country is critical for absorbing foreign knowledge and an important determinant of whether potential spillovers will be realized. In endogenous growth theory, human capital has been recognized as an essential determinant of economic growth. Benhabib and Spiegel (1994) pointed out that human capital is a factor affecting productivity growth as suggested by endogenous growth theory. Furthermore, SWOT analysis approach from MNEs’ point of view has been conducted by interview and questionnaire in order to support empirical results.
4.2.1 Model Specification

In order to test the impact of FDI on GDP growth, this paper is being applied basic equation that includes categories of factors affected on GDP. In this research, as the first equation, GDP will be dependent variable but real interest rate, exchange rate, unemployment rate, FDI net inflows will be independent variables. In order to examine whether there is Foreign Investment Law and floating exchange rate policy has effects or not, the second equation has been used by adding dummy variables. The descriptive statistics for all variables are going to be computed at first in my study. As the model has been used time series data series, the Augmented Dickey Fuller (ADF) unit root test would be done. Then, it has been checked for co-integrated series if the data series is stationary.

The Ordinary Least Squares (OLS) was used to determine the relationship between gross domestic products (GDP$^9$), foreign direct investment net inflows (FDI$^{10}$) and other explanatory variables. The model was specified simply as follows:

\[
\ln GDP_t = \alpha_0 + \alpha_1 \ln FDI_t + \alpha_2 \ln ExtR_t + \alpha_3 \ln InfR_t + \alpha_4 \ln IntR_t + \alpha_5 \ln UnEmp_t + \varepsilon_t
\]

\[\text{(4.14)}\]

\[
\ln GDP_t = \alpha_0 + \alpha_1 \ln FDI_t + \alpha_2 \ln ExtR_t + \alpha_3 \ln InfR_t + \alpha_4 \ln IntR_t + \alpha_5 \ln UnEmp_t + \]
\[+\alpha_6 \ln d1988 + \alpha_7 \ln d2012 + \varepsilon_t\]

\[\text{(4.15)}\]

---


$^{10}$ FDI - US Dollars at current price and current exchange rate in millions. Data on FDI flows are presented on net bases (capital transactions' credits less debits between direct investors and their foreign affiliates). Net decreases in assets or net increases in liabilities are recorded as credits (with a positive sign), while net increases in assets or net decreases in liabilities are recorded as debits (with a negative sign). Hence, FDI flows with a negative sign indicate that at least one of the three components of FDI is negative and not offset by positive amounts of the remaining components. These are called reverse investment or disinvestment. Source: UNCTAD
where:

\( \ln GDP_t \) : logarithm of Gross Domestic Products

\( \ln FDI_t \) : logarithm of Foreign Direct Investment Net Inflows

\( ExtR_t \) : exchange rate

\( InfR_t \) : inflation rate

\( RIntR_t \) : real interest rate

\( UnEmp_t \) : unemployment rate

\( d1988 \) : dummy variable for the years when new foreign investment law (FIL) and floating exchange rate policy has been apply (\( d1988=1 \) if the data series of Year is 1988 and onwards, otherwise \( d1988=0 \))

\( d2012 \) : dummy variable for the years when new foreign investment law (FIL) and floating exchange rate policy has been apply (\( d2012=1 \) if the data series of Year is 2012 and onwards, otherwise \( d2012=0 \))

\( \varepsilon_t \) : the error term which capture other factors that may cause variation in dependent variable but not included in the model.

For the economic outcome of FDI, the study can investigate effects of FDI in Myanmar in terms of GDP growth. This study can also analyze factors cited as motives of FDI and to examine why foreign investors selected Myanmar. Meanwhile, we can investigate foreign investment policy of the Myanmar government and what is the Myanmar government’s policy towards FDI.

The hypothesis is that although there are many factors effect on GDP growth to Myanmar, the inflows of FDI is reflected in Myanmar’s economy. Then, the effects of FDI inflows on GDP growth is positive and significant.
4.2.2 Data Explanation and Data Collection

GDP and FDI net inflows were taken by natural logarithm values because it is more appropriate in time series regression since the estimated coefficients can be interpreted as continuously compounded growth rates. National currency per US dollars exchange rates are used to derive explicit exchange rates for each of the countries presented with regard to any other country calculated by UNCTAD. The rest data series for inflation rate, real interest rate and unemployment rate were being published by World Development Indicators and Asian Development Bank Key Indicators. The dummy variables of “d1988” and “d2012” in the year of 1988 and 2012 for new Foreign Investment Law (FIL) and the exchange rate policy which has been newly applied by Central Bank of Myanmar starting from 2012 and years onwards.

The first difference which is denoted by $D. or d$ in each data series represents as follows:

- $D.InGDP_t$ : Percentage change of Gross Domestic Products
- $D.InFDI_t$ : Percentage change of Foreign Direct Investment Net Inflows
- $D.ExtR_t$ : Change of Exchange Rate
- $D.InfR_t$ : Change of Inflation Rate
- $D.RIntR_t$ : Change of Real Interest Rate
- $D.UnEmp_t$ : Change of Unemployment Rate
- $D. u_n$ : First Difference of the residuals

In this study, secondary data is being used for research and 44 years of data has been collected from the period of 1971-2014. All the data set of GDP, inflation rate, interest rate, exchange rate, unemployment rate, FDI inflows are taken from the published reports of International Institutions, respective Ministries of Myanmar and from the open door website. STATA software and additional supplement interviews are being used for the analysis.
Time series econometric model is utilized to examine the relationship between the variables as suggested in the above model. Depending on data and running regression, some appropriate econometric tests are used such as Unit Root Test by performing Augmented Dickey-Fuller Test to identify stationary data series. Then, the data series is checked for co-integration by using first step of Engle-Granger (EG) co-integration test. Then the error correlation model (ECM) would be performed if the series is not co-integrated.

4.2.3 Stationary and Non-stationary Process

In time series econometrics techniques, it is important to check whether the data series are stationary or not. Moreover, the non-stationary data series may increase the possibility of a spurious regression problem from which no valid statistical inference can be made (Phillios, 1986). The variance of non-stationary series also changes with time and the important assumption of OLS estimation break down.

