

**Independent Final Report**  
**Factors Impacting Foreign Direct Investment: Evidence from Thilawa  
Special Economic Zone in Myanmar**

by

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## **LIST OF ABBREVIATIONS**

EPZ	–	Export Processing Zone
FDI	–	Foreign Direct Investment
FMCG	–	Fast-moving consumer goods
JICA	–	Japan International Cooperation Agency
JV	–	Joint Venture
METI	–	Ministry of Economy, Trade and Industry (Japan)
MIA	–	Myanmar Industrial Association
MIDC	–	Myanmar Industrial Development Committee
MITT	–	Myanmar International Terminal Thilawa
MJTD	–	Myanmar Japan Thilawa Development Ltd
NIPC	–	Nigerian Investment Promotion Commission
OSS	–	One Stop Service
OSSC	–	One Stop Service Centre
PLC	–	Product Life Cycle
SEZ	–	Special Economic Zone
SOP	–	Standard Operating Procedures
USDP	–	Union Solidarity and Development Party

## **CERTIFICATION**

I, NAY Hlwan Aung (Student ID 52120615) hereby declare that the contents of this Independent Final Report are original and true, not submitted to any other university or educational institution for the award of a degree or diploma. All the information derived from other published or unpublished sources has been cited and acknowledged appropriately.

NAY Hlwan Aung

Date: 22 May 2022

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## **ABSTRACT**

Economic zones have been developed across the world in order to upgrade technology as well as economic development. The concept of special economic zones has become attractive amongst developing countries to attract foreign direct investors. There are many academic papers on how SEZs have impacted local community such as increased income, technology advancement and human capacity. However, there is limited literature on which factors within SEZs have impacted foreign investors within the zone. Thus, this research aims to understand which factors are beneficial to foreign investors and what challenges exist as well as the extent of those impacts to them using interviews and questionnaires.

This research finds that foreign firms are more likely to benefit from effective management of waste water, good supply of clean water, good land transportation system, presence of Myanmar International Terminal Thilawa (MITT) within the economic zone, proximity to strong business network, reliable power supply, lower wage workers and abundant availability of those. On the other hand, foreign firms are also being challenged by long commuting time, recruiting qualified factory engineers, recruiting semi-skilled workers and recruiting office workers nearby. Interestingly financial incentives such as commercial income tax, corporate tax and custom duty, Zone administration system such as simplified custom procedure, administration transparency and investment approval procedure have less impact on foreign firms. From cluster analysis, it can be observed that there are two main clusters Cluster 1 having 10 samples and Cluster 2 having 11 samples. As a conclusion, this research has shown that provision of well-established infrastructure is the most impactful matter that host government needs to consider in the case of a developing country. And the capacity of those infrastructure should be upgraded

in accordance with the development within the area, so that businesses find it less challenging to invest in those areas. Regarding challenges, education and technical training programs should be introduced in the proximity of the economic zones, facilitating the recruitment of qualified employees nearby, meanwhile educational level of those employees should be promoted.

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## **CHAPTER 1: INTRODUCTION**

This chapter discusses different purposes of special economic zones, attractiveness of special economic zones within developing countries and their failure & success. Then, it covers the research objectives and research questions, and finally discusses the significance of the research.

### **1.1 Background of Research**

Economic zones have been implemented by governments in developing countries as a tool to promote economic development as well as competitiveness. However, depending on the level of economic development of a country, least developed countries implement special economic zones and industrial parks to enhance catchup strategy, whereas innovation districts have been developed to boost innovation in already developed countries (UNIDO,2015). The use of special economic zone (SEZ) as an instrument to attract FDI and grow trade has been more frequent especially in developing countries (White, 2011). According to UNCTAD report of 2019, number of SEZs has gradually increased from 79 in 29 countries 1975 to around 5400 in 147 countries in 2018, with large fraction of development within developing countries with 4772.

The concept of SEZs has become an attractive strategy for industrial policy makers for several reasons (UNCTAD,2019). Ease of implementing SEZs within a country is one factor in influencing the decision of policy makers to establish SEZs. When there is a weak governance, it is too risky and not feasible to implement the reforms in the whole country, thus testing the effectiveness of reforms through SEZs is quite attractive. Second reason is related to cost effectiveness for the host country in developing economic zones. There will be a very high financial burden for a country to develop industrial

infrastructure whereas developing similar infrastructure within SEZs costs less. And capital expenditure for the establishment of SEZs can be contained and are mostly limited to provision of infrastructure linking SEZs perimeter. The other intention of development of SEZs is increased competition amongst countries to attract FDI. As amount of FDI in manufacturing sector amongst the developing countries become weak, governments introduce more attractive promotion packages in order to attract FDI in response to tight competition (UNCTAD,2019).

Even though the concept of SEZ becomes a development tool for developing countries, not all economic zones are successful and achieve intended outcomes such as attracting multinational enterprises, building local absorptive capacity and employment opportunities, etc. According to Kuznetsov & Kuznetsova (2019), failures of economic zones have been pointed out as the result of lack of infrastructure investment, no provision of tax benefits and very low investment attractiveness in regions. However, to achieve intended goals of SEZ including attracting FDI, several incentives are offered to potential investors such as preferential treatment (tax, land cost), rights to investors (full foreign ownership), local advantages (cheap labor, infrastructure) and administration (Anti-strike laws) (Wong & Chu, 1984). Traditional theories also explained that foreign invested enterprises are attracted to invest abroad mainly because of abundant natural resources, advanced technology and attractive markets (Song et al., 2020). Likewise, SEZs also provide a series of special policies such as tax exemptions, government subsidies, credit facilities, reasonable land prices, convenient administration approval, and many others (Wang, 2013; Lonarkar,2014). Meanwhile, investors can benefit from industrial agglomeration including geographical agglomeration of production suppliers, service suppliers, and related institutions within an industry (Porter, 1998). However, there is

limited literature on which factors really benefit or cause trouble to foreign investors within SEZ and to what extent. This study addresses those questions, explaining which factors are the most beneficial ones and what are the most challenging issues and their intensity, thus enabling economic zone developers including government officials to effectively strategize their economic zone development.

## **1.2 Research Objectives & Research Questions**

This research is undertaken to understand the factors which benefitted the foreign firms in Thilawa Special Economic Zone as well as the challenging issues for them. Then, the research will measure the extent of those impacts to the foreign investors within SEZ. Based on those objectives, the following research questions have been developed.

RQ 1: Which factors have benefited foreign direct investment in Thilawa SEZ?

RQ 2: What are the challenges for foreign investors within Thilawa SEZ?

RQ 3: To what extent each factor impacted Foreign Direct Investment?

The data used for this research was obtained mainly from foreign firms within Thilawa SEZ, Yangon, Myanmar as well as other stakeholders to enhance extensive comprehension of the topic. Within Myanmar, there are many different economic zones across the country, but only few of them are successful. In OECD review of 2020, Thilawa SEZ has been described as a good example for other industrial zones in terms of infrastructure development, management practices and used as a testing ground for Myanmar government to introduce simplified procedures and responsible business code practices across the country. Findings from this research can contribute to extensive understanding of which factors actually benefitted foreign investors within SEZ and

which challenges are still there for them to achieve their full potential, and their intensity, thus enabling stakeholders to select the best-suited strategies to attract FDI in developing future economic zones.

### **1.3 Significance of Research**

As a least developed country, Myanmar needs foreign investment to improve economic development as well as upgrade technological capabilities through spillovers. Hence, government needs to understand ways to attract foreign investment into the country. One of the attractive strategies is the establishment of special economic zones within the country. However, characteristics of SEZs vary from one region to another and success of them also depend on those characteristics. However, findings from this research will provide valuable information to stakeholders of special economic zones to a certain extent. In the implementation of special economic zones in the future, stakeholders can consider which factors are the most beneficial ones for international firms as well as challenging issues for foreign investors which deter them from achieving more efficient operation. With the knowledge of those factors, SEZ management team can adopt effective measures and make informed decisions regarding the implementation of special economic zones within the country. Thus, government stakeholders who are responsible for economic zone development as well as potential zone developers whether private or public can avoid unproductive investment decisions which will lead to few investments, in turn failure of SEZs.

## CHAPTER 2: SPECIAL ECONOMIC ZONES

This chapter discusses definition of special economic zone, what types of economic zone have been adopted across the world, purposes of economic zones. Then, it touches on the origin of economic zone in Myanmar and for which purpose economic zones have been developed. Finally, the case of Thilawa Special Economic Zone will be discussed.

### 2.1 Overview of Special Economic Zones

Special economic zones are developed as the strategies for economic development of countries across the globe (UNIDO, 2015). According to Farole and Akinci (2011), special economic zone is defined as a delineated area in which investors can enjoy different custom policy, tax incentive programs and regulatory system, and the business environment in those regions are more liberal than other parts of a nation. According to a World Bank report in 2018, SEZs have been categorized into six different types: Free Trade ones, export processing zones, Hybrid EPZs, Enterprise zones, Freeports, Single factory EPZs and Specialized zones.

Type of Zone	Development Objective	Physical Configuration	Typical Location	Eligible Activities	Markets
Free Trade Zone	Support trade	Size < 50 ha	Ports of entry	Entrepot and trade-related activities	Domestic, re-export
Traditional EPZ	Export manufacturing	Size < 100 ha All project area is EPZ	None	Manufacturing, other processing	Mostly Export
Hybrid EPZ	Export manufacturing	Size < 100 ha; only part of project is EPZ	None	Manufacturing, other processing	Export and domestic market
Free Port	Integrated Development	Size > 100 km <sup>2</sup>	None	Multi-use	Domestic internal and export markets
Enterprise Zone, Urban Free Zone (Rural Areas)	Urban Revitalization	Size < 50 ha	Distressed urban or rural areas	Multi-use	Domestic
Single Factory EPZ	Export manufacturing	Designation for individual enterprises	Country wide	Manufacturing, other processing	Export market

Table 1: Types of Special Economic Zones (Source: World Bank Report, 2018)

Based on previous academic works, Zeng (2019) has summarized four main purposes for the establishment of SEZs in a country: (1) industrialization, attraction of international investment and promotion of exports, (2) to create employment opportunities for local workers, (3) to serve as a testing area for economic reforms and (4) a pilot project to introduce new policies and regulations within a country. Thus, foreign or international investment is one of the priorities which governments focus in establishing special economic zones. Chinese experience of surge of inflow of foreign direct investment is attributable to many reasons, but early success of SEZs is one of the reasons behind FDI boost in the country (Graham, 2004). Similar increased volume of FDI is found in Philippines especially 10 years after enactment of Special Economic Zone Act of 1995. In the case of India, the inflow of FDI is different from one region to another, and researchers reached implication that these disparities in FDI inflow were owing to several contextual variables such as market size, infrastructure, location, and labor availability (Chakraborty et al., 2017). However, the lessons from tourism special economic zones in Indonesia, called Mandalika and Tanjung, showed that the concept of SEZ alone does not promote investment with improper implementation of policies, weak institutional capacities, and insufficient infrastructure (Adam, 2019).

## **2.2 History of Special Economic Zones in Myanmar**

In 1995, Myanmar military government established the first Myanmar Industrial Development Committee (MIDC) to promote the industrial development in the country (Lubeigt, 2007). Initially, MIDC established only 18 industrial zones in 9 states and regions in 1995. In May 2020, the Industrial Zone Law was enacted to attract FDI,

improve industrialization and job opportunities in local economy before then there was no special legislation for Industrial Zones in Myanmar (Myanmar's New Industrial Zone Law, n.d.). Regarding SEZ, government enacted first Special Economic Zone Law in January 2011 ("Special Economic Zones in Myanmar", n.d.) to promote goods processing, trading, and service sector as well as to facilitate technology transfer, workforce education and training. In January 2014, new SEZ law was enacted again to attract export-oriented industries according to the KMPG report.

In Myanmar, the concept of SEZ has been around since mid-1990s with feasibility study conducted for deep port in Dawei in 1996 and Thilawa also discussed at that time. Then, a team was sent to China to study about SEZ and to submit reports and recommendation to Union Solidarity and Development Party (USDP) in 2008-12. Later, the concept of industrial parks and SEZs have become a part of government (2011-2016) plan to promote industrialization in Myanmar (Thame, 2017). According to Oxfam report, 2017, it is also described that the concept of SEZs became a key component in the country's industrialization plan for economic expansion since the end of Myanmar military government in 2010. So far, there are three special economic zones in Myanmar: Dawei SEZ, Kyauk Phyu SEZ and Thilawa SEZ.

