



Comparison Study of Three Industrial Parks in Central Java Indonesia

Submitted: 1 September 2018
Accepted: 20 September 2018
Available Online: 31 October 2018

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Abstract

Compared with other Industrial parks in Jababeka, West and East Java, industrial parks progress in Central Java are less developed. This condition is mainly due to the lack of optimal management. Only limited studies comprehensively discuss the differences among in industrial parks in Central Java in particularly in management aspect. The research aims to comparatively analyze the differences and similarities of three industrial parks in term of their administration (location selection and preparation), infrastructure provision and management. This research adopts a descriptive-qualitative research method to discuss a particular research problem. The previous survey of this study was conducted in eight industrial parks management in Central Java. Three industrial parks (KIW, Terboyo, and BSB) representing industrial park s as a core business, an industrial plot provider and a residential area supporter were profoundly explored in dept. The data were collected through observation, focus group discussion (FGD), in-depth interviews and documentation. The key informants are the industrial park manager s and their team. The result s show that jurisdictional prerequisites are an important factor in the development of industrial estates, affecting construction costs and future management. The provision of infrastructure is fairly adequate. The quality of industrial park management does not depend on the status of ownership but the professionalism of the manager and tenant satisfaction. Both KIW and BSB have proved to offer better service performance than Terboyo. As own state regulation, however, KIW, there are many strict regulations and supervision, especially in land acquisition. Hence, the concept of land banking and supportive regulation are needed. Finally, the manager's commitment is pivotal to carry out the business and master plans.

Keywords: industrial park; Central Java; Indonesia

1. Introduction

Industrial development has a strong role in the economic growth of countries (Eltis, 1988; Haraguchi, Cheng, & Smeets, 2017; Kniivilä, 2007). Since the end of 1970, the Government of Indonesia (Gol) concerns to improve economic growth (Roepstorff, 2006). Indonesia's industrial growth in 2015-2019 target higher than the national Gross Domestic Product (GDP), with the manufacturing industry's contribution to 21.6 percent of GDP in 2019 (Ministry of Industry Republic of Indonesia, 2017b). Regarding this condition, the number of medium and large-scale industries urge to increase, one of the strategies develop the growth center areas (Industrial Growth Center), such as an industrial park (Ministry of Industry Republic of Indonesia, 2017a).

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Industrial parks have a significant role in economic growth that adopted by many countries. They align infrastructure provision and agglomeration economies to jolt industrial growth (Noufal & Ramachandran, 2016). An industrial park/estate, as defined by Peddle (1993), is as follows “a large tract of land, sub-divided and developed for the use of several firms simultaneously, distinguished by its sharable infrastructure and near of firms.” Industrial estate is a tract of land developed and subdivided into plots according to a comprehensive plan with or without built-up (advance) factories, sometimes with common facilities and sometimes without them, for the use of a group of industrialist” (UNIDO, 1997; Weldesilassie, Gebreyesus, Abebe, & Gebrehiwot, 2017). According to Ministry of Industry Regulation No. 142/2015 about Technical Guidance of Industrial Parks Development. Industrial Estate is an area where industrial activities gathered and completed with supporting facilities and infrastructure developed and managed by the Development Industrial Estate Company. Further elaborated, Industrial parks run by business entities in the form of legal entities and established under Indonesian law and living in Indonesia.

Central Java is the third most populated province in Indonesia after West Java and East Java. Besides a strategic location, Central Java has considerably natural and human resources. The number of population in Central Java is about 34 million (Central Bureau of Statistics, 2018). The Central Java categorize as the second lowest Provincial Minimum Wage after the Special Region of Yogyakarta (Central Bureau of Statistics, 2018). Moreover, the wages of workers in Jabodetabek are relatively high, causing many companies interested in investing in Central Java. However, compared with other Industrial parks in Jababeka, West and East Java, industrial parks progress in Central Java are less developed. This condition is mainly due to the lack of optimal management. Only limited studies comprehensively discuss the differences among in industrial parks in Central Java in particularly in management aspect. Therefore, this research is very important to understand the industrial park condition in Central Java. According to Octavia (2016), the industrial development business in Indonesia has proliferated since it began in the 1970s. However, poor planning and weak implementation of policies in the past have led to policy problems in four key areas: inefficient administration, poor infrastructure, antagonistic labor relations, and limited incentives.