Therefore, stationary or non-stationary is an important property of time series processes. In general, a collection of N-dimensional random vectors \( y_{t-1}, y_t, ..., y_{t+1} \) is called a stochastic stationary process if

i. All the random vectors have the same mean vector \( E[y_t] = \mu \) for all \( t \), so that \( E[y_t] = E[y_{t+1}] \) for any \( t \) and \( k \).

ii. The variance of all involved random variables is a finite constant \( \sigma_y^2 \), \( \text{var}(y_t) = \sigma_y^2 \) for all \( t \), so that \( \text{var}(y_t) = \text{var}(y_{t+k}) \) for any \( t \) and \( k \).

iii. The covariance matrices of vector \( y_t \) and \( y_{t+k} \) that are \( k \) periods apart do not depend on \( t \) but only on \( k \).

\[
\text{cov}(y_t, y_{t+k}) = E[(y_t - \mu)(y_{t+k} - \mu)'] = \tau \text{ all } t \text{ so that } \text{cov}(y_t, y_{t+k}) = \text{cov}(y_{t+n}, y_{t+n+k}) \text{ for any } t, k \text{ or } n
\]
While estimating the above-mentioned conditions imply that the time series under consideration must not have trends, fixed seasonal patterns, or time varying variances. If time series variables do not possess the properties (1), (2) and (3), the variables are said to be generated by a non-stationary process. If the process is non-stationary, the statistical properties of regression analysis and estimators using non-stationary time series are dubious as evidenced by the substantial literature of “spurious regression”. To overcome the problem of non-stationary data and “spurious regression”, a usual and common practice is to difference the time series to achieve stationary.

4.2.3.1 The Augmented Dickey Fuller (ADF) Test

The following is the brief discussion about the basic features of unit root tests. By considering a simple AR(1) process:

\[ y_t = \rho y_{t-1} + x_t' \delta + \epsilon_t \]  \hspace{1cm} (4.16)

Where \( x_t \) are optional exogenous regressors which may consist of constant, or a constant and trend, \( \rho \) and \( \delta \) are parameters to be estimated, and the \( \epsilon_t \) are assumed to be white noise. If \( |\rho| \geq 1 \), \( y \) is a non-stationary series and the variance increases with time and approaches infinity. If \( |\rho| < 1 \), \( y \) is a (trend-) stationary series. Thus, the hypothesis of (trend-) stationary can be evaluated by testing whether the absolute value of \( \rho \) is strictly less than one.

The standard DF test was carried out by estimating equations (4.16) after subtracting \( y_{t-1} \) from both sides of the equation:

\[ \Delta y_t = \alpha y_{t-1} + x_t' \delta + \epsilon_t \]  \hspace{1cm} (4.17)

where \( \alpha = \rho - 1 \). The null and alternative hypothesis can be written as,

\[ H_0: \alpha = 0 \]
\[ H_1: \alpha < 0 \]

and evaluated using the conventional t-ration for \( \alpha \).
\[ t_\alpha = \frac{\hat{\alpha}}{se(\hat{\alpha})} \] (4.18)

where \( \hat{\alpha} \) is the estimate of \( \alpha \), and \( se(\hat{\alpha}) \) is the coefficient standard error.

Dickey and Fuller (1979) show that under the null hypothesis is a unit root, this statistic does not follow the conventional Student’s t-distribution, and they derive asymptotic results and stimulate critical values for various test and sample sizes. The simple Dickey-Fuller unit root test described above is valid only if the series is an AR(1) process. If the series is correlated at higher order lags, the assumption of white noise disturbances \( \varepsilon_t \) is violated. The Augmented Dickey-Fuller (ADF) test constructs a parametric correction for higher-order correlation by assuming that the series follows an AR(p) process and adding p lagged difference terms of the dependent variable to the right-hand side of the test regression:

\[ \Delta y_t = \alpha y_{t-1} + x'_t \delta + \beta_1 \Delta y_{t-1} + \beta_2 \Delta y_{t-2} + \ldots + \beta_p \Delta y_{t-p} + \varepsilon_t \] (4.19)

This augmented specification is then used to test (4.17) using the t-ratio (4.18). An important result obtained by Fuller is that the asymptotic distribution of the t-ratio for \( \alpha \) is independent of the number of lagged first differences included in the ADF regression. Moreover, while the assumption that \( y \) follows an autoregressive (AR) process may seem restrictive.

4.2.3.2 The Engle-Granger (EG) First-step Test

The first step of Engle-Granger (EG) co-integration test has been performed in order to know the variables in the data series are co-integrated or not. So, the first difference of residuals is regressed on the lagged level of the residuals without a constant after regression dependent variable of lnGDP on independent variables. In the resemblance of the EG test to the Dickey-Fuller test for non-stationarity, under the null hypothesis is that the variables are not co-integrated if the residual is non-stationary.
4.2.4 Supplement Interview and SWOT Analysis

Due to the limitation of data to use in the econometric model, the supplement interview is essential to support SWOT analysis on this study. The interview questions were set mostly focus on the determinants of FDI in Myanmar, the factors which can boost FDI in Myanmar, the motives and so on. The interview questions were being sent to Businessmen, INGOs which were conducting in economic development programs in Myanmar, relevant government agencies and freelance economic columnists. The summary of interview feedbacks from the 16 responders out of 20 people is being presented in the paper. In the last part of this section, the SWOT analysis tool is being used from the perspective of Myanmar. (The set of interview questions and answers are provided in Appendix Section B.)
CHAPTER 5
STUDY RESULTS

By using STATA software, firstly, unit root test is applied to test whether these time series data are stationary or not. After that, co-integration technique is used to test long-run relationship between the variables and then regress with error correlation model (ECM).

5.1 Summary Statistics

As discussed earlier, this study used five main variables: logarithm of gross domestic products ($\ln\text{GDP}$), logarithm of foreign direct investment inflows ($\ln\text{FDI}$), exchange rate ($\text{ExR}$), inflation rate ($\text{InfR}$), real interest rate ($\text{RIntR}$) and unemployment rate ($\text{UnEmp}$). The following section will be discussed the summary statistics of the initial values of six variables from 1971 to 2014.

Figure 5.1 Myanmar’s GDP: 1971-2014

Source: United Nations Conference on Trade and Development (UNCTAD)
Myanmar had experienced a sustained increase in the amount of gross domestic product for a long period of time. Between 1971 and 2014, on average, Myanmar produced 7,472.21 US $ in million per year. However, during the same period of time, maximum and minimum output that could be produced by Myanmar’s economy was 1,985.43 million of US dollar and 26,325.75 million of US dollar respectively. In the year of 1988, the growth rate of GDP was dropped sharply to 11.35% \( (3,062.52 - 3,454.72/3454.72) \times 100 \) because of People Power Uprising also known as 8888-Uprising.

Figure 5.2 FDI Inflows in Myanmar: 1971-2013

Source: United Nations Conference on Trade and Development (UNCTAD)

FDI net inflows to Myanmar during the period of 1971 to 2914 are fluctuated. From the year of 1971 to 1988, the yearly FDI net inflows are very less but starting from 1989, the amount is increased. Beyond late 1988, foreign trade and invest increased gradually because Myanmar started practicing open-door policy together with enacted foreign investment law (1988) The average net inflows amount of FDI is 401.18 million in US $ while the minimum and maximum amounts are negative 1.54 million in US dollar and 6,669.40 million in US dollar correspondingly.
The average currency exchange of Myanmar Kyats to US dollar throughout a year is 330.01 Kyats during the period of 1971 to 2014. During the same period of time, the minimum currency rate is only 4.77 Kyats and the maximum currency rate is 1,279.72 Kyats. The currency exchange rate of Kyats per US dollar exhibited from stagnant to gradually sharp pattern.

