

Global Experiences with Special Economic Zones

Focus on China and Africa

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Abstract

This study briefly summarizes the development experiences of special economic zones in China and Africa, the lessons that Africa can learn from China, and the preliminary results of the Chinese investments in special economic zones in Africa. The study makes recommendations on how to unleash the power of special economic zones and industrial zones in Africa through strategically leveraging the Chinese experiences. The success factors of Chinese special economic zones include the strong and long-term commitment of the government, a conducive business environment in the zones, strategic locations, technology upgrading and skills training, and strong linkages with the local economy. However, the Chinese experiences highlight some pitfalls to avoid, such as the “mushroom approach” and high-level overlaps at the later stage, environmental degradation, and the unbalance between industrial development and social

dimensions. This calls for a bigger role for the market. Sub-Saharan Africa’s experience with traditional economic zones has been relatively poor, except in a few countries, such as Mauritius. The key challenges include the poor regulatory and institutional framework, lack of effective strategic planning, weak governance and implementation capacity, and inadequate infrastructure, among others. Since 2006, China has implemented special economic zone projects globally, including in four countries in Sub-Saharan Africa. It is still too early to conduct a full assessment of these projects; however, the evidence shows that some zones have begun to attract investments and make important contributions to the local economy. The main challenges include access to land, regulatory barriers, resettlement and coordination issues, and lack of external infrastructure.

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Special economic zones (SEZs) or industrial parks can be an effective instrument to promote industrialization if implemented properly in the right context, as shown in some of the emerging countries, particularly those in East Asia. More and more countries have begun to implement this instrument for their industrialization process, especially as a way of attracting foreign direct investment (FDI) mostly in the manufacturing sector, creating jobs, generating exports and foreign exchange, and so on. So far, the results are quite mixed with some countries very successful such as China, Singapore, Malaysia, the Republic of Korea, Jordan, Mauritius, etc., and others still struggling, in particular those in Sub-Saharan Africa (SSA).

This paper is intended to provide a brief overview of the concept of SEZs, the different SEZ experiences in China and Africa, the key lessons that Africa can learn from China, as well as the recent Chinese zones in Africa. Some key elements for success are provided as well. For this purpose, the paper is structured in the following way: section 1 starts with definitions and key global lessons of SEZs, then followed with the Chinese experiences (section 2), African experiences (section 3), the lessons that Africa can learn from China (section 4), then concludes with some insights on the Chinese zones in Africa, which were established in relatively recent years (section 5).

I. Definitions and Global Lessons of SEZs

There is a big variation of “special economic zones (SEZs)”. The term “SEZ” here covers a broad range of zones, such as free trade zones, export-processing zones, industrial parks, economic and technology development zones, high-tech zones, science and innovation parks, free ports, enterprise zones, and others.

The basic concept of SEZs includes several specific characteristics: (a) it is a geographically delimited area, usually physically secured; (b) it has a single management or administration; (c) it offers benefits for investors physically within the zone; and (d) it has a separate customs area (duty-free benefits) and streamlined procedures (FIAS 2008). In addition, an SEZ normally operates under more liberal economic laws than those typically prevailing in the country. In general, SEZs confer two main types of benefits, which in part explain their popularity: “static” economic benefits such as employment generation, export growth, government revenues, and foreign exchange earnings; and the more “dynamic” economic benefits such as skills upgrading, technology transfer and innovation, economic diversification, productivity enhancement of local firms, etc. (Zeng 2010).

SEZs are typically established with the aim of achieving one or more of the following four policy objectives (Madani 1999; Cling and Letilly 2001; FIAS 2008; Zeng 2010; Farole and Akinci 2011; Fuller and Romer 2012): (i) attracting foreign direct investment (FDI); (ii) serving as “pressure valves” to alleviate large-scale unemployment; (iii) supporting a wider economic reform strategy; and (iv) acting as experimental laboratories for the application of new policies and approaches. Economists also believe that SEZs can achieve industrial development in a more efficient and effective way. In particular, investing in SEZs can: 1) provide a bundling of public services in a geographically concentrated area; 2) improve the efficiency of limited government funding/budget for infrastructure; 3) facilitate cluster development, or agglomeration of certain industries; and 4) propel urban development – providing conducive living conditions for workers and for diaspora science and technical personnel, and conglomeration of services, including obtaining economies of scale for environmental services such as water treatment plants and solid waste treatment plants. Thus the zones can be conducive to job

creation and income generation, and potentially, to protecting the environment and promoting green growth and eco-friendly cities (Lin and Wang 2014).

Empirical research shows that many SEZs have been successful in attracting FDI and generating jobs and exports and demonstrate marginally positive cost-benefit effect (Chen 1993; Jayanthakumaran 2003; Monge-Gonzalez, et al. 2005; Warr 1989; Zeng 2010; Fuller and Romer 2012). However, many scholars still view zones as second or third-best options for development, whose success is confined to specific conditions over a limited time horizon (Hamada 1974; Madani 1999) and there are some concerns that zones may become “enclaves” (Kaplinsky 1993).

The first modern industrial zone was established in Shannon, Ireland in 1959. Since the 1970s, starting in the East Asia and Latin America regions, SEZs - initially mostly in the form of export processing zones (EPZs) - have been established to attract FDI in the labor-intensive manufacturing sectors to encourage exports (Farole 2011). This is a divergence from the traditional import-substitution policies. EPZs are normally fenced-in estates with strict customs controls and most of the products (normally over 80%) produced in the zones have to be exported. This model was successful in many countries, such as the Republic of Korea; Taiwan, China; Vietnam; Bangladesh; Mauritius; Dominican Republic; El Salvador; etc. Many new zones have been set up since, and by 1986, according to the International Labor Organization (ILO), there were 176 zones in 47 countries; and by 2015 it is estimated that there are around 4,300 zones in over 130 countries (The Economist 2015).

However, EPZs also have their limitations – they tend to become enclaves, without much linkage with the local economy and rely heavily on fiscal incentives. Given these limitations and the changing global macroeconomic and regulatory environment, many countries began to move towards the modern concept of SEZs which have wider size, more linkages with the local economy and are multifunctional and less reliant on incentives. Some countries, such as China, even declared a city or a province as an SEZ to test market-oriented economic reforms. Such an approach played an important catalytic role in the rapid economic growth and transformation in China and other Asian tigers. The SEZ record in Africa is more mixed. Except for the Mauritius success story and some modest achievements in Lesotho, Kenya and Madagascar, the vast majority of SEZs in SSA have not had a transformative impact.