Currently, there are nine industrial parks in Central Java that mostly in the capital city of Central Java, Semarang. In the future, seven industrial estates will build in Central Java, among others in Demak, Grobogan, Boyolali and Cilacap Regencies (Central Java One-Stop Investment and Licensing Service, 2017). The development of the next industrial park is expected to be better than the previous parks in order to provide positive economic growth, reduce unemployment and poverty. This research is providing an overview of the current management conditions of industrial parks in Central Java. To understand this, we conducted a preliminary study at eighth industrial parks and classified their types.

Types of industrial estates vary according to needs, land, site, and industries. There are different types of industrial estates to cater to different types of requirements. The designs of industrial estate differ from place to place; some of them are according to location, industrial activity, motivational scene, sponsorship activity. For general purpose, first, types based on facilities and services, namely (1) Industrial areas, zones, townships, and estates; (2) Estates with general-purpose and custom-built, factories, (3) estates with common service facilities. Second, based on location (industrial estates in or near big cities, in small towns, in rural areas), and third based on functions (single-trade estates, functional estates, ancillary estates, nursery estates) (Falcke, 1999; United Nations Economic and Social Council, 1964). In addition, Chandran (2007) clarified the types of the industrial park in India, divided by land (urban, semi-urban, rural), industrial activities (general and specific), and organizational structure (government, cooperative, self-financed, private). Industrial parks may be classified according to improvements and facilities, industrial activity, objective and sponsorship (ownership) and management (UNIDO, 1968).

Based on the above types of industrial estates and preliminary surveys, there are three types of industrial estates that represent all regions, based on facilities and services. Further, the type of industrial park has been categorized based on facilities and services, there are three industrial parks, First, industrial estate as the core business (KIW, KIK, JIPS and KI Cilacap), second, industrial park as an industrial plot provider (KI Candi, KI Terboyo, LIK), and thirdly, industrial park as a residential area support (LIK).

Regulatory bases create industrial estates refers to Law No. 3 of 2014 about Industry, lines for Industrial Zone Development. In the Technical Guidelines, it states that develop Industrial Estates requires a thorough and comprehensive Government Regulation of the Republic of Indonesia Number 142 of 2015 about Industrial Estates and No 40 / M-IND / PER / 6/2016 on Technical Guidelines for Industrial Zone Development. In the Technical Guidelines, it explained that industrial park development requires a thorough and comprehensive preparation stage. Some things that considered industrial park development, as referred to in paragraph (1) at least include: location selection, licensing, land acquisition, land maturation, infrastructure development; and management.

In this study, we aim to comparatively analyze the differences and similarities of three industrial parks in term of their administration (location selection and preparation), infrastructure provision and management. Three industrial parks that represent the different type of industrial parks in Central Java are chosen. First, industrial estate as the core business (KIW), second, industrial estate as an industrial plot provider (KI Terboyo), and third industrial estate as residential area support (BSB). Hopefully, the condition of three type industrial parks in administration, infrastructure and management aspect will improve the next industrial parks development in particular in Central Java.

2. Methods

This research adopted a descriptive-qualitative research method to discuss a particular research problem (Hosseini, 2015; Kim, Sefcik, & Bradway, 2016). A qualitative descriptive approach is ideal when an exact description of a phenomenon is preferred and needed (Lambert & Lambert, 2012). It is widely used to present findings as this approach straightforwardly presents participants' accounts without complex interpretations (Kim et al., 2016; Lambert & Lambert, 2012). Furthermore, qualitative descriptive has been described as less theoretical compared to other qualitative approaches (Neergaard, Olesen, Andersen, & Sondergaard, 2009).

First, we draw from a naturalistic perspective and examine a phenomenon in eight industrial parks management in Central Java; there are KIW, KI Candi, KI Terboyo, LIK, BSB, KIK, JIPS, and KIC. Four of them (KIW, LIK, Terboyo, BSB) in Semarang municipality, two (Jatengland, KIK) are quite close to Semarang; the furthestmost is KI Cilacap that in Cilacap Regency.