Source: United Nations Conference on Trade and Development (UNCTAD)

Figure 5.4 Inflation Rate in Myanmar: 1971-2013

Source: World Development Indicators (WDI)
The inflation rate in Myanmar (Figure 5.4) was shown fluctuated for every year from 1971 to 2014. The average inflation rate was 16.53%, the minimum and maximum rate were -6.04% and 57.07% respectively.

Figure 5.5 Real Interest Rate in Myanmar: 1971-2014

In the period of 1971 to 2014, the average real interest rate in Myanmar was only 0.25% while the maximum real interest rate was 12.48% and the minimum was -31.51%. The real interest rate of Myanmar were mostly negative because the inflation rate was higher than nominal interest rate in Myanmar during the period of year 1971 to 2014.

Source: World Development Indicators (WDI)
Figure 5.6 Unemployment Rate of Myanmar: 1971-2014

Source: World Development Indicators (WDI)

During the time from 1971 to 2014, the minimum unemployment rate in Myanmar was 4% and the maximum rate was 4.3% respectively while the average unemployment rate was 4.13%. The unemployment rate was gradually declined from 4.3% to 4.11% in 1989. After that, it increased again and flatted at 4% starting from 2000 until 2014.

The following Table-5.1 and 5.2 represent the descriptive statistics of data series to conduct the empirical study. As this main purpose of this paper is to study the effect of FDI on GDP growth of Myanmar, GDP has been taken logarithm in order to perform as GDP growth.

Table 5.1 Descriptive Statistics of the Data Series

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnGDP</td>
<td>8.57</td>
<td>10.18</td>
<td>7.59</td>
<td>0.80</td>
</tr>
<tr>
<td>lnFDI</td>
<td>3.69</td>
<td>8.81</td>
<td>-3.51</td>
<td>3.46</td>
</tr>
<tr>
<td>ExR</td>
<td>330.01</td>
<td>1279.92</td>
<td>4.77</td>
<td>433.51</td>
</tr>
<tr>
<td>InfR</td>
<td>16.53</td>
<td>57.07</td>
<td>-6.04</td>
<td>14.36</td>
</tr>
<tr>
<td>RIntR</td>
<td>0.25</td>
<td>12.48</td>
<td>-31.51</td>
<td>9.92</td>
</tr>
<tr>
<td>UnEmp</td>
<td>4.13</td>
<td>4.3</td>
<td>4</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Source: Author’s Calculation
Table 5.2 Descriptive Statistics of the First Difference Data Series

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DlnGDP</td>
<td>0.06</td>
<td>0.13</td>
<td>-0.12</td>
<td>0.05</td>
</tr>
<tr>
<td>DlnFDI</td>
<td>0.24</td>
<td>5.62</td>
<td>-5.80</td>
<td>2.45</td>
</tr>
<tr>
<td>DExR</td>
<td>22.78</td>
<td>235</td>
<td>-159.8</td>
<td>73.55</td>
</tr>
<tr>
<td>DInfR</td>
<td>0.08</td>
<td>35.97</td>
<td>-33.09</td>
<td>14.29</td>
</tr>
<tr>
<td>DRIntR</td>
<td>0.11</td>
<td>22.61</td>
<td>-20.37</td>
<td>8.09</td>
</tr>
<tr>
<td>DUnEmpR</td>
<td>-0.01</td>
<td>0.06</td>
<td>-0.05</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Source: Author’s Calculation

5.2 Empirical Findings

5.2.1 The Augmented Dickey-Fuller (ADF) Test Findings

Firstly, the Augmented Dickey-Fuller (ADF) unit root test was applied to each data series in order to check whether each series was stationary or non-stationary. The ADF test was run once with intercept, with both trend and intercept and then without both intercept and trend. The test was applied to each data series in both in level and in first difference. The estimated results of test are shown in the following Table 5.3.
### Table 5.3 Augmented Dickey-Fuller (ADF) Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level t-statistic</th>
<th>First Difference t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intercept and Trend</td>
<td>Without Intercept and Trend</td>
</tr>
<tr>
<td>lnGDP</td>
<td>3.634***</td>
<td>-0.355</td>
</tr>
<tr>
<td>ExR</td>
<td>0.250</td>
<td>1.445</td>
</tr>
<tr>
<td>RIntR</td>
<td>-2.791*</td>
<td>-2.847</td>
</tr>
<tr>
<td>UnEmp</td>
<td>-1.165</td>
<td>-1.759</td>
</tr>
</tbody>
</table>

Source: Author’s Calculation

*Denotes the rejection of the null hypothesis at 10% significance levels.

** Denotes the rejection of the null hypothesis at 5% significance levels.

*** Denotes the rejection of the null hypothesis at 1% significance levels.

The result of ADF unit root level test for three conditions with intercept, with trend and without intercept and trend, it reveals that inflation rate (InfR) has no unit root and satisfied in all three conditions. Although, the logarithm of gross domestic product (lnGDP), logarithm of foreign direct investment net inflows (lnFDI) and the real interest rate (RIntR) are not satisfied in all three conditions, they could reject the null hypothesis in two conditions of the test. The unemployment rate (UnEmp) could reject the null hypothesis in the condition of without trend and intercept ADF test.

Therefore, each data series is transformed to be first difference and the ADF test for unit root is applied to each series again. However, the currency exchange rate (ExR) has unit root problem in the level test, it became stationary when it was tested by treating first difference value. Moreover, the ADF test indicates that the first difference of each data series was stationary with highly significant of 1% and 5% that in which the null hypothesis of unit root is highly rejected.
5.2.2 Engle-Granger (EG) Co-integration Test Findings

According to the Engle Granger (EG) test result (See Table 5.4), absolute t-value of first difference residuals were stationary with highly significant of 1% critical value. Therefore, the null hypothesis is highly rejected and could say that the series are indeed co-integrated in both models (4.14) and (4.15). Then, the models in this study could be proceed to OLS regression in the next step.

Table 5.4 First Difference Residual Dickey-Fuller Test

<table>
<thead>
<tr>
<th></th>
<th>Test Statistic</th>
<th>1% Critical Value</th>
<th>5% Critical Value</th>
<th>10% Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z (t)</td>
<td>-5.659</td>
<td>-2.657</td>
<td>-1.950</td>
<td>-1.601</td>
</tr>
<tr>
<td>D2.u1</td>
<td>Coefficient</td>
<td>Std. Error</td>
<td>t-value</td>
<td>p&gt;</td>
</tr>
<tr>
<td>' u1</td>
<td>-1.103</td>
<td>0.19</td>
<td>-5.66</td>
<td>0.000</td>
</tr>
<tr>
<td>LD.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test Statistic</th>
<th>1% Critical Value</th>
<th>5% Critical Value</th>
<th>10% Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z (t)</td>
<td>-7.120</td>
<td>-2.657</td>
<td>-1.950</td>
<td>-1.601</td>
</tr>
<tr>
<td>D2.u2</td>
<td>Coefficient</td>
<td>Std. Error</td>
<td>t-value</td>
<td>p&gt;</td>
</tr>
<tr>
<td>' u2</td>
<td>-1.132</td>
<td>0.19</td>
<td>-7.12</td>
<td>0.000</td>
</tr>
<tr>
<td>LD.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s Calculation

*Denotes the rejection of the null hypothesis at 10% significance levels.