### **2.3 Thilawa Special Economic Zone**

In 2011, representatives from Japan and Myanmar have met to discuss the development of Thilawa SEZ which was initially presented to Japanese officials by President U Thein Sein. Shortly after negotiation, METI conducted a pre-feasibility study of area in March 2012 and a memorandum of understanding for Thilawa SEZ project was signed in January 2013 by President U Thein Sein and Prime minister Noda. A joint



venture named Myanmar Japan Thilawa Development Ltd (MJTD) was established in October 2013, with 51% ownership of Myanmar and 49% by Japan. Thilawa SEZ Management committee was also established to supervise Thilawa SEZ and its permission procedures (Asano, n.d.). The construction of Thilawa SEZ started in November 2013 and its first investor became operational in September 2015. It was located 20km southeast of Yangon city with the area of 2,500 ha according to Khandelwal et al. (2018). Myanmar International Terminals Thilawa (MITT) is located 25 km away from Yangon city, and facilitated the logistic of overseas freights owing to its close proximity to Thilawa SEZ.

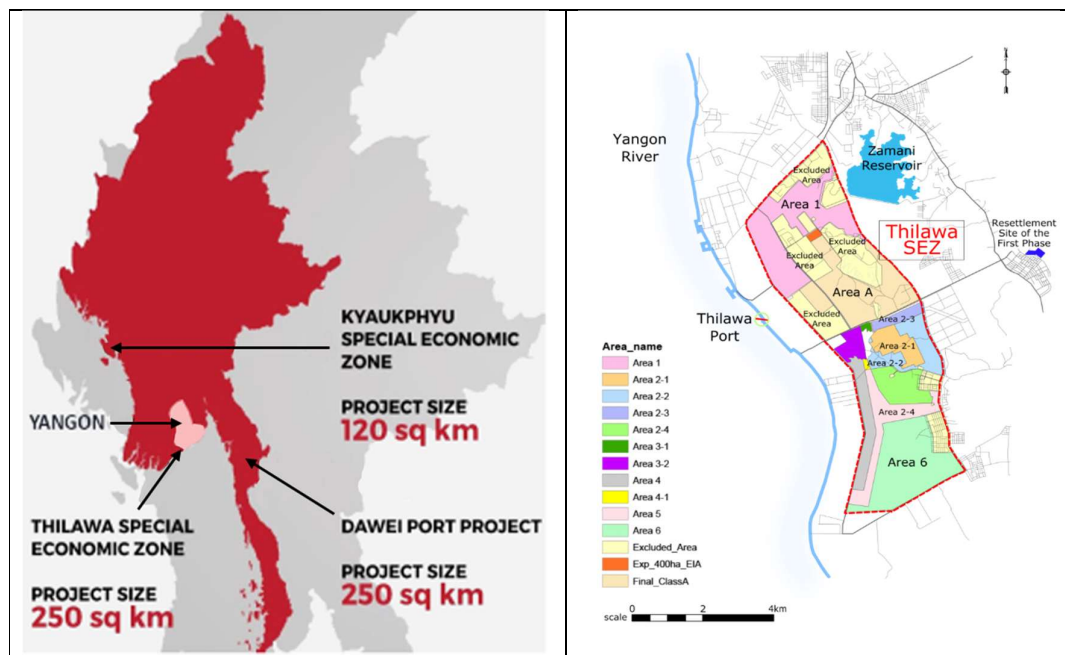


Figure 1: Location of Thilawa SEZ and MITT Port  
(Reference from The ASEAN Post and PEDIA)

This project has been jointly developed by Myanmar-Japan joint venture with 60% domestic business oriented and 40% export oriented. Thilawa SEZ is the first international standard SEZ of Myanmar and was developed into two different zones: Zone

A with 404 ha completed and Zone B with 700 ha under construction. The ownership structure of Thilawa SEZ is as follows (MJTD, 2019).

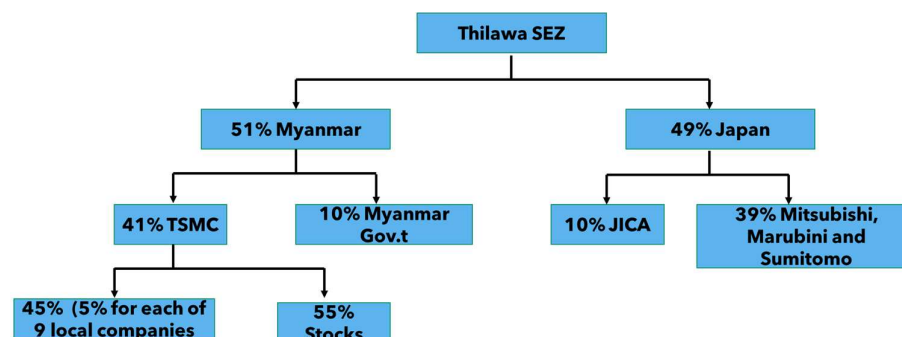


Figure 2: Ownership Structure of Thilawa Special Economic Zone

So far, Thilawa SEZ has attracted initial investment amount of USD 2385.4 million, and expansion and increase of paid-up capital amount of USD 3448.5million. Thus, total investment amount reached USD 5,833.9 million from different countries. In terms of industry, 50% of firms invested are in domestic-oriented manufacturing, 31% in export-oriented manufacturing followed by logistics, trading, real estate, engineering, environmental services, human resource development and machine rental (Refer to Table. 2.2).

Type of Business	No	%
Manufacturing (export)	36	31
Manufacturing (Domestic)	58	50
Logistic	8	7
Trading	7	6
Engineering	1	1
Environmental Services	1	1
HRD	1	1
Machine Rental	1	1
Real Estate	2	2
Total companies	115	100%

Table 2: Type of Business within Thilawa SEZ

Based on data from Myanmar Investment Commission, the amount of FDI inflow into Thilawa SEZ is compared against total FDI into Myanmar in the flowing table.

<b>Type of FDI</b>	<b>2017-2018</b>	<b>2018-2019</b>	<b>Until 30 Sept 2021</b>
FDI into Thilawa SEZ	401.88 mn (6.57%)	362.28 mn (8.01%)	2127.52 (2.3%)
Total FDI	6119.97 mn	4520.754 mn	92569.85

Table 3: Comparison of FDI inflow into Thilawa SEZ

## **CHAPTER 3: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK**

This chapter discusses theories of foreign direct investment which explain reasons of foreign firms to invest in overseas market. It also reviews the factors which are beneficial to foreign investors in economic zones and challenging issues to them.

### **3.1 Foreign Direct Investment Theories**

Foreign direct investment is defined as “an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprises) in an enterprise resident in an economy other than that of the foreign direct investor” in World Investment Report, 2007. The main difference of FDI from other type of international investment is the involvement in decision making and formulating policies in their investment (Moon, 2013).

#### **3.1.1 Entry of Foreign Direct Investments**

According to Chen & Ku (2000), FDI can be categorized into expansionary and defensive types. Expansionary FDI is invested mainly to reap firm-specific benefits, and it in turn contributes to the growth of sales. Another type is defensive FDI, and its main objective is to exploit the cheap labor in the host country. When a foreign firm enters the domestic market, there are several ways of entry (Meyer, 2008). Basically, types of entry can be differentiated based on whether a foreign firm invest in equity or not. Non-equity mode of entry includes turnkey projects, export, outsourcing, licensing, and franchising. On the other hand, equity form of entry includes portfolio investment, joint venture, and

wholly owned subsidiary. Portfolio is different from latter two because JV and wholly owned subsidiary have control over management, policies and decision making.

### **3.1.2 Industrial Organization Theory**

In the research work of Hymer (1976), he explained the first theory of the international trade in imperfect market. When foreign firms invest in another country, they face many challenges such as cultural differences, local customer preferences, unfamiliarity with legal system and language barriers, which their local partners have been quite accustomed to. To compete with such local competitors in domestic market, foreign firms can bring their market power so that they can reap benefits from international investment. Their market power come in the form of patent of advanced technology, brand awareness, ability of mass production, skills in terms of management and marketing, and linkages with financial institutions for cheaper financing opportunities. This argument has been supported by several other scholars such as Graham & Krugman (1989) pointing out that decision of European firms to invest in the United States is mainly due to technological advantages of those firms as well as Sodesten (1970) stating that willingness to increase profits through their advanced technological capabilities and superior organizational structure are driving factors for FDI.

### **3.1.3 Capital Market Theory**

Another theory to explain FDI is the difference of currencies between host country and home country. That concept originated from scholar named Aliber (1970) who explained that strong currency in the home country drives its investors to extend their

investment in the host country which has weak currency. This philosophy can explain the experience of FDI of developed countries but will not be applicable to the cases of FDI inflow into less developed countries with imperfect and non-existent capital markets, and heavily regulated foreign exchange policies. Moreover, this theory does not explain FDI inflow between two developed countries with equally strong currencies and FDI outflow from developing countries of weak currency.

According to Gray (1981), the two types of theories were categorized regarding foreign direct investment named macroeconomic FDI theories and microeconomic FDI theories. Macroeconomic FDI theories focus on country specific factors such as size of domestic market, economic growth pace, gross domestic product, infrastructure, institutional factors, and natural resources. On the other hand, microeconomic FDI theory emphasize firm-specific factors, and approach the FDI from investor's perspective. Influential factors are trade, production, employment, and intellectual property (Lipsey, 2004).

#### **3.1.4 Production Cycle Theory**

After the second world war, US firms made FDI into Western European countries especially in manufacturing industry. To explain this phenomenon, Vernon introduced the product life cycle theory (PLC) in 1966. According to PLC theory, there are four stages of production cycle: innovation, growth, maturity, and decline. In the first stage, US firms have superior technological capabilities and innovativeness, thus they applied those advantages to manufacture new innovative products in the domestic market and exported the surplus into foreign economy. In the growth stage, demand for those new products increased in European market. US firms standardized the product, meanwhile

imitation by local manufacturers happened. In the maturity stage, US firms extended their manufacturing facilities abroad in order to exploit low production cost in foreign economy as well as to protect their market share against domestic competitors. In the decline stage, competition between local and foreign firms intensified and investors looked for countries with lower production costs and cheaper inputs (Denisia, 2010: Shenkar, 2007).

### **3.1.5 Eclectic Paradigm**

Another concept is eclectic paradigm which was introduced in 1976 by John H. Dunning. Under this concept, ownership advantages, internalization advantages and location advantages are three main factors impacting appearance, structure, and location of FDI. Ownership advantage includes tangible assets of a firm (work force, financial capacity, and natural resources) as well as intangible ones (brand image and skills sets). Differences between host and home country result in location advantage such as cultural environment, legal system, and structure of market. Lastly, internalization advantage comes from benefits of that ownership through production and trading. Ownership and internalization are firm-specific factors, falling under microeconomic FDI theory whereas, location is country-specific factor, thus under macroeconomic FDI theory (Popovici & Calin, 2014).

### **3.1.6 Horizontal vs Vertical Foreign Direct Investment**

Foreign investors selected location of their investment depending on a comparison between the exploitation of emerging market and reduction of production cost. Based on

that concept, foreign direct investment can be categorized into two types: horizontal FDI and vertical FDI (Shenkar, 2007). When countries are emerging and have the potential to upgrade their domestic market, foreign investors see business opportunities in that emerging market. Thus, foreign firms invest horizontal FDI in order to introduce their products in the domestic market. This type of FDI is more into geographical diversification of production line and replacement of export. Whereas vertical FDI comes from the idea that foreign firms want to exploit lower production cost. Vertical FDI takes place when foreign investors enter the local economy to manufacture intermediate products which will be used for final products in the home country. Foreign investors will look for the regions with lower cost production and this model is more suitable for developing countries where abundant supply of workers with cheap labor.

### **3.2 Beneficial Factors to Foreign Investors in Special Economic Zones**

Governments introduced several different types of incentive packages to attract investment into industrial and economic areas.

#### **3.2.1 Financial and Non-Financial Incentives**

According to ASEAN Guidelines, fiscal incentives are offered often in the forms of tax incentives. There are standardized fiscal incentive package across the world such as tax exemption, duty free imports, and exemption from foreign exchange controls. Based on the studies conducted in the United States, tax incentives have an influential impact on the development of individual local areas (Bondonio & Greenbaum, 2007). In Kenya, a researcher studies the impact of fiscal incentives on FDI decision making based on 72 employees from firms within export processing zones and found out fiscal incentives



influence decision to invest and retention of FDI within those EPZs. However, a researcher also pointed out that incentives are not the only factor in decision making of FDI, but other factors such as human resource, corruption and inflation also influence FDI (THUITA, 2017). In the case of Philippine SEZs, government provides not only fiscal incentive packages but also non-fiscal incentives such as 100% foreign ownership and simplified export-import procedures (BUSQUE IV, 2016). Even though there are different types of incentives for investors in SEZs across the world, it is essential to understand what types of incentives have been provided within Thilawa SEZ. Depending on the types of zones within Thilawa SEZ, investors can get different levels of incentives but under same categories. According to OECD report 2020, there are many fiscal incentives in Thilawa SEZ: **commercial tax exemption, corporate income tax exemption, and preferential custom duties** as well as non-fiscal incentive such as **100% foreign ownership**.