In order for the zones to be successful, the zone programs must be adapted to the host country’s specific situations, and build on its comparative advantages. The key is to make the zones an integral part of the long term development strategy, taking into account the commercial sustainability, target markets and businesses, growth trajectory, infrastructure availability, skills and technology innovation capability, and environmental sustainability. This is particularly important since economic transformation can take decades. In this regard, it is important for policy makers to undertake joint actions in order to promote synergies and coordination among the different players. Policy makers and practitioners both at the central and local levels need to make concerted efforts to:

- Make economic zones effective in attracting quality investments,
- Ensure zones are economically viable and deliver positive externalities, including catalyzing economic reforms, facilitating learning, innovation, upgrading, and structural transformation, and
- Ensure the sustainability of economic zones from an institutional, social, and environmental perspective.

II. China’s Experience with Special Economic Zones

China might be the most successful country in terms of leveraging SEZs to achieve far-reaching economic transformations. It started with four zones at the initial stage to experiment with market-oriented economic reforms which involves laws, regulations, taxation, land, labor, finance, customs, immigration, etc. After the initial successes, the zone program and relevant reforms were gradually rolled out throughout the nation. Together with the numerous industrial clusters, the SEZs have contributed significantly to national GDP, employment, exports, and attraction of foreign investment. The SEZs have also played important roles in bringing new technologies to China and in adopting modern management practices (Zeng 2010).

While most lessons in China are positive, such as gradualism with a pragmatic and experimental approach; reform-oriented mindset; strong commitment and active facilitation of the state; open-up to FDI; sound infrastructure; effective marketing and investment promotion; and continuous technology learning and upgrading, etc. (Zeng 2010), there are also some adverse lessons for the late-comers to avoid, such as the “mushroom approach” at the local levels and high-level overlaps of various zones at the later stage; environmental degradation; and limited urban-industry integration, with some exceptions such as the Suzhou Industrial Park.

II.1 An Overview of China’s SEZ Programs

After decades of centrally planned economy, the Government of China adopted the Open Door policy in 1978, and in July 1979, it decided that Guangdong and Fujian provinces should take the lead in opening up to the outside world and implement “special policies and flexible measures”. By August 1980, Shenzhen, Zhuhai, and Shantou in Guangdong Province were designated as special economic zones, followed by Xiamen in Fujian Province in October 1980. The four SEZs were quite similar in that they comprised large areas within which the objective was to facilitate broadly based, comprehensive economic development, and they all enjoyed special financial, investment, and trade privileges. They were deliberately located far from the center of political power in Beijing to minimize both potential risks and political interference. They were encouraged to pursue pragmatic and open economic policies that would serve as a test for innovative policies that, if proven successful, would be implemented more widely across the country.

The combination of favorable policies and the right mixture of production factors in the SEZs resulted in unprecedented rates of growth in China. Against a national average annual GDP growth of roughly 10 percent from 1980 to 1984, Shenzhen grew at a phenomenal 58 percent annual rate, followed by Zhuhai (32 percent), Xiamen (13 percent), and Shantou (9 percent). By 1986, Shenzhen had already developed rudimentary markets in capital, labor, land, technology, communication, and other factors of production (Yeung, Lee, and Kee 2009).

The initial opening to trade and investment having proved successful, China resolved to open its economy further. In 1984, the central authorities created a variant of SEZs, which they dubbed economic and technological development zones, informally known as China’s national industrial parks. The difference between the comprehensive SEZs and the ETDZs is one of scale. A comprehensive SEZ often consists of a much larger area (sometimes an entire city or province). From 1984 to 1988, 14 ETDZs were established in additional coastal cities and in the following years in cities in the Pearl River Delta, the Yangtze River Delta, and the Min Delta in Fujian. Meanwhile, in 1988, the entire province of Hainan was designated as the fifth comprehensive SEZ, and in 1989 and 2006, Shanghai Pudong New Area and Tianjin Binhai New Area were granted such status as well.

Subsequently, in 1992, the State Council created another 35 ETDZs. In doing so, they sought (a) to extend the ETDZs from the coastline to inland regions and (b) to focus less on fundamental industries and more on technology-intensive industries. By the end of 2008, there were 54 state-level ETDZs. By March 2013, there are 191 national level ETDZs in China. ETDZs are typically located in the suburban regions of a major city. Within the ETDZ, an administrative committee, commonly selected by the local government, oversees the economic and social management of the zone on behalf of the local administration (China Knowledge Online 2009).

In addition to the special economic zones mentioned above, there are many other types of SEZs in China at various levels, which include high-tech industrial development zones (HIDZs), free trade zones (FTZs), export-processing zones (EPZs), and others. Each has a different focus.

The SEZs have made crucial contributions to China's success. Most of all, they—especially the first ones—successfully tested the market economy and new institutions and established role models for the rest of the country to follow. By 1992, the concept of openness had been extended to the entire coastal region and to all capital cities of provinces and autonomous regions in the interior, and various types of SEZs had begun to spring up throughout the country. Thus, when Deng Xiaoping made his famous southern tour that year, the mission that had started with the creation of the first five SEZs had in many respects been accomplished: the “special” economic zones by that time were no longer so special (Yeung, Lee, and Kee 2009).

Economically, SEZs have contributed significantly to national GDP, employment, exports, and attraction of foreign investment and new technologies, as well as adoption of modern management practices, among others. It was estimated those in recent years, SEZs (including all types of industrial parks and zones) at national levels accounted for about 22% of national GDP, about 46% of FDI, and about 60% of exports and generated in excess of 30 million jobs (Zeng 2010). An analysis of panel data of 270 cities at the prefecture level over 23 years shows that the introduction of a major zone in a city led to an increase in the GDP level of 12% on average in the post-reform years, and the effect is depending on the type of zone. The long-term (cumulative) effect of a SEZ could be an increase of about 20% in the GDP level (Alder, S., et al., 2013). Another analysis (Wang 2013) of 321 prefecture-level cities between 1978 & 2008 shows: a) on average, a SEZ program increases the level of per capita FDI by 21.7% and the growth rate of FDI by 6.9 percentage points; b) the SEZ program generates significant agglomeration economies - it increases the technological progress of the earlier treated municipalities by 1.6 percentage points compared to the later ones; and c) the average wage of workers in the treatment group increases by 8% more than in the control group while there is a 5% rise in the cost of living.

