The Participation of Japanese Companies in the Industrial Park Development in the Philippines

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Abstract

Given the extensive involvement of Japanese companies in the development and operation of special economic zones in the Philippines, particularly in industrial parks or manufacturing economic zones, this paper aims to explore the characteristics and performance of the Japanese affiliated industrial parks in the Philippines. This paper also discusses the prominent trend in special economic zones development, particularly, the emergence of private foreign partnership economic zones. This paper also presents relevant facts and figures about special economic zones in the Philippines. This paper also examines the case of four affiliated-Japanese economic zones in the Philippines: First Philippine Industrial Park (FPIP)- Sumitomo Corporation, Lima Technology Center (LTC)- Marubeni Corporation, and Lima Technology Center (LTC)- Marubeni Corporation. Japanese affiliated industrial zones are concentrated in few areas of the country, particularly in the industrialized province of Batangas, Cavite, and Laguna. In comparison with other manufacturing zones and all other economic zones, Japanese affiliated industrial parks are found to deliver more significant outcome, particularly in terms of number of tenant firms, investments, exports, and employment. The nature of cooperation of Japanese companies varies from full involvement in development and operation to conducting specific functions such as sales and marketing.

Key Words

Industrial Park, Special Economic Zones (SEZ), Joint-Venture, Manufacturing, Japanese companies

Contents

1. Introduction

Special economic zones (SEZ) come in various names, configuration, and sizes. Special economic zones (SEZ) are commonly defined as specific geographical areas within a country where the rules and business environment are designed, in general, to attract investments, promote exports, and generate employment. The term special economic zone encompasses various related terms such as industrial parks, industrial zones, export processing zone, customs-free zone, and business centers.

The development of special economic zones started exclusively as government initiative and as a key component of export-oriented industrial development program in many countries. However, in recent years, the participation of private sector in the development of economic zones is on the rise, particularly in many developing countries. The number of privately developed and operated zones in developing countries rose from less than 25% in 1980s in 62% in 2008 (Farole, 2011). In addition to this, foreign investments in zone development have been increasing. In particular, many Japanese companies, mostly conglomerates or trading companies have been involved in zone development since the latter half of 1980s. Through the development of industrial parks, Japanese trading companies were instrumental in bringing Japanese manufacturing firms to Southeast Asian countries (Kuchiki, 2007).

Similar with the case of many countries, special economic zones in the Philippines also started as solely government-led and managed zones but eventually, the participation of private sector was allowed in 1995. In the Philippines, there are five distinct types of special economic zones : manufacturing economic zone, or industrial park, information technology (IT) parks/centers, agro-industrial economic zone, tourism economic zone, and medical tourism parks/centers. As of December 2020, the number of economic zones stood at 412 zones and more than 95% of the zones are private zones. A substantial number of economic zones also has foreign private capital, in particular, 48% of industrial parks have foreign private partners. Among the foreign companies, Japanese companies is the most active in the industrial park business with 31% of industrial parks features joint venture with Japanese companies.

Given the considerable involvement of Japanese companies in the development industrial parks in the Philippines, this paper aims to explore the characteristics and performance of the Japanese affiliated industrial parks in the Philippines. This paper also discusses the trend in special economic zones development, particularly, the emergence of private foreign partnership economic zones. This paper also presents historical background of economic zone development and relevant facts and figures. This paper also examines the case of four Japanese affiliated economic zones in the Philippines : First Philippine Industrial Park (FPIP)- Sumitomo Corporation, Lima Technology Center (LTC)- Marubeni Corporation, and Lima Technology Center (LTC)- Marubeni Corporation. To explain the nature and performance of Japanese affiliated economic zones, this paper uses information and secondary data from various sources such as Philippines Economic Zone Authority (PEZA), Philippine Statistics Authority (PSA), Department of Trade and Industry of the Philippines (DTI), National Economic Development Agency of the Philippines (NEDA), Japan External Trade Organization (JETRO), Japan Foreign Trade Council (JFTC), and Japan International Cooperation Agency (JICA). This study also utilizes information from the website of industrial parks and Japanese trading companies and conglomerates.

2. Special Economic Zone (SEZ) Development : Evolution, Key Actors, and Business Model of Economic Zone

2.1 Evolution

Freeports is considered to be one of the earliest forms of special economic zones. These freeports which facilitate the movement of cargoes without or with little restriction have existed already for many centuries (UNCTAD, 2019). The Shannon Free Zone in Ireland, considered as the world's first

export processing zone (EPZ), was established in 1958. The Shannon Free Zone provided the blueprint for all subsequent manufacturing and export-based zones as it incorporated both elements of free trade zones and industrial zones (Farole, 2011). Many countries, particularly in Asia have followed suit and established EPZs as integral part of trade and industrial policy from late 1960s onwards. These EPZs are mainly involved in low-cost and labor-intensive activities. Meanwhile, a newer form of comprehensive economic zones has emerged in late 1970s as many countries have shifted to economic liberalization strategies and to facilitate the rapid growth of global supply chains. Comprehensive economic zones, which offers incentives not only to manufacturing and exporting firms but also to different activities such as tourism, real estate, and retail, can trace its roots to China's SEZ model in 1970s (Aggarwal, 2010).

The economic zones of 1950s-1970s are public zones, which means that the government is entirely responsible for the development and operation of these zones. However, from late 1980s and 1990s, private zones, which are planned and managed by private companies, would emerge. The first private economic zone is established in Dominican Republic in 1969, followed afterwards by other Latin American countries and by Asian countries in 1990s (Farole, 2011). Private economic zones now account for the bulk of economic zones around the world. The preference towards privately developed and operated zone can be attributed to both push and pull factors (Farole, 2011). The push factors include the financial limitations and macroeconomic stability to cover the cost of the development and the necessity to revitalize failed economic zone program. Meanwhile, the main pull factor for private companies is the opportunity to generate new income source from real estate and services.

Another prominent trend in the development of economic zones is the emergence of zones developed through foreign partnership. In general, there are three types of foreign partnership zones : foreign developers or joint-ventures with local domestic companies as private foreign direct investment ; public-private partnerships with foreign developers ; government-government partnerships projects. The zones developed by foreign companies or through joint ventures is the most popular arrangement. Zones developed through foreign partnerships can bring in several benefits such as development cost reduction, expertise and experiences of foreign zone developers, and business network. In many developing countries, the cost of setting up economic zones is too high and will not be possible without financing from private investors, mainly foreign companies. In the World Bank portfolio of economic zone projects, several projects can cost more than $100 million (World Bank, 2017). Foreign zone developers also come with expertise and experiences which are critical to the success of the projects. For example, Japanese companies such as Sumitomo, Mitsubishi and Sojitz are well-known zone developers (UNCTAD, 2019). Furthermore, foreign partners can also draw in guaranteed investments or locator firms through their well-connected business network. In some cases, the foreign zones developers themselves serve as an anchor tenant and attract their suppliers to move and in the process, create an industrial cluster. This pattern is commonly found in the case of Japanese manufacturing multinational enterprises.

2.2 Key Actors

The development of economic zones includes several key actors with different motivation and respon-

sibilities. In many economic zone development programs, the government plays a central role in outlining national economic development agenda ; crafting and implementing key policies that are relevant to economic zone development ; and coordinating with different stakeholders ranging from other areas of the government to arrangement with other countries. In many countries, a specific economic zone authority is established to serve as facilitator and regulator of zone development. Economic zone authority is often designed as One-Stop-Shop which perform varieties of function such as implementation of policies, selection, and approval of zone developers, issuing relevant permits and approvals within the zones, and assisting in trainings.