Second, we conducted a desk study to gather some information. Regarding the types of industrial estates and preliminary surveys, there are three types of industrial parks that represent all parks, based on facilities and services: industrial estate as the core business (KIW, KIK, JIPS and KI Cilacap); industrial park as an industrial plot provider (KI Candi, KI Terboyo, LIK), and industrial park as a residential area support (BSB). Three industrial parks that represent a different type of industrial parks in Central Java are chosen. First, industrial estate as the core business (KIW), second, industrial estate as an industrial plot provider (KI Terboyo), and third industrial estate as residential area support (BSB).

To compare the conditions of each industrial park we refer to the rules: Republic of Indonesia Law No. 3 of 2014 about Industry, Government Regulation of the Republic of Indonesia Number 142 of 2015 about Industrial Estates and Rule Number 40/M-IND/PER/6/2016 on Technical Guidelines for Industrial Zone Development. Three major aspects are compared. First, administrative include the area place and proximity to the basic network. Second, infrastructure provision includes basic infrastructure provided, namely electricity and energy networks, telecommunications, water sources, transportation, waste management. Third, management aspects include organizational status, master plan and business plan, management system, tenant service, development of business units, CSR, monitoring and evaluation.

Several approaches were conducted to collect materials for this study, including field surveys, literature reviews, key informant interviews. The key informants are the industrial park manager and team. The collected data both primary and secondary sources were edited, summarized and analyzed in order to meet the various aims of the study. Data are presented descriptively including the table.

3. Result and Discussion

3.1 Industrial Parks

Three industrial parks that represent typology, First, industrial estate as the core business (KIW), second, industrial estate as an industrial plot provider (KI Terboyo), and third industrial estate as residential area support (BSB).

3.1.1. Introduction of PT Wijayakusuma Industrial Estate (KIW)

KI Wijayakusuma was established in 1998 by PT Wijayakusuma Industrial Estate, with an area of up to 250 Ha. PT KIW is a State-Owned Enterprise (BUMN) in the form of a state-owned company. Share ownership consists of the Central Government, 51.09 percent, the Central Java Provincial Government 40.19 percent, and the Cilacap District Government 8.52 percent. KIW is an expansion of the Cilacap Industrial Zone which is already full/saturated. Further, the management of Cilacap KI was then granted to the Cilacap Regency Government.

3.1.2. Introduction of Terboyo Industrial Park

Terboyo Industrial Park was established in 1989 by three businessmen namely Budi Santoso (owner of Suara Merdeka), M. Soleman Hidayat, and Enggarhasto Loekito (Currently, Ministry of Trade). This area covers 300 Ha. Terboyo industrial park is managed by PT. Merdeka Wirastama. Foundation background is to create an industrial development monument in Central Java, as a marker of the prestige of economic development in Central Java at that time. This park was established at the beginning of the government opening the opportunity for the private sector to play a role in establishing the industrial park. Terboyo was the first industrial park that is managed by the private sector. Previously industrial parks were only managed by the government through limited-liability companies, following Presidential Regulation Number 53/1989.

3.1.3. Introduction of BSB Industrial Park

BSB Industrial Park was established and started operating since 2000, has a land area of 115 ha. This area was developed by PT Bukit Semarang Baru (BSB) which has a housing development business and business area. At first, this area was infiltration land, then PT. BSB has acquired 1,000 hectares of land used for settlements starting in the 1990s. Consider the low progress of the settlement development, in 1997, and it applied for a permit to part of the area in the form of a change in the catchment area into a techno park area (technology-based industry). As one of the efforts to attract growth, PT. BSB proposes a spatial change to become an industrial designation (with the concept of Techno park). BSB consist of

settlements, business areas, and industries, as well as education/campus. The settlement itself is divided into the lower and upper middle class to capture the market from the workers and industrial managers.

3.2 Administration (Location Selection and Preparation)

According to Ministry of Industry No 40/M-IND/PER/6/2016 about technical guidelines for industrial estate development, some criteria considered in the location selection area include proximity to city center, settlement, highway, a source of power, telecommunication network, seaport, water resources (surface and groundwater) and permittance. The condition of administration is presented in Table 1.

