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Analysis of the performance of private economic zones in Philippines

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Abstract

The establishment of special economic zones has been a popular development policy tool for many developing economies like the Philippines. Special economic zones in the Philippines started as solely government-led and managed zones but eventually, the participation of private sector was allowed in 1995. As of 2016, majority of 348 active special economic zones are developed and managed by the private sector. Given the two decades of private sector participation, it is apt to analyze the economic contribution of these private special economic zones, particularly in comparison with public economic zones. This paper evaluates the performance of private and public economic zones using indicators on investments, exports, and employment. The increasing number of private economic zones are instrumental in driving the growth in investments, exports, and employment from 1995-2015. The analysis at zone level shows that while private economic zones deliver significant outcomes, public economic zones continue to play a major role. However, these findings are based on descriptive analysis. Further study using more sophisticated estimation techniques is required to assess the effectiveness of economic zones.

Keywords: Special Economic Zones; Investments; Exports; Employment

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1. Introduction

Special economic zones (SEZs) are centerpiece of economic development policy around the world. The number of special economic zones worldwide is estimated to be around 4,300 zones in 2015 (The Economist, 2015). The nomenclature of special economic zones varies among different countries and includes the common types such industrial parks, free trade zones, export processing zones, and business parks.

Most of the countries have started implementing special economic zone strategy as an effort to liberalize the economy, capture foreign investments, and increase exports. As the economies continue forward into liberalization and deregulation, the underlying goals of these economic zones have consequently evolved from mainly export-oriented to high technology and innovation-oriented zones. Furthermore, the management of zones have changed from government-initiated or government-operated to public-private partnership or purely private.

In the Philippines, economic zones were instituted in the late 1960s as part of the export-oriented-industrialization strategy. The first export processing zone, Bataan Export Processing Zone (BEPZ) was established in 1972 and four more economic zones were created in the succeeding years: Baguio City Export Processing Zone (BCEPZ) and Mactan Export Processing Zone (MEPZ) in Cebu in 1979, and Cavite Export Processing Zone (CEPZ) in 1986. From 1970s to early 1990s, economic zones were created and operated by the central government. In 1995, the development and management of economic zones were opened to the private sector through the enactment of Special Economic Zones of 1995. The same act also established the Philippines Economic Zone Authority (PEZA), the government agency that manages public economic zones and administers incentives to developers and locators within the special economic zones. As of 2016, the number of economic zones stood at 348 zones and majority of these zones are developed and managed by the private sector. The current Duterte administration aims to create additional special economic zones all over the country. PEZA is currently considering the plan to establish two new public economic zones per region (Mercurio, 2017).

Considering two decades of private sector participation in the development and management of special economic zones, it is therefore necessary to examine the performance of private economic zones, particularly, in comparison to the government-managed economic zones. This paper analyzes the performance of private and public economic zones using data on investments, exports, and employment. This paper aims to answer the following research questions: How do private and public economic zones perform in terms of investment, exports, and employment from 1995-2015? Are there any variations in performance? Are private economic zones more effective than public economic zones? The findings of this exploratory study can potentially serve as a useful input in policy-making, specifically, considering the government plan to build more public economic zones.

2. Review of related literature

Special Economic zones are commonly defined geographic area with differentiated rules and regulations from the national territory which are commonly instituted to attract investments, promote exports, and

generate employment (Carter and Harding, 2011; Baissac, 2011). Special economic zones come in various forms which include export processing zones free zones, free ports, foreign trade zones, export processing zones, trade and cooperation zones, and economic technological development zones (Baissac, 2011).

Over the past years, special economic zones have evolved, specifically, in terms of zone objective, incentives, structure, location, and ownership (Aggarwal, 2010). In terms of objective, establishment of SEZ have developed from facilitating trade and generating employment to fostering high-skilled and high-technological activities, stimulating economic activity, and diversifying export composition. The incentives within SEZs have also evolved from traditional tax-related incentives to various incentives such as infrastructure, services, industrial policies, labor policies, and corporate taxation. The structure of SEZs has also advanced from stand-alone industrial estates to integrated industrial townships. The economic activity within SEZ has also evolved from trade-oriented and labor-intensive to capital intensive to high-technology intensive SEZ. The location pattern of SEZs also changed from areas that are located near the port areas to various parts of the country with the aim of integration with host economies. The ownership and management of SEZ started as government-created and management but starting from 1980s, privately-developed and managed zones have emerged.