Meanwhile, the zone developers are responsible for setting up the zones, which can begin from site selection up to the construction of actual zones. Developers could select a land on their own or built on a land designated by the government. In some cases, zone developers are also responsible for attracting zone users or locators. Some zone developers also function as zone operators managing the daily operating within the zones.

Zone users or locators are the companies that operates within the zones. These zone users are attracted to locate within a certain zone due to various financial and non-financial incentives. Zone users are obligated to follow the rules and regulations within the zones. In general, they are expected to generate export earnings and create employment opportunities.

2.3 Business Model of Economic Zone

The business of economic zone includes wide-ranging areas such as land development, construction, sales and marketing, provision of utilities, and facility management. The business model of industrial park is essentially similar to real estate business in which profit comes from the development of land and offering value-added services. Comparable to real estate business, industrial park business generate income by selling or renting a piece of land or office spaces. Moreover, in the same case with real estate business, the location of the zone determines the price of rent or land. Therefore, the selection of the zone location is often a decisive factor in the profitability of the zones. In general, economic zone location requires good accessibility to transport networks, availability of labor pool, and competitive wages.

Given the different functions and services offered by economic zone business, there are several income streams such as revenue from land development, revenue from zone management, revenue from utility supply, and revenue from logistics and housing. As mentioned earlier, the economic zone business is similar to real estate business wherein profit is generated through the sale of land. In the case of Southeast Asia, the development cost of land is estimated to be at around $25 per square meter and this developed land is normally sold at around $45 per square meter (JICA, 2014). In some areas which are developed to include commercial and residential zone, the value can be as high as $80 per square meter. The revenue from sale of developed land is estimated to generate 25 percent return rate, however, this comes with a considerable risk in developing countries (JICA, 2014). In the case of revenue from zone management, the profit margin is estimated to be at around 10–15%. Meanwhile, some zone also offers utility supply business such as industrial water and sewerage treatment which offers another revenue stream. Zones, which are mostly designed as integrated townships, also generate income

through operation of logistic services, recruiting services, housing for expatriates and dormitory for workers, and management of hotel and restaurants.

3. Special Economic Zone (SEZ) in the Philippines : Definition and Key Indicators

3.1 Definition and Incentives

Special economic zones in the Philippines are defined as "selected areas with highly developed or have the potential to be developed into agro-industrial, industrial tourist/recreation, commercial, banking, investment, and financial centers (PEZA, 1995)". The special economic zone program aims to accomplish different objectives such as promoting flow of investment from both foreign and local, generate employment opportunities, establish linkages among industries, transforming selected areas in the country to highly developed zone areas, facilitate financial and industrial cooperation between the Philippines and industrialized countries.

There are five different types of special economic zones : industrial estates or manufacturing SEZ, export processing zones (EPZ), free trade zones, tourism ecozones, and IT Parks/Buildings. The criteria for the establishment of an economic zone include : the proposed area should be recognized as regional growth center in the Medium-Term Philippine Development Plan or by Regional Development Council ; the existence of required infrastructure and suitability and capacity to the proposed site to absorb such improvements ; the availability of water source and electricity power supply ; the extent of vacant lands available for industrial and commercial development ; the availability of labor force from skilled to non-skilled ; areas must have significant incremental advantage over the existing economic zones and its potential profitability can be established ; the area must be strategically located ; and the area must be situated where controls can easily be established to curtail smuggling activities. The development and operation of economic zones are open to private sector from 1995. Consequently, the national government have stopped developing new economic zones since 1995. The specific area requirements and incentives varies according to the type of economic zones. In general, 5% gross income tax rate are given to developers who established zones outside Metro Manila (Table 1).

Meanwhile, the locator or tenant firms are provided with both tax-related and non-tax related benefits. Tax related benefits includes : tax and duty-free importation of capital equipment, raw materials, spare parts, suppliers, breeding stocks, and genetic materials ; income tax holiday (ITH) of four years for non-pioneer projects or six years for pioneer projects ; special tax rate of 5% of modified gross income in lieu of all national and local taxes after ITH ; tax credit for import substitution ; exemption from wharfage dues, export tax, and import fees ; tax credit on domestic capital equipment, breeding stocks, and genetic materials ; additional deduction for incremental labor expenses and training expenses ; remittance of earnings without prior approval from the central bank ; exemption from local business taxes ; exemption from Branch Profit Remittance Tax (BPRT) in the case of Philippines branches under 5% modified gross income. The non-tax incentives include unrestricted use of consigned equipment ; permanent resident status for foreign investors and immediate family ; and employment of foreign nationals.

In addition to these tax-related and non-tax related incentives, the Philippines also offer several

Table 1. Area Requirement and Incentives to Developers

Economic Zone	Area Requirement	Incentives to Developers
Manufacturing	25 hectares	5% Gross Income Tax (GIT)
Agro-industrial Economic Zone	5 hectares	<25 hectares: no incentive (except for sing locator economic zones
		>25 hectares: 5%
Tourism Economic Zone	5 hectares	<25 hectares and located outside Boracay Island, Cebu City, Mactan Island, and Metro Manila: no incentive
		>25 hectares and located outside Boracay Island, Cebu City, Mactan Island, and Metro Manila: 5%
Medical Tourism Park	1 hectare	Within Metro Manila: No incentive
		Outside Metro Manila: 5% (only for new projects)
Medical Tourism Center	Within Metro Manila and Cebu City: 5k sqm flr area	Within Metro Manila: No incentive
	Outside Metro Manila and Cebu City: 2k sqm flr area	Outside Metro Manila: 5% (only for new projects)
Information Technology Park	1 hectare	Within Metro Manila and Cebu City: No incentive
		Outside Metro Manila and Cebu City including IT Facilities Enterprises: 5% (only for new projects)
Information Technology Park	Within Metro Manila and Cebu City: 10k sqm flr area	Within Metro Manila and Cebu City: No incentive
	Outside Metro Manila and Cebu City: 5k sqm flr area	Outside Metro Manila and Cebu City including IT Facilities Enterprises: 5% (only for new projects)

Source: author's construction based on PEZA statistics

advantages. The Philippines has a fast-growing economy among Southeast Asian countries with 6-7% growth over the past years. The Philippine has a young population with median of 23.5 years old. The Philippines is a recipient of Generalized System of Preferences (GSP) for developing countries from the European Union and the United States. The GSP aims to help developing countries to increase export to industrialized countries through the elimination of tariff restrictions on certain products. The Philippines is also rated as positive and stable investment by major credit rating agencies such as Standard and Poor's Financial Services, Fitch Ratings, and Moody's Investor Service. The Filipino workforce is considered as among the best in the world: high literacy rate, proficient in English, easy to train, hard-working, and friendly. The Philippines have set up policies that allows 100% foreign ownership of companies and protects the basic rights of investors such as: right to remit profits, right to pay foreign obligations, and right to repatriate investments. The Philippines is strategically located in Asia, within 4-5 hours flying time to major capitals in the region. The Philippines also has relatively low wages, electricity, communication, and housing costs. The Philippines is also equipped with excellent amenities for expatriates such business centers, housing, schools, hospitals, shopping malls, hotels and restaurants,

beach resorts, and recreation centers.

The Philippine Economic Zone Authority is the primary government agency responsible for promoting investment, overseeing, and facilitating the business operation within the economic zones. PEZA is attached to the Department of Trade and Industry (DTI). PEZA offers a One-Stop Shop services for various requirements or procedures such as building and occupancy permit, import permits, online import and export procedure and e-payment system, special multiple-entry non-immigrant visa, environmental clearance certificate, exemption from local government permits and fees. PEZA also operates as Non-Stop Shop providing 24/7 continuous service (PEZA, 2021).