The success of state-level SEZs spurred the speedy development of new ones by different levels of governments. By 2004, there were nearly 7,000 industrial parks in China. To curb the blind expansion of industrial parks, China stepped up its efforts to clean up unqualified industrial parks. By the end of 2006, the number of industrial parks had been reduced to 1,568, among which 222 are state-level zones. The total planned area had been reduced from 38,600 square kilometers to 9,900 square kilometers (74.4 percent less) (China Knowledge Online 2009).

II.2 Major Factors for Success and Lessons Learned

Many factors contributed to the success of China's SEZs, and in every case, the situations and factors might be different. However, their success draws on some common key elements and points to some common lessons.

Strong commitment and support of the government to pilot market-oriented economic reforms.

Despite the high uncertainty at the beginning, the top leaders were determined to make changes, through a gradualist approach. Such a determination ensured a stable and supportive macro-environment for reform and for the new Open Door policies to prevent political opposition and temporary setbacks from undermining the economic experiment with the special economic zones. The central government had tried to decentralize its power and help create an open and conducive legal and policy environment for the SEZs. At the same time, the local governments made a great effort to build a sound business environment. They not only put in place an efficient regulatory and administrative system but also good infrastructure for the zones, such as roads, water, electricity, gas, sewerage, telephone, and ports, which in most cases involve heavy government direct investments, especially in the initial stages (Zeng, 2010). Beyond the basic infrastructure, local governments also provide or facilitate various business services to many SEZs, especially to the HIDZs and ETDZs; these include, among others, accounting, legal, business planning, marketing, import-export assistance, skills training, and management consulting. For example, in Suzhou Industrial Park, the government offers seed money, information services, laboratories, product testing centers, technology trading rooms, and the like for start-ups (Box 1).

Box 1. Suzhou Industrial Park – A Great Success of Combining Local Strengths with Global Knowledge

China-Singapore Suzhou Industrial Park (Suzhou IP) was built in Suzhou in 1994. The core district, covering an area of 80 km², was developed jointly by the Chinese and Singaporean governments. Under the master plan, it is free to adapt or adopt the urban township concept and management practices of Singapore and other countries. It is the only project in China that involves borrowing of such a nature. Planning, investment promotion and public administrative policy are all geared towards creating a pro-business environment. Suzhou IP consists of the Suzhou Export Processing Zone, a biotech and nanotech park and an international sci-tech park. The park encourages the development of electronics, mechanical-electronic integration, pharmaceuticals, fine chemicals, precision engineering and new materials.

In 2012, GDP of the park grew 10.7% from the previous year to RMB 173.8 billion, accounting for 14.47% of Suzhou's total. It ranked third among the state-level economic and technological development zones in China, after Guangzhou Development District and Tianjin Economic-Technological Development Area (TEDA). In part because it is one of China's manufacturing hubs for LCD panels and ICs, the output value of the IT and IC industries in the park contributed nearly 3% and 16% of China's total IT and IC value in 2008. By the end of 2012, more than 86 Fortune 500 enterprises had put money into 145 projects in Suzhou IP. The park has attracted companies including Siemens, Nokia, Fujitsu, Mitsubishi, Samsung, Daimler Chrysler, BP and ZF.

Besides the advanced management practices learned from Singapore, from the initial stage, the Park also benefited from a very conducive business environment fostered by the local government.

- *Investment.* The Suzhou government set up a venture capital of 100 million yuan to provide seed money; meanwhile, the park attracted overseas venture capital to invest in the park. In addition, banks and financial organizations, such as the China Trust and Investment Company, the Chinese Commercial and Industrial Bank, and the Transportation Bank, also provided loans to small private firms with more dynamism and flexibility.
- *Infrastructure building.* The park built an incubation site of 38,000 square meters with Internet connections every 10 square meters, conference rooms, a multimedia room, a technical trading room, information centers, product testing centers, public labs, and so on. In addition, the park also provides resources such as an accounting office, law firm, business planning space, and other services for all the enterprises, reducing the burdens on start-ups.

- *Import-export service.* The park provides free import-export services, including customs declaration, bonded warehouse, and so on.
- *Human resources support.* The park has a labor market, which holds three big recruiting events each month and has a human resource database. In addition, some recruiting firms also help to identify qualified people.
- *Management consulting services.* University professors and successful entrepreneurs give management and business training, including seminars and case studies. To promote products, the park set up networks to help relevant enterprises introduce their products, organizes public media visit, and hosts exhibitions. Most importantly, enterprises gain membership in the Shanghai Technology Stock Exchange, thus obtaining investment, projects, new products, and market-related information.

Source: Zeng 2001; Hong Kong Trade Development Council 2014.

In addition, the SEZ governments are able to make timely adjustments to relevant policies and regulations based on business needs and market conditions, as well as on development stage. For example, after the zones were successful, the governments began to put more emphasis on the technology-intensive or high-value-added sectors and to adjust their FDI policies to create a level playing field for both foreign and domestic firms. In 2007, China established a common effective tax rate of 25 percent for both foreign and domestic companies.

Land Reforms. In China, the land reforms started from Shenzhen has played an important role in the SEZs' success. Before 1981, all land belonged to the State in the urban areas and, in rural areas, land was "collectively" owned. In November 1981, the Guangdong government passed the Provisional Regulations of Land Control in the Shenzhen SEZ which allowed investors to apply to the SEZ authorities for a Land Use Certificate, which was good between 20-50 years depending on the sector and type of activity. It also provided standard land use fees within the SEZ, which provided important initial finance for infrastructure and real estate development. By 1987, all coastal SEZs were allowing foreign investors to lease land from governments.

To further establish a market-based land allocation mechanism, the Shenzhen government decided to set up an "open bidding" system for land allocation, and held China's first state land auction on December 1, 1987. By 2002, this practice was adopted nationwide. In 2007, this new practice was extended to all industrial land as well. In parallel, Shenzhen SEZ also led China in adopting the Western concept and practice of land use planning and zoning system to meet market needs (Shen and Xu 2011). These reforms yielded invaluable returns for the entire nation's economic transition and helped to establish a modern land market which has transformed the whole of China's urban landscape.