Table 1. Administration (Location Selection and Preparation)

No	Location Criteria	Industrial Parks		
		KIW	Terboyo	BSB
1	Proximity to city center (km)	11,4	± 7	±19,3
2	Proximity to settlement (km)	±2	Inside settlement areas	± 1,9
3	Proximity to National / Provincial / District Highways/railway	Close to national (Pantura) and Semarang City highway	Close to railway stations, national roads, and district roads	Close to national roads, district roads
4	Proximity to the source of power (Energy and electricity)	PLN (National electricity company) and gas network are available	PLN	PLN, Gas Pertamina
5	Telecommunication	Telkom	Telkom	Telkom
6	Proximity to Seaport	Distance to Tanjung Emas Port ± 15 km	Distance to Tanjung Emas Port (±5,6 km)	Distance to Tanjung Emas Port (±18,6 km)
7	Water sources (surface and groundwater)	PDAM (local water company), Banjir Kanal Barat River	Groundwater	Groundwater
8	Permittance	Complete	Complete	Complete

Source: Authors Analysis, 2018

As can be seen from table 1, seen from the distance to the city center, KIW and BSB are quite ideal, which is more than 10 km, while KIW is quite far. The distance to the residential center is also a consideration, KIW and BSB have a fairly ideal distance which is approximately 2 km from the settlement. All regions are already on the national/regional transportation lines close to the electricity and telecommunications networks, at KIW and BSB even close to the energy (gas) network. Meanwhile, Terboyo has the closest distance to the port. KIW has the proximity of surface water sources and PDAMs. All regions already have completed licensing.

KIW is located in the western city of Semarang, located on the main line of Jakarta Surabaya. This location is also quite close to the city center, airport, and port, as well as a toll road and highway access, so accessibility is excellent. The advantage of the KIW location is that the land is relatively flat, there is no need to cut or cut too much (cut and fill), so it is relatively fast to be ready to build.

BSB is in the highland region, in southern Semarang about 10 km from the city center and airport. With the area in the hills, preparing the land with the cut and fill model from the local location, it takes about three months. The advantage of this location is the area that is clean, organized, flood free and has the potential of toll road access. Compared to KIW and BSB, KI Terboyo was built the earliest where the rules related to industrial estates by the new private were made (presidential Decree of the Republic of Indonesia Number 53 of 1989) concerning Industrial Estates. At that time KI Terboyo had a fairly strategic location, not far from the city, but judging from the current condition in accordance with Government Regulation No 40 / M-IND/PER/6/2016, the distance of KI Terboyo with the city center is quite close (< 10 M), and is an area prone to congestion. This area is also quite close to the port, the center of government and the workers' pockets and a conducive social environment. Another advantage located in Terboyo is the one axis of Jakarta-Surabaya. This location is also per the Spatial Plan. However, the area around the coastal area of the eastern part of the city of Semarang, especially in the District of Genuk, including Terboyo, experiences the risk of rob and flooding caused by land subsidence (Pujiastuti, Suripin, & Syafrudin, 2015). This condition is suspected because of the high use of groundwater that is not balanced by the replenishment of balanced groundwater causing a decrease in groundwater level (Asdak, 1995). There are two KI namely Terboyo and BSB, and both of them are still using groundwater.

Optimism in the future of the manager Terboyo with the construction of tolls and sea dikes is improving the environment, reducing flooding. The land owned by KI Terboyo covering an area of 200 hectares will also be used for infiltration ponds, with environmental improvements expected to improve facilities and infrastructure so that managers can implement higher IPLs and manage the environment better, besides selling prices increase.

3.3 Infrastructure Construction

Infrastructure construction must be provided by the government following their respective authorities (Regulation No. 142 the Year 2015 concerning Industrial Estates), include The condition of infrastructure construction presented in Table 2.