3.2 Key Indicators

The economic zone development in the Philippines have undergone three main period: government-led EPZ (1970–1994); private sector-driven SEZ (1995–1999); and Information Technology (IT) industry-centered SEZ (2000-present). The country's first export processing zone was established in Bataan in 1972. The transformation that has occurred in the economic zone development is reflected in key indicators such as the number of economic zones and firms, the type of management, and the location of investments (Figure 1). The significant increase in the number of zones and firms occurred from 1996 onwards as a result of private sector participation in the zone development. The growth in number of zones and intensified further from 2000 onwards as incentives were extended to IT Parks and Centers.

Economic zones in the Philippines are predominantly private zones. Out of 412 zones, 95% of the zones are developed and operated by private sector (Table 2). On the other hand, there are only a handful of public economic zones that are managed by Philippines Economic Zone Authority (PEZA)

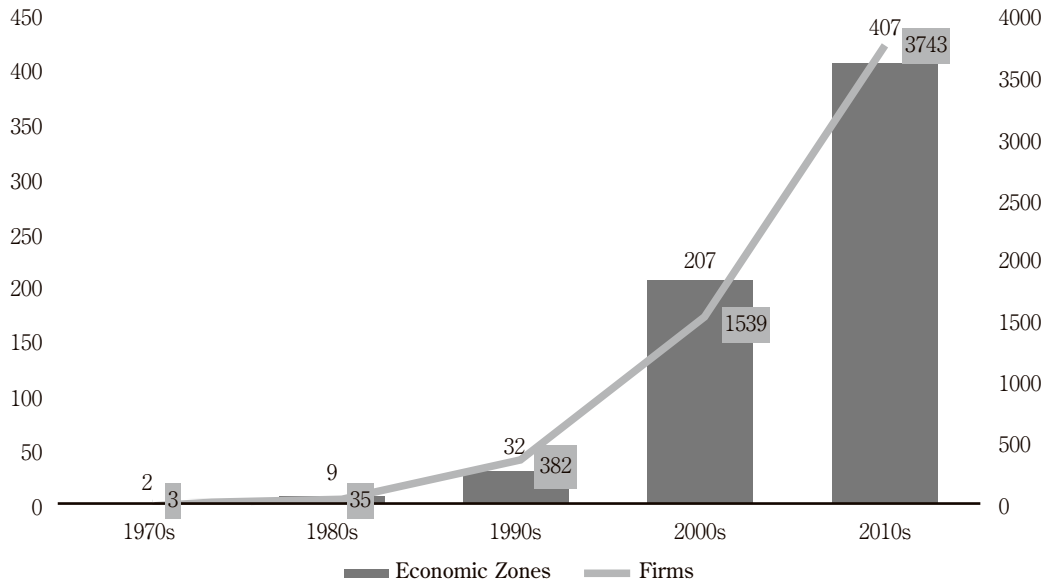

Figure 1. Cumulative Number of Economic Zones and Firms

Source: author's construction based on PEZA statistics

Table 2. Type of Management, Average Land Area and Number of Locator Firms

Type of SEZ	Public	Private	Land Area (Has.)	Firms
IT Parks/Centers	5	284	23	4.4
Manufacturing	9	65	538	31.86
Agro-industrial	1	21	37	1.2
Tourism/Medical	1	21	42	2.45

Source : author's construction based on PEZA statistics

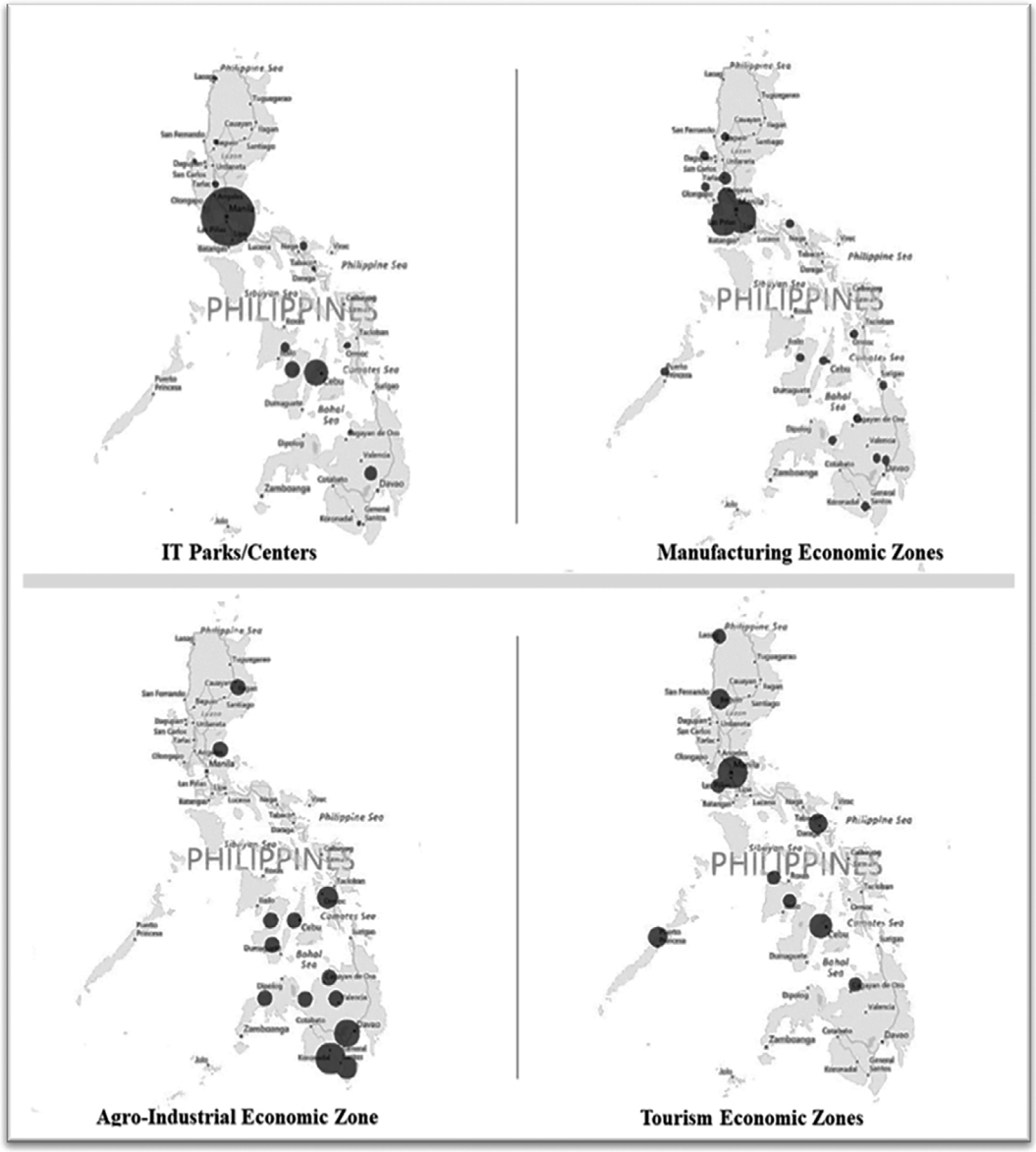

Figure 2. Location of Special Economic Zones

Source : author's construction based on PEZA statistics

and local government. PEZA currently operates four manufacturing economic zones : Baguio City Economic Zone, Cavite Economic Zone, Mactan Economic Zone, and Pampanga Economic Zone. In terms of land area, manufacturing zones are the biggest with an average of 538 hectares. On the other hand, IT Parks and Centers are the smallest with an average of 23 hectares. Manufacturing zones have also drawn the most number of locators with an average of 31.86 firms. The other types of zones have only 1–4 locator firms.