** Denotes the rejection of the null hypothesis at 5% significance levels.

*** Denotes the rejection of the null hypothesis at 1% significance levels.
5.2.3 OLS Regression

The simple time series OLS analysis used data from 1971-2014. This study estimates the effects of FDI inflows on economic growth after controlling for other growth determinants and the potential biases induced by endogeneity. Moreover, it is examined whether the growth effects of FDI depend on the recipient country’s level of financial development. The following regression result summary table is done for equations 4.14 and 4.15. In the table 5.5, the column (2) is regressed by adding dummy variables for new FIL (enacted in 1988) and exchange rate policy (start practicing floating exchange rate policy in 2012 by Central Bank of Myanmar) in order to see how effects of dummy variables to the main model.
### 5.2.3.1 OLS Estimation Results

#### Table-5.5 OLS Estimation Results

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnGDP</td>
<td>0.0355*</td>
<td>0.0267</td>
</tr>
<tr>
<td>lnFDI</td>
<td>(0.051)</td>
<td>(0.175)</td>
</tr>
<tr>
<td>ExR</td>
<td>0.00102***</td>
<td>0.000772***</td>
</tr>
<tr>
<td>InfR</td>
<td>-0.00817**</td>
<td>-0.00274</td>
</tr>
<tr>
<td>RIntR</td>
<td>0.000457</td>
<td>0.00633</td>
</tr>
<tr>
<td>UnEmp</td>
<td>-2.637**</td>
<td>-3.186***</td>
</tr>
<tr>
<td>d1988</td>
<td>-0.0212</td>
<td></td>
</tr>
<tr>
<td>d2012</td>
<td></td>
<td>0.573***</td>
</tr>
<tr>
<td>Constant</td>
<td>19.13***</td>
<td>21.39***</td>
</tr>
<tr>
<td>(Std Error)</td>
<td>(4.098)</td>
<td>(3.485)</td>
</tr>
<tr>
<td>Observations</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.937</td>
<td>0.965</td>
</tr>
<tr>
<td>Adj R-squared</td>
<td>0.926</td>
<td>0.956</td>
</tr>
</tbody>
</table>

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Author’s Calculation

This OLS simple regression result in column (2) has been done in order to know dummy variables effects by adding dummy variables of “d1988” and “d2012”.

Ref. code: 25605704090017GJH
5.2.3.2 OLS Estimation Results Analysis

In table 5.5, there were two OLS estimated results in column (1) and (2), presents by without time dummy and with time dummy respectively in order to see how the time control variable effects to main model which was concerned. The comparison table of expected signs and actual result on OLS regression is provided in Appendix A. As revealed by the OLS regression in column (1) and (2), foreign direct investment net inflows had a positive significant effect on GDP with 10% significant level. It means that if foreign direct investment net inflows increase by 1%, GDP will increase approximately by 0.03%.

The exchange rate was highly significant effect on GDP positively in 99% confidence interval. GDP in Myanmar will rise approximately by 0.001% if currency exchange rate increases 1 unit. Although the value of coefficient was too less, there was a highly significant with positive relationship between GDP and currency exchange rate in Myanmar. It could say that when foreign currency exchange rate was high, the local currency was depreciated and more investment which leaded to economic growth in Myanmar. Since the exchange rate is probably noted that as non-stationary at level while all the other variables are stationary. It might be happened because Myanmar kept a multiple exchange rate practice until April 2012. Since 1988, the official exchange rate was controlled to the special drawing right (SDR) of the IMF and it had been set at 8.5085 kyat per SDR for more than three decades. Because the official exchange rate was applied only for public sector transactions, the parallel market developed in the private sector. Thus, the foreign exchange market was segmented between the public and private sectors (Hori and Wong, 2008; IMF, 2012). The parallel market exchange rate steadily depreciated from around 30 kyats per US dollar in 1987 to around 1.300 kyats per US dollar in 2006. At its peak, the gap between the official and parallel exchange rates exceeded about 200 times (refer to the Exchange Rate Table-3.1 in the Chapter 3).

11 IDE Discussion Paper No. 388 by Koji Kubo, February 2013
The estimation result provides the expected sign for inflation rate in both models. It can be seen that there is a negative relationship between GDP and inflation rate. The coefficient value from the model without time dummy is statistically significant at 5% while the other model with time dummy provides insignificant result. It shown that 1% increase in inflation causes decreased in GDP by 0.82%.

The regression model in column (1) and (2) showed that, the unemployment rate has negative effect on GDP as it is expected. In model 1, one percent increased in unemployment rate causes 263.7% decreased in GDP. The estimated result from model 2 states that 1% increased in unemployment rate causes GDP decreased by 318.9%. The percentage affects GDP of unemployment are too large because the unemployment rate data is being collected as the percentage of total labor force and the rates are stagnant over the periods. Both of the estimated results are statistically significant.

This implied that the results follow the theory of the inverse relationship between GDP and unemployment. The relationship between Gross Domestic Product (GDP) and unemployment rates can be seen by the application of Okun’s Law (1962). According to the principles established by this law, to achieve one percentage point decline in the unemployment rate in the course of a year, real GDP must grow approximately two percentage points faster than the rate of growth of potential GDP over that period. Employment is the primary source of personal income in the country, and has a major influence on consumer spending and overall economic growth. GDP and unemployment rates are linked in the sense that both are macroeconomic factors.

According to discover by the models, real interest rate had indicated positive but not significant in both models. It should be negative sign because lower interest rate means less costly to borrow from banks and less return for saving. If so more investment and spending which causing a higher amount of economic activity and growth. Therefore, the effects of real interest rate did not reveal to GDP during the study period from 1971 to 2014 in Myanmar.
The time dummy for year 1988 and 2012 were the foreign investment law (FIL) had been enacted in Myanmar. In the year of 2012, there were two shorts that new amended FIL was enacted and floating exchange rate policy was started by Central Bank of Myanmar (CBM). The result in above table 5.5 displayed that there was positive significant by time dummy on GDP at 10% significant level by holding the other independent variables unchanged.