Table 2. Infrastructure Construction for Industrial Parks

No	Infrastructure Type	Industrial Parks		
		KIW	Terboyo	BSB
1	Electricity and energy network (fuel, gas, coal)	PLN (State Electricity Company), Pertagas	PLN	PLN
2	Telecommunication (telephone and the internet)	Telkom	Telkom	Telkom
3	Water source (Surface and groundwater)	Surface water (Kali Garang/Banjir Kanal Barat River)	groundwater	groundwater
4	Hinterland access (enter/exit), sort of transportation (worker and goods)	None of the public transportation, open access	None of the public transportation, open access	None of the public transportation, close access
5	WWTP	Available	Not available	Available

Source: Authors Analysis, 2018.

The principal objective of the industrial park programme is to provide factory accommodations to industries at the suitable site with the basic facilities, such as electricity, energy, telecommunications, transportation, water, WWTP and other supporting facilities as can be seen from table 2. All industrial parks have served electricity (PLN) for tenants, and KIW also provides gas (Pertagas), as well as telecommunications facilities (Telkom). In term of the water source, both Terboyo and BSB use groundwater, whereas KIW use surface water (Banjir Kanal Barat River). All industrial parks have open access, but they do not have public transportation inside areas. KIW and BSB also provide WWTP.

Regarding water source, KIW has more sophisticated technology for processing surface water from Banjir Kanal Barat River, known as water treatment plant (WTP). Water services started at the beginning of 2018, which surface water sources from Banjir Kanal Barat River with a capacity of 3,000 m³/day. The tariff charged is 12,100 rupiah/m³, this tariff is lower than PDAM (Local water company) of 17,000 Rupiahs. Whereas, the cost of developing water supply is quite expensive. For example, the distance of water source (Banjir Kanal Barat River) to the processing plant is approximately 9 km where the pipes across PT Kereta Api land. For that, KIW should pay 1.3 billion to PT Kereta Api. Even though, BSB still uses groundwater, the BSB manager concern to implement conservation concept. BSB built five small lakes which served to control the flow of rainwater to reduce flood, as well as water reservoirs. The location of lakes are not inside industrial areas, but the presence of lakes is around the BSB area.

In term of Wastewater Treatment Plant (WWTP), BSB provides a centralized WWTP. Tenants pay the service fee according to the level of contamination that is calculated per cubic. After the treatment procedure, water is discharged into the river body. In order to high contamination waste, the tenant should decrease the contamination level before treatment. BSB manager routinely supervises tenant effluent waste and collaborates with the Environmental Agency. Environmental Management Efforts and environmental monitoring efforts have been conducted every six months, while wastewater is monitored every month. Similar to BSB, KIW also obliged tenants to process high contaminated wastewater with COD level above 1,500 reduce to 1,000 before processed into WWTP. Wastewater unit always monitors COD levels daily, and they also collaborate with environmental Agency in supervision.

3.4 Management of Industrial Parks

Management of industrial estates is a prominent role in ensuring that industrial park can operate optimally. Description of the management of the industrial park can be seen in Table 3.

Table 3. Management of Industrial Parks

No	Management	Industrial Parks		
		KIW	Terboyo	BSB
1	Organization	State-owned enterprises	Private-Company	Privat - Company
2	Availability of masterplan and Business plan (suitability)	Yes	No (business plan)	Yes
3	Management system (Related to quality and application, work safety, health, and energy management ISO 50001)	ISO 14001 environmental management	No	No
4	Tenant services (Management of permits, infrastructure, customs, complaints, links and match of human resources)	Licensing management: managed by the manager, there is a bonded zone (customs) service from the customs and excise office	By request	By request
5	Marketing (Formal and Informal advertising)	Advertising (electronic and mass media) and leaflet	Informal	Advertising
6	Development of business units (business facilities): shop houses, warehouses, apartments	WTP, WWTP, environmental maintenance, parking management, rental of ATM rooms	Warehouse rental	Shophouse

Table 3 Continued

No	Management	Industrial Parks		
		KIW	Terboyo	BSB
7	Environmental management fee: sanitation, security, waste, lighting	Environmental management fees (IDR 2.000/m ² /year), water fee (IDR 12.100/kubic)	50 rupiahs /m ² /month	450/m ² /year
8	Social Responsibility and Community Empowerment (IP Social) / CSR	Community development partnership program for SMEs,	No	Home renovation
9	Monitoring and Evaluation	BPK (Audit Board of Rol), BPKP (Development and Financial Oversight Agency), GCG (Good Corporate Governance)	No	Self-monitoring and evaluation