Investment incentives and institutional autonomy. To encourage firms (especially FDI) to invest in the zones, the SEZs had in place various fiscal and non-fiscal incentives¹ and preferential policies, including streamlined administrative process, sound infrastructure, inexpensive land and facility use, rapid customs clearance, the ability to repatriate profits and capital investments, reduced duties on imports, concessionary tax rates, export tax exemption, flexibility in hiring and firing workers, depreciation allowances, and a limited license to sell into the domestic market, among others (Ge 1999; Enright, Scott, and Chung 2005). Favorable policies were also in place to attract skilled labor, including the

¹ Some of these incentives were applied to all firms but many are only for FDI. For example, for FDI, the corporate tax rate was especially generous—15 percent as opposed to 30 percent for domestic firms—plus exemption from local income tax. This was streamlined later – 25% for both foreign and domestic firms as mentioned above.

overseas diaspora, such as the provision of housing, research funding, subsidies for children's education, and assistance in "Hukou" transfer, among others.

In addition, the SEZs (especially the comprehensive SEZs and ETDZs) were given greater political and economic autonomy. They had the legislative authority to develop municipal laws and regulations along the basic lines of national laws and regulations to govern and administer these zones. Such an unusual discretion allowed them more freedom in pursuing new policies and development measures deemed necessary to vitalize the economy. For instance, SEZs were the first to establish a labor market. Companies operating inside the zones could enter into enforceable labor contracts with specific term limits, could dismiss unqualified or underperforming employees, and could adjust wage and compensation rates to reflect the market situation (ProLogis 2008). These factors were critical to attracting the right talent. In Shenzhen, such autonomy greatly encouraged policy and institutional innovations², which were inseparable from its remarkable success.

Foreign Direct Investment and the Chinese diaspora. FDI and the Chinese diaspora have played important roles in the success of the SEZs by attracting capital investment, technologies, and management skills; generating learning and spillovers; and ultimately helping to build local manufacturing capacity. At the same time that the SEZs were opening up in the 1980s, Hong Kong SAR, China; Macao SAR, China; and Taiwan, China were also beginning to upgrade their industrial structure and transfer out their labor-intensive manufacturing sectors. The cheap labor and good infrastructure in the SEZs, as well as the Open Door policies coupled with various incentives, provided a great opportunity for FDI to flow into China from the diaspora. Given the culture, language, and location advantages, such investments were dominant in the beginning stage, especially for the early SEZs.

Technology learning, innovation, upgrading, and strong links with the domestic economy. One of the key strengths of the SEZs is that they have a high concentration of very skilled people, including many R&D personnel, especially in the HIDZs and ETDZs. As a result, they have become centers of knowledge and technology generation, adaptation, diffusion, and innovation. The abundance of FDI provides a good opportunity for technology learning. Governments also put strong emphasis on technology learning and innovation, as well as on technology-intensive industries. For example, the Shenzhen SEZ set up an intellectual property office and issued a number of policies and regulations to protect intellectual property rights. It also implemented various incentives to encourage high-tech industries, R&D spending, and venture capital investment and to attract technology talents. In addition, the SEZs are closely linked to domestic enterprises and industrial clusters through supply chains or value chains. This connection not only helps achieve economies of scale and business efficiency, but also stimulates synergistic learning and enhances industrial competitiveness (Zeng, 2010).

Innovative cultures. In addition to institutional flexibility, the composition of people in the SEZs also helped nurture innovation and entrepreneurship. Because most SEZs were built in new areas or suburbs of cities and were open to all qualified workers, they have attracted a large number of immigrants from across the country and, later on, from overseas, who hoped for better jobs and new opportunities. Such

² Shenzhen SEZ was the first to adopt wage reform, in which compensation was based on base pay, occupational pay, and a variable allowance. It also adopted a minimum wage and a social insurance package superior to anything previously available in China (Sklair 1991). Shenzhen was also the first city in China to set up a center to monitor currency exchange rates, to privatize a portion of its state-owned enterprises through stock-sharing plans, to permit the entry of foreign banks, and, in 1990, to establish a stock exchange (Asian Development Bank 2007).

a strongly motivated migrant community tends to generate an innovative and entrepreneurial culture. For example, in Shenzhen, migrants account for 83 percent of the total population. Among its permanent citizens, 21 percent are under 16, and 62 percent are between the ages of 17 and 44 (Asian Development Bank 2007). Such a young and innovative culture makes Shenzhen one of the most dynamic SEZs in China.

Clear objectives, benchmarks, and competitions. In China, SEZs were normally set up in batches—initially four—and then the number increased rapidly. Despite the large number of these zones, most of them have clear goals and targets in GDP growth, exports, employment, revenues, FDI generation, and the like. These expectations put a great deal of pressure and responsibility on the shoulders of the zone management. Meanwhile, the hundreds of SEZs are highly competitive among themselves. Each SEZ strives to distinguish itself in service, quality of infrastructure, and appearance to attract new enterprises and reach the targeted development goals. Such competition helps make them more efficient and competitive (Zeng, 2010).

Location advantages. Most SEZs in China are located in the coastal region or near major cities with a history or tradition of foreign trading or business and thus are better linked to the international market. They also have good access to major infrastructure, such as ports, airports, and railways. The location advantage is especially obvious for the SEZs in the Pearl River Delta region (close to Hong Kong SAR, China) and the Min Delta region (close to Taiwan, China). Hong Kong SAR, China has provided capital, logistical support, access to world markets, management knowhow, technology, and management skills. The Pearl River Delta region has provided labor, land, and natural resources. It is this interaction that has allowed the Greater Pearl River Delta region to emerge relatively quickly as one of the world's major manufacturing bases (Enright, Scott, and Chung 2005).

II.3 Some Pitfalls to Avoid

While overall SEZ lessons from China are positive and encouraging, there are also a few adverse lessons which other countries should try to avoid in their pursuit of SEZ programs. Such lessons include:

- **Mushroom approach at local level and high-level overlaps at the later stage.** Seeing the success of SEZs at the coastal region, in the 1990s and early 2000s, many local governments and cities began to imitate this approach and set up various industrial zones/parks to attract investments or to support the local township and village enterprises (TVEs) without any appropriate assessment and planning. This led to a large waste of resources and environmental damage and many of them have failed. At the central and provincial levels, the zone programs were more organized with better planning and management, but at the later stage, after huge success in the coast region, there was also a high level of overlap and competition since late 1990s. Many industrial zones are competing in the same or similar sectors, lacking conspicuous product or sector differentiations. This phenomenon leads to declining efficiency of the zone programs.