5.3 Interview Feedbacks

The feedbacks of interview have been collected through email and telecommunication. The followings are the summary classification of feedbacks from 16 people out of 20 from different institutions such as governmental institutions, INGOs, businessmen, freelance economic columnist and academic fields. The detail interview questions and answers are provided in Appendix B section.

i. Determinants of FDI in Myanmar and Its Key Factors
The answers they provided are such that the labor cost in Myanmar is cheap, there are rich natural resources and Myanmar is situated in strategic place. Some said about key factors of Myanmar that need to be are political stability, good infrastructure, and proper regulation practice.

ii. The factors that help Myanmar to boost FDI
The answers from all were similar. They responded Myanmar needs to develop infrastructure, to practice law enforcement, try to get totally lifting of U.S sanction and to provide accurate information.

iii. The main pull factors for foreign investors
They replied that Myanmar has location advantage, rich natural resources and human resources.

iv. Potential Investment from ASEAN countries
Some said that there will not have much FDI from ASEEAN countries to Myanmar. Investment from Singapore was quite high due to U.S sanctions. That is why some foreign investment comes to Myanmar via Singapore and most of the foreign investment in Myanmar is from China.
v. Opinion on Myanmar Government to prepare to attract more FDI and relationship between FDI and GDP Growth of Myanmar

Most of the people’s opinion are such that the government needs to practice law enforcement, political stability, infrastructure development, removing sanction and inclusion of productive capacity. Regarding with FDI and GDP growth, they said that it depends on FDI that goes to which sector: primary, manufacturing or service sector. Somehow, investment can create jobs and produce for exports answered by some government agencies.

5.4 SWOT Analysis of Myanmar

Foreign direct investment (FDI) and multinational enterprises (MNEs) play a large and growing role in shaping the world, both economically and politically. The simple rational of why a company invests overseas is to seek greater profits by establishing foreign subsidiaries.

5.4.1 Strengths of Myanmar

One of the most favorable factors of Myanmar is strategically located between two economic giants of China and India by bordering other growth markets like Thailand, has access to the Bay of Bengal, the second largest surface area in Southeast Asia and a relatively youthful population. The abundance of locations is suitable for hydropower, solar power and wind power generation along with the expansion of the transmission system.

Given the landscape profile, Myanmar process topographic features and different climatic areas. It can be easily grown not only perennial plants but also crops such as rice, pulses and beans, fruits and vegetables.

The plentiful of natural resources in Myanmar is another favorable strength. As the factor of resources endowment, Myanmar endows resources more than Cambodia and Laos. Especially, Myanmar has diversity of natural resources such as timber, mineral, hydro power, precious stones and natural gas. This is Myanmar’s comparative advantage and a strong attractiveness for resources seeking FDI.
Since Myanmar’s Foreign Investment Law was first enacted in 1988, it started to adopt a market-oriented economic policy. The law won positive response from foreign investors in the early years.

In the given advantage of Myanmar’s 2,832 kilometers of coastline along the Bay of Bengal and in the Andaman Sea, fisheries represent an important opportunity for communities and businesses in the coastal areas of Myanmar. Fishing grounds in Myanmar water are relatively less exploited than elsewhere. Opportunities in the sector exist inshore, offshore as well as at deep sea locations.

Foreign investment in the fisheries sector is permitted to foreign investors in a joint venture with a local company. Recently, fishery products from Myanmar received approval to be exported to the European Union by certified producers. Myanmar enjoys preferential tariff arrangements with the European Union as a least developed country (LDC).

Myanmar’s strong forestry sector offers numerous opportunities for involvement of local and international investors. The country is one of the leading producers of teak and hardwood. The structural change offers opportunities to foreign and local investors to support this emergence of value-added and sustainable forestry e.g. by establishing new wood-processing industries in Myanmar.

The power sector of Myanmar opens up abundant and immediate opportunities to foreign and local investors. In order to reach the objective of full national electrification until 2030, the power sector of Myanmar is to grow to a multiple of its current size.

Furthermore, labor force in Myanmar is the relatively high compare with other CLMV countries.
5.4.2 Weakness of Myanmar

On the other hand of favorable strengths of Myanmar, there are some weakness existence. Because of poor infrastructures especially insufficient power supply makes hostile for MNEs. Primitive financial system, young banking sector development, poor insurance sector practice, high prices of land and real estate, and political risk happens unfavorable to MNEs to invest in Myanmar. Another factor of weakness is implementing the enacted law. For instance, it took years to made by-laws, rules and regulations in order to implement systematically by following enacted Law.

In particularly, Samsung Electronics is considering building facilities in Myanmar to make home appliances. It is part of efforts to respond to rising labor costs in China and Vietnam. In January 2013, Samsung Electronics won approval from the Myanmar Investment Commission to establish a factory near the country's capital, Yangon, but the plant was put on hold because of insufficient power supply and much higher price of land. Those are the main obstacles in Myanmar when MNEs reflect to invest in manufacturing sector.

5.4.3 Opportunities in Myanmar

The Myanmar government is embarking on the motivated path of reform with many favorable factors to attract foreign investors’ attention. Myanmar’s recent efforts to promote the small and medium-sized enterprise (SME) sector and the role of special economic zones in the state investment promotion strategy are parts of improving the investment climate in Myanmar.

The manufacturing sector opens up opportunities due to the significant domestic market of Myanmar, direct access to strategic markets of Southeast Asia as well as to China and India. Preferential tariff arrangements for exports of the least developed country Myanmar to various geographies create distinct economic incentives for investments in Myanmar.

The manufacturing sector opens up opportunities due to the significant domestic market of Myanmar and direct access can be done to strategic Southeast Asia markets as well as to the markets of China and India. The preferential tariff arrangements for exports of Myanmar to various geographies create distinct economic incentives to invest in Myanmar.
Investments began to pour in Myanmar beginning in 2011 when the former military regime yielded power to the current government. The European Union and United States lifted respective trade sanctions against the country which allowed western companies to invest in Myanmar. According to sources from the Ministry of Planning and Economic Development, most of the approved FDI came from other Asian nations. Another factor of opportunities in Myanmar is the potentiality of removing the discrimination against foreign companies.

5.4.4 Threats in Myanmar

In Myanmar, the main threats to the political stability thought by foreign investors comes from internal forces such as centralized military government over long decades and frequent changes of policies under the weak rule of law. Most of the foreign investors indicated that the single biggest obstacle to invest in Myanmar is fear of political change which would affect current economic policy. Another threat is uncertainty of Peace Process.

5.4.5 Summary of SWOT Analysis

In the previous years of political and economic reform, the Myanmar society has shown to be willing and capable to drive the fundamental change. Myanmar’s citizens have demonstrated to be flexible in adapting to the availability of new opportunities and in dealing with new and requirements, while acquiring new skills and competencies in a learning society.