### **3.2.2 Zone Administration**

The concept of One Stop Service (OSS) is also introduced by economic zone developers to solve bureaucratic delays in application and approval procedures for permits, licenses as well as access to other related information in a timely manner (April, 2013). OSS provides the assistance to investors in terms of some if not all of the following: corporate registration, administrative works such as visa, utilities, financing, environmental issues and land rent. The practices of OSS have been studied in three key topics: (1) dissemination of information to investors through OSS, (2) assistance in land lease for projects, and (3) facilitation of administration procedures with line ministries such as permit and approval (One Stop Shops). In Nigeria, one stop service center has

been proved as an effective tool to attract inflow foreign direct investment. In the study, researchers have analyzed the inflow FDI before and after the establishment of Nigerian Investment Promotion Commission (NIPC): one stop service mechanism through which efficient and transparent services have been provided to investors (Zakari et al., 2102). To address the concerns of foreign investors after Kosovo crisis, Macedonia government introduced several measures which includes one-stop shop system after observing surge in foreign investors' interests within the country. Moreover, Bulgarian Foreign Investment Agency was established as a one stop service center dealing with issues from foreign investors (Slaveski & Nedanovski, 2002). Other two government agencies which successfully implemented one-stop service as one of the strategic tools to attract FDI, were Singapore Economic Development Board and American State Utah Governor's Office of Economic Development (Moloney & Octaviani, n.d.). In the case of Thilawa SEZ, there is One Stop Service Center (OSSC) through which representatives from all related departments could **process approval procedures** at one place without seeking further approval from line ministries. Custom officers also need to provide **simplified and expedited custom procedures on-site**.

### **3.2.3. Labor Wage**

Foreign investors are looking for the opportunities to reap benefits of lower production costs from developing countries especially through lower labor cost. However, not only lower labor cost but also the availability of skilled labor has influential impact on foreign investment within the regions (Broadman & Sun, 1997). One research study has also pointed out that the increase of low cost and quality science & technology labor force raise significant amount of investment in developing countries (Mohiuddin & Su, 2013).

A cost advantage through low-cost labor is an attractive factor for investors and impact the dynamism of zones and surrounding areas (Khadaroo & Seetanah, 2009). However, the availability of low-cost workforce is not a significant factor in deciding to invest in special economic zones based on empirical analysis on two types of firms within and outside of special economic zones in Poland (Jaroslaw & Cicha-Nazarczuk, 2021). Regarding the wage of employees in economic zones in Myanmar, one research has been conducted through a survey of 200 employees in three economic zones in Yangon, Myanmar: Thilawa SEZ, Hlaing Thar Yar Industrial Zone and Shwe Pyi Thar Industrial Zone (Kusakabe & Melo, 2019). According to data from that survey, the **wage of employees** in Thilawa SEZ is the lowest amongst all three zones for both genders, and average years of education is 8 years for women and 8.3 year for men. Moreover, there are several villages around Thilawa SEZ from which majority of the manual labor for firms within the zone has been supplied.

### **3.2.4 Infrastructure**

Infrastructure including transport, telecommunication, water & sanitation, and power are critical input for manufacturing and promoting production. However, infrastructure is classified into soft and hard infrastructure Fung et al. (2005). Soft infrastructure includes transparent institutions and intensive reforms, whereas hard infrastructure represents transport, telecommunication, ports, and highways. Poor infrastructure causes increased transaction cost and limited reach to both domestic and global market, that in turn leads to deter FDI into the country. Through adequate infrastructure and effective practice, adverse business climate can be compensated to certain degree within the zones (UNCTAD, 2019). In some developing countries such as Russia, the role of infrastructure

has more influence than tax incentives over SEZ investors, as tax incentives do not seem attractive without proper infrastructure within SEZ. One research uses data from 33 African countries from 1984 to 2002 to analyze the influence of transport infrastructure on foreign investment in the country. Researchers use length of paved road per square kilometer of land as the indicator of transport infrastructure and reached a conclusion that infrastructure is one of the ingredients to attract FDI (Khadaroo & Seetanah, 2009). Examples of Chinese special economic zones, open coastal cities and economic & technological development zones shows the positive influence of advanced infrastructure in those zones over foreign investment (Zeng, 2012). In the case of Philippines, after withdrawal of US military forces from Clark and Subic bases in 1992, the amount of infrastructure in those two bases was worth USD 9.2 billion at the time of handover. And those bases were converted to special economic zones. FedEx has made an investment in Subic region, Philippines in 1995, and it can be partly attributable to the fact that the region needs minimum required investment for facilities. A researcher also empirically proved that independent variables related to infrastructure are significant toward dependent variable of new manufacturing FDIs in a region of Philippines based on 1055 registered projects with foreign equity from 1987 to 1998 (Makabenta, 2002). In Thilawa SEZ, JICA has supported the upgrade of external infrastructure of the zone such as **access roads, power station and transmission lines, water supply system as well as multipurpose port**. Internal infrastructure such as **industrial water supply system, sewerage & wastewater, and solid waste facilities** within Thilawa SEZ were arranged by Myanmar Japan Thilawa Development (MJTD, 2019).

### 3.2.5 Business Network

According to Devereux & Griffith (1998), their analysis on UK presents the impact of the agglomeration in explaining the location of inward investors. One of the researches in France has studied the determinants of location choices of foreign investors based on 4000 foreign investments over 10 years. And one of implications they came up with is that 10% increase in the number of competitors in a location can lead up to 40% increase of average investment probabilities in that location (Crozet et al., 2004). Local specialization, urbanization economics and foreign-specific agglomeration have strong significant effect on selection of FDI location (Chen, 2009). The location of new foreign owned manufacturing firms is significantly dominated by several variables including economic size and the existing manufacturing base in that particular area. Furthermore, foreign investors are more likely to prefer urban areas rather than rural ones to invest because of its economic size (Coughlin & Segev, 1997). As Yangon is the economic hub of Myanmar and location of Thilawa within Yangon provides a great advantage over other industrial zones across the country. The presence of potential partners and firms in the similar industry positively impact foreign direct investment in the regions (**proximity to strong business network**). Moreover, investors in the zone can easily source their materials from suppliers which has long established their reputation in Yangon areas (**proximity to suppliers**).

### 3.3 Challenging Factors to Foreign Investors in Special Economic Zones

More and more developing countries are trying to attract foreign investment in such a way that they could provide labor force which possess competitive combination of wage, skills and productivity (Noorbakhsh et al., 1999). Hence, low level of human capital in

the host country can discourage inward FDI into country because physical capital is less productive at the low level of human capital (Abbas et al., 2021). One of the earliest research by Lucas (1990) presents that a human capital is the critical factor which explain the reason capital does not flow from rich to poor countries. A similar concept can be found in the research by Zhang & Markusen (1999) in which they present that as the supply of skilled labor declines, inward FDI converges to zero. Thus, they claim that the availability of skilled labor in the host country is a direct requirement of multinational corporations. The **lack of trained technical workers** is still the most reported challenging issue reported by 2017 Myanmar Business Survey and **quality of employees** is the most cited problem raised from Japanese investors in Myanmar (OECD, 2020). There was a survey of 200 employees in three economic zones in Yangon, Myanmar: Thilawa SEZ, Hlaing Thar Yar Industrial Zone and Shwe Pyi Thar Industrial Zone. Only 20% of respondents from Thilawa SEZ has described that they received trainings from their employers, but in-depth interviews with employees confirm that most of their skill upgrades are through informal training from other fellow employees outside designated working hours (Kusakabe & Melo, 2019). Another issue which challenge investors within the zone is long commuting time for employees. According to the survey conducted by Khandelwa et al. (2018), the **long commuting time** is described as the most significant problem amongst the managers.

### **3.4 Impact of Special Economic Zones to Foreign Firms**

There are four stakeholders in each special economic zone such as owner, regulator, zone developer, zone operator with their different roles and responsibilities (Mangal, 2019). In the study of firm performance based on firm location by Li et al. (2021),

researchers investigated whether firms within SEZs have better performance than firms outside SEZ by comparing total factor productivity, labor productivity and return on assets. The result shows that locating within SEZs is positively related to firm performance. So **financial performance** of the firms is influenced by their location within or outside the SEZs. In the case of Bangladesh, firms within SEZs are higher in productivity (sales per employees) than their counterparts outside of SEZs (Khandelwal & Teachout, 2016). Based on the findings from a research in Romania, the technological capacity of the foreign firms is superior to their domestic counterparts in virtually all manufacturing sectors (VOICU, 2004).

### 3.5 Conceptual Framework

This chapter discusses how relevant theories and evidence from the interviews has been summarized and which factors impacts foreign direct investment in Thilawa SEZ. Based on the literature review and the empirical evidence from the interviews with foreign firms within the zone, the questionnaire has been developed.

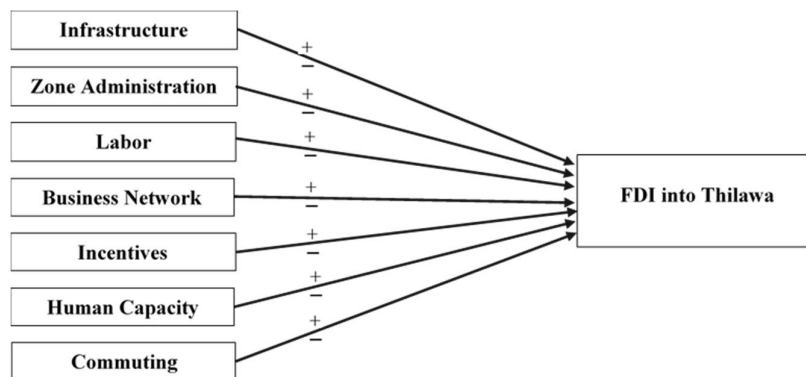


Figure 3: Conceptual Framework

## CHAPTER 4: METHODOLOGY

This chapter discusses what kind of data collection methods have been utilized, population and sampling and statistical data analysis methods used in this research project. In this research, both qualitative and quantitative research method have been used in the way that theoretical concepts have been triangulated with data collected through interviews and questionnaire has been developed based on those data.

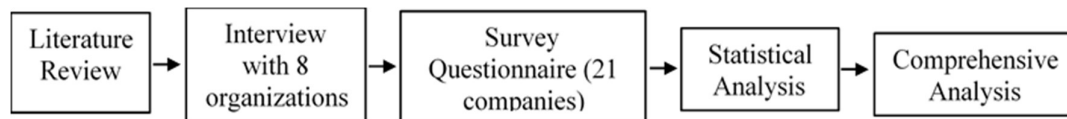


Figure 4: Types of Research Method used

Primary data collection has been undertaken from two main sources: interviews and questionnaire. After literature review, data from literature have been collected to develop conceptual framework. To validate that framework, semi-structured interviews have been carried out from November to December 2021. Interview with officer from Myanmar Industrial Association (MIA) also shed light on main differences between Thilawa SEZ and other existing economic zones across the country, at the same time reasons why Thilawa has been one of most attractive destinations for investors. Another interview with Japanese consultant from Thilawa zone developer (MJTD) provided insights into how the idea of Thilawa SEZ developed, approval procedure, incentive packages and other valuable information which cannot be easily accessed online. At the company level, several foreign firms within Thilawa SEZ have been contacted for interview, but some firms have temporarily terminated operation owing to COVID pandemic and political instability, thus not accepting the interview. However, 6 foreign firms have accepted interviews.



#### **4.1 Source of Data**

This research has used both primary and secondary data sources. Literature review of research articles, academic journals, books, government reports and others (UN report, NGO analysis and consultant reviews) provides valuable insights to develop theoretical framework. In order to validate that theoretical framework in the context of Thilawa SEZ, 8 semi-structured interviews with foreign companies, joint development company and government agency have been conducted (Refer to Table 4.1). Through those interviews, it is more clear which factors are actually positively impacting foreign companies in the zone and what challenges exists for them to operate effectively. Moreover, some additional factors were identified which literature did not provide. In terms of selection of interviewees, only senior level managers with extensive understanding of selection of Thilawa SEZ as an investment destination, zone's benefits and drawbacks on their company, have been interviewed. In spite of COVID pandemic, all participants accepted to organize face-to-face interviews. Out of 8 interviews, 3 interviews (Myanmar Industrial Association, PEB and NS Bluescope) have taken place within Yangon and the other 5 interviews in their Thilawa offices. In terms of interview language, only two interviews were conducted in English as both of them (MJTD and Marubeni Myanmar Fertilizer) were Japanese nationals.