The inclusion of private sector in the development of management of economic zones can be attributed to both push and pull factors (Farole, 2011). The push factors include difficulty for many countries to cover the associated costs of economic zones and need to revitalize failing economic zones programs. The pull factor involves the opportunity to profit for the private companies from real estate ventures and services to the firms. The first private economic zone is established in Dominican Republic in 1969 and this model was followed by other Latin American countries such as Costa Rica, El Salvador, Honduras, Nicaragua, Guatemala, and Colombia (Farole, 2011). Asian countries like Thailand, Philippines, and Vietnam have initiated private economic zones from 1990s. The number of private zones in developing and transitioning economies has increased from 25 % of zones in 1980s to 62 % in 2007 (FIAS, 2008).

The comparison of efficacy of public economic zones over private economic zones or vice-versa is a highly debated topic, although anecdotal evidence shows that private SEZs are likely to be more effective (Baissac, 2011; FIAS, 2008). However, no comprehensive empirical analysis has been conducted to address this question. Private economic zones might have successful business operation but offer limited or negative economic contribution. On the other hand, public economic zones may fail to deliver profit but provide socio-economic impact.

Assessing the performance of economic zones is often difficult and context-specific. To evaluate the success of economic zones, a framework based on the outcomes of the objectives can be outlined (Farole, 2011). The framework identifies two types of outcomes: static and dynamic. Static economic benefits are relatively short term and pertain to outcomes when economic zones are used as instruments of trade and investment policy. The static economic benefits are often measured through the following indicators: employment, foreign-direct investments, foreign exchange through exports, and value-added. Meanwhile, dynamic economic benefits include non-traditional economic activities, hard and soft technology transfer, the encouragement of domestic entrepreneurship, and the promotion of economic openness.

3. Data and methodology

This paper uses data on investments, exports, and employment for both economic zone level and national level. The economic zone level data are sourced from PEZA. The national data on investments, exports, and employment are obtained from the Philippine Statistical Authority (PSA). The data on investments and exports were adjusted to reflect real values using 2006=100 price index.

This paper is an exploratory study on the performance of economic zones in the Philippines. The data on static outcomes are aggregated based on type of management, private or public. This study defines public economic zones as zones which are managed by the government, while private economic zones are zones which are developed and operated by private companies. Given the fact that huge majority of economic zones belong to private sector, this study anticipates that private economic zones will have better static outcomes than public economic zones. To establish the efficacy of private economic zones over public economic zones, this study explores the data on individual zone level. Analysis at zone-level data can also provide some insights on how first generation of public economic zones was affected by the entry of private economic zones.

4. Results and discussion

4.1. Special economic zones in the Philippines

In the Philippines, Special Economic Zones or ecozones are defined as selected 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 development of these economic zones aims to promote exports, create employment, and encourage investments, particularly foreign investments. There are five types of special economic zones: information technology parks/centers, manufacturing economic zones, agro-industrial economic zones, tourism economic zones, and medical tourism parks/centers.

The planning, developing, and operation of these economic zones are open to private sector as well as local government entities. However, each economic zone has specific area requirements and incentive scheme. In general, developers and firms are exempted local and national taxes. In lieu of these taxes, 5% of the gross income shall be to national government (3%) and local government (2%). To avail of this incentive, the developer must choose to locate outside the capital or in some economic zones like Information Technology Park and Center, outside Metro Manila or Cebu City.

The special economic zones in the Philippines have undergone significant transformation over the past decades. SEZs have evolved from government-controlled export processing zones to liberal economic zones that include private participation and wide spectrum of economic activities (Manasan, 2013). The first export processing zone (EPZ) is established in Mariveles, Bataan in 1972 with aim of fostering trade, accessing foreign exchange, and development of industrial base. Additional public economic zones were established in the following years: Baguio City Export Processing Zone (BCEPZ) and Mactan Export Processing Zone (MEPZ)

in Cebu in 1979, and Cavite Export Processing Zone (CEPZ) in 1986. These first generations of EPZ were highly-subsidized and in some cases, the government incur more costs than benefits (FIAS, 2008). The case of Bataan Export Processing Zone is an often-cited example of zone in which costs have significantly exceeded the benefits (Warr, 1989).

For more than two decades, the development and operation of economic zones lies solely on the government, however significant policy shift has occurred with enactment of Special Economic Zone Act of 1995. This act allowed the participation of the private sector in the development and management of economic zones. The act also modified the prevailing export orientation of the first-generation economic zone as it allowed firms to engage in non-export activities. Furthermore, in addition to traditional manufacturing activities, incentives were expanded to other activities such commercial/trade services, utilities and facilities, and real estates. Different economic zones with varied purpose were also created such special economic zones, industrial estates, export processing zones, and free trade zones free trade zones. The act also created the Philippine Economic Zone Authority (PEZA), a government agency tasked to promote investments, provide assistance, and facilitate incentives to investors or locators within the special economic zones. PEZA took over the management of existing public economic zones.