Investments in Myanmar present exciting opportunities as well as risks. The strengths come from Myanmar’s rich natural resources like natural gas, forest resources, mineral resources like gems and jewelry, marine resources, and large areas of cultivable land. Its geographical location, cheap and relatively educated workforce, and accessible routes of transportation from sea and road are also potential incentives to investors. Myanmar’s attractiveness as an investment site also comes from incentives and policies that have been put in place by the government. Risks come from political and unfavorable macroeconomic factors such as exchange rate control, poor infrastructure, unstable policies and level of openness.
To sum up, the factors, which the sample firms considered most important for evaluation investment climate of a host country, are the political stability of a host country, followed by infrastructures, well-established laws and regulations, administrative efficiency, availability of foreign exchange and low wages. With comparatively low labor costs, rich natural resource endowments, a diverse agricultural base for further value-added production and the strong support of industrial investment as a priority of the Government of Myanmar, investors enjoy favorable conditions.

In their Doing Business 2016 report, the World Bank ranked Myanmar 167 out of 189 countries on the ease of doing business. It was a jump up from the 2015 ranking of 177. The progress of Myanmar in the World Bank’s rankings was driven in part by improvements in regulations, costs, and procedures related to establishing a new venture and the creation of a one-stop place for registering new businesses. The incoming government of Aung San Suu Kyi’s National League for Democracy (NLD) has already emphasized its focus on countering corruption throughout the government.
CHAPTER 6
CONCLUSIONS AND RECOMMENDATIONS

This chapter is classified into three sections. The first section represents conclusion and policy implications. Limitation of data is described in the second section. The third section indicates suggestions for further study.

6.1 Conclusions and Policy Implications

This study aims to analyze the effects of FDI on GDP growth of Myanmar before and after foreign investment law has been enacted, to examine the relationship of factors that correlated with FDI and GDP, and to investigate the causes and effects of FDI in the economy of Myanmar.

According to the descriptive and estimated result of the study, the following conclusions can be made.

Foreign direct investment is one of the engines for economic growth of Myanmar by analyzing empirical results. The effects of foreign direct investment inflows could change GDP growth of Myanmar. Meanwhile, inflation rate, exchange rate and unemployment rate also affect economic growth of Myanmar. The effectiveness of foreign invest law enacted by government in 1988 and 2012, and practicing floating exchange rate policy by Central Bank of Myanmar can be also seen clearly. The appropriate foreign investment law which meets international norm for foreign investors could attractive more foreign investments in Myanmar. The determinants of FDI in Myanmar also favorable conditions to attract more FDI to compare with neighboring developing countries. Myanmar needs to create better job conditions within the country in order to decline unemployment rate which can accelerate increase to economic growth of the country. On the other hand, if there is more foreign investment in labor incentive industries, it can lead to higher employment rate.
This study investigates the impact of FDI on economic growth in Myanmar using time series data from 1971 to 2014. The results suggest that the economic growth of Myanmar over the study period depend on the FDI. According to results’ analysis, for the economic growth of Myanmar, the effects through FDI could facilitate the development process of Myanmar.

In Myanmar, the storage of electricity has become the bottleneck of industrial growth and constraint further FDI introduction in Myanmar. Foreign investors view well-established infrastructure as a major decisive factor in investment decision-making. Therefore, it is also important to consider the availability of adequate infrastructure and location. A well-developed infrastructure can enhance the attraction of a host country and the location of the firms can help not only delivering their products and obtain business information in time but also can reduce operating costs.

Further important factor for foreign investors is land ownership right. However, land can be leased in Myanmar for 30 years and can be extended based on a case by case basis. Therefore, Myanmar government should focus on land ownership right properly and review the high prices of land and real estates.

Last but not the least, the investors consider political stability as a very important factor in assessment of investment climate of a host country. Political instability may disrupt the economic process of a country and create additional difficulties for foreign invested firms. If a country lacks political stability, even if the opportunity exists for profitable venture, the foreign firms which have a long-term view of investment would not invest there since the safety of the investment is much more important than the short-term profits. Political instability may be due to external or internal factors.

6.2 Limitations of the Study

The FDI net inflow in the study is only net inward FDI inflow, not the amounts of inward and outward FDI. The exchange rates using in this study are currency exchange rates calculated by UNCTAD secretariat based on International Organizations’ database and national sources. There does not have clear explanation whether all the rates are official or market rates.
6.3 Suggestions for Further Study

For further study, a researcher can study the determinants of FDI or the net amounts of inward FDI and how to boost faster economic development in Myanmar. There can be cross sectional studied by sectors or among ASEAN countries in the future. Moreover, there are many variables determined FDI and Myanmar’s economic development. Therefore, further studies or research papers should be done by investigating other macroeconomic indicators for the development of the country.
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Books


**Thesis**


Other Materials
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The Consult-Myanmar: http://consult-myanmar.com/
The Myanmar Times Journal: http://www.mmtimes.com


Ref. code: 25605704090017GJH
APPENDICES
### APPENDIX A

Data Set

#### Table A.1
GDP, FDI Net Inflows and Exchange Rate from the Year of 1971 to 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP US$ in Million</th>
<th>FDI Net Inflows US$ in Million</th>
<th>Exchange Rate per 1 US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>1,985.43</td>
<td>0.05</td>
<td>4.77</td>
</tr>
<tr>
<td>1972</td>
<td>1,994.24</td>
<td>0.28</td>
<td>5.46</td>
</tr>
<tr>
<td>1973</td>
<td>2,023.83</td>
<td>0.03</td>
<td>4.93</td>
</tr>
<tr>
<td>1974</td>
<td>2,077.46</td>
<td>1.02</td>
<td>4.86</td>
</tr>
<tr>
<td>1975</td>
<td>2,162.37</td>
<td>3.31</td>
<td>6.38</td>
</tr>
<tr>
<td>1976</td>
<td>2,281.58</td>
<td>0.00</td>
<td>6.71</td>
</tr>
<tr>
<td>1977</td>
<td>2,401.24</td>
<td>0.06</td>
<td>7.07</td>
</tr>
<tr>
<td>1978</td>
<td>2,550.60</td>
<td>0.00</td>
<td>6.80</td>
</tr>
<tr>
<td>1979</td>
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</tr>
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<td>1980</td>
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<td>0.38</td>
<td>6.54</td>
</tr>
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<td>7.22</td>
</tr>
<tr>
<td>1982</td>
<td>3,229.68</td>
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<td>7.71</td>
</tr>
<tr>
<td>1983</td>
<td>3,370.27</td>
<td>0.00</td>
<td>7.96</td>
</tr>
<tr>
<td>1984</td>
<td>3,536.51</td>
<td>0.78</td>
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</tr>
<tr>
<td>1985</td>
<td>3,637.34</td>
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<td>1986</td>
<td>3,598.88</td>
<td>0.14</td>
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<td>1987</td>
<td>3,454.72</td>
<td>0.00</td>
<td>13.95</td>
</tr>
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<td>1988</td>
<td>3,062.52</td>
<td>0.00</td>
<td>16.88</td>
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<tr>
<td>1989</td>
<td>3,175.69</td>
<td>56.00</td>
<td>25.62</td>
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<tr>
<td>1990</td>
<td>3,265.15</td>
<td>225.10</td>
<td>29.28</td>
</tr>
</tbody>
</table>