Based on an analysis (Wang 2013) of 321 prefecture-level cities, the effect of a SEZ treatment seems to have decreased marginally for later zones - the average per capita FDI for the 1978–1990 sample group was 60% higher than that for the control group. For the 1986–1995 sample group the SEZ program increased per capita FDI by 33% relative to the matched control municipalities. For the 1991–2008 sample group this increase rate dropped to 20%. Moreover, the SEZ program seemed to have crowded in domestic investments for the first two sub-groups, but not for the 1991–2008 sub-group. In addition, for the 1978–1990 sample group, the average worker's wage increased by 7.7% and the CPI decreased by 2.2% with a SEZ treatment, while for the 1991–2008 sample group, the

average wage increased only by 1.2% relative to the matched control municipalities, with the CPI increasing by 0.4% (Wang 2013). To avoid the “racing to the bottom” syndrome and prevent further declining of the investment efficiency, the current new round of reform in China is trying to let the market play a bigger role in resource allocations.

- **Environmental degradation.** In China, GDP performance used to be the top priority for the government officials, also related to China’s growth model based on low technology and labor- and resource intensive manufacturing, many SEZs face serious environmental and resource challenges. With the increasing emphasis on climate change problems, the environmental challenges call for particular attention: chief one is the serious water, air, and land pollution and the huge amount of industrial waste. The World Bank estimates that the environmental cost in China is about 8% of GDP. To tackle these issues, China has implemented tougher environmental standards and tried to use fiscal policies to force firms to adopt “green technologies” and conduct innovations. At the national level, the government is promoting the transformation of the growth model from investment and exports driven to consumption driven, which will focus more on quality, with emphasis on technology upgrading and service sectors.
- **Unbalance between industrial development and social dimensions.** While the special economic zones have achieved great economic success, many of them are somewhat lagging behind in providing the commensurate social and urban services, except a few such as the Suzhou Industrial Park and Kunshan Industrial Park, where industrial and urban development are well integrated. Many of them do not have sufficient health and education services or public transportation to accommodate their increasing population. Some SEZs are at a distance from their host cities, like an “isolated island” with few cultural and leisure activities. Such zones have problems attracting high-quality investments and talents and face great challenges in sustaining their growth or upgrading their industrial structures. To mitigate these problems, the new generation of zones in China is now encouraged to integrate with urban planning and development, with good public services and urban amenities.

III. SEZs in Africa – A Long Journey Ahead

In the Sub-Saharan Africa region, several countries launched zone programs in the early 1970s (Liberia in 1970, Mauritius in 1971, and Senegal in 1974), but they did not operationalize programs until the 1990s or 2000s (table 1). Also, these zones are largely different from the modern large scale multi-use zones that are currently being proposed (Farole 2011).

Table 1. Overview of African zone programs by decade of launch

1970s	Liberia, Senegal, Mauritius
1980s	Djibouti, Togo
1990s	Burundi, Cameroon, Cape Verde, Equatorial Guinea, Ghana, Kenya, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Seychelles, Sudan, Uganda, Zimbabwe
2000s	Gabon, Gambia, Mali, South Africa, Botswana, Zambia, Eritrea, Mauritania, DRC Congo, Tanzania, Ethiopia

Source: FIAS (2008) with author’s amendments. Note that this list is not exhaustive.

The lack of data makes it hard to have a comprehensive analysis of Africa’s performance in SEZs—in terms of investments, exports, and employment—relative to other regions. The available evidence suggests that SSA’s experience with traditional EPZs and IZs has been relatively poor in terms of both employment generation and export performance (Table 2).

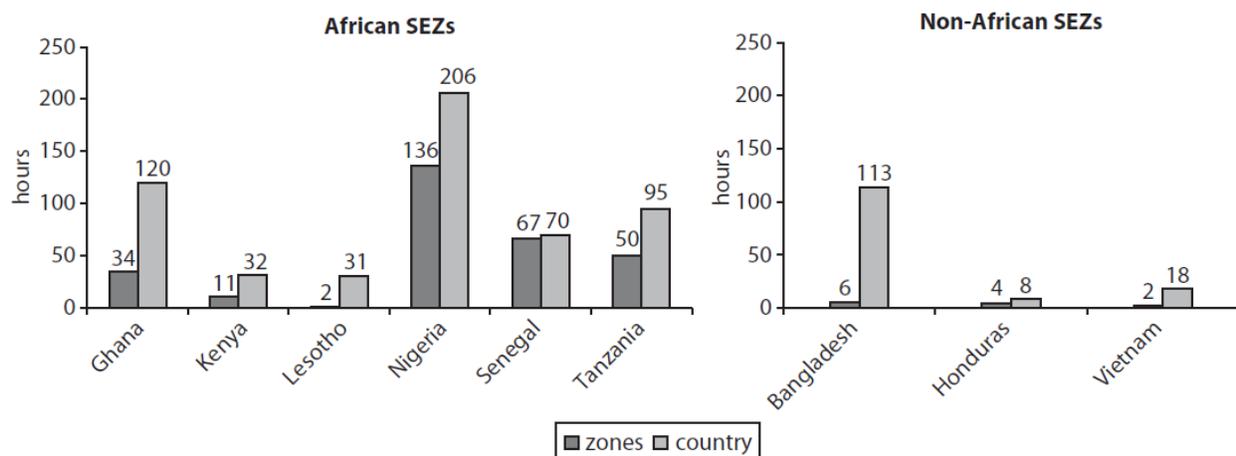
Table 2. Estimates of direct employment and exports in zones in select regions around 2004-06

Region	Direct employment (million)	Exports (US\$ million)
<i>Sub-Saharan Africa</i>	1.0	8,605
Asia and the Pacific	61.1	510,666
Americas	3.1	72,636
Central and East Europe and Central Asia	1.6	89,666
Middle East and North Africa	1.5	169,459
Global	68.4	851,032

Source: FIAS (2008).