Figure 1 shows the cumulative number of economic zones from 1970 to 2016. There is a remarkable expansion of economic zones starting from 1996, the year after Special Economic Zone of 1995 was implemented. Around 70 % of the operating economic zones are established from 2006-2016.

Table 1 lists the number of active and planned economic zones as of July 2016. There are 348 special economic zones that are operating in the Philippines and additional 145 zones are being developed. Majority of the economic zones are either Information Technology (IT) Parks/Center with 234 zones or Manufacturing Economic Zones or Industrial Estates with 21 zones. The same trend could be observed with the types of economic zones that are currently in the pipeline. Almost 70 % of the planned economic zones are Information Technology Parks/Centers. PEZA amendments to extend incentives to IT Parks/ Centers and IT enterprises in 2000 have significantly contributed to the expansion of business processing and outsourcing(BPO) services industry in the Philippines (Raquiza, 2015).

Table 2 shows the number of economic zones based on type of management, public or private. Most of the economic zones in the Philippines are developed and managed by private sector. Only a few SEZ are under the government jurisdiction. PEZA currently operates four manufacturing economic zones: Baguio City Economic Zone, Cavite Economic Zone, Mactan Economic Zone, and Pampanga Economic Zone. Bataan Economic Zone is formerly under PEZA but was converted into Freeport Area of Bataan(FAB) in 2009 through Republic Act 9728 (AFAB, 2009). FAB is managed by the Authority of Freeport Area of Bataan(AFAB), a government-owned and controlled corporation. The developers of manufacturing economic zones are typically managing single economic zones except for Carmelray Industrial Corporation and Laguna Technopark Inc. with 2 zones each. The developers of IT Parks/Centers are operating multiple zones such as Robinsons Land Corporation with 8 zones, SM Prime Holdings, Inc with 7 zones, Ayala Land, Inc. with 7 zones, and Megaworld Corporation with 4 zones. These developers of IT Parks/Centers are concurrently the largest real estate companies in the Philippines. It is apparent that government's effort to develop BPO services

industry through IT Parks/Centers have seemingly impacted the real estate development, specifically the Filipino property developers and BPO operators (Raquiza, 2015).

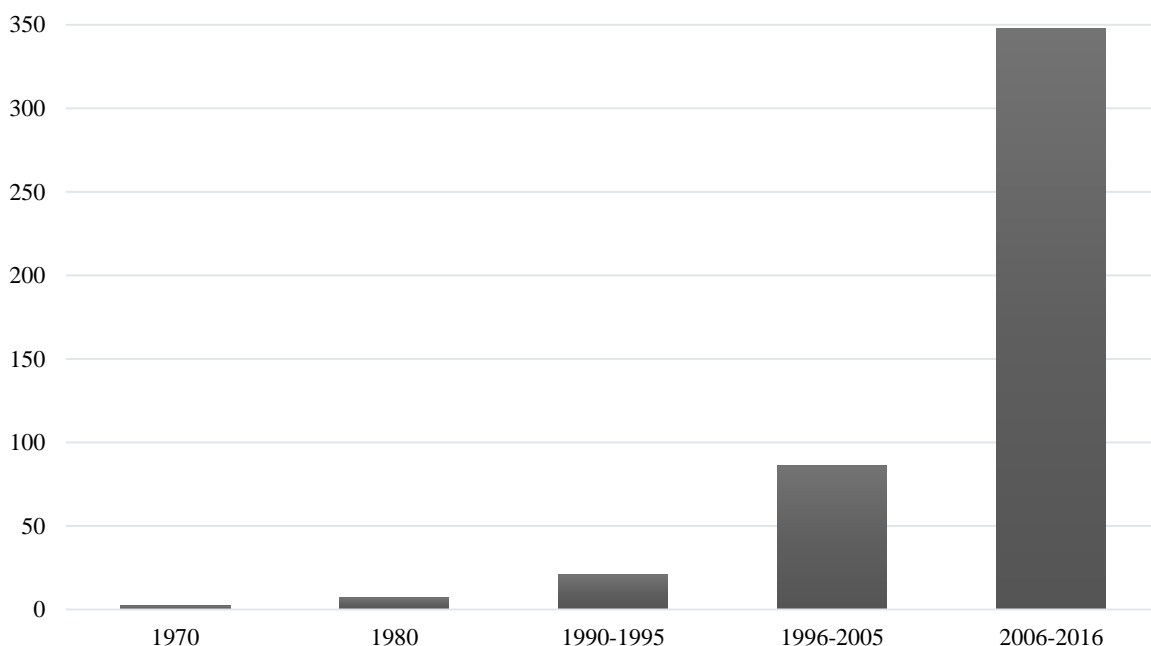


Figure 1. Cumulative Number of Economic Zones (Source: author’s construction based on PEZA statistics)