The geographical distribution of economic zones varies according to the type of economic zones (Figure 2). IT Parks/Centers and manufacturing economic zone tend to concentrate in few and relatively developed areas of the country. Industrial parks are heavily clustered in Region 4A which is an adja-

Table 3. Economic Zone Indicators by Region

Region	Zones	Firms	Investments (Php Million)	Exports (US$ Million)	Employment
Region 1	5	5	26,613	36	1,698
Region 2	1	1	6,499	-	384
Region 3	22	116	174,579	33,981	77,592
Region 4-A	56	2,051	1,379,687	443,567	516,634
Batangas	15	374	347,121	42,573	119,346
Cavite	16	758	305,408	145,476	168,860
Laguna	19	913	695,979	254,743	220,788
Quezon	1	1	21,059	316	1,891
Rizal	5	5	10,119	456	5,749
Region 4-B	4	24	49,997	3,675	2,612
Palawan	4	24	49,997	3,675	2,612
Region 4-ALL	60	2,705	1,429,685	447,242	519,246
Region 5	8	10	10,571	881	6,025
Region 6	24	46	66,780	1,726	32,685
Region 7	51	677	247,986	72,685	213,866
Region 8	5	15	23,662	27,795	5,343
Region 9	1	1	184	104	147
Region 10	10	23	48,828	6,714	11,795
Region 11	16	27	48,980	2,669	42,790
Region 12	8	13	66,457	4,168	19,107
Region 13	1	4	76,920	1,566	3,278
CAR	5	47	138,477	55,588	14,435
Metro Manila	178	1,281	933,741	105,317	560,336

*Zones and Firms as of Dec.2018 ; Investments, Exports, and Employment from 1995–2018
Source : (PEZA, 2021)

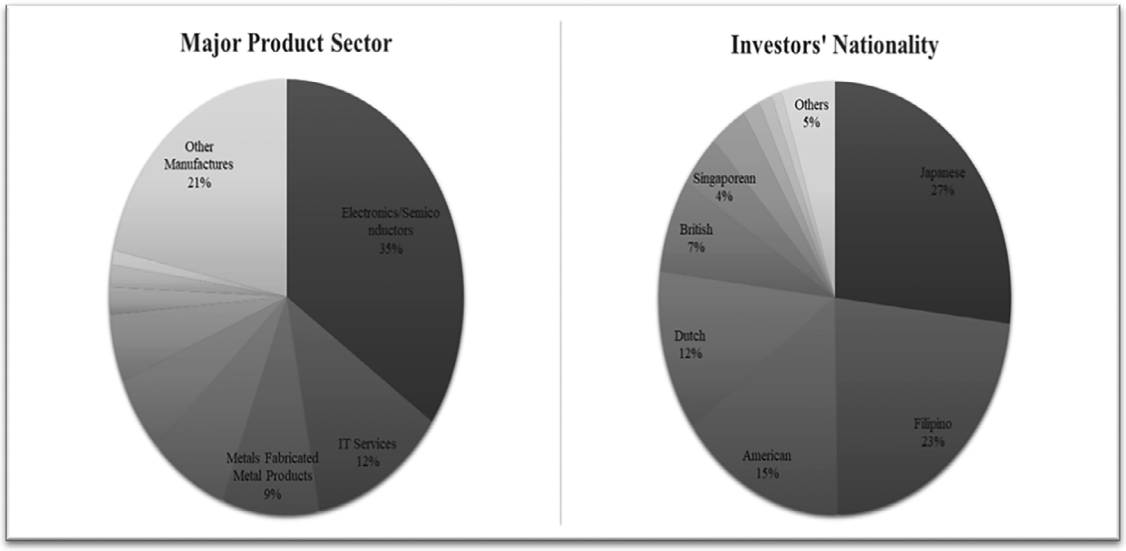

Figure 3：Major Product Sector and Investor's Nationality
Source：author's construction based on PEZA statistics

cent area of Metro Manila, particularly in the provinces of Laguna, Cavite and Batangas. This area is also known as CALABARZON（Cavite, Laguna, Batangas, Rizal, and Quezon）area where significant industrialization has occurred in early 1990s. Agro-industrial economic zone and Tourism economic zone are relatively scattered across the country. More than half of IT Parks/Centers are located within Metro Manila. While several IT Parks/Centers have chosen to locate in secondary or tertiary centers of Cebu, Negros Occidental, Davao Del Sur, Laguna, and Iloilo.

Special economic zone performance is typically assess using three indicators：investments, exports, and employment. While development of the countryside of one of the objectives of the economic zone program, only few areas are able to attract significant economic zone outcomes（Table 3）. As economic zones are clustered in few areas in the country, consequently, the bulk of investments, export, and employment are concentrated in Region 3, Region 4-A, Region 7, and Metro Manila.

There are different firms engaged in various activities within the economic zone：export enterprise, free trade zone enterprise, service enterprise, domestic market enterprise, pioneer enterprise, utilities enterprise, facilities enterprise, tourism enterprise, ecozone developer/operator, and IT enterprise. As of March 2020, there are 3,725 locator firms in various economic zones. Many of the firms are involve in exporting activities and IT services（Figure 3）. Other firms are engaged in different businesses such facilities, logistic services, tourism, and utilities. Meanwhile, in terms of nationality, a sizable number of firms are of local origin. However, a considerable number of firms are purely foreign or joint venture with local companies. The biggest foreign investors include Japanese, South Korean, and American.

4. Foreign Private Partnership Zones in the Philippines : Japanese-affiliated Industrial Parks

4.1 Philippines-Japan Economic Relations

Japan and Philippines share a strong economies tie. In 2006, Japan and the Philippines entered into bilateral trade treaty through the Japan-Philippines Economic Partnership Agreement (JPEPA). The trade agreement covers wide areas including trade in goods and services, investments, movement of people, intellectual property, custom procedures, improvement of business environment and government procurement system. JPEPA is the only bilateral trade agreement which the Philippines has entered. While JPEPA is the ninth economic partnership agreement signed by Japan (Japan Customs, 2020).

Japan is one of the largest trading partners of the Philippines. In 2020, 16% of the Philippines export went to Japan, while 10% of the country's import were sourced from Japan (PSA, 2020a). Philippines major export products to Japan includes machinery and electronics, mineral products, furniture and wood products, marine products, and fresh foods. Meanwhile, Japanese import products to the Philippines includes machineries and transport equipment, electronics, metal manufactures, and other industrial manufactures. Japan is also the top source of foreign direct investments (FDI) in the Philippines. In 2020, Japan account for the 8% of the FDI and is the fifth largest source of investments (PSA, 2020b). Majority of the Japanese FDI went to manufacturing sector.

Japan is also consistently the top provider of Official Development Assistance (ODA) in the Philippines. In 2018, Japan accounts for the 37% share of development assistance in the Philippines (NEDA, 2020). The key priority areas of Japan's ODA include disaster risk reduction and management, quality infrastructure development for sustainable economic growth, and peace and development in Mindanao. According to ODA evaluation which measures the extent to which Japan's ODA contribute to the development of partner countries, Japan's ODA in the Philippines is rated highly satisfactory in two development viewpoints : relevance policies and effectiveness in results (MOFA, 2020).

4.2 Japanese-affiliated Industrial Parks : Characteristics and Accomplishments

A substantial percentage of economic zones are developer and/or operated together with foreign partner companies (Figure 4). Joint venture with foreign private companies is evident in manufacturing economic zones/industrial park (41%) and tourism economic zones (37%). On the other hand, the agro-industrial economic zones, IT Parks/Centers, and Medical Tourism Parks/Centers are still dominated by local Filipino private companies. A significant percentage of foreign partnership in economic zones is through joint venture with Japanese companies. Japanese companies are largely involved in the development and management of manufacturing economic zones (39%). Moreover, several Japanese companies are also engaged in the development and/or management of some tourism economic zones (11%) and agro-industrial zones (5%).