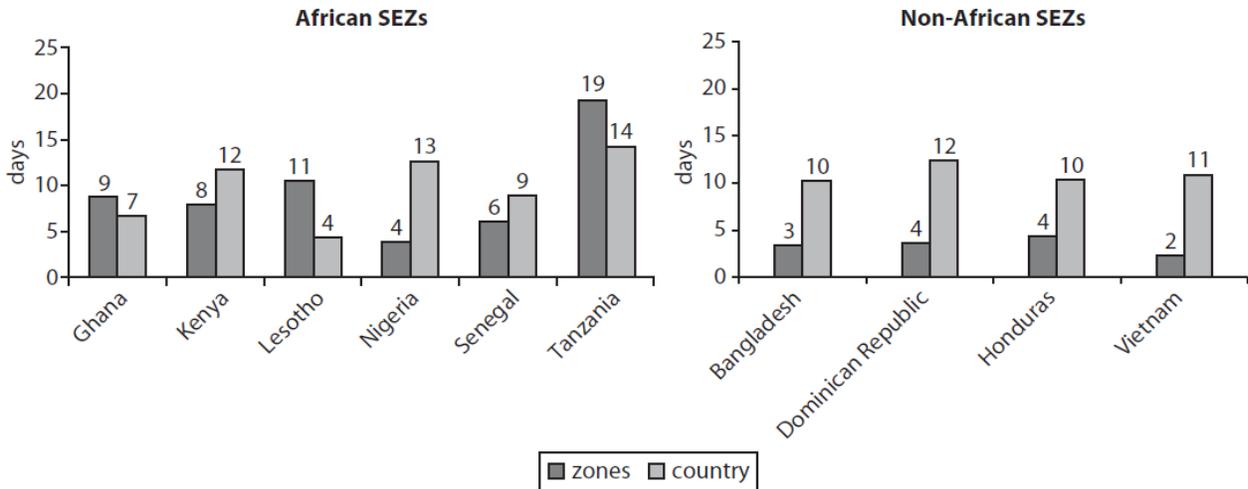
A World Bank study (Farole 2011) of six African Zone programs (Ghana, Kenya, Lesotho, Nigeria, Senegal, and Tanzania) in comparison with four non-African countries (the Dominican Republic, Honduras, Vietnam, and Bangladesh) shows that success in African zones is rather limited to a few countries with relatively better performance, such as Mauritius, Kenya, Madagascar, and possibly Ghana. In terms of investments, exports and employment generation, the African zones are in general falling behind their peers in other continents. One important reason could be the weak business environment (Farole 2011). Figure 1 shows that the downtime (measured by hours) due to power shortages is still quite high in absolute terms in most African zones despite some reduction compared with outside zones (on average the reduction is about 54% in African zones vs. 92% in non-African zones). Figure 2 shows that the average time needed for customs clearance is not significantly reduced in most African zones, and in some cases, it actually takes longer within the zones than outside, which is opposite to their non-African peers, where the business environment is much better within the zones than outside.

Figure 1. Average Monthly Downtime Due to Power Outages



Source: Farole 2011.

Figure 2. Average Time Needed for Imports through Major Seaport to Customs Clearance (days)



Source: Farole 2011.

However, when measuring the African zone programs, it is important to consider that most African countries are relatively latecomers in implementing modern zone programs and many of these zones are still in the early stages (Farole 2011). The change and rebalancing of the global value chain and industrial structural can possibly provide a great opportunity for these zones.

Overall, various evidence shows that so far very few African zones (with the exception of Mauritius) appear to have made significant progress toward taking advantage of the dynamic potential of economic zones as an instrument of sustainable structural transformation. Some of the key challenges, among others, include (Zeng 2012a):

- *Legal, regulatory and institutional framework.* In many African countries, the current legal, regulatory and institutional framework for SEZs is either outdated or does not exist, even though the SEZ initiative has been launched or, even in some cases, the parks have been built and operational. This is like “putting the cart in front of horse”, which has created a lot of confusion and deterred potential investors. This is quite evident through a review of six zones in Nigeria (Zeng 2012b).
- *Poor business environment.* In most Sub-Saharan African countries, the costs of doing business are high due to overall constraining environment in terms of registration, licensing, taxation, trade logistics, customs clearance, foreign exchange, and service delivery. Many one-stop-shops for investors do not live up to their names.
- *Lack of strategic planning and demand-driven approach.* International experience shows that effective zone programs are an integral part of the overall national, regional or municipal development strategy and build on strong demand from business sectors, such as those in Malaysia, China, the Republic of Korea, and Mauritius, etc. However, many zone initiatives in Africa are driven by political agenda and lack a strong business case.
- *Inadequate infrastructure.* This is an overall constraint for all the zones but at different degrees. In general, power, gas, roads, ports, and telecom are the key constraints and many governments and developers try to resort to the PPP approach to solve the constraints. Given the large investments required for the zones, a strong commitment from government and active participation of the private sector are crucial.
- *Zone management and operational know-how.* Most of the zone developers, including the relevant government agencies, do not have experience in zone management and operations, and

many zone developers are only construction companies; therefore, it's a challenge for them to identify the right partners to provide the critical knowledge and expertise on zone management and operations. This seriously undermines the implementation capacity.

- *Host government ownership & policy consistency.* This is especially a challenge for those zones that face a new government that does not fully recognize the potentials of the economic zones or fully acknowledge the commitments made by the previous governments. Strong and long-term government commitment is crucial for the success of the zones.
- *Resettlement issues.* In several zones, state governments promised to provide the compensation in the case of land acquisition and resettlement, however, these promises were not or only partially fulfilled, which hinders the further development of the zones.

IV. What Can Africa Learn from China?

Given the various challenges that the SEZ programs in Africa face, in order to avoid falling into the same pitfalls in the past, Africa needs a new SEZ strategy. Such a strategy can draw on the useful lessons and experiences of China and other countries, and can build on the following thrusts (Zeng 2012a):