Table 1. Active and Planned Economic Zones

Types of Economic Zones	Active	Planned
Information Technology Parks/Centers	234	104
Manufacturing Economic Zone/ Industrial Estates	72	29
Agro-industrial Economic Zone	21	6
Tourism Economic Zones	19	6
Medical Tourism Parks/Center	2	
Total	348	145

Source: author’s construction based on PEZA statistics

Figure 2 displays the number of firms in public and private zones from 1970s-2016. The number firms located in private economic zones have significantly grew from 1996-onwards. This trend coincides with the surge in number of economic zones from 1996 as shown in Figure 1.

4.2. Evaluation of the performance of public and private economic zones based on static outcomes

Figure 3 shows the flow of investment from 1995-2015. At the national level, the flow of investment has increased by 104% from 1995-2015. The flow of investment has peaked in 1997 with 272 billion pesos but

have significantly dipped from 2000-2003. The sizable decline in investments in 2000-2003 is due to unstable political situation (Aldaba and Aldaba, 2010). The Estrada administration (1998-2001) was smeared by corruption charges which later led to its downfall in 2001. The succeeding Arroyo administration (2001-2010) was also frequently rocked by political scandals and had the lowest trust rating among all administration (Diokno, 2012). The flow of investments in private zones has grown by 150% from 1995-2015. Investments in private zones mirrors the national trend with downward movement in 2000-2003 and growth trajectory from 2004-2011. Meanwhile, the flow of investment in public economic zones have remained flat and lower than investments in private zone. Nevertheless, the investments in public economic zone have managed to grow by 77% from 1995-2015.

Table 2. Type of SEZ Management

Type of SEZ	Public	Private
IT Parks/Centers	6	228
Manufacturing SEZ	9	63
Agro-industrial SEZ	1	20
Tourism SEZ	0	19

Source: author's construction based on PEZA statistics

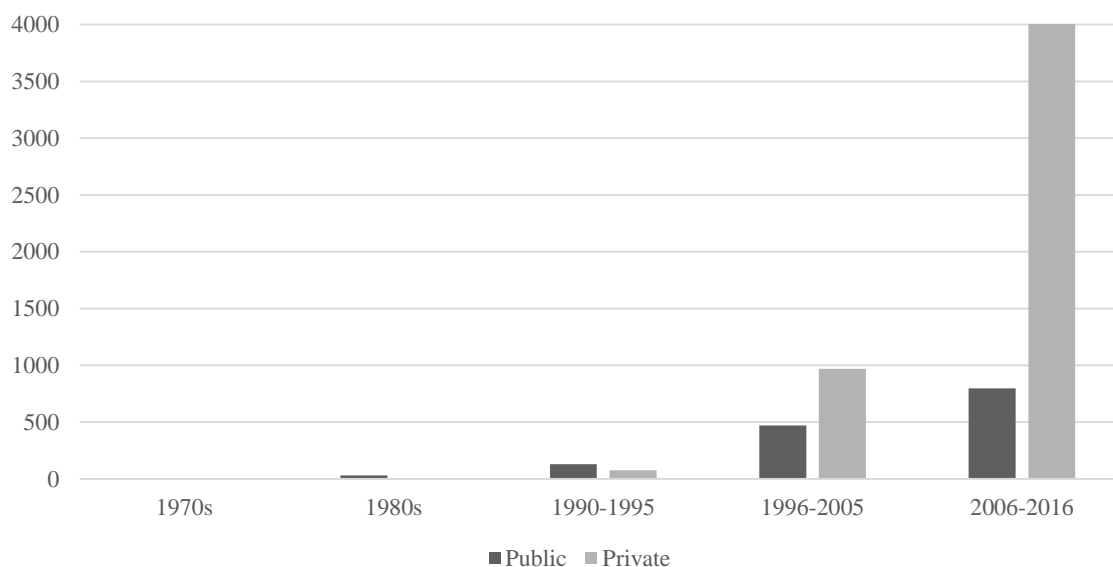


Figure 2. Number of Firms in Public and Private Economic Zones (Source: author's construction based on PEZA statistics)