Japanese affiliated economic zones exhibit some distinctive characteristics (Table 4). Japanese affiliated economic zones tend to be heavily concentrated in a few areas in the country, specifically in provinces located at the South of Metro Manila. The bulk of Japanese-affiliated industrial parks are found in

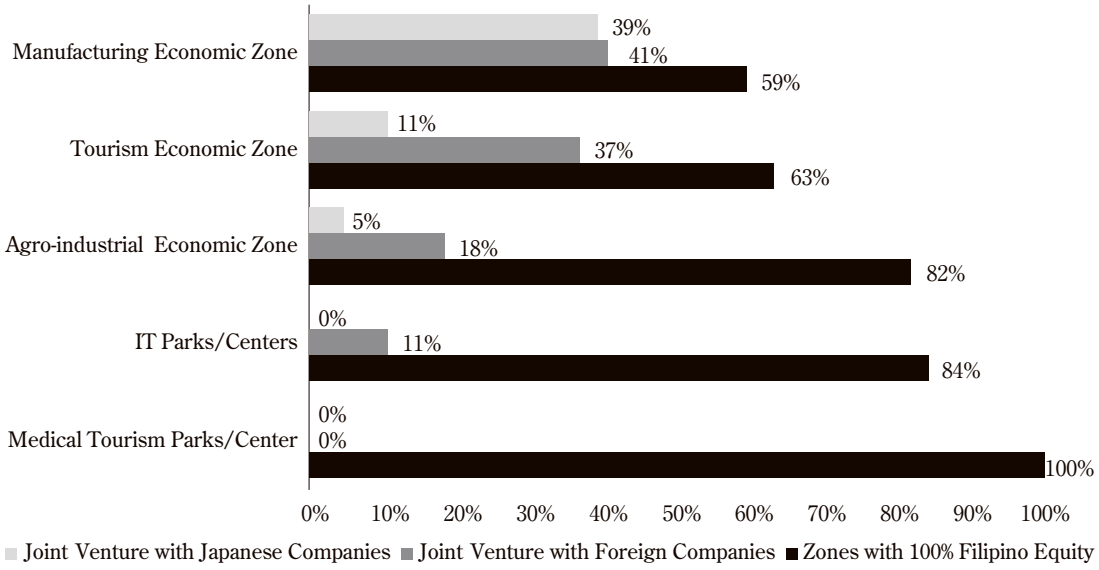

Figure 4：Foreign Joint-Venture in Economic Zones
Source：author's construction based on PEZA statistics

the three neighboring provinces of Laguna (9 zones), Cavite (5 zones), and Batangas (5 zones).

Japanese affiliated economic zones are developed and operated by different companies. However, a few developers such as Science Parks of the Philippines and Laguna Technopark participate in the development in multiple zones. In terms of corporate equity of the zones, majority of the zones have 60% Filipino- 40% Japanese ownership ratio. This in accordance with the 1987 Constitution which limits foreign ownership of land and specified businesses to only 40%. Some of the economic zones does not have Japanese equity as some Japanese companies are only responsible for sales and marketing.

The average land area of Japanese affiliated manufacturing zones is 135 hectares which is considerably smaller than the average size (594 hectares) of all manufacturing economic zones in the country. The SMPIC Special Economic Zones in the smallest zone with only 3.31 hectares, while the Taganito Special Economic is the biggest zone with 687.51 hectares.

In terms of year of development, which is defined as the year when the zone started selling lots or spaces or the year that of first registered investment, majority of the zones are established after 1995. In particular, 21 zones were developed in between 1995–2015. On the other hand, a substantial number of zones have started development even before the enactment of the Special Economic Zone Act of 1995. The Omnibus Investment Code of 1987 facilitated the participation of foreign private companies in the earlier zones (BOI, 2020). Under this code, exemption from taxes on income for new Filipino and foreign investors in preferred activity such as export-oriented activity, manufacturing, mining, tourism, domestics shipping, power generation and public utilities, and telecommunications.

Japanese affiliated zones deliver relatively higher outcome than the other manufacturing zones and all other zones (Table 5). The average number of locator firms within Japanese affiliated zones is 36 firms which slightly higher than the average number of firms in both manufacturing zones (22 firms)

Table. 4. Basic Characteristics of Japanese-affiliated Industrial Park

No.	Economic Zone	Location	Developer	Corporate Nationality	Land Area (hectares)	Year	Firms	100% Japanese Firms	Joint venture Firms
1	First Cavite Industrial Estate	Cavite	First Cavite Industrial Estate, Inc.	60% Filipino & 40% Japanese	71.77	1991	131	44%	12%
2	Laguna Technopark	Laguna	Laguna Technopark, Inc.	95% Filipino & 5% Japanese	314.90	1991	282	54%	15%
3	Laguna Technopark-ANNEX	Laguna	Laguna Technopark, Inc	95% Filipino & 5% Japanese	29.00	1991	28	54%	11%
4	Light Industry & Science Park I	Laguna	LISP-I Locators' Association, Inc.	65.6% Filipino ; 24.4% American ; 10% Japanese	71.75	1991	84	29%	2%
5	Carmelray Industrial Park 1	Laguna	Carmelray Industrial Corporation	100% Filipino	80.03	1991	38	47%	11%
6	Gateway Business Park	Cavite	Gateway Property Holdings, Inc.	80% Filipino and 20% Indonesian	110.05	1991	22	27%	14%
7	West Cebu Industrial Park	Cebu	Cebu Industrial Park Developers, Inc.	60% Filipino and 40% Japanese	169.92	1993	22	73%	18%
8	First Philippines Industrial Park	Batangas	First Philippine Industrial Park, Inc.	70% Filipino & 30% Japanese	331.85	1996	114	67%	11%
9	Lima Technology Center	Batangas	Lima Land, Inc.	100% Filipino	429.97	1997	108	39%	6%
10	Luisita Industrial Park	Tarlac	Luisita Realty Corporation	100% Filipino	29.40	1997	8	63%	25%
11	Plastic Processing Center SEZ	Bataan	Diversified Ecozone Corporation	65% Filipino & 35% Japanese	26.02	1998	2	50%	0%
12	Subic Shipyard Special Economic Zone	Zambales	Consort Land, Inc.	45.14% Singaporean, 42.27% Filipino and 12.5% Japanese	76.59	1995	4	25%	0%
13	Light Industry & Science Park I	Laguna	Science Park of the Philippines, Inc	65.6% Filipino ; 24.4% American ; 10% Japanese	71.75	1995	84	29%	2%
14	Light Industry & Science Park II	Laguna	Science Park of the Philippines, Inc	65.6% Filipino ; 24.4% American ; 10% Japanese	68.01	1998	35	46%	14%
15	Toyota Sta. Rosa (Laguna) SEZ	Laguna	Toyota Motors Philippines Corporation	60% Filipino & 40% Japanese	81.67	1995	4	100%	0%