Source: Authors Analysis, 2018

In term of the organization of the industrial park, there are two types of organization between state-owned enterprises (KIW), and private companies (Terboyo and BSB). The challenge for the public as well as the private sector is to facilitate the creation and maintenance of industrial parks that are competitive in the global as well as in the local context. To achieve this, professional management with private sector experience is essential for success. The responsible agency should not limit itself to merely the maintenance of the facilities and supervision of common areas and space, but play a dynamic role promoting the services offered by the park among local and regional entrepreneurs (Chandran, 2007; Falcke, 1999). However, as state-owned enterprises, KIW faces a problem with land procurement. PT KIW is unable to compete with other private sectors, because of the strict regulation. Such as, public enterprises in the acquisition of land must be under the prices set by the BPN (National Land Agency) and by the NJOP (Sales value of tax objects). In the future, KIW will develop new areas by establishing a subsidiary, "PT Putra Wijaya Sakti," to overcome the weaknesses of state-owned enterprises that are not free in business, and bargaining prices.

For this case, perhaps we can learn from the Korean Government. Korea is an example of a country that is successful in developing an industrial park which has significantly contributed to the growth as the incubators of the manufacturing sector. Korean Government support both developer and companies. For instance, the support system for developers is intended to support the development cost of industrial parks partially and to apply relevant laws and systems to enable easy acquisition of land for the development of industrial parks. Whereas, the support system for resident enterprises includes tax benefits at the time of land acquisition and low-interest loan arrangement for land purchase (Cho, 2012).

Both Terboyo and BSB are private sectors, whereas they have different concept and management. Terboyo, founded in 1989, is built entirely independently without government support. For example, Terboyo was built over ex-pond land. Consequently, it needs high investigation for the reclamation process. Other, the provision of telephone networks from Telkom requires a fee of 6 million rupiahs/spot in 1989. Generally, the procurement of infrastructures is highly expensive. The high construction costs have an impact on the high price of land. Even though the facilities inside the park are well-developed, many companies are built outside the Park.

Consequently, the developer needs a long time to sell lots, even though, at this time, they are sold out. Currently, The Provincial and district government increase their attention to the industrial park. They have support funding for road maintenance. It shows that government role betters than the past and government concern to support good environments for the growth of the economy.

The "private sector" is heterogeneous. The incentives and costs facing a consultant, a developer and the users of the park are very different, as is their situation – formal and informal – within the local political economy. It is important to caution against the prior assumption that "the private sector" will be better at all steps. Whether this is so, and who is meant by the "private sector," will depend on specific capabilities and incentives. The design of industrial park programs should consider each of these steps, and seek to understand, in the light of the local political economy, which actors would be better or worse suited to which roles. Among the conjectures we will explore below is that such "role allocation" is the most important parameter for park implementation (Saleman & Jordan, 2014).

All industrial areas studied have a master plan and business plan, exclude Terboyo does not have a business plan. However, in the implementation of the master plan and business plan, not all of them are suitable for the concept because the demand for each tenant varies — for example, land area, the direction of the building and zonation. According to Government Regulation No 40/M-IND/PER/6/2016, the master plan should consist of target types of industries for prospective tenants and analysis and arrangement of spatial patterns. In the case of BSB, the developer has the principle that the development of this area must not damage its main business as residential areas. Therefore, BSB has the concept of a high-tech industrial area with the theme of the green industry. The type of industry should match with the environmental impact analysis and estate regulation. The manager will survey for prospective industries to determine the level of contamination and potential pollutants produced. If the result does not match their criteria, they will refuse the industries.

Related to management system, mostly industrial parks concern in environmental issue and now sustainable development of industrial parks have become global issue (Liu, Adams, Cote, Geng, & Li, 2018), environmental management systems (EMSs), International Organization for Standardization (ISO)

14001, can be used as a tool in by industrial park managers to improve their environmental performance. KIW has been implemented “the regulation for facilitating to establish EMS, whereas Terboyo and BSB have not implemented it yet. According to Geng & Côté (2003), the implementation of an EMS should not be thought of as the ultimate objective for an industrial park’s environmental management. The next steps include encouraging further public participation and taking an integrated approach leading to an industrial ecosystem, which can realize better environmental performance at the industrial park level.