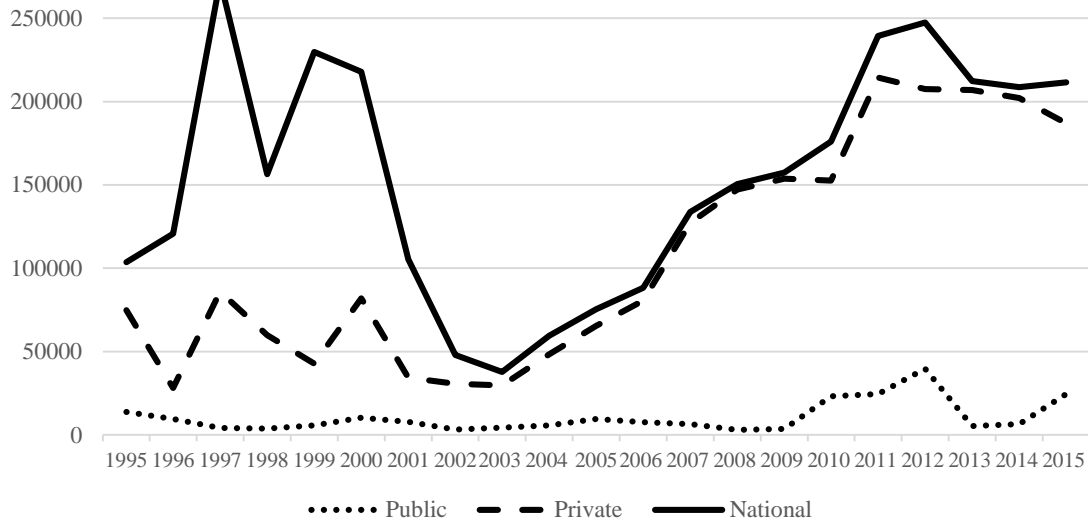


Figure 3. Flow of Investment (Million PHP): National Level and Economic Zones (Source: author’s construction based on PEZA statistics)

Figure 4 illustrates the volume of exports at national level and economic zones level. The volume of exports was on the upward trend from 1995-2007 but declined from 2008-2015. At the national level, the amount of exports has increased by 273% from 1995-2015. The amount of export at the national level peaked at 40 billion in 2007. The amount of export from the private economic zones is comparable to the national level growth trajectory. The exports from private economic zones have increased by 884% from 1995-2015. On the other hand, the exports from public economic zones have declined by 24% from 1995-2015. In 1995, exports from public economic zones were slightly higher than private economic zones but starting from 1996, exports from private economic zones have grown significantly and further widen the gap between private and public economic zones.

Figure 5 displays the total employment within economic zones. The number of direct employment generated within economic zones has consistently grown from 1995-2015 with a remarkable 860% growth rate. Employment within public economic zones is higher from 1995-1999 but starting from 2000, employment within private economic zones have significantly increased. From 1995-2015, employment in public economic zones has expanded by 43%, while employment within private economic zones has increased by astonishing 3774%. The huge jump in employment within private economic zones from 2000 coincides with the expansion of incentives to IT Parks/Centers and BPO services industry. From then on, BPO services industry has turned into a billion-dollar industry and generated significant employment opportunities, particularly, with skilled labor (Raquiza, 2015). In 2010, BPO industry in the Philippines provided the most number of employment in the world with more than 500,000 employees and was then declared as the world’s BPO capital (Natividad, 2015). Unlike in the investments and exports, the share of employment generated within economic zones is relatively low at 3%. However, this does not necessarily

mean that economic zones have marginal effect on employment. The level of employment generated by economic zones will probably be higher if indirect employment will also be considered. But due to lack of data availability and difficulty in estimation, data for indirect employment is not included.