Based on the data from literature review and interviews, a questionnaire has been developed with 5 main sections (Refer to Appendix N7). From QN.1 to 8, the aim is to collect general information of the foreign firm and its purpose of investment within the economic zone. All questions from QN.9 to 33 have been measured with 7-point Likert scale. To evaluate the impact of the various factors on foreign firms, 17 questions from

QN.9 to 25 have been asked. Then, QN. 26 and 27 measure the impact of Thilawa SEZ on foreign firms in terms of competitiveness and trust in the economic zone developer. Performance of the company is measured through QN. 28 and 29 regarding financial performance and sales growth. The remaining questions from QN. 30 to 34 are related to challenges for foreign investors. And the last question has been designed as an open question, thus enabling foreign firms to specify what are the challenges within Thilawa SEZ. In terms of language, original English version of the questionnaire was translated into Myanmar, thus participants could use which language they felt convenient in filling questionnaire (Refer to Appendix N7 & N8).

No	Organization	Interviewee Name	Position	Origin Country	Line of Business	Interview
1	Myanmar Industrial Association	Zaw Min Thein	Office Manager	Myanmar	Government Office	22-Nov
2	MJTD	Yoichi Matsui	Chief Consultant	Japan/ Myanmar	Thilawa Developer	24-Nov
3	Marubeni Myanmar Fertilizer	Takashi Akai	Managing Director	Japan	Fertilizer	15-Dec
4	RK Yangon	April Kyaw Thu	Assistant Manager	Japan	Steel	15-Dec
5	PEB	Si Thu Aung	Head of Sales	British Virgin Islands	Steel	16-Dec
6	NS Bluescope	Maw Aung Phyio Lwin	Business Segment Manager	Australia	Steel	20-Dec
7	Aju Myanmar	Myo Thu Lynn	Senior Manager	South Korea	Bored Pile	21-Dec
8	Vanguard	Lynn Htin	Manager	China	Apparel	21-Dec

Table 4: Profile of the Companies Interviewed

## 4.2 Population and Sampling

There are 115 investors within Thilawa SEZ with their origin country not only from Asia but also Europe. However, only 4 companies are fully Myanmar owned. In terms of

origin country, more than one third of companies, 56 are from Japan and followed by 14 from Thailand (Refer to Appendix N1).

This research only focuses on the foreign firms which manufactures products, so the number of available companies are only 94 firms (Refer to Appendix N2). Amongst those investors, some of the companies just bought land from the zone developer and not yet established its operation within the zone. And the political instability originated from military coup in February 2021 caused most companies reluctant to participate in any type of survey and interview, thus limited the number of participants in the questionnaire. In total, 21 firms have participated in the questionnaires.

#### **4.3 Data Collection Method**

In terms of distribution of questionnaires, most of the foreign firms have been reached through email, but some firms could not be reached as they do not have any contact online. Even though several follow-up emails were sent to request firms to participate, only 10 firms have responded to questionnaires online. After poor online participation, distribution of hard copy of questionnaire was carried out. However, some firms only have guards, no office staff, and some plainly reject to participate, thus only 43 questionnaires could be distributed within SEZ. Out of 43 questionnaires, only 5 responses could be collected in the first round, for various reasons. In the second round, 6 companies filled the questionnaires. Thus, total respondents in the research reached 21 firms.

#### **4.4 Data Analysis Method**

The data collected needs to be analyzed in order to understand the meaning of those data. There are many different approaches and methods to do statistical analysis, but the following analysis methods have been selected.

#### 4.4.1 Reliability Test and Kurtosis & Skewness

Reliability test requires to be undertaken to examine the internal consistency of questionnaire and how closely related the questions are. In the research, Cronbach Alpha from SPSS statistical software has been used to measure reliability. According to Hulin et al. (2001), the value of Cronbach Alpha between 0.6 and 0.7 is acceptable level, Alpha value over 0.8 is very good level and Alpha value over 0.95 is assumed as an indication of redundancy. Moreover, it is also necessary to check whether data in the research shows normal distribution, generally value of skewness and kurtosis should be between -2 and +2 to reflect normally distributed data (Sencan, 2005). To be more specific, skewness measures level of symmetry and distortion to bell curve, whereas kurtosis measures data is heavily tailed or lightly tailed. In this research, SPSS is used to check skewness and kurtosis.

Test	Value	Comment
Skewness	$-0.5 < X < 0.5$	Fairly Symmetrical
	$-1 < X < -0.5$	Moderately Negative Skewed
	$0.5 < X < 1$	Moderately Positive Skewed
	$< 1 \text{ or } > -1$	Highly Skewed
Kurtosis	$-2 < X < +2$	Acceptable Limit

Table 5: Translation of Skewness & Kurtosis value

#### 4.4.2 Descriptive Statistical Analysis

Descriptive statistical analysis is used to enhance the knowledge of the reader, comprehension and application related to the research (Hussain, 2012) and is likely the

simplest of statistical analysis to perform and interpret (Fisher & Marshall, 2009). Several different types of descriptive analysis are available such as bar chart, graphs, pie chart and table, etc. In this research, descriptive statistical analyses are used to present frequency of origin of investment, investment amount, number of employees, the reason behind investment and mean value of Likert scale questions. In terms of presentation, bar chart, pie chart and table are mainly used to describe the data.

#### **4.4.3 Correlation**

Measurement of monotonic relationship between two variables is defined as correlation (Schober et al., 2018). That kind of relationship means that if the value of one variable changes, the value of another variable will also change. The value of this monotonic relationship is represented by correlation coefficient value called “r”. Depending on the value of the coefficient, several descriptors are assigned such as “Negligible” from value less than 0.1, “Weak” from value of 0.1 to 0.39, “Moderate” from value of 0.4 to 0.69, “Strong” from value of 0.7 to 0.89 and “Very Strong” from value of 0.9 to 1.00 (Schober et al., 2018). And value of correlation coefficient can be positive or negative, representing two variables moving same direction or opposite direction respectively.

#### **4.4.4 K-means Cluster Analysis**

Cluster analysis is used to group samples into cluster in the way that the variables and attributes of samples within each cluster are similar to one another, and cluster themselves are apart from one another (Tryfos, 1998). The number and characteristic of the clusters are usually derived from data and not known prior to analysis. Basically, there are two

commonly used clustering analyses: Hierarchical Clustering and Non-Hierarchical Clustering. K-means falls into non-hierarchical clustering. In order to do K-means, it is essential to determine how many clusters need to be formed or to find optimal K value. However, there are several methods to determine K value, elbow method is used in this research. Elbow method is a visual method which compares the difference of sum of square error (SSE) of each cluster, and the most extreme difference cause the angle of elbow, representing the best number of cluster (Umargono et al., 2019).

## **CHAPTER 5: ANALYSES AND RESULTS**

In this chapter, the kinds of statistical analyses conducted in this research will be discussed. The first two analyses of reliability and skewness & kurtosis test will determine whether data are consistent and normally distributed. Correlation analysis will provide relationship between variables and K-means will show which samples fall in same cluster and which variables dominate the clusters.

### **5.1 Reliability Test and Skewness & Kurtosis**

The reliability test for all Likert scale questions is carried out for using SPSS software and the Cronbach's Alpha value is 0.873 (Refer to Appendix N3) which is over 0.8 but less than 0.9, thus it can be translated into very good level. Values of skewness for all Likert scale questions fall between -1 and +1 and value of kurtosis also are between -2 and +2 (Refer to Appendix N4), thus data is normally distributed.

### **5.2 Descriptive Statistics**

There are 21 foreign firms which participated in the questionnaire. In terms of their country of origin, there are 4 Japanese companies and the same number from Thailand. 2 firms from both Taiwan and South Korea also responded to the questionnaire. There are also companies from several other countries such as Singapore, Malaysia, Hong Kong, China, Australia and British Virgin Islands, etc. (Refer to Figure 5.1). In terms of investment amount of participant companies, Thailand represents the largest amount of investment with 102 million USD, then closely followed by China and Singapore with 100 million USD each. Then Malaysia company invested 70 million USD, Japanese firms made up almost total 40 million USD investment, and companies from Taiwan invested

33 million USD. The other remaining countries are under 20 million USD (Refer to Figure 5. 2).

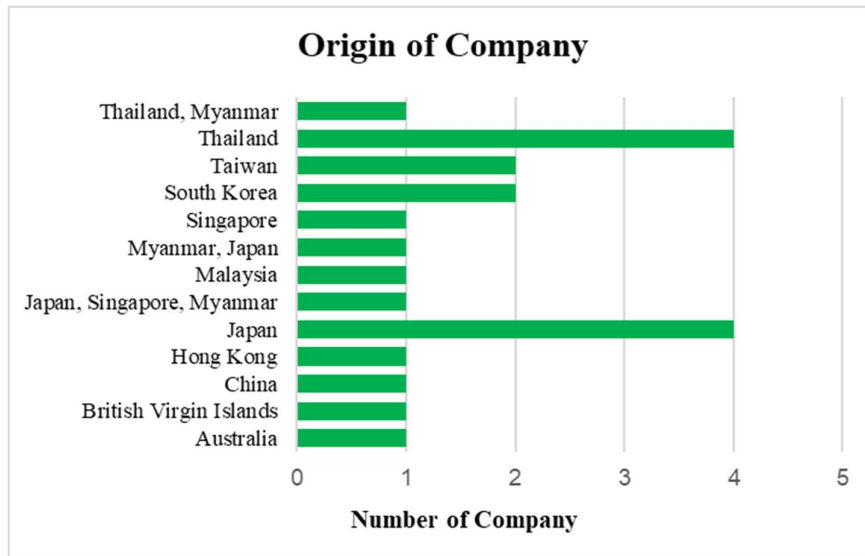


Figure 5: Country of Origin of Participating Companies

In the questionnaire, one question is asked related to the reason behind their investment within Thilawa SEZ. Based on the FDI theoretical concept, foreign companies invest for one of two reasons which are lower production cost and expansion into new market. Out of 21 participant firms, 13 companies have responded that their investment is mainly because they want to expand their products into new market and 8 companies came to invest for lower production cost. During the interview, one fertilizer company “Marubeni Myanmar Fertilizer” pointed out that their product is new in the market, and plan to reap opportunities from booming agricultural sector in Myanmar. All three steel companies in the interview pointed out cheap labor as one of the attractive factors for them, but still their sales are quite domestic oriented (market expansion). But one apparel company clearly stated that it chose to invest in Thilawa SEZ mainly because of cheap labor, and all of their products are exported to foreign market.



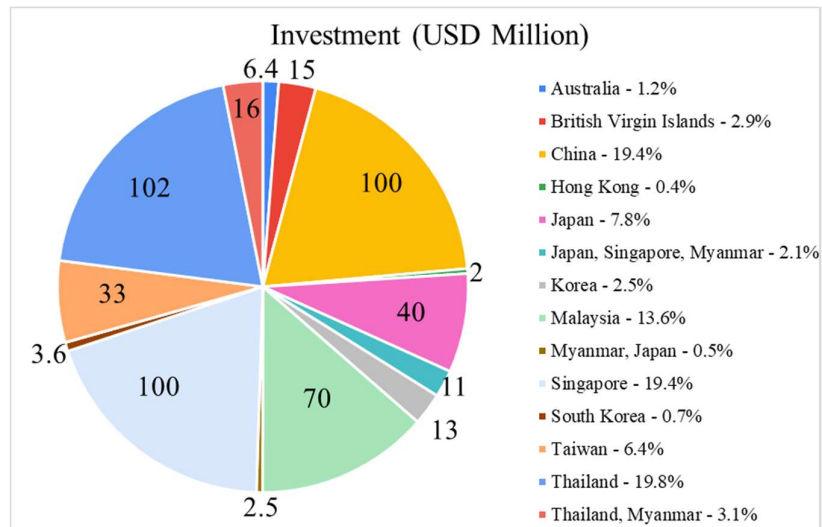


Figure 6: Investment Amount into Thilawa SEZ by Country of Origin  
(Source: Interview with Thilawa SEZ chief consultant)

Regarding labor force, 6 companies hired over 201 employees and the same number of companies hired employees between 0 – 50. However, 3 companies hired between 151 – 200 employees, and 6 companies hired between 51 – 100 employees (Refer to Figure 5.3).