- ***Using SEZs to address the market failures or binding constraints that cannot be addressed through other options.*** Such constraints may include issues related to land, infrastructure, trade logistics, etc. If the constraints can be addressed through country-wide reforms, sector-wide incentives, or universal approaches, then an SEZ might not be necessary. Since an SEZ is a very expensive undertaking and involves very careful and skilled planning, design and management, it should not be taken lightly. China leveraged the SEZ as a breakthrough towards a market-oriented growth model in an overall very constraining environment and achieved transformative impact. In an extreme environment in the late 1970s and early 1980s, China offered generous fiscal incentives to lure foreign investors besides good infrastructure and efficient public services. However, today's macro-environment is different and many African countries are the destinations of industrial transfer from East Asia. Instead of focusing on tax incentives, they should put more efforts on improving the business environment including infrastructures and consider "smart incentives" that encourage skills training, technology transfer/upgrading and local economic linkages.
- ***A sound legal, regulatory framework and effective institutions with strong and long-term government commitment.*** In most African countries, the EPZ/SEZ laws or regulations are either missing or out-of-date, and many investment arrangements are done on a MOU basis. Such a practice lacks transparency and clarity of roles and responsibilities of various parties and often puts investments at great risk. In China, the first SEZ legislation was formulated to govern the SEZs at the local level: in August 1980, the SEZ Act for Guangdong Province was passed by the National Congress at the same time when the Shenzhen SEZ was launched. It includes general provisions and specific provisions on registration and operations, incentives, labor management, land, etc. Although it was drafted by the provincial government, it was enacted by the national congress to ensure its supremacy and the full support of the central government. In the Republic of Korea, Malaysia, Jamaica, Jordan and other countries with successful SEZ programs, relevant laws and regulations were also put in place when they launched the programs. In addition, strong and long-term government commitment is needed to ensure policy continuity and the adequate provision of various public goods (such as off-site infrastructures) and services (such as one-stop shop).
- ***A better business environment inside the zone,*** including efficient services, such as a one-stop shop and good infrastructure. One of the key objectives of the zones is to overcome the constraints (both soft and hard) of doing business in an economy, such as poor infrastructures, trade logistics, inefficient public services and bureaucracy, etc. However, in most African zones, these issues are still

prominent though there are some improvements compared with outside – the power shortage, slow customs, inadequate roads and water supply, etc. often make the production costs very high. In China, all the basic infrastructures are provided with high quality in most zones and the one-stop-shop services and aftercare are very efficient and effective such as those in Shenzhen, Suzhou, and TEDA, to name a few. All these make the zones very attractive to investors. Of course, one thing African zones can do differently is that they can attract more private investors through a PPP framework given the limited resources of the African governments. China is also increasingly moving towards this direction.

- ***A realistic scheme - starting small and implementable.*** It is crucial to make one or two zones work first before scaling-up. Although there were many overlaps in terms of the zone programs at the later stage, initially China started with only four zones at very strategic locations, and once they (especially the Shenzhen one) were successful, the program was then rolled out in the entire economy. African countries should seriously learn this lesson and start with one or two and make them truly successful first before starting the program at a larger scale. Many African countries start with 10 or even 20 zones all at once, which is a recipe for failure.
- ***Certain level of autonomy at the local/zone level coupled with clear objectives, sound benchmarking and monitoring/evaluation.*** Using SEZs to pilot new reforms, as East Asian experience (especially China) shows, would require a certain level of autonomy at the local/zone level. While it is important for the central government to define the overall SEZ strategy/planning and put in place the right frameworks, the local/zone level should have certain autonomy to test new reforms/approaches to make zones to work since in many cases the specific solutions are on the ground. In China, the initial SEZs even have certain legislative power to pilot reforms to improve the business environment. In Africa, given the limited government capacity, the private sector can be effectively leveraged to fill the gaps, such as in the areas of zone management, financing, etc. While zones may enjoy a certain level flexibility, they also need to be accountable for the intended results, measured rigorously against the pre-set targets and benchmarked across different zones.
- ***Technology transfer, diffusion and skills training.*** This is crucial for the zones to acquire sufficient manpower and make their products competitive. In most African zones, investors have problems finding relevant skilled or semi-skilled workers and getting necessary technology support. Many firms have to bring their own technicians/engineers with high cost and conduct training for the local workers, which is a big burden for the investors. In China, many zones have well-equipped skills training center, which works closely with technical and vocational schools, colleges and universities to provide relevant skills training and technology support for the firms in the zones. Some zones also have incubators to nurture new start-ups with certain seeds money. Local governments also have talents strategy to attract highly skilled people/diaspora to work in the zones.
- ***Better linkages with local economy.*** Zones need to build on local comparative advantages and have local suppliers as part of their value chains. In many countries, especially in Africa, zones are often criticized for being an “enclave” without much linkage with the local economy. To fully benefit from the zone programs, governments and zone management needs to consider the local comparative advantages in identifying the priority sectors and try to help the local firms to link with investors in the zones through supply chains or sub-contracting. In China, most zones are well plugged in the existing local clusters, so the zones and local clusters reinforce each other through business linkages. Chinese zones also encourage foreign investors to establish joint-ventures with local counterparts. In Taiwan, China, and the Republic of Korea, governments also encourage the backward linkages through technical assistance and other policy interventions. The Mashan Free Zone in the Republic of Korea is a good example in this regard.
- ***Sound environmental management.*** As mentioned before, China has paid a high cost in its rapid industrialization process. At the early stage, most zones paid less attention to environmental

protection while pursuing high GDP growth, and today the government has to spend billions of dollars to clean up the environment. Since African zones are mostly latecomers, they should take this lesson seriously and adopt strict measures to protect the environment.

- ***A good balance between industrial development and social/urban development.*** Today the zone programs are part of the broad urban development agenda and they should be included in the urban master planning from early on to ensure the good integration between the zones and cities in terms of infrastructure and social services. Many early-stage zones in China have not done this well despite some exceptions, and Africa should draw this lesson and strike a good balance from the beginning.

V. Chinese Investments in SEZs in Africa: “Flying Geese” from Asia?

In the mid-1990s, the Chinese government began to emphasize a policy of “going global” (*zou chuqu*), which encouraged Chinese companies to target new markets, build global brands, and invest abroad. One component of this policy was the establishment of overseas industrial and trade zones. Overseas economic zones were believed to serve several strategic objectives. First, they would help increase demand for Chinese-made machinery and equipment, while making it easier to provide post-sales product support. Second, by producing overseas and exporting to Europe or North America, Chinese companies would be able to avoid trade frictions and barriers imposed on exports from China. Third, they would assist China’s efforts to boost its own domestic restructuring and move up the value chain at home. Fourth, they were intended to create economies of scale for overseas investment, and in particular, to assist less experienced SMEs to venture overseas “in groups”. Finally, they were viewed as a way to transfer one element of China’s own success to other developing countries; a strategy that the government believed would be helpful for recipient countries (World Bank 2010).

This strategy was pioneered by Chinese companies such as Haier, which established an industrial zone in Camden, South Carolina, USA, in 1999 to set up a supply chain in the U.S. market. Haier also established an industrial zone in Lahore, Pakistan, in 2001, in a joint venture with a local investor. In 1999, the Chinese government signed an agreement with the Arab Republic of Egypt to establish an industrial zone in the Suez economic area.³ In 2003, Chinese investors also announced that they would establish two zones in Zambia: a copper producing cluster in the Copperbelt Province and a recreational cluster outside Lusaka. In 2006, this development of overseas zones was given significant priority, as the government announced a policy decision to eventually establish up to 50 special economic and trade cooperation zones outside the country (World Bank 2010).