Source: UNCTAD
<table>
<thead>
<tr>
<th>Year</th>
<th>GDP US$ in Million</th>
<th>FID Net Inflows US$ in Million</th>
<th>Exchange Rate per 1 US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>3,243.91</td>
<td>235.10</td>
<td>35.07</td>
</tr>
<tr>
<td>1992</td>
<td>3,557.30</td>
<td>149.00</td>
<td>41.75</td>
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<td>3,772.14</td>
<td>91.70</td>
<td>55.56</td>
</tr>
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<td>1994</td>
<td>4,054.22</td>
<td>135.20</td>
<td>66.41</td>
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<td>1995</td>
<td>4,335.91</td>
<td>317.60</td>
<td>77.89</td>
</tr>
<tr>
<td>1996</td>
<td>4,615.26</td>
<td>580.70</td>
<td>84.11</td>
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Source: UNCTAD
Table A.2
Inflation, Real Interest Rate and Unemployment Rate from the Year of 1971 to 2014

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Source: WDI (* Calculated in Trend by Author)
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Source: WDI (* Calculated in Trend by Author)
Table A.3
Expected Signs and Actual Result on OLS Regression

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Source: Author’s Calculation
APPENDIX B

Interview Questions and Feedbacks

The respondent people and interviewees are working in International Non-Government Organizations (INGOs), some are doing their own business, freelance economic columnists and the rest are from government agencies. There are 12 people who gave feedbacks their opinions on the following questions.

The feedbacks are compiled among same group.

B.1 Feedbacks from INGOs Group

1. How do you think about determinants of FDI in Myanmar, what are the key factors? FDI broadly depends on political stability (election process, conflict, civil war, peace process) and macroeconomic stability (Kyats stability, CBM weak administration of monetary policy inflation)

2. Which determinants can be most important in Myanmar? Political stability, infrastructure development (electricity problem), land issue, inconsistent and clear laws, shortage of skilled labor, law enforcement (we have so many laws in Myanmar but enforcement is very weak)

3. What are the factors that help Myanmar boost the FDI? Infrastructure development, clear and proper land tenure system and law enforcement.

4. How can MM government attract more foreign investment? N/A

5. What are the characteristics and nature of investment in Myanmar? N/A

6. How do you think about new FIL? What kind of policy should they amend in terms with international norms? N/A

7. Because of government reform, what are the main pull factors for foreign investors to do business in MM? N/A
8. How do you think about investment from ASEAN countries?

Investment from ASEAN countries to Myanmar? I don’t think it is not much most FDI comes from ASEAN countries to Myanmar. But you can see from DICA data that investment comes from Singapore. But not all are Singapore investment. Due to U.S sanctions, investment comes to Myanmar via Singapore. And the most investment to Myanmar is from China.

9. Do you think that FDI can promote MM’s economy and how?

Need to manage carefully and Myanmar should have sound financial and monetary policy. FDI can promote economic growth of Myanmar. In terms of investment in special economic zones, the products from there to be exported to Myanmar even though tax incentives to attract more FDI, it can creates job and tech transfer for the Myanmar.

10. How FDI can perform in MM?

N/A

11. What are the advantages for MM because of FDI?

Tech transfer and job creations

12. How do you think about MM’s foreign investment policies?

N/A

13. Which major policy should MM Government imply and what should be fixed and changed?

N/A

14. In order to attract more FDI in MM, how should MM government prepare?

Infrastructure development, political stability and law enforcement.

15. What will be opportunities for host country because of FDI?

Depending on which sector, host country can enjoy job creations (make sure to arrange people are skillful), tech know how and trainings.

16. How could it be relationship between FDI and GDP growth in MM?

Regarding with FDI and GDP growth, it depends on FDI goes to which sector such primary, manufacturing or service sector. If it supports manufacturing sector for the commodities to be exported, it is positively related with GDP growth.
17. What are positive and negative consequences of FDI in Myanmar?

The advantages is creation of employment, tech and know-how transfers, diversify areas of investment (agriculture sector to manufacturing sector). The negative points are impact of FDI investment only goes to natural resource sector (oil and gas) not too much on agriculture and manufacturing sector. The implications and environment and social impact of FDI should be carefully examined.

18. Should it be focused on growth or redistribution?

Need to balance between growth and redistribution. Growth only major cities can create problems like internal migration, city congestion, the inequality among state and regions.

19. How about natural resource depletion?

Natural resource extractive sector should be carefully examined. Instead of exporting raw materials, we need to get value added technology so that it can add more natural resource revenue and sustainable in the sector.

B.2 Feedbacks from government agencies (national staffs)

1. How do you think about determinants of FDI in Myanmar, what are the key factors?
   Cheap labor, rich natural resource, strategic place

2. Which determinants can be most important in Myanmar?
   Cheap labor, untapped domestic market

3. What are the factors that help Myanmar boost the FDI?
   Totally lifting of U.S sanction

4. How can MM government attract more foreign investment?
   Integrating into world economy, following global standards on human rights and democracy.

5. What are the characteristics and nature of investment in Myanmar?
   Extractive industries, less labor intensive, low job creation except in garment

6. What are the motives and determinants?
   The need for energy supply
7. How do you think about new FIL? What kind of policy should they amend in terms with international norms?
   Removing discrimination against foreign companies.
8. Because of government reform, what are the main pull factors for foreign investors to do business in MM?
   N/A
9. How do you think about investment from ASEAN countries?
   Still low
10. Do you think that FDI can promote MM’s economy and how?
    Both for domestic market and export
11. How FDI can perform in MM?
    N/A
12. What are the advantages for MM because of FDI?
    N/A
13. How do you think about MM’s foreign investment policies?
    N/A
14. Which major policy should MM Government imply and what should be fixed and changed?
    Clear policy framework
15. In order to attract more FDI in MM, how should MM government prepare?
    Removing sanction
16. What will be opportunities for host country because of FDI?
    Cheap labor
17. How could it be relationship between FDI and GDP growth in MM?
    Investment can create jobs and produce for export
18. What are positive and negative consequences of FDI in Myanmar?
    Less concerned about job creation and environmental and social impacts
19. Should it be focused on growth or redistribution?
    Hand in hand
20. How about natural resource depletion?
    Need to be address
B.3 Feedbacks from Freelance Economic Columnists

1. How do you think about determinants of FDI in Myanmar, what are the key factors?

   In Myanmar, there are some variables that should be considered as determinants of FDI.
   Gross Domestic Product, Foreign exchange rate, Interest rate, Inflation, Economy openness, Countries official language, Distance, Shared border, Economic, Political and Social Globalization.
   Key factors are: 1. Economic conditions (market, resources and competitiveness), 2. Policies (Macro policies, private sector, trade and industry, FDI policies) and 3. MNE strategies (risk perception, location, sourcing and integration transfer)

2. Which determinants can be most important in Myanmar?

   Political and Economic conditions can be most important.