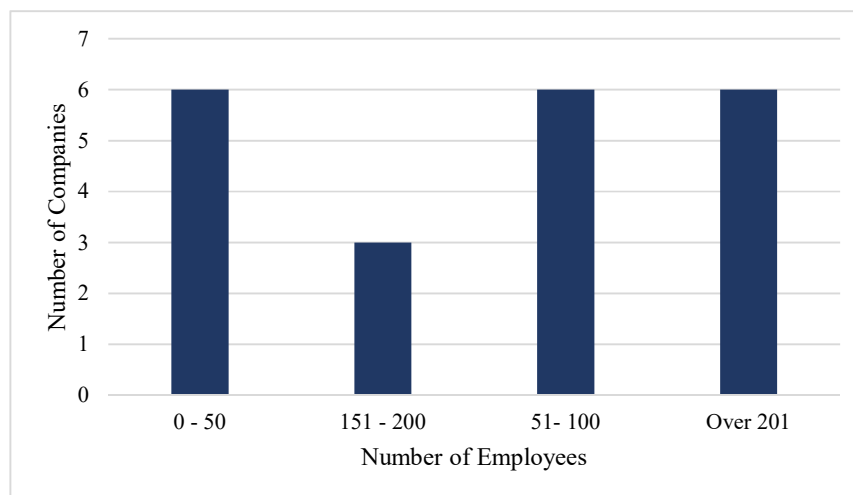


Figure 7: Number of Companies by employments

In terms of their market, 11 companies responded that they intend to sell products only within local market, thus their market is domestic oriented, whereas other 4 firms

specified that all of their products are exported and not sold in the local market at all, hence they are fully export oriented firms. However, the remaining 6 companies target not only local market but also export, and the percentage of export is ranging from as low as 6% to a high as 95%. From the interviews with the company called PEB from British Virgin Island and Aju Myanmar from Korea, it was pointed out that some firms increased export as they need to deliver their foreign branches sales. Moreover, the local sales have declined owing to COVID pandemic and political instability within the country, hence causing foreign firms to put more emphasis on export than before. Their exporting countries include Asia, Europe, Africa, Middle East and America.

From the means of all Likert scale questions, both land transport and presence of port represent the highest score with 5.38 out of 7 scale, meaning that land transport and port have the highest impact on the foreign investment within the zone. Reliable power supply, lower wage workers, abundant supply of cheap labor, simplified custom procedure also represent 5.33, 5.1, 5.1 and 4.81 respectively. Whereas solid waste management has the least importance for the foreign investment with mean value of 4.1. and also waste water management, clean water supply and proximity to suppliers have been considered as less important with the mean of 4.43, 4.38 and 4.33 respectively. In terms of challenges, long commuting time is the most challenging issue with mean value of 4.33, and finding the semi-skilled workers is considered as the least challenging problem—amongst foreign firms compared to finding factory engineers and office workers from nearby places. To effectively measure the performance of the foreign firms, both negative and positive scale from -3 to +3 have been added in the Likert scale so that firms can clearly describe whether their performance is lower or higher than expected. Based on the mean value, financial performance and sale growth have increased slightly.

### **5.3 Correlation**

The correlation presents the relationship between two variables. Commercial tax, company income tax and custom duty have positive significant relationship with competitiveness of the companies, thus those tax and custom duty reduction has provided foreign investors within the zone an advantage over other firms outside of the zone. Administration related factors such as simplified investment approval, simplified custom procedures and administration transparency have also positively significant correlation with competitiveness, hence it can be translated as those effective administration systems made foreign firms more competitive against other investors outside the zone. And presence of good land transportation also significantly impacted competitiveness of investors. Availability of cheap labor, reliable power supply, and presence of port within the Thilawa SEZ have positive significant relationship with the trust of investors towards “developer’s accountability”. However, the difficulty to find semi-skilled factory worker has negative significant correlation with the trust of investors towards developer. It can be translated that difficulty in finding semi-skilled factory workers from nearby diminishes the trust of foreign investors within the zone, assuming that developer’s poor ability for selection of location within Yangon.

Factors such as the availability of cheap labor, abundant availability of cheap workers nearby and presence of port within Thilawa SEZ have significantly impacted the financial performance of the foreign investors within the zone in a positive way. So, it means cheaper labor and abundant availability of them from nearby areas financially lower overhead cost of foreign investors and in turn leads to better financial performance. The presence of port within Thilawa SEZ facilitates the transportation of materials from

overseas, and reduces time & cost of logistic, leading to positive financial performance. In terms of sales growth, custom duty and availability of labor force have significant positive relationship with sales growth.

As there is no such one stop service center outside the Thilawa SEZ in Myanmar, investors normally have to go to different ministries to get approval for their projects (OECD, 2020). Moreover, there are several standard operating procedures (SOP) for investors to follow easily available on Thilawa SEZ website. According to chief consultant of Thilawa SEZ, information can be easily available online regarding to any administration related issues, and criteria for investment permission are very straightforward as well as transparent. Thus, transparency in the zone administration plays quite a beneficial factor to investors within Thilawa SEZ, unlike other economic zones in Myanmar where there is less or no transparency in zone administration. From the interviews with foreign firms such as RK Steel, NS Bluescope and Vanguard, it was learnt that they recruit manual labor from the abundant supply of cheap labor nearby. In the interview, Thilawa SEZ chief consultant also described that zone administration body also encourages investors within the zone to consider recruitment from nearby villages to increase job opportunities in those areas before considering to recruit from other places. From the interview with one foreign firm “PEB”, it is explained that there are cheaper land rents in other industrial zones within Yangon, but reputation and accountability of MTSH (Thilawa SEZ developer) greatly attracted their investment in spite of Thilawa’s higher rent. According to Thilawa SEZ chief consultant, firms within the zone have introduced 72 new products and technologies into Myanmar market, in turn impacting competitiveness of foreign firms within Thilawa SEZ.

## 5.4 K-means

Finally, cluster analysis has been carried out in order to find out the pattern of the participant companies in terms of their variables, cluster the firms into different groups and observe the dominant factors in each cluster. From that analysis, it can be easily noticed which factors are most impactful on foreign firms and what are the most challenging issues for them. In this research, Jupyter Python 3 online software has been used to calculate optimal K value. After running the analysis, the following visual graph has been generated. According to the graph, it can be said that the optimal K value for this K-means is 2 (Refer to Figure 5.4).

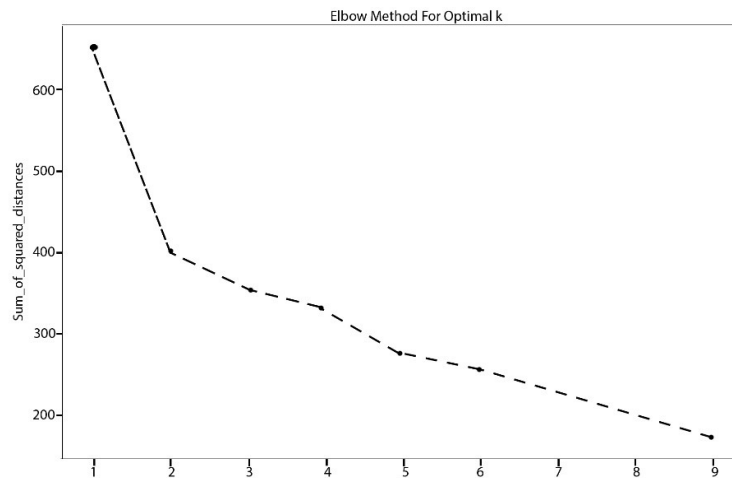


Figure 8: Elbow Method for Optimal K-value

The next step is to run the K-means using SPSS software. K-means is basically an iterative clustering algorithm in which number of clusters is determined by user and calculate the centroid of each cluster so that level of similarity is high amongst samples within one cluster whereas the level of similarity is very low between samples from different clusters (Shakeel et al., 2018). After K-means, the following cluster formation has been found. There are 10 companies in Cluster 1 and 11 companies in Cluster 2. The

distance between related cluster centroid and each sample can be found in the following

Table 6.1.

Cluster Membership			
No	Name	Cluster	Distance
1	NS BlueScope Lysaght Myanmar Ltd.	1	4.320
2	RK Yangon Steel Co.,Ltd	1	2.804
3	Marubeni Myanmar Fertilizer	1	5.124
4	Kianjoo Can (Myanmar) Co Ltd	1	5.006
5	Atsumi Myanmar Co.,Ltd	1	4.456
6	JFE Meranti	1	4.032
7	Koryo Cable Myanmar	1	5.372
8	Myanmar Century Steel Structure	1	4.366
9	A&N Foods (Myanmar)	1	5.483
10	Advanz Beverage Manufacturing	1	3.932
11	PEB Steel Myanmar Ltd.	2	3.238
12	Aju Myanmar	2	3.981
13	VANGUARD APPAREL CO., LTD.	2	6.518
14	Indorama Ventures Packaging (Myanmar)	2	4.809
15	Seiji (Myanmar)	2	4.257
16	Toyo Ink Myanmar	2	4.072
17	Siam GS Battery Myanmar	2	4.257
18	Igeta & Sun	2	4.496
19	Agri First	2	3.006
20	ABBA Aluminum	2	2.960
21	Millcon Thiha Gel	2	3.585

Table 6: Identified Clusters

From ANOVA table of K-means (Refer to Appendix N5), it is easy to determine which factors are the main differentiators for formation of clusters. The most differentiating factor between two clusters is supply of clean water (CW). And other differentiating factors include waste water management (WW), finding quality office workers nearby (QW), quality factory engineer nearby (FE), long commuting time (LCT) and solid waste management (SW). Thus, there are different characteristics in each cluster. Based on the variables of each cluster, companies in Cluster 1 are more sensitive to sanitation and water management such as clean water, wastewater and solid waste, find more difficulties in recruiting quality employees such as engineers and office employees and finds long commuting time as more challenging. Whereas, companies in Cluster 2 are less sensitive

to sanitation, and find it less challenging to recruit quality factory engineers and office employees and find long commuting time as less challenging.

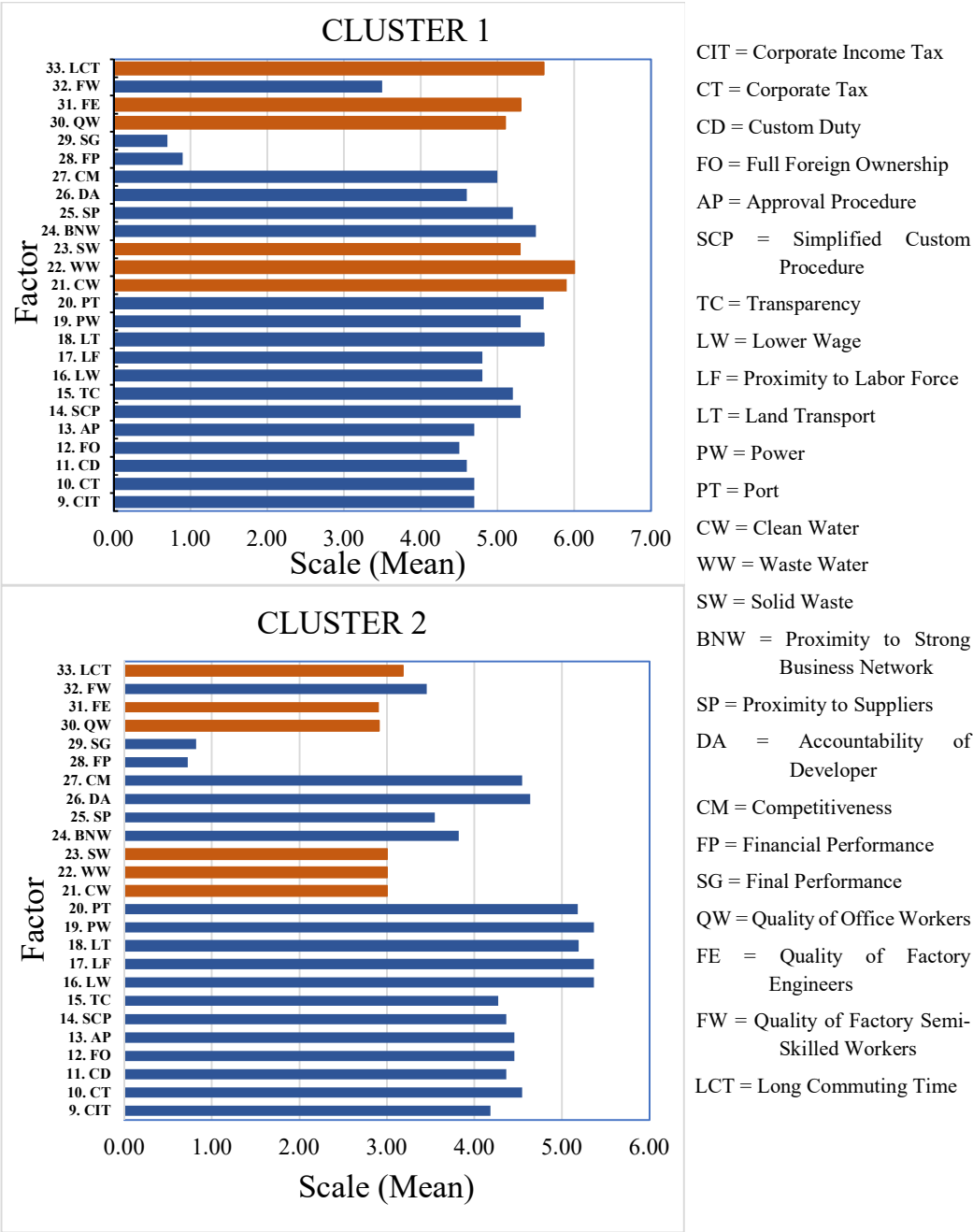


Figure 9: Differentiating Factors in Clustering

Regarding the most impactful factors to foreign firms within Thilawa SEZ, it is necessary to consider the number of participants in each cluster. If one cluster has a

considerable number of samples, then the other cluster would have a very limited impact on whole participants. But in this case, both clusters have similar number of participant firms within each cluster. Thus, it will be required to consider impactful factors and challenges from both clusters. Within Cluster 1, waste water, clean water, land transport, port and close business network represent the five most beneficial factors with the mean values 6.0, 5.9, 5.6, 5.6 and 5.5 respectively, whereas long commuting time, difficulty in recruiting qualified factor engineer and office workers represents the most challenging issues with mean value of 5.6, 5.3 and 5.1 respectively. With Cluster 2, the mean values of five most impactful factors are power, lower wage, abundance availability of cheap labor, land transport and port with the value of 5.36, 5.36, 5.36, 5.18 and 5.18 respectively, whereas the highest mean values of challenges are finding factory semi-skilled workers, long commuting time and finding qualified factory engineers nearby.