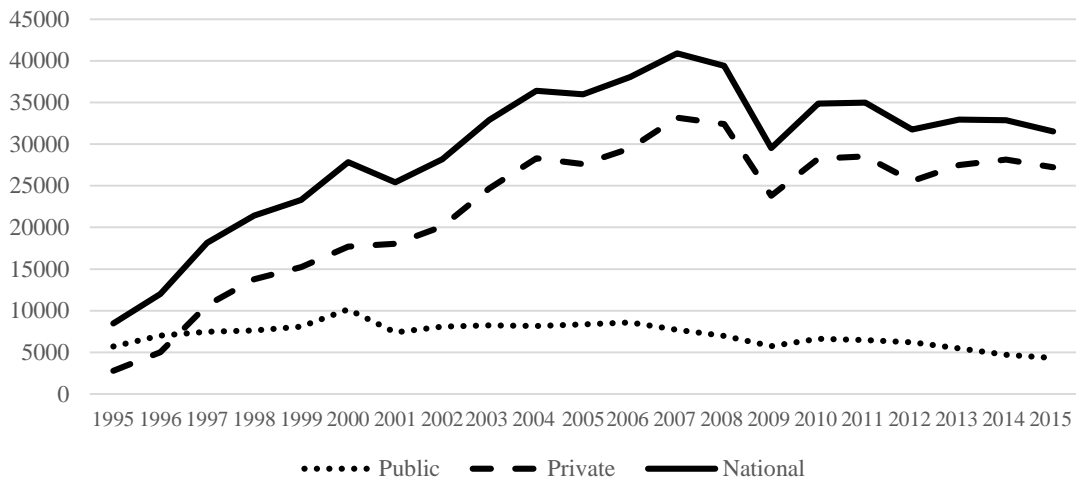


Figure 4. Volume of Export (Million USD) in Economic Zones: National and Economic Zones (Source: author’s construction based on PEZA statistics)

The analysis based on aggregated level denotes private economic zones are undeniably instrumental in driving the growth in national level of investments, exports, and employment. From 1995-2015, private economic zones have consistently contributed a major share of investments, exports, and employment. In comparison with public economic zones, private economic zones have consistently deliver better outcomes. This finding supports the earlier studies (Baissac, 2011; FIAS, 2008) that emphasize the effectiveness of private economic zones over public economic zones. However, this does not necessarily mean that public economic zones are inferior to private economic zones. As expected, the larger number of private economic zones have higher combined statistics.

The examination also suggests the existence of competition between private economic zones and public economic zones. From the point of view of economics, competition is good and beneficial, particularly, for the firms and workers. Prior to 1995, potential locator firms who wish to invest in economic zones are left with limited choices. Participation of the private sector has increased the number of economic zones and provided potential locator firms with better options and higher chances of finding zones that can meet their requirements. In addition to this, some investors prefer to transact with private company than government offices to avoid red tape and corruption (Farole, 2011). Subsequently, the increase in number of economic zones and firms can lead to additional job opportunities for the workers. Furthermore, the number and presence of economic zones is positively associated with increase in exports and foreign direct investments (ADB, 2015). As illustrated in the case of the Philippines, the growth in number of economic zones corresponds with increase in number of firms, investments, export, and employment.

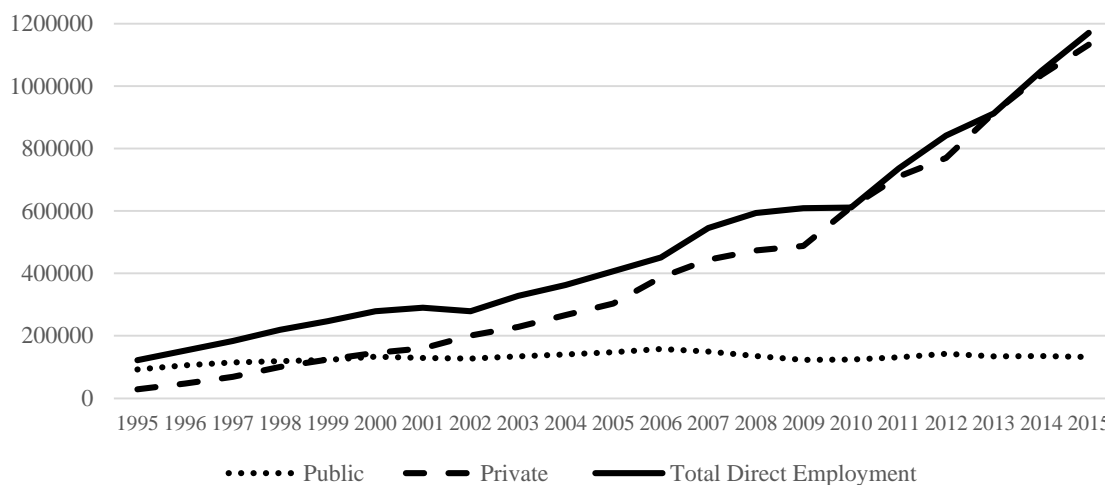


Figure 5. Number of Direct Employment in Economic Zones (Source: author’s construction based on PEZA statistics)