16	Hermosa Ecozone Industrial Park	Bataan	Hermosa Ecozone Development Corp.	100% Filipino	162.00	2005	32	22%	6%
17	Jasaan Misamis Oriental Ecozone	Misamis Oriental	Misamis Oriental Land Development Corporation	60% Filipino% 40% Japanese	25.25	2001	1	100%	0%
18	EMI Special Economic Zone	Cavite	EMI-Jolou Realty, Inc.	60% Filipino 40% Japanese	12.20	2002	1	100%	0%
19	YTMI Realty Special Economic Zone	Laguna	YTMI Realty Corporation	60% Filipino ; 40% Japanese	20.66	2002	7	71%	0%
20	Rio Tuba Export Processing Zone	Palawan	Rio Tuba Nickel Mining Corporation	60% Filipino ; 40% Japanese	423.95	2002	2	50%	0%
21	MRI Ecozone	Cebu	Mitsumi Realty, Inc.	99% Filipino and 1% Japanese	28.29	2002	5	80%	0%
22	AG&P Special Economic Zone	Batangas	Atlantic Gulf & Pacific Co. of Manila	96% Filipino and 4% Japanese	40.34	2008	5	40%	0%
23	Cavite Economic Zone II	Cavite	Majestic Technical Skills Development and Landscape Corporation	60% Filipino ; 38% Singaporean ; and 2% Japanese	53.72	2009	3	33%	0%
24	Taganito Special Economic Zone	Surigao del Norte	Taganito Mining Corporation	65% Filipino and 35% Japanese	687.51	2009	4	75%	50%
25	Light Industry Science Park IV	Batangas	Science Park of the Philippines, Inc	88.42% Filipino and 11.58% American	250.00	2013	17	12%	0%
26	First Industrial Township (FIT)	Batangas	First Philippine Industrial Park, Inc.	100% Filipino	70.00	2014	3	30%	70%
27	Anflo Industrial Estate	Davao del Norte	ANFLO Industrial Estate Corporation	100% Filipino	52.59	2014	8	13%	0%
28	Cavite Technopark	Cavite	Laguna Technopark, Inc.	75% Filipino and 25% Japanese	109.86	2015	15	7%	0%
29	Central Technopark	Tarlac	Luisita Industrial Park Corporation	60% Filipino & 40% Japanese	300.00	2015	2	50%	0%
30	SMPIC Special Economic Zone	Laguna	Taurus First Properties, Inc.	60% Filipino ; 40% Japanese	3.31	2017	1	100%	0%

Source : author's construction based on PEZA statistics

Table 5. Zone Comparison

Indicator	ALL Zones	Manufacturing Zones	Japanese-affiliated Zones
Firms	9	22	30
Investment (million pesos)	926	2320	2593
Export (million dollars)	107	315.6	583
Employment	2488	4802	8151
Land Area	173	594	140

Source : author's construction based on PEZA statistics

and all zones (9 firms). The average amount of investments drawn by the Japanese affiliate zones is also greater than investments in both manufacturing economic zones and all zones. From 1995–2015, Japanese affiliated economic zones have attracted an average investment of 2,593 million pesos. The average investment in all manufacturing economic zone is 2,320 million pesos, while the average investment in all zones is only 926 million pesos. Japanese affiliated manufacturing zones have delivered significantly higher amount of average exports from 1995–2015. Japanese affiliated manufacturing zones produced an average of 583 million dollars' worth of exports, while manufacturing zones and all zones generated 316 million dollars and 107 million dollars, respectively. Moreover, Japanese affiliated firms have provided a considerable higher number of average jobs from 1995–2015. Japanese affiliated zones have generated an average of 8,151 employment opportunities. The average employment generated within manufacturing zones is 4,802 jobs, while the average employment in all zones is only 2,488 jobs. Meanwhile, the average land of area Japanese affiliated zones is 140 hectares, smaller than manufacturing zones (594 hectares) but larger than the average of all zones (9.60 hectares).

4.3 Case Study of Japanese Developers/Operators in the Philippines

4.3.1 First Philippine Industrial Park (FPIP) - Sumitomo Corporation

The First Philippine Industrial Park (FPIP) is a joint project of the Lopez Group of Companies and Sumitomo Corporation. The Lopez Group of Companies owns 70% of the company's equity, while Sumitomo Corporation holds 30% of the shares. The Lopez Group of Companies is one of the largest conglomerate in the Philippines and engages in various businesses such as telecommunications, power generation and distribution, manufacturing, and property development. Sumitomo corporation is a Japanese conglomerate and a major player in industrial park development for over 30 years. Sumitomo Corporation have developed and operated 8 industrial parks in different Asian countries such as Indonesia, Philippines, Vietnam, Myanmar, India, and Bangladesh (Sumitomo Corporation, n.d.). Sumitomo Corporation also acts as sales agent in several industrial parks in Thailand, Cambodia, Indonesia, Philippines, and Morocco.

FPIP is located in Batangas, an area which is highly accessible from the Metro Manila (61 km), international airport (49 km), and seaport (48 km). As of 2021,The 446 hectares industrial park is home to 114 firms and 73 of these firms are either purely Japanese companies or joint venture with Japanese companies. The locator firms are mainly involved in manufacturing export products such as cars/mo-

torcycle parts, electronic components, precision equipment, rubber and plastics, and medical-related equipment (Figure 5). Some of the notable locator firms include Canon, Brother, NEC/Tokin, Shimano, BE Aerospace, Thermos, Hoya, Eaton, Ibiden, and Murata. Meanwhile, some firms are engaged in the local market such as YKK, Nestle, Amkor Technology, Honda, and Philipp Morris International.

FPIP is fully equipped with the necessary infrastructure and facilities (FPIP, n.d.). The park provides stable supply of electricity with its exclusive substation located inside the park and equipped with underground power distribution system. FPIP provide industrial water with a capacity of 42, 500 cubic meter/day and wastewater treatment facility with a capacity of 14, 256 cubic meter/day. FPIP also offers wide and concrete road system and modern underground drainage system. FPIP is also equipped with amenities such as gyms, business hotel, gym, Business Hotel, Japanese restaurants, PEZA office, fully equipped distribution center, bank, clinic, staffing agency, and shuttle bus service. In addition to this, the park also offers various support and services to the tenant firms such as safety and security, opportunity to contribute to local community development and environmental protection effort, and venue to establish linkages and exchange information. The park has national police stationed inside, 24-hour security guards, and fire station and fire trucks. FPIP organizes community development programs, education and skills training, and livelihood assistance. The park puts priority on environmental protection and ensures strict adherence to government environment, safety, and health standards. Moreover, FPIP also plays a key role in the protection of the river flowing through the park and of the indigenous and endangered species of trees located inside the park. These environmental efforts were lauded by Philippine Economic Zone Authority as FPIP was recognized as one of the two recipients of first Green, Healthy, Smart, and Sustainable Ecozone Award in 2020 (Business World Online, 2020). FPIP arranges regular meetings to establish linkages and facilitate information exchanges among Japanese employees as well as together with Filipino employees.