Factor	Cluster	
	1	2
Corporate Income Tax (CIT)	4.7	4.18
Commercial Tax (CT)	4.7	4.55
Custom Duty (CD)	4.6	4.36
100% foreign Ownership (FO)	4.5	4.45
Approval Procedure (AP)	4.7	4.45
Simplified Custom Procedure (SCP)	5.3	4.36
Transparency (TC)	5.2	4.27
Lower Wage (LW)	4.8	5.36
Proximity to Labor Force (LF)	4.8	5.36
Land Transport (LT)	5.6	5.18
Power (PW)	5.3	5.36
Port (PT)	5.6	5.18
Clean Water (CW)	5.9	3
Wastewater (WW)	6	3
Solid Waste (SW)	5.3	3
Proximity to strong business network (BNW)	5.5	3.82
Proximity to suppliers (SP)	5.2	3.55
Developer Accountability (DA)	4.6	4.64
Competitiveness (CM)	5	4.55
Financial Performance (FP)	0.9	0.73
Sale Growth (SG)	0.7	0.82
Quality of Office workers (OW)	5.1	2.91
Quality of Factory Engineers (FE)	5.3	2.91
Quality of Factory Semi-Skilled Workers (FW)	3.5	3.45
Long Commuting Time for Employees (LCT)	5.6	3.18

Table 7: Mean Values of Factors in Clusters



In the questionnaire, one open question regarding challenges within Thilawa SEZ is added and only 10 out of 21 participant firms has answered the question. But only 8 companies clearly elaborated their challenging issues within Thilawa SEZ, whereas one company simply stated Thilawa zone is better than any other industrial zones, and another answered with none for the question. Thus, those 8 valid answers have been described into the following Table 6.3. To summarize these findings, foreign investors want the developer to improve the capacity of the existing infrastructure such as bridge, port and road so that logistic of cargoes can be handled more effectively. Other interesting findings include not satisfied with current tax cut and high rate of utility charges.

No	Challenges for Foreign Firms
1	Not satisfied with current tax cut
2	Low capacity Bridge (connecting Thilawa to Yangon)
3	Low capacity Terminal
4	Hazardous waste management
5	Narrow road for cargo trucks
6	Long commuting time
7	Difficulty in recruitment
8	High rate of electricity and water bill

Table 8: Challenges for Foreign Firms

## **CHAPTER 6: FINDINGS, DISCUSSION AND IMPLICATIONS**

This chapter discusses the findings from the interviews and statistical analyses, and based on those findings, it will present what kind of conclusions can be drawn about the research questions. Then, some recommendations will be presented in line with findings and conclusions from the research.

### **6.1 Findings**

In this research, preliminary data collection has been conducted not only from interview but also from literature review. Based on the data from those sources, different factors, which can impact foreign investors within Thilawa SEZ, have been identified. Then, research questionnaire has been developed based on those factors, and distributed to foreign investors within Thilawa SEZ. Statistical analyses have been conducted to examine which factors impact foreign investors within Thilawa SEZ, Myanmar and to what extent.

Basically, there are two types of factors including not only positive factors but also challenges to the foreign investors within the economic zone. Based on that concept, three main research questions have been developed

- RQ1 Which factors have benefited foreign direct investment in Thilawa SEZ?
- RQ2 What are the challenges for foreign investors within Thilawa SEZ?
- RQ3 To what extent each factor impacted Foreign Direct Investment?

From cluster analysis, it can be observed that there are two main clusters and within each cluster, samples have similar characteristic than ones from other cluster. From K-means, both clusters have a considerable number of samples with Cluster 1

having 10 samples and Cluster 2 having 11 samples. Thus, it is necessary to consider both clusters. Based on statistical analysis, foreign firms are more likely to benefit from effective management of waste water, good supply of clean water, good land transportation system, presence of Myanmar International Terminal Thilawa (MITT) within the economic zone, proximity to strong business network, reliable power supply, lower wage workers and abundant availability of those. On the other hand, foreign firms are also being challenged by long commuting time, recruiting qualified factory engineers, recruiting semi-skilled workers and recruiting office workers nearby. Regarding the challenges to foreign firms, some firms responded to the open question and can be summarized as low capacity infrastructure such as road, terminal, bridge, difficulties in recruitment, high charge for electricity and water bills and long commuting time and hazardous waste management.

Cluster 1		Cluster 2	
Positive Factor	Mean	Positive Factor	Mean
Waste Water	6.00	Power	5.36
Clean Water	5.90	Lower Wage	5.36
Land Transport	5.60	Proximity to Labor Force	5.36
Port	5.60	Land Transport	5.18
Proximity to strong business network	5.50	Port	5.18
Challenges	Mean	Challenges	Mean
Long Commuting Time for Employees	5.60	Quality of Factory Semi-Skilled Workers	3.45
Quality of Factory Engineers	5.30	Long Commuting Time for Employees	3.18
Quality of Office workers	5.10	Quality of Factory Engineers	2.91
Quality of Factory Semi-Skilled Workers	3.50	Quality of Office workers	2.91

Table 9: Most Impactful Factors

To address the third research question, it is better to use the table (Refer to Table 6.1) as there are two set of factors, each impacting each cluster to different extent. Some of

the beneficial factors include in both clusters such as port and proximity to labor force, but with different degree in each cluster.

In cluster 1, there are steel factories, fertilizer plant and FMCG companies which usually requires treatment facilities for their disposed waste from production, thus presence of those treatment facilities within the zone is more beneficial for them. Whereas in cluster 2, firms such as PEB steel and Vanguard are large scale investors and they run their production in large batches, thus power cut and insufficient voltage lead to loss of quality final products. In the interview with the manager from Vanguard, he pointed out the importance of power in running their operation. Then, these large scale firms require a large number of manual workers. So, reliable power supply and availability of cheap labor from nearby villages become the most impactful factors for them. Both clusters share two positive impactful factors port and land transport, obviously all of foreign firms in the survey import their materials from overseas, and some of them even export their finished products to foreign market, thus presence of port within the zone becomes one of the most positive impacts. Furthermore, only 4 firms out 21 have fully focused on foreign export, and other 17 firms have made sales within domestic market, thus newly constructed land transport connecting from Thilawa to Yangon plays a critical role in transportation of their products. Basically, for the positive impactful factors, two main categories can be found which are infrastructure (waste water, clean water, land transport, port, power) and location (proximity to strong business network, proximity to labor force, lower wage).

In terms of challenges, long commuting time and quality of employees have been found as the most challenging issues from the research. Although Thilawa is closest SEZ to Yangon which is economic hub, also second capital city of Myanmar, its location is still 20 km from Yangon. Commuting time from Yangon to Thilawa usually takes 1 hour

to 1.5 hours depending on the traffic conditions. As compared to other jobs available within Yangon, employees feel quite a challenge to daily commute to Thilawa. Other challenges are all concerned with lack of quality employees from nearby places. Despite the fact that there is abundant supply of cheap labor from nearby villages, it is hard for foreign firms to recruit qualified employees such as engineers, semi-skilled workers and office workers around Thilawa SEZ.

In terms of industry of foreign firms, half of companies from Cluster 1 are into steel manufacturing with a few firms from FMCG whereas firms in Cluster 2 varied from ink production firm to construction pile production. In terms of technology, there is no low-tech firm in both clusters, all companies from both clusters are mid tech firms, but firms in Cluster 1 seem slightly more advanced in technology than firms in Cluster 2.

## **6.2 Discussion and Implications**

The objective of this research is to understand which factors benefitted foreign firms within Thilawa SEZ and what kind of challenges they encountered. Then, this research also measured extent of impacts of those factors to foreign firms. From the findings, it can be concluded that good infrastructure such as waste water management, clean water supply, land transport, port and reliable power supply, cheap workforce and having good business network close by have the largest impact on foreign firms. So, interestingly financial incentives such as commercial income tax, corporate tax and custom duty, Zone administration system such as simplified custom procedure, administration transparency and investment approval procedure have less impact on foreign firms. In terms of challenges, finding qualified employees from nearby cities played a challenging issue to

foreign investors in Thilawa SEZ and geographically Thilawa SEZ is located a bit further from Yangon city, thus clearly long commuting time becomes a hurdle for the firms.

For developing countries, one of strategic tools to attract foreign investors is establishment of economic zones with attractive features. From this research, it has been demonstrated that provision of well-established infrastructure is the most impactful matter that host government needs to consider in the case of a developing country. And the capacity of those infrastructure should be upgraded in accordance with the development within the area, so that businesses do not find very challenging to invest in those areas. Regarding challenges, education and technical training programs should be introduced in the proximity of the economic zones, thus it facilitates the recruitment of qualified employees nearby, meanwhile educational level of those employees should be enhanced. Firms in Thilawa can also establish internship programs with educational institutes located nearby so that not only students can have job opportunities but also firms can train those students in advance to fit in related tasks.

Even though there are several challenges within Thilawa SEZ for foreign investors, the zone still is the most attractive investment destination for potential foreign investors into Myanmar. Given that good infrastructure such as new road, new port, incentive packages, effective administration system, proximity to Yangon as compared to other zones in different states, foreign firms can reap good opportunities by investing in Thilawa SEZ. Potential and existing Japanese investors should provide related technical training as well as cultural orientation to solve lack of skilled workers as well as facilitate misunderstanding in working environment. And arrangement of transportation for employees is more effective. Moreover, upgrading human resources within the regions along with the reliable institutional and legal framework, favorable trade system, can

attract more horizontal FDI. However, the government should enhance technical knowledge transfer from current vertical FDI to local employees, thus improving local technical capacity which can be a stepping stone for attracting more advanced investments in the regions.

This research has confirmed that infrastructure is positively impactful to FDI in a country, which can also be found from the Philippines's case. Foreign investors in Philippines are more likely to establish in the regions with good infrastructure and highly urbanized regions (Makabenta, 2002). In addition, the finding of positive impacts of location related factors, such as proximity to business network and availability of cheap labor, has been similarly found in SEZs, Thailand (Pakdeenurit et al., 2017). Then, finding from this research has indicated that incentives have only limited impact on FDIs similarly to case of Poland (Dorozynski et al., 2014).

### **6.3 Limitations & Future Research**

There are some limitations in this research. First limitation is the size of the sample. As Myanmar is currently experiencing political instability which has originated from military coup in 1<sup>st</sup> February 2021, companies are very reluctant to participate in any kind of interview, communication and questionnaire. The situation is exacerbated by COVID 19 which causes some factories in Thilawa SEZ to temporarily shut down. Hence, limited number of companies have participated in the research. Furthermore, other limitation in this research is number of factors which have been developed from literature and interviews. If interviews could be conducted with more foreign firms, they would provide other impactful factors to their companies. Another limitation is that the questions are just developed based on only Thilawa SEZ case, thus it might be hard to generalize the

findings on all other economic zones. Factors such as waste treatment, one stop service and port will not be the case for all economic zones within Myanmar.

This research only focuses on manufacturing companies within the economic zone, thus future researchers may extend data collection to other service related companies such as logistics, trading, engineering and real estate agents such as hotels. In this way, future research can enrich the understanding of foreign firms of other types and will be applicable to broader scope of foreign companies.