To ascertain whether private economic zones are more effective than public economic zones and how first generation of public economic zones are affected by the entry of private economic zones, it is necessary to delve into indicators at individual zone level. Table 3 displays the ranking of economic zones with highest total investments, exports, and employment from 1995-2015. The top 10 zones with highest total investments from 1995-2015 are private economic zones except for Cavite Economic Zone. Furthermore, the top 10 zones with highest total investments are also manufacturing economic zones with exception of Newport City Cyber Tourism Zone and E-Square IT Park. The top 10 zones with highest total exports are also private economic zones, however, three public economic zones rank high from top 3-5: Baguio City Economic Zones, Cavite Economic Zone, and Mactan Economic Zone. The top 10 zones with highest total volume of exports are all manufacturing SEZ. In terms of employment, the top 10 zones which have generated the most number of employment are dominated by public economic zones by Cavite Economic Zones, Mactan Economic Zone, and Bataan Economic Zone. These findings at zone-level substantiate the result at aggregate level on effectiveness of private economic zones, particularly in terms of investments and exports. On the hand, the result also provides evidence on the significance of public economic zones in employment generation. The first generation of public economic zones most significant contribution is employment generation and foreign exchange reserves (ADB, 2015).

Figure 6 shows the number of firms by economic zone location. Public economic zones have constantly attracted a many locator firms, particularly the Cavite Economic Zones and Mactan Economic Zone. In 1990s, the top three zones that drew the most number of firms are the following: Cavite Economic Zone with 107 firms, Mactan Economic Zone with 52 firms, and Laguna Technopark-SEZ with 43 firms. In 2000s, the top three economic zone destinations are the following: Cavite Economic Zone with 155 firms, Laguna Technopark – SEZ with 107 firms, and Calamba Premiere International Park – SEZ with 58 firms. In 2010s, the top zone locations are the following: Cavite Economic Zone with 126 firms, Laguna Technopark – SEZ with 107 firms, and E-Square IT Park with 64 firms.

Table 3. Top Economic Zones from 1995-2015

Rank	INVESTMENTS		EXPORTS		EMPLOYMENT	
	Zone	Total	Zone	Total	Zone	Total
1	Laguna Technopark - SEZ	289,113	Laguna Technopark - SEZ	114,518	Cavite Economic Zone	1,466,941
2	First Philippine Industrial Park	139,470	Gateway Business Park	57,509	Laguna Technopark - SEZ	1,337,902
3	Baguio City Economic Zone	110,337	Baguio City Economic Zone	49,005	Mactan Economic Zone	988,919
4	Gateway Business Park	85,534	Cavite Economic Zone	45,735	Light Industry & Science Park I	372,450
5	Cavite Economic Zone	74,053	Mactan Economic Zone	33,583	Bataan Economic Zone	308,338
6	Taganito Special Economic Zone	72,241	Carmelray Industrial Park I	24,291	Gateway Business Park	299,725
7	Light Industry & Science Park I	67,593	Amkor Technology - SEZ	23,270	Carmelray Industrial Park I	274,815
8	Carmelray Industrial Park I	59,253	Leyte Industrial Development Estate	21,173	Eastwood City Cyberpark	258,768
9	Newport City CyberTourism Zone	59,104	Light Industry & Science Park I	16,052	First Cavite Industrial Estate	245,365
10	E-Square I.T. Park	50,947	Calamba Premiere International Park	14,003	Lima Technology Center	244,750

Source: author's construction based on Philippines Economic Zones Authority (PEZA) statistics

The analysis at zone level confirms the results at aggregate level: private economic zones deliver more significant outcomes than public economic zones. However, it is also evident that some public economic zones, specifically Baguio Economic Zone, Cavite Economic Zone and Mactan Economic Zone continue to play a significant role and deliver strong outcomes. The relatively strong performance of these public economic zones signifies resiliency against competition from private economic zones. The relative success of these public economic zones can serve as useful guide for the government's plan to build more public economic zones. In the case of Cavite Economic Zone, good location and strong support from the local government drive its growth (JICA, 2004). Cavite is in Southern Luzon region wherein massive infrastructure projects were pursued to accelerate the industrialization. The local government of Cavite has also been active in inviting investors. The case of Mactan Economic Zone highlights the importance of transition of economic activities (Moran, 2011). Mactan Economic Zone began with low-skilled intensive industries such as garment, shoes, and toys but gradually shifted to middle-skill intensive industries such electronics, machinery and medical equipment. The case of Baguio Economic Zone also emphasizes the significance of the transformation of economic activities from low-skilled industry of garment to high-skilled industries of IT

and electronics (Moran, 2011). Furthermore, the development of Baguio Economic Zone was steered by an anchor firm, Texas Instrument.