3. What are the factors that help Myanmar boost the FDI?

   Political and economic stability, rule of law and regulatory frame work, skilled labor, developed infrastructure, favorable investment climate, provide accurate information with international language.

4. How can MM government attract more foreign investment?

   Political and economic stability, Rule of law and regulatory frame work, developed infrastructure, provide accurate information.

5. What are the characteristics and nature of investment in Myanmar?

   Characteristics and nature: Resources based, labor intensive and services, FDI in natural resources, FDI in power sector, FDI in agriculture.

6. What are the motives and determinants?

   Motives: resource, market, efficiency, and strategic
   Determinants: same as in No.1

7. How do you think about new FIL? What kind of policy should they amend in terms with international norms?

   Land ownership, profit sharing agreement, set up and investment promotion agency for its implementation, focus on green-field investment, attention on both: domestic investors and foreign investors, develop local capacity of SMEs, narrow gap in performance necessities, apply competition policy.
8. Because of government reform, what are the main pull factors for foreign investors to do business in MM?

   Location advantage, natural resources and human resources

9. How do you think about investment from ASEAN countries?

   Only Vietnam and Singapore invest a lot compare to other ASEAN countries.

10. Do you think that FDI can promote MM’s economy and how?

    Yes. FDI can contribute to technology transfer and skill development which in turn lead to economic development.

11. How FDI can perform in MM?

    It can perform well in MM, because MM is one of Asia’s final economic frontiers, has comparative advantages, is in good geographical location, has numerous natural resources.

12. What are the advantages for MM because of FDI?

    FDI can contribute to technology transfer and skill development which in turn lead to economic development.

13. How do you think about MM’s foreign investment policies?

    There should be tax exemptions for firms that invest in priority sectors.

14. Which major policy should MM Government imply and what should be fixed and changed?

    As in No. 5

15. In order to attract more FDI in MM, how should MM government prepare?

    Inclusion of productive capacity and infrastructure-related provision in international investment agreement

16. What will be opportunities for host country because of FDI?

    FDI can contribute to technology transfer and skill development which in turn lead to economic development.

17. How could be relationship between FDI and GDP growth in MM?

    The level of investment of a country is the key determinant of sustained economic growth. FDI in Myanmar can improve trade which in turn boost Myanmar economy.
18. What are positive and negative consequences of FDI in Myanmar?

Because of FDI, Myanmar can integrate economy in regional and global. FDI can promote domestic investment by supporting industries, clusters and finance.

But there should be particular attention to social and environmental impacts.

19. Should it be focused on growth or redistribution?

Redistribution

20. How about natural resource depletion?

To understand the potential effects of natural resource wealth sharing, stakeholders need to know more about:

a. The amount of current government revenue coming from natural resource and the amounts of revenue derived from each region or state

b. The total resource endowment and the potential for new discoveries of resources

c. Quantities of production, exports and domestic consumption and the sales value for each resource disaggregated if possible by state and region

d. The population, poverty levels, and subnational government expenditure needs in each region or state

e. Environmental, social, infrastructure or other costs of resource development

B.4 Feedbacks from Businessmen

1. How do you think about determinants of FDI in Myanmar, what are the key factors?

Politically stability, good infrastructure, regulation, reduction the red tape and financial sanction should be lifted.

2. Which determinants can be most important in Myanmar?

Good infrastructure - power and logistics, and financial sector development

3. What are the factors that help Myanmar boost the FDI?

In order to boost the FDI in Myanmar, Mya should be sound legal infrastructure which could guarantee the investors to have confidence in Myanmar. Review all the laws and regulation that contradict each other and amend in balance with the country’s development too.
4. How can MM government attract more foreign investment?  
Try to improve the infrastructure.

5. What are the characteristics and nature of investment in Myanmar?  
Around 40% of the investment in Myanmar in year 2015-16 is at the oil and gas which does not need much country’s existing infrastructure.

6. What are the motives and determinants?  
N/A

7. How do you think about new FIL? What kind of policy should they amend in terms with international norms?  
The new FIL which enacted in year 2012 was now merged with the citizen investment law and now it is under review. Which still attract the foreign investment and favor a lot in order to come but also need to review can country really benefit from that investment and treaties.

8. Because of government reform, what are the main pull factors for foreign investors to do business in MM?  
What reform means? We have been under quick reform process in last 4 years to some extent. Amending the new laws, reconnection with the international communities, admit and open up the violations and asking the international advise and request and deregulations on the doing business are the good move. But now we have new government which we all have trust. It is kind of very dramatic move and people are expecting. That could bring the more investment and more stability. So that we could be more invested in the infrastructure.

9. How do you think about investment from ASEAN countries?  
Sine we had been under sanction for long time an still suffering for financial sanction, ASEAN is the our main investors and also somehow were violated from those investment. So if we may have more investment and interest from others, there will be competitive marker and maybe we could gain more.

10. Do you think that FDI can promote MM’s economy and how?  
Of course, that could improve our economy in many ways. Once the investment coming and if the investment are the long-term and huge that could secure our financial and monetary flow and so on. The infrastructure will be improved by time and education and health. If we could many well.
11. How FDI can perform in MM?
   N/A
12. What are the advantages for MM because of FDI?
   N/A
13. How do you think about MM’s foreign investment policies?
   N/A
14. Which major policy should MM Government imply and what should be fixed and changed?
   N/A
15. In order to attract more FDI in MM, how should MM government prepare?
   N/A
16. What will be opportunities for host country because of FDI?
   N/A
17. How could it be relationship between FDI and GDP growth in MM?
   N/A
18. What are positive and negative consequences of FDI in Myanmar?
   N/A
19. Should it be focused on growth or redistribution?
   It is a bit controversial that which one we could focus first but redistribution should be also think every step of growth.
20. How about natural resource depletion?
   N/A
APPENDIX C
Additional Figures and Tables

Figure C.1
Map of Myanmar

Source: Google
Figure C.2
Inward FDI Stock as Share of GDP in ASEAN in 2014

Source: Author’s Calculation based on UNCTAD
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</tr>
</tbody>
</table>
BIOGRAPHY

Name: Ei Ei Phyu
Date of Birth: April 12, 1981
Educational Attainment: 2005: Bachelor of Commerce (B.Com), Yangon University of Economics
Scholarship: 2014-2016: Heinrich Boll Stiftung Scholarship
2016: Robert Nathan Foundation Fellowship
Professional Experiences: 2017 November to Present
Technical Advisor: Banking and Financial Sector Development Programme
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
2016 October to 2017 October
National Support Staff (National Consultant):
Public Financial Management Project funded by World Bank
Joint Public Accounts Committee of Myanmar Union Parliament