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## APPENDIX

Country of Origin	Number of Companies
Japan	56
Thailand	14
Korea	9
Taiwan	8
Myanmar	4
Malaysia	4
Australia	2
France	2
Netherlands	2
Switzerland	2
Hong Kong	1
Denmark	1
Canada	1
China	1
Austria	1
Germany	1
India	1
Indonesia	1
Singapore	1
Sweden	1
USA	1
British Virgin Island	1
<b>Total</b>	<b>115</b>

**N1: Origin Country of Investors in Thilawa SEZ**

Type of Industry	Percentage
Manufacturing (Export Oriented)	36
Manufacturing (Domestic Oriented)	58
Logistic	8
Trading	7
Engineering	1
Environmental Services	1
HRD	1
Machine Rental	1
Real Estate	2
<b>Total</b>	<b>115</b>

**N2: Types of Industry of Investors in Thilawa SEZ**

### Case Processing Summary

		N	%
Cases	Valid	21	100.0
	Excluded <sup>a</sup>	0	0.0
	Total	21	100.0

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

Cronbach's Alpha	N of Items
.873	25

### N3: Reliability Test

		9. CIT	10. CT	11. CD	12. FO	13. AP	14. SCP	15. TC	16. LW	17. LF	18. LT	19. PW	20. PT	21. CW	22. WW	23. SW	24. BNW	25. SP	26. DA	27. CM	28. FP	29. SG	30. QW	31. FE	32. FW	33. LCT
N	Valid	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skewness		.505	-.150	-.531	-.552	.010	.414	.642	.001	.376	-.038	.609	.190	.280	.232	.434	-.119	-.336	-.150	-.144	-.355	.195	.096	.331	-.338	.210
Std. Error of Skewness		.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501	.501
Kurtosis		-.443	-.382	-.306	1.166	-.467	.382	.250	-.488	-1.131	-.725	.346	-.785	-1.492	-1.496	-.357	-.007	-1.090	-.382	-1.047	.603	-.365	-1.136	-.831	-.709	-.983
Std. Error of Kurtosis		.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972	.972

### N4: Skewness & Kurtosis Value

ANOVA						
	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
9. CIT	1.406	1	1.355	19	1.038	.321
10. CT	.125	1	.780	19	.160	.693
11. CD	.293	1	.681	19	.430	.520
12. FO	.011	1	2.591	19	.004	.949
13. AP	.316	1	.780	19	.404	.532
14. SCP	4.593	1	.666	19	6.901	.017
15. TC	4.504	1	.725	19	6.209	.022
16. LW	1.664	1	1.376	19	1.209	.285
17. LF	1.664	1	1.060	19	1.569	.225
18. LT	.916	1	.844	19	1.085	.311
19. PW	.021	1	.666	19	.032	.860
20. PT	.916	1	.949	19	.965	.338
21. CW	44.052	1	.363	19	121.304	.000
22. WW	47.143	1	.632	19	74.643	.000
23. SW	27.710	1	.847	19	32.701	.000
24. BNW	14.816	1	.744	19	19.913	.000
25. SP	14.339	1	.754	19	19.016	.000
26. DA	.007	1	.787	19	.009	.926
27. CM	1.082	1	.986	19	1.098	.308
28. FP	.156	1	.267	19	.584	.454
29. SG	.073	1	.407	19	.180	.676
30. QW	25.143	1	.516	19	48.702	.000
31. FE	29.943	1	.685	19	43.733	.000
32. FW	.011	1	.907	19	.012	.914
33. LCT	30.630	1	.844	19	36.291	.000

**N5: ANOVA Table for Differentiating Factors**



## N6: Optimal K-value Calculation Using Jupyter Python 3

2/24/22, 9:54 PM

Untitled - Jupyter Notebook

```
In [1]: import pandas as pd
import matplotlib.pyplot as plt
from sklearn.cluster import KMeans
```

```
In [2]: Data = pd.read_csv('R1.csv')
```

```
In [3]: Data
```

```
Out[3]:
```

	Name	9. CIT	10. CT	11. CD	12. FO	13. AP	14. SCP	15. TC	16. LW	17. LF	...	24. BNW	25. SP	26. DA	27. CM	28. FP	29. SG	30. QW	31. FE	32. FW	33. LCT
0	NS BlueScope Lysaght Myanmar Ltd.	3	3	3	4	4	5	4	4	4	...	6	5	5	4	1	0	5	4	4	6
1	PEB Steel Myanmar Ltd. (PEB Steel Buildings Co...	4	5	5	4	4	5	4	4	4	...	4	5	4	5	1	1	2	3	4	3
2	RK Yangon Steel Co.,Ltd	6	5	5	5	5	6	6	5	5	...	6	6	5	6	1	1	5	5	4	5
3	Marubeni Myanmar Fertilizer	5	4	5	5	6	7	7	5	4	...	4	4	6	6	1	1	4	5	2	6
4	Aju Myanmar	5	6	5	4	5	4	4	6	6	...	5	5	5	6	1	1	4	3	4	5
5	Kianjoo Can (Myanmar) Co Ltd	6	5	5	1	4	6	5	3	4	...	5	5	4	5	1	1	6	5	2	5
6	VANGUARD APPAREL CO., LTD.	6	6	5	1	6	5	5	5	7	...	2	2	5	6	1	2	3	2	4	3
7	Atsumi Myanmar Co.,Ltd	4	5	4	4	4	4	5	5	4	...	6	6	5	5	1	1	5	4	4	4
8	JFE Meranti	7	6	6	5	5	5	4	5	5	...	5	5	5	6	1	1	5	6	5	5
9	Koryo Cable Myanmar	4	5	5	5	4	5	6	6	7	...	6	5	6	5	2	2	6	7	2	7
10	Indorama Ventures Packaging (Myanmar)	5	5	5	7	5	6	5	7	6	...	4	4	6	6	1	1	3	2	2	3
11	Seiji (Myanmar)	4	4	3	5	5	4	5	4	4	...	3	3	4	5	0	0	2	2	3	2
12	Toyo Ink Myanmar	4	4	5	7	5	4	4	7	6	...	4	3	5	4	1	1	4	3	3	2
13	Siam GS Battery Myanmar	3	4	3	4	4	3	4	5	5	...	5	5	4	4	1	0	3	4	4	3
14	Igeta & Sun	3	3	4	5	3	4	3	4	4	...	3	3	4	3	0	1	2	3	4	3
15	Agri First	4	5	4	5	5	4	5	5	5	...	4	3	5	4	0	0	3	4	3	4
16	Myanmar Century Steel Structure	4	5	4	5	5	5	5	3	4	...	5	6	3	4	0	0	5	6	4	7
17	ABBA Aluminum	5	4	5	3	4	5	4	6	6	...	4	3	5	4	1	1	3	3	4	3
18	A&N Foods (Myanmar)	3	4	4	7	6	5	4	7	6	...	7	5	4	5	1	0	4	5	3	5
19	Advanz Beverage Manufacturing	5	5	5	4	4	5	6	5	5	...	5	5	3	4	0	0	6	6	5	6
20	Millicon Thiha Gel	3	4	4	4	3	4	4	6	6	...	4	3	4	3	1	1	3	3	3	4

21 rows × 26 columns

```
In [4]: del Data['Name']
```

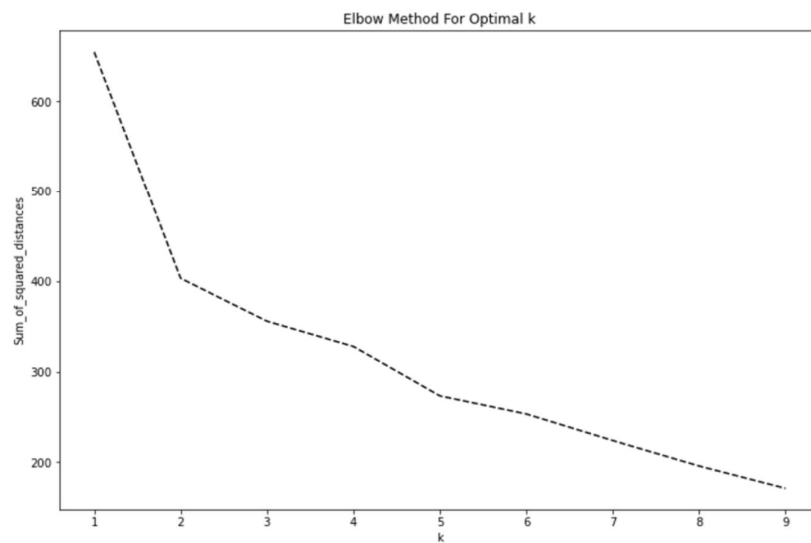
```
In [5]: Sum_of_squared_distances = []

K = range(1,10)
for k in K:
    km = KMeans(n_clusters = k)
    km = km.fit(Data)
    Sum_of_squared_distances.append(km.inertia_)
```

```
In [6]: Sum_of_squared_distances
```

```
Out[6]: [654.5714285714287,  
403.0363636363637,  
355.6363636363637,  
327.7,  
273.1047619047619,  
253.14285714285717,  
223.797619047619,  
195.64999999999995,  
170.91666666666669]
```

```
In [7]: figure = plt.figure(figsize = (12, 8))  
plt.plot(K, Sum_of_squared_distances, 'k--')  
plt.xlabel('k')  
plt.ylabel('Sum_of_squared_distances')  
plt.title('Elbow Method For Optimal k')  
plt.show()
```



```
In [ ]:
```

## N7: Questionnaire in English

### FACTORS AFFECTING FOREIGN DIRECT INVESTMENT: EVIDENCE FROM THILAWA SEZ IN MYANMAR

From this questionnaire, we only like to collect information before political event on 1st Feb 2021. So, any impact resulting from current political situations in Myanmar to your company does not have to be reflected in the questionnaire. Please feel free to skip a question you cannot answer.

Confidentiality: The following information will only be used for academic research. I agree to the fact that name and other identifying information about participants will remain confidential, and will not disclose for any purpose other than research purpose without prior authorization from participants.

Statistical analysis will be carried out based on all the data, thus no data of the company will be shown in research project.

We are grateful for your cooperation.

- 1 What is the name of the company?
- 2 What is the country of origin of your company?
- 3 How many employees work for your company?  
(a) 0 - 50  
(b) 51 - 100  
(c) 101 - 150  
(d) 151 - 200  
(e) Over 201
- 4 When did your company invest in Thilawa SEZ?
- 5 How much is your company investment within Thilawa SEZ in total? (USD)
- 6 What percent of sales is for domestic market and foreign market (export)?  
Local market sales - %  
Foreign market sales (export) - %
- 7 If your company export to foreign market , please specify to which country your company export products (eg. Singapore, Thailand, Vietnam, etc.)
- 8 Our company chose Thilawa SEZ for investment because:  
(a) it wants to exploit lower production cost (lower labor cost)  
(b) it wants to expand their products into new market (Myanmar)

*** To what extent did your company get affected by the following factors from scale 1 - 7. (Scale 1 = least affected and Scale 7 = Most affected)									
No	Description		7 Likert Scale						
			1	2	3	4	5	6	7
9	Corporate Income Tax (CIT)	How affected is your company by corporate income tax ?	1	2	3	4	5	6	7
10	Commercial Tax (CT)	How affected is your company by commercial tax ?	1	2	3	4	5	6	7
11	Custom Duty (CD)	How affected is your company by custom duty ?	1	2	3	4	5	6	7
12	100% foreign Ownership (FO)	How affected is your company by allowance of 100% foreign ownership?	1	2	3	4	5	6	7
13	Approval Procedure (AP)	How impactful is simplified investment approval to your company?	1	2	3	4	5	6	7
14	Simplified Custom Procedure (SCP)	How beneficial is simplified custom duty procedures to your company?	1	2	3	4	5	6	7
15	Transparency (TC)	How important is administration transparency to your company?	1	2	3	4	5	6	7
16	Lower Wage (LW)	How beneficial is availability of lower waged employees to your company?	1	2	3	4	5	6	7
17	Proximity to Labor Force (LF)	How important is availability of abundance of manual workers nearby to your company?	1	2	3	4	5	6	7
18	Land Transport (LT)	How affected is your company by good land transportation connecting from Thilawa to downtown areas?	1	2	3	4	5	6	7
19	Power (PW)	How affected is your company by reliable power supply?	1	2	3	4	5	6	7

20	Port (PT)	How beneficial is the presence of port to your company?	1	2	3	4	5	6	7
21	Clean Water (CW)	How important is presence of supply of clean water to your company?	1	2	3	4	5	6	7
22	Wastewater (WW)	How important is presence of management of wastewater to your company?	1	2	3	4	5	6	7
23	Solid Waste (SW)	How important is presence of management of solid waste to your company?	1	2	3	4	5	6	7
24	Proximity to strong business network (BNW)	How impactful is proximity to business network to your company?	1	2	3	4	5	6	7
25	Proximity to suppliers (SP)	How important is proximity to suppliers to your company?	1	2	3	4	5	6	7
<b>*** Please specify the extent of impacts from Scale 1 - 7. (Scale 1 = least and Scale 7 = Most)</b>									
26	Developer Accountability (DA)	What is the extent of trust to developer of Thilawa SEZ (MJTD)?	1	2	3	4	5	6	7
27	Competitiveness (CM)	How competitive is your company compared to your competitors outside of Thilawa SEZ?	1	2	3	4	5	6	7
<b>*** Please specify the extent of impacts from Scale -3 to 3. (Scale -3 = Extremely low and Scale 3 = Extremely high )</b>									
28	Financial Performance (FP)	How well has your company's financial performance been as compared to your competitors outside of Thilawa SEZ ?	-3	-2	-1	0	1	2	3
29	Sale Growth (SG)	Is the sales growth above expectation?	-3	-2	-1	0	1	2	3
<b>*** To what extent your company find following factors challenging from scale 1 - 7. (Scale 1 = least challenging and Scale 7 = Most challenging)</b>									
30	Quality of Office workers (OW)	How difficult for your company to hire office workers (accountant, marketing, administration) nearby?	1	2	3	4	5	6	7
31	Quality of Factory Engineers (FE)	How difficult for your company to hire factory workers (qualified engineers) nearby?	1	2	3	4	5	6	7
32	Quality of Factory Semi-Skilled Workers (FW)	How difficult for your company to hire Semi-skilled workers nearby?	1	2	3	4	5	6	7
33	Long Commuting Time for Employees (LCT)	How challenging is long commuting time for our company's employees to Thilawa?	1	2	3	4	5	6	7
34	What do you think are the other challenges and problems for your company in Thilawa? Please elaborate further?								