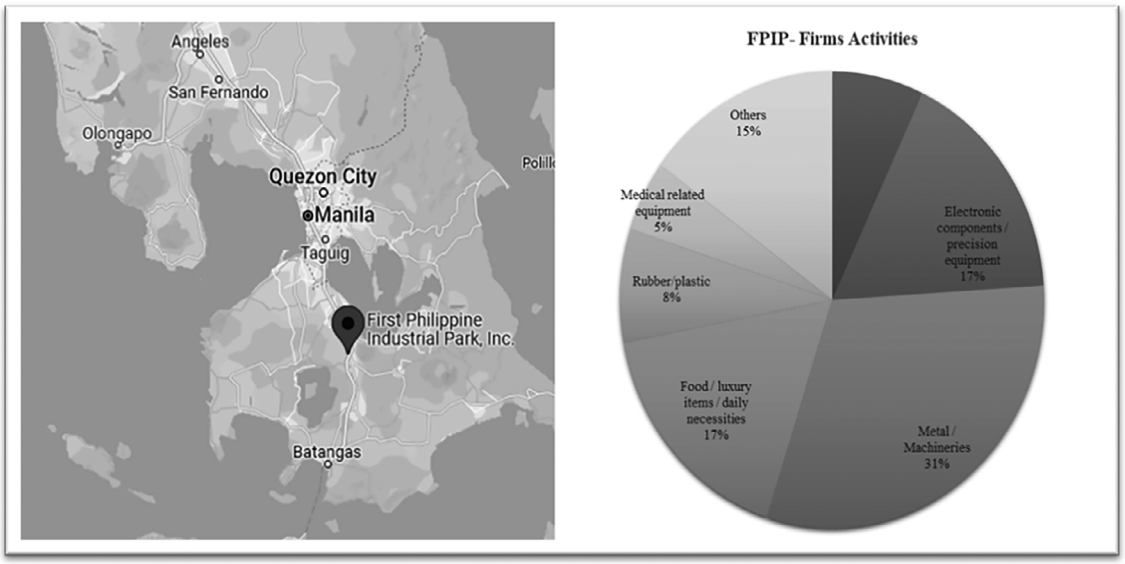

Figure 5. FPIP Location and Firm Activities

Source : Google Maps and author's construction based on PEZA statistics

4.3.2 Lima Technology Center (LTC) - Marubeni Corporation

Lima Technology Center (LTC) is built through the partnership between AboitizLand and Marubeni Corporation. The industrial park used to be 60-40 joint-venture, but AboitizLand buys out the 40% stake held by Marubeni in 2014 (The Manila Times, 2014). However, Marubeni Corporation maintain management and sales function. AboitizLand is part of the Aboitiz conglomerate which is involve in different sectors such as power distribution, banking, food production, construction, infrastructure, and land development. AboitizLand is the developer and operator of 2 other economic zone in Cebu, Mactan Economic Zone II and West Cebu Industrial Park. Marubeni Corporation is a Japanese general trading company (sogo shosha) offering diverse range of products and services in various sectors such food, agri-business, chemicals, energy, metals and mineral resource, infrastructure project, aerospace and ship, construction, finance and leasing business, and real estate business. Marubeni corporation has been involved in industrial park business since 1980s to support the overseas operation of Japanese firms. Industrial parks developed or managed by Marubeni corporation are found in Asian countries of Indonesia, Myanmar, Philippines, India, and Vietnam (Marubeni, n.d.). Marubeni corporation was also involved in the development of First Cavite Industrial Estate which was established in early 1990s.

LTC is situated in Batangas providing good transportation links and access to skilled labor. LTC is located 65 km away from the airport and 35 km away from the seaport. The park is also strategically located in Lipa city which is home to 24 universities. LTC has 600 hectares land area and is currently hosting 108 tenant firms and 48 of these firms are Japanese firms or joint venture. The tenant firms are engaged mostly in export of manufactured products such as electrical machinery and apparatus, office, accounting and computing machinery, rubber and plastic products, fabricated metal products, paper and paper products, and food products (Figure 6). Some of the well-known Japanese tenant firm includes Bandai Namco, Chiyoda Manufacturing Corporation, Funai Electric Inc., Furukawa Automo-

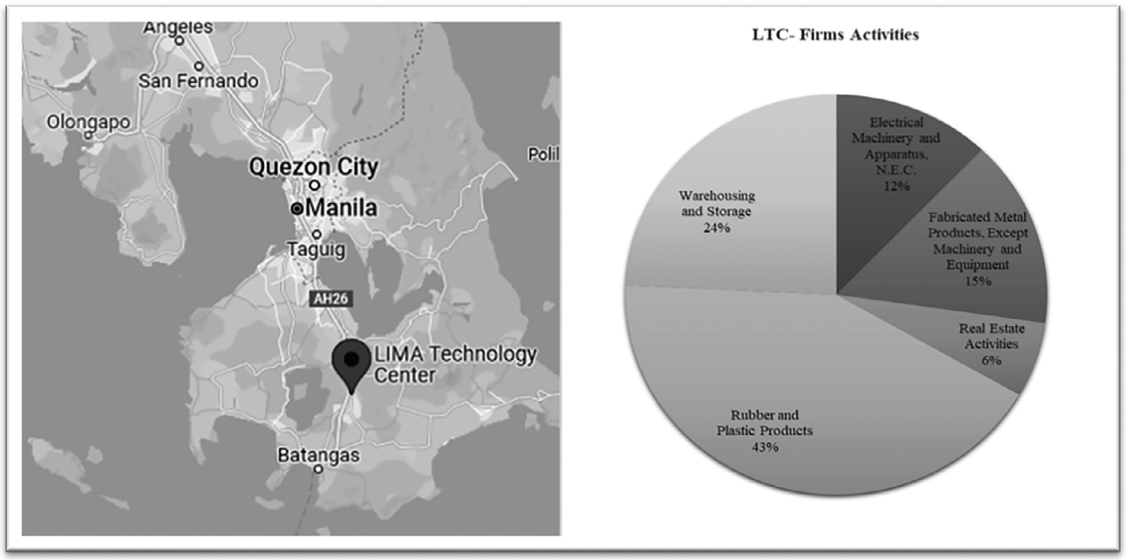

Figure 6 : LTC Location and Firm Activities

Source : Google Maps and author's construction based on PEZA statistics

tive Systems, Hitachi Cable Inc., and Maruichi Steel Tube.

LTC offers a full range of infrastructure system from construction, power generation and distribution to water production and distribution through subsidiaries of Aboitiz Group (Aboitizland, n.d). The park is equipped with its own electricity transmission route from the Batangas substation, and a second sub-transmission line is currently under construction to ensure stable power supply. LTC is capable of supplying 10,500 meter/day of potable water. LTC also has wastewater treatment facility than can process 26,000 cubic meter/ of wastewater and Department of Environment and Natural Resources (DENR) accredited laboratory for water and wastewater monitoring. LTC also offers construction services such as project management, electro-mechanical works, industrial piping works, heavy structural steel works and steel fabrication. The park also provides security and safety related services such a fully equipped emergency response team, ambulance available 24/7, fire trucks, 24/7 security presence in major access points, and CCTV security cameras. LTC also has PEZA and Bureau of Customs (BOC) offices which offers 24/7 services to the tenant firms. In addition to this, the park is a mixed-use development which provide a full range of facilities and services such as a 4- star hotel, retail stores and restaurants, residential areas, and clinics.

4.3.3 Light Industry and Science Park (LISP) IV and Hermosa Ecozone Industrial Park (HEIP)-Sojitz Corporation

Light Industry and Science Park IV and Hermosa Ecozone Industrial Park are joint project of Science Park of the Philippines and Sojitz Corporation (Sojitz , 2017). The Science Park of the Philippines is in charge of development and management, while the Sojitz Corporation acts as a sales agent. Science Park of the Philippines was established in 1989 and is considered as a pioneer in private industrial estate development in the country. Science Park of the Philippines have developed almost 800 hectares of aggregate area. Sojitz corporation is a Japanese general trading company involved in wide range of business across different part of the world. Sojitz is currently involved in 7 industrial parks in 4 Asian countries of India, Indonesia, Vietnam, and Philippines. Sojitz entered into partnership as a sales agent with Science Park of the Philippines in November 2017. Sojitz offers the following support to companies who are thinking of conducting business in the Philippines : 24-hour security system, Japanese staff on site, infrastructure maintenance, provision of information to tenants, introduction of construction companies and consultants, exchange of information on workers' compensation, taxation, operation support, and recruitment of local staff.

Light Industry and Science Park (LISP) IV is a 250-hectare zone located in Batangas (Science Park of the Philippines, Inc., n.d.-a). The park is conveniently located 60 km away from the airport and 38 km from the seaport. LISP IV is currently hosting 17 firms and 2 of which are Japanese companies or joint venture. Majority of the tenant firms in LISP IV is engaged in real estate activities (Figure 7). LISP IV is designed as a mix-use development which features a 170-hectare industrial area, 5-hectare retail and institutional area, and 37-hectare residential neighborhood. The industrial park retained 35% of the original landscape to preserve the environment. The industrial park is fully equipped with necessary infrastructure for manufacturing operations.