Regarding the tenant service, KIW facilitates all licensing management, whereas Terboyo and BSB, that is carried out by tenants. Furthermore, KIW has been implemented KLIK facilities (Direct Investment Facility Facilitation), so that prospective tenant can start construction even though the building permit is still under the process (in line between the construction process and the ease of licensing).

Environmental management fee generally uses for sanitation, security, waste, and lighting. All IPs have been implemented environmental management fee. However, the amount of retribution varies. Compared to others, Terboyo has the lowest retribution, only 50 rupiahs per m² per month, managers are worried that if the high tariff is charged the tenants will urge better infrastructure facilities. Whereas, infrastructure conditions suffered severe damage mainly due to flooding and tidal flooding.

In term of development of business units (business facilities), KIW still has land used for the development of the business unit such as WTP, WWTP, environmental maintenance, parking management, rental of ATM rooms as well as BSB developer initially built a commercial area designed for BSB Integrated Business and Business which will accommodate various businesses, trade and trade activities consisting of Government and Private office facilities, Shopping Centers, Hotels, Restaurants, Entertainment, and others. The concept of developing commercial areas focuses on service to the broader community by providing infrastructure and facilities to respond to various needs of the present and the future. Whereas, Terboyo has sold all of its plots so that it does not have more space for business, only limited space for warehouse rental. Commercial facilities in industrial estates are very important for residents in industrial estates because the established commercial facilities are expected to meet tenants and labor needs so that they are more efficient. Developers should provide commercial facilities as a form of a facility to tenants as well as managing business businesses.

Management's attention does not spare the community as one of the stakeholders that determine the company's operational success in order to create business harmony between the company and the community. As a form of social responsibility to the community, KIK and BSB have a CSR program. KIW facilitate community development partnership program for small and micro enterprises (SMEs), whereas BSB assists the community in home renovation program.

Monitoring and evaluation, particularly in financial condition, are conducted by some institutions. KIW as state-owned enterprises has more strict procedure than others, such as BPK (Audit Board of RoI), BPKP (development and Financial Oversight Agency), GCG (Good Corporate Governance). According to the manager of KIW, as a public company has limited flexibility compared to private developers because of the many restrictive rules. Furthermore, several factors are often posited to explain the failures of industrial park programs. Some are highly specific, such as the threat of conflict, but most are broad, for example, poor sector targeting; poor location choice; insufficient investment in infrastructure; poor implementation capacity and lack of authority; and lack of high-level support and stability. When these are surmounted, or sidestepped, relative failure is also attributed to factors such as a lack of support for technology acquisition, skills building and quality assurance, or other actions that would generate “cluster effects” (Saleman and Jordan, 2014).

4. Conclusion

This paper explores three types of industrial parks, in particular, in term of administration, infrastructure procurement, and management. The comparative case study was described by selecting KIW, Terboyo, and BSB that all of them located in Semarang Municipality. To sum up, administrative prerequisites are an important factor in the development of industrial estates, especially affecting construction costs and their impact on future management of the area. Generally, the provision of basic infrastructure by the industrial park developers is adequate, while supporting businesses still need development. This opens up opportunities for managers to provide supporting business facilities. Both BSB and Terboyo still depend on groundwater. However, BSB has a strong effort to preserve the environment. The Regional Government needs to carry out supervision, especially related to permitting the utilization of groundwater while requiring the industry to offset groundwater conservation efforts. The quality of the management of industrial estates does not depend on the status of ownership but the professionalism of the manager (vision and mission) and tenant satisfaction. KIW and BSB have proved to provide better service performance than Terboyo. However, as State Own Regulation, KIW, there are many strict regulations and supervisions, especially in land acquisition. Toward, the concept of land banking and regulations that support it are needed. The manager's commitment is very important to manage the industrial park following the master plan and business plan.

Acknowledgment

The authors gratefully acknowledge that the research is for all who contribute to this article, especially for our team in Research and Development Department in Bappeda Central Java Province and the management team of KIW, Terboyo, and BSB.

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