## N8: Questionnaire in Myanmar

### နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုအပေါ်သက်ရောက်မှုရှိသော အချက်များ (သီလဝါဇုန်ရှိ ကုမ္ပဏီများမှ အချက်အလက်များ)

ဤအချက်အလက်ကောက်ခံမှုသည် ၂၀၂၁ ဖေဖော်ဝါရီ ၁ ရက်နေ့ဖြစ်ခဲ့သော နိုင်ငံရေး အဖြစ်အပျက်များမတိုင်ခင် အခြေအနေများကို ကောက်ခံခြင်းဖြစ်သည်။ သို့ဖြစ်ပါ၍ လက်ရှိနိုင်ငံရေး အခြေအနေကြောင့် စီးပွားရေးအပေါ်သက်ရောက်မှုများကို ဖြေကြားရာ၌ထည့်သွင်းစဉ်းစားရန်မလိုပါ။

အောက်ဖော်ပြပါ အချက်အလက်များကို သုတေသနပြုလုပ်ရန်အတွက်သာ အသုံးပြုမည်ဖြစ်ပြီး ကုမ္ပဏီနာမည် တခြားသက်ဆိုင်ရာ အချက်အလက်များကို ထိန်းသိမ်းထားမည်ဖြစ်ပြီး အခြားမည်သည့်အကြောင်းတွက်နဲ့မျှ ခွင့်ပြုချက်မရဘဲ ဖော်ပြမည်မဟုတ်ပါ။

- ၁ ကုမ္ပဏီနာမည်အားဖော်ပြပါ။
- ၂ ကုမ္ပဏီ၏ ရုံးချုပ်ရှိရာ နိုင်ငံကို ဖော်ပြပါ။
- ၃ ကုမ္ပဏီ၌ ဝန်ထမ်း ဘယ်နှယောက်ရှိပါသလဲ။
  - (၁) ၀ - ၅၀
  - (၂) ၅၁ - ၁၀၀
  - (၃) ၁၀၁ - ၁၅၀
  - (၄) ၁၅၁ - ၂၀၀
  - (၅) ၂၀၁ အထက်
- ၄ ကုမ္ပဏီသည် သီလဝါဇုန်အတွင်း၌ မည်သည့်ခုနှစ်တွင် စတင်လည်ပတ်ပါသနည်း။
- ၅ ကုမ္ပဏီ၏ ရင်းနှီးမြှုပ်နှံမှု စုစုပေါင်းပမာဏအား ဖော်ပြပါ။ (USD)
- ၆ ကုမ္ပဏီ၏ ပြည်တွင်း၌ရောင်းအား နှင့် ပြည်ပရောင်းအား ရာခိုင်နှုန်းကို ဖော်ပြပါ။
 

ပြည်တွင်းရောင်းအားရာခိုင်နှုန်း - %

ပြည်ပရောင်းအားရာခိုင်နှုန်း (export) - %
- ၇ အကယ်၍ ပြည်ပသို့ရောင်းချပါက နိုင်ငံများအားဖော်ပြပေးပါ။ (eg. Singapore, Thailand, Vietnam, etc.)
- ၈ ကုမ္ပဏီသည် သီလဝါဇုန် ရင်းနှီးမြှုပ်နှံခဲ့ခြင်းမှာ
  ၁. ကုန်ထုတ်ကုန်ကျစရိတ် သက်သာခြင်းကြောင့်
  ၂. မြန်မာနိုင်ငံ၌ ဈေးကွက်ချဲ့ထွင်လိုသောကြောင့်

*** စကေး 1 - 7 မှ အောက်ပါအချက်များကြောင့် သင့်ကုမ္ပဏီအား မည်သည့်အတိုင်းအတာအထိ သက်ရောက်မှုရှိသနည်း။ (စကေး 1 = အနည်းဆုံးသက်ရောက်မှု နှင့် စကေး 7 = အများဆုံးသက်ရောက်မှု)								
စဉ်	ဖော်ပြချက်		စကေး					
			၁	၂	၃	၄	၅	၆
၉	ကုမ္ပဏီဝင်ငွေခွန်	သင့်ကုမ္ပဏီအပေါ် ဝင်ငွေခွန် ကင်းလွတ်ခွင့်က မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆
၁၀	ကုမ္ပဏီကုန်သွယ်ခွန်	သင့်ကုမ္ပဏီအပေါ် ကုန်သွယ်ခွန် ကင်းလွတ်ခွင့်က မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆
၁၁	အကောက်ခွန်	သင့်ကုမ္ပဏီအပေါ် အကောက်ခွန် ကင်းလွတ်ခွင့်က မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆
၁၂	100% နိုင်ငံခြားပိုင်ဆိုင်မှု ခွင့်ပြုချက်	100% နိုင်ငံခြားပိုင်ဆိုင်မှုခွင့်ပြုချက်ကြောင့် သင့်ကုမ္ပဏီကို မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆

၁၃	ရိုးရှင်းသောလုပ်ငန်းခွင်ပြုမှု	သင့်ကုမ္ပဏီအပေါ်ရိုးရှင်းသောလုပ်ငန်းခွင်ပြုမိန့်က မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၁၄	ရိုးရှင်းသောအကောက်ခွန်လုပ်ထုံးလုပ်နည်း	သင့်ကုမ္ပဏီအပေါ်ရိုးရှင်းသော custom procedure က မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၁၅	ပွင့်လင်းမြင်သာမှု	သီလဝါစီမံခန့်ခွဲမှု ကော်မတီ၏ ပွင့်လင်းမြင်သာမှုက သင့်ကုမ္ပဏီအပေါ် မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၁၆	သက်သာလုပ်သား	သင့်ကုမ္ပဏီအပေါ် နီးနားမှဈေးသက်သာသော လုပ်သားရရှိမှုက မည်မျှသက်ရောက်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၁၇	လုပ်သားရရှိမှု	သင့်ကုမ္ပဏီအပေါ် နီးနား၌များပြားလှသောလုပ်သားရရှိခြင်းက မည်မျှအရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၁၈	ကုန်လမ်းဆက်သွယ်မှု	သီလဝါနှင့် မြို့ထဲသို့ကောင်းမွန်သောလမ်းကြီးရှိနေမှုက သင့်ကုမ္ပဏီအပေါ် မည်မျှအရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၁၉	လျှပ်စစ်မီး	ကောင်းမွန်ပြီးစိတ်ချရသော လျှပ်စစ်မီးရရှိမှုက သင့်ကုမ္ပဏီအပေါ် မည်မျှအရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၂၀	ဆိပ်ကမ်း	သီလဝါထဲ၌ ဆိပ်ကမ်းရှိခြင်းက သင့်ကုမ္ပဏီအပေါ် မည်မျှလောက်အရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၂၁	သန့်ရှင်းသောသောက်ရေ	သီလဝါထဲ၌ သန့်ရှင်းသောသောက်ရေရှိခြင်းက သင့်ကုမ္ပဏီအပေါ်မည်မျှလောက်အရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၂၂	ညစ်ညမ်းရေသန့်စင်မှု	သီလဝါထဲ၌ စနစ်ကျသောညစ်ညမ်းရေသန့်စင်စနစ်ရှိခြင်းက သင့်ကုမ္ပဏီအပေါ်မည်မျှလောက်အရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၂၃	အမှိုက်စနစ်	သီလဝါထဲ၌ စနစ်ကျသော အမှိုက်စနစ်ရှိခြင်းက သင့်ကုမ္ပဏီအပေါ်မည်မျှလောက်အရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၂၄	စီးပွားရေးကွန်ရက်	အရေးပါသော စီးပွားရေးကွန်ရက်၏ အနီး၌ ရှိနေခြင်းက သင့်ကုမ္ပဏီအပေါ်မည်မျှလောက်အရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၂၅	Supplier	Supplier ၏ အနီး၌ ရှိနေခြင်းက သင့်ကုမ္ပဏီအပေါ် မည်မျှလောက်အရေးပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
*** ကျေးဇူးပြု၍ စကေး 1 - 7 မှ သက်ရောက်မှုများ၏ အတိုင်းအတာကို သတ်မှတ်ပေးပါ။ (စကေး 1 = အနည်းဆုံး နှင့် စကေး 7 = အများဆုံး)									
၂၆	သီလဝါဇန်ဖော်ဆောင်သူ	သင့်ကုမ္ပဏီအနေဖြင့် သီလဝါဇန် ဖော်ဆောင်သူ (MJTD) အပေါ် မည်မျှ ယုံကြည်မှုရှိပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၂၇	ယှဉ်နိုင်စွမ်း	သီလဝါအပြင်၌ရှိသော အခြားအလားတူကုမ္ပဏီများနှင့် မည်မျှလောက် ယှဉ်ပြိုင်နိုင်စွမ်းရှိပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
*** ကျေးဇူးပြု၍ စကေး-၃ မှ ၃ အထိ အကျိုးသက်ရောက်မှုအတိုင်းအတာကို သတ်မှတ်ပေးပါ။ (စကေး-၃ = အလွန်နိမ့်ကျပြီး စကေး ၃ = အလွန်အမင်းမြင့်သည်)									
၂၈	Financial Performance	အခြားအလားတူ သီလဝါအပြင်၌ရှိသော ကုမ္ပဏီများနှင့်ယှဉ်ပါက financial performance မည်မျှလောက် ရှိပါသလဲ။	-	-	-	၀	၁	၂	၃
၂၉	ရောင်းအား	သင့်ကုမ္ပဏီအနေဖြင့် ရောင်းအားသည် ထင်တားသည်ထက် ကျော်လွန်ပါသလား။	-	-	-	၀	၁	၂	၃
*** သင့်ကုမ္ပဏီသည် စကေး 1 - 7 မှ အောက်ပါအချက်များအား စိန်ခေါ်သည့်အတိုင်းအတာအထိ တွေ့နိုင်သည်။ (စကေး 1 = စိန်ခေါ်မှုအနည်းဆုံးနှင့် စကေး 7 = စိန်ခေါ်မှုအများဆုံး)									

၃၀	ရုံးဝန်ထမ်းအရည်အသွေး	သင့်ကုမ္ပဏီအနေဖြင့်နီးနားဝန်းကျင်မှ အရည်အသွေးပြည့်ဝသော ရုံးဝန်ထမ်းများ (စာရင်းကိုင်၊ ကြော်ငြာ၊ အုပ်ချုပ်မှုဆိုင်ရာ) ရရှိရန် မည်မျှလောက်ခက်ခဲပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၃၁	စက်ရုံအင်ဂျင်နီယာအရည်အသွေး	သင့်ကုမ္ပဏီအနေဖြင့်နီးနားဝန်းကျင်မှ အရည်အသွေးပြည့်ဝသော စက်ရုံအင်ဂျင်နီယာ ရရှိရန် မည်မျှလောက်ခက်ခဲပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၃၂	စက်ရုံလုပ်သားအရည်အသွေး	သင့်ကုမ္ပဏီအနေဖြင့်နီးနားဝန်းကျင်မှ အရည်အသွေးပြည့်ဝသော စက်ရုံဝန်ထမ်းများ (semi-skilled workers) ရရှိရန် မည်မျှလောက်ခက်ခဲပါသလဲ။	၁	၂	၃	၄	၅	၆	၇
၃၃	ဝန်ထမ်းများတွက် ခရီးဝေးမှု	သီလဝါသို့ ဝန်ထမ်းများ အချိန်အကြာကြီးကုန်ပြီးအလုပ်လာရခြင်းက မည်မျှလောက် ခက်ခဲသလဲ။	၁	၂	၃	၄	၅	၆	၇
၃၄	သင့်ကုမ္ပဏီအနေဖြင့် သီလဝါဇုန်ထဲရှိ အခြားပြဿနာ အခက်အခဲများရှိပါက ဖော်ပြရန်								