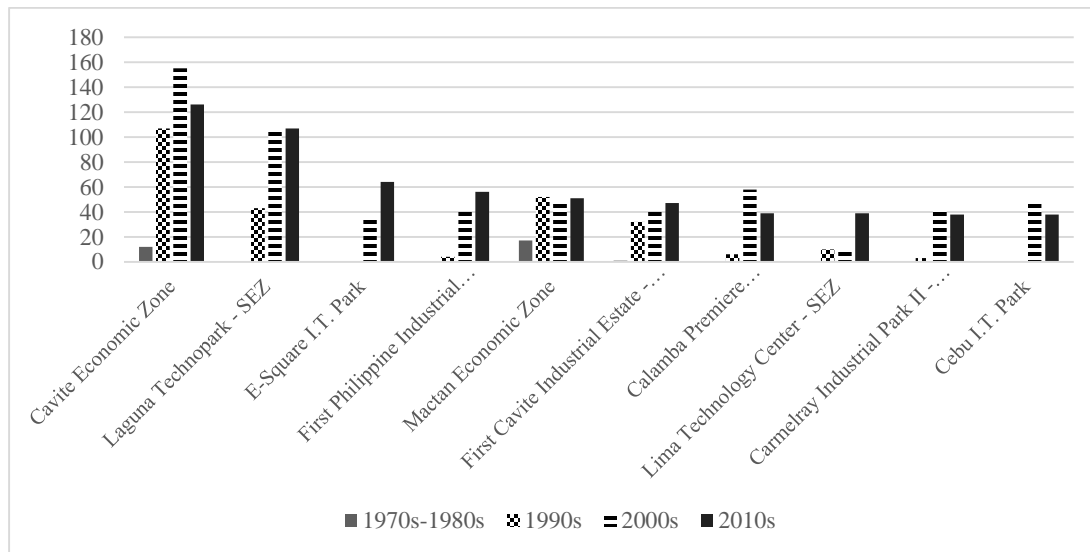


Figure 6. Number of Firms by Economic Zone: 1970s-2016 (Source: author’s construction based on PEZA statistics)

While this finding provides useful insight on the contribution of private economic zones and resiliency of public economic zones, the study is limited to descriptive analysis. To provide concrete evidence on the efficacy of private economic zones over public economic zones as well as to determine the resiliency of public economic zones, it is necessary to conduct further study using more robust econometric techniques.

5. Summary and conclusion

This paper presented the significant background information about the special economic zones in the Philippines. The special economic zones in the Philippines have undergone significant transformation over the past decades. SEZs have evolved from government-controlled export processing zones to liberal economic zones that include private participation and wide spectrum of economic activities. Majority of the 348 economic zones are IT Parks/Centers which are developed and managed by private sectors.

This paper evaluated the performance of private economic zones and public economic zones from 1995-2015 based on static outcomes. The analysis shows that private economic zones are instrumental in driving the growth in national level of investments, exports, and employment. From 1995-2015, private economic zones have consistently contributed a major share of investments, exports, and employment. However, this should not be interpreted as relative underperformance of public economic zones. There are more private economic zones in the analysis so aggregated outcomes are higher. The analysis also suggests the existence

of competition between private economic zones and public economic zones. This competition has positive impact on the firms, workers, and whole economy.

To further examine the performance of private economic and zones and public economic zones, this paper conducted analysis at the zone level. The finding at the zone level substantiate the results at aggregate level: private economic zones deliver better outcomes than public economic zones. However, it is also apparent that some public economic zones, specifically Baguio Economic Zone, Cavite Economic Zone and Mactan Economic Zone have been resilient amidst the increasing number of private economic zones. In particular, these public economic zones play an important role in employment generation.

This study is mainly descriptive but useful implications can be outlined, especially for the current administrations plan to create more public economic zones. Based on the static outcomes of investment, export, and employment, private economic zones are found to deliver better impact. Thus, the government should continue to encourage private sector participation in economic zone development and management. On the other hand, the analysis also shows that some public economic zones continue to play a significant role, particularly, in generating jobs. The government should carefully examine and emulate the factors that contribute to the success of some public economic zones.

Given the limitation of the current study, areas for further study can be identified. To establish the efficiency of private economic zones and resiliency of public economic zones, it necessary to conduct analysis using quantitative techniques. Furthermore, it also noteworthy to extend the analysis using not only static outcome but also dynamic outcomes. Considering the government plan to build more public economic zones, it is also highly-recommended to perform cost-benefit analysis.

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