Hermosa Ecozone Industrial Park (HEIP) is situated in Bataan which part of the country's newer

growth corridor of Subic Bay Freeport Zone in Zambales and Clark Special Economic Zone in Pampanga (Science Park of the Philippines, Inc., n.d.-b). HEIP is located in close proximity to an international airport (35 km) and seaport (20 km). The 162-hectare industrial estate is part of 478 mixed-use property development. HEIP is currently hosting 32 tenant firms and 9 of which are Japanese companies or joint venture. Similar to LISP IV, a huge bulk of the firms are engaged in real estate business (Figure 8).

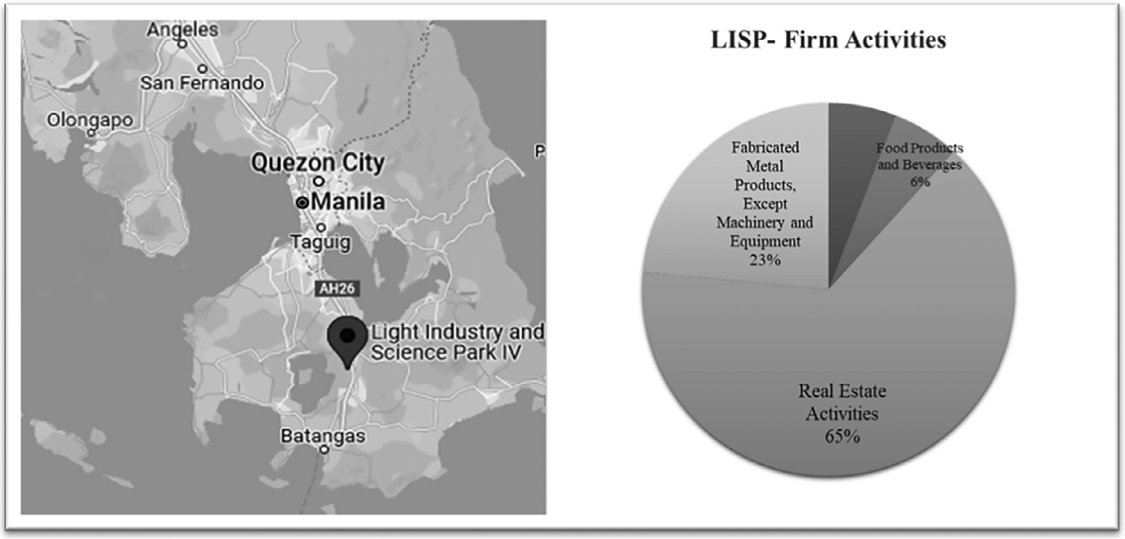

Figure 7 : LISP IV Location and Firm Activities
Source : Google Maps and author's construction based on PEZA statistics

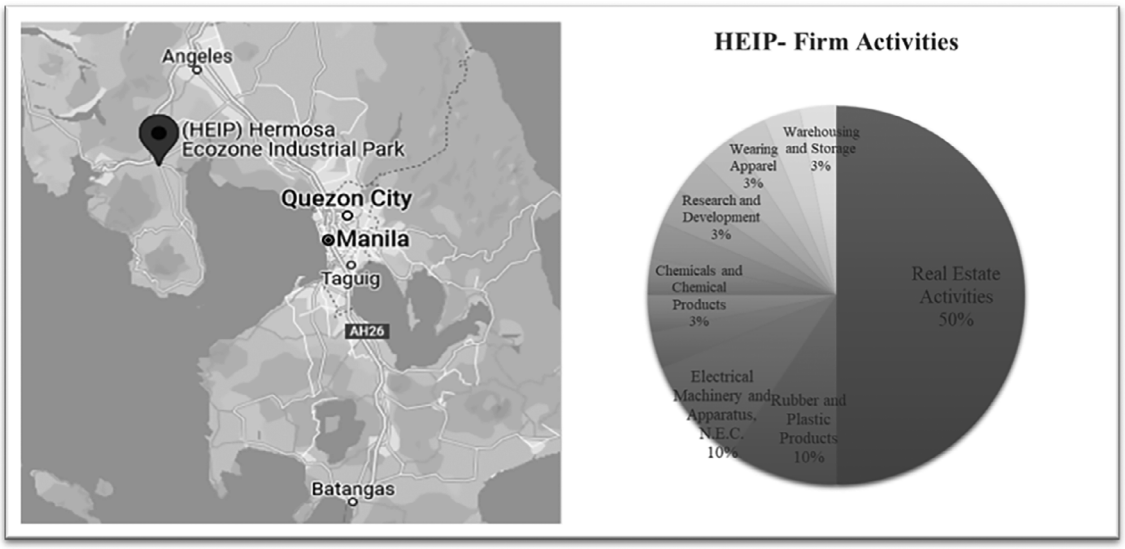

Figure 8 : HEIP Location and Firm Activities
Source : Google Maps and author's construction based on PEZA statistics

4.3.4 Discussion of Case Study

The case study of selected Japanese affiliated industrial park reveals some interesting pattern. First, in terms of partnership, Japanese companies tend to enter an agreement with a big local conglomerate such as with the case of FPIP and LTC. This is expected as industrial park development requires huge financing in which most of the time, only big companies can provide. Second, the partnership arrangement varies. Some companies like Sumitomo Corporation are fully- involved in the development and operation of the zones, while some companies like Sojitz are responsible only with sales and support services. Third, the selected Japanese affiliated zones are located in the industrialized area of country except for HEIP. Fourth, all zones are highly accessible and located less 100 km away from ports and airport. Fifth, the scale of operation, particularly with the number of tenant firms, varies among selected zones. The relatively older zones of FPIP and LTC have attracted more firms than the newer zones. This in line with the argument that it takes some years before the estimated outcome of zones could materialize. In particular, the large-scale employment can emerge after 5–10 years (Farole, 2011).

5. Conclusion and Areas for Further Study

Private sector plays a key role in the development and operation of special economic zones in the Philippines. A considerable number of private economic zones in the Philippines were built and operated through partnership with foreign private companies. Among the foreign private partners, Japanese companies are the forefront, particularly with the development and management of the industrial parks.

This paper examined the distinctive characteristics and activities of Japanese affiliated industrial parks. Japanese affiliated industrial zones are concentrated in few areas of the country, particularly in the industrialized province of Batangas, Cavite, and Laguna. In comparison with other manufacturing zones, Japanese affiliated economic zones are found to have higher impact based on the average number of tenant firms, amount of investments and exports, and average number of employments. The case study of selected Japanese affiliated zones also demonstrates distinctive characteristics of Japanese affiliated park, in particular with the type of partner local companies and the nature of cooperation. Japanese companies, mostly general trading companies or conglomerates, tend to cooperate with the big local conglomerates. The nature of cooperation varies from full involvement in development and operation to performing specific functions or services only.

Since this study provided a descriptive analysis of the characteristics of the Japanese-affiliated industrial parks in the Philippines, several relevant topics could be further explored. First, it would be noteworthy to confirm and examine the factors that have helped Japanese companies deliver higher positive outcome. Second, it would be also valuable to explore the rationale of Japanese companies for choosing a certain local partner or the decision criteria with regards to nature of partnership, whether to be fully involved in the development and operation or perform limited functions. Third, it would also be worthwhile to look into the possible impact of Japanese developers on their local tenant firms.

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