Under the 2006 policy, the Chinese government identified SEZ projects in about 15 countries⁴—including four in SSA—that would be formally supported by MOFCOM. The goal during the 11th Five Year Plan (2006-2010) was to establish at least ten SEZs with an investment of US\$2 billion that would allow around 500 Chinese companies to venture overseas (Bräutigam and Tang 2010).

The Chinese government designed the program to ensure that developers have a profit motive, as they view this as a critical factor to ensure sustainability of the project. MOFCOM emphasizes that the zone projects are driven by market conditions with the companies taking the lead on the business decisions and the Chinese government only playing a supporting role. Nevertheless, the high profile nature of this

³ Other Chinese zone investments were in Cuba, Zambia and Dubai.

⁴ A total of 19 zones were approved in 2006.

initiative has translated into a package of generous financial and non-financial support from the Chinese government for the zone projects. MOFCOM established a competitive tender process for the zone projects, under which winning bids are eligible to receive a number of incentives, including RMB200-300 million (US\$29-44 million) in grants and up to RMB2 billion (US\$294 million) in long-term loans (World Bank 2010). There are also other incentives for Chinese companies moving into the zones. For example, they can apply to a MOFCOM fund—the Special Fund for Economic and Technological Cooperation—to receive a rebate on up to 100 percent of the interest paid on Chinese bank loans— a benefit valid for five years (Bräutigam and Tang 2010). These incentives were designed to reduce the commercial risk for the Chinese investors to enter into new markets. But all these incentives are performance-based, and benchmarking evaluations take place every 1-2 years.

In addition to these incentives, the China-Africa Development Fund (CADF) is a potentially important catalyst of these zone investments. CADF was launched in June 2007 by the Chinese State Council with an initial US\$1 billion provided by the China Development Bank⁵. CADF invests in joint ventures with Chinese firms that invest in Africa and it has taken equity positions in several zones. It is currently the second largest shareholder in the Lekki FTZ (Nigeria) and the JinFei Zone (Mauritius).

The Chinese government views overseas zones program as a long-term initiative and the zone projects currently are still in early stages of implementation as shown in Table 3. MOFCOM has reported that as of June 2010, a total amount of US\$700 million had been invested by Chinese companies in the construction of 16 zones.⁶ MOFCOM also reports that over 200 companies are operating in these zones with an investment of US\$2.5 billion. MOFCOM concludes that 10 out of the 16 zones have made considerable progress in infrastructure construction and attracting investment. MOFCOM attributes the successful performance of these zones to the accumulated experience of the Chinese zone developers in the host countries and good planning and management to fit the conditions of the host countries.

Table 3. SEZs Officially Supported by MOFCOM

Region	Zone	Tender Year	Status
<i>Sub-Saharan Africa</i>			
Zambia	Chambishi Nonferrous Metal Mining Group Industrial Park	2006	Operational
	Lusaka sub-zone		Under construction
Nigeria	Lekki Free Trade Zone	2007	operational
	Ogun-Guangdong Zone	2006	operational
Ethiopia	Eastern Industrial Park	2007	operational
Mauritius	JinFei Economic and Trade Cooperation Zone	2006	Under construction
<i>North Africa</i>			
Algeria	Jiangling Economic and Trade Cooperation Zone	2007	Not implemented
Egypt	Tianjin TEDA Suez Zone	2007	Operational
<i>East Asia</i>			
Vietnam	China-Vietnam (Shenzhen-Haiphong) Economic and Trade Cooperation Zone	2007	Under construction
	Longjiang Industrial Park	2007	Operational

⁵ China Development Bank is a stakeholder of CADF.

⁶ Interviews with MOFCOM officials in 2010.

Thailand	Thai-Chinese Rayong Industrial Zone	2006	Operational
Cambodia	Sihanoukville SEZ	2006	Under construction
Indonesia	China-Indonesia Economic Trade Zone	2007	Under construction
Korea, Rep.	Korea-China Industrial Park	2007	Delayed due to funding problem
<i>South Asia</i>			
Pakistan	Haier-Ruba Industrial Zone	2006	Operational
<i>Latin America</i>			
Venezuela	Venezuela-China Science Technology Industry Zone	2007	Not Implemented
Mexico	Mexico and China (Ningbo) Geely industrial and trade cooperation zone	2007	Not Implemented due to land access issue
<i>Eastern Europe</i>			
Russia	Ussuriysk Economic and Trade Cooperation Zone	2006	Under construction and partly operational
	Tomsk Timber Industry and Trade Cooperation Zone	2007	Operational
	St. Petersburg Baltic Economic and Trade Cooperation Zone	2006	Dropped

Note: Due to limited information, the status of the zones is not necessarily the latest.

Source: World Bank (2010), Brautigam and Tang 2013, and Author's compilation.

Chinese investments in SEZs in SSA are not limited to the projects that were approved by MOFCOM in Nigeria, Ethiopia, Mauritius and Zambia. Chinese companies and provincial governments have also invested in industrial zones elsewhere in Nigeria, and in Sierra Leone and Guinea (some of which subsequently competed unsuccessfully for MOFCOM support.) (Bräutigam and Tang 2010). More recently, projects have been initiated in Botswana and South Africa; there are also reportedly Chinese zone proposals in Angola, Mozambique and Uganda. However, there is limited information on the progress of these initiatives and few of the underlying development agreements between governments and the investors have been made available to a wider audience.⁷

Nevertheless, several features of the Chinese investments in SEZs in SSA can be identified based on the information provided on these projects. First, the companies that were successful in the MOFCOM competitive selection process were usually those that had already established a business presence in the host countries in trading, construction or manufacturing. Second, the business models of each of these SEZ investments range from fully Chinese-owned companies (as in Ethiopia and Mauritius) to joint-ventures often with the host governments (as in Nigeria and Zambia). Third, the Chinese zone developers established consortiums with multiple Chinese investors (as in Nigeria and Mauritius), often with the participation of provincial SOEs. Fourth, the Chinese investments were primarily for on-site infrastructure—*i.e.* within the perimeter of the zone—and based on the expectation that the host governments will provide the required off-site infrastructure investments⁸. Finally, all these zone projects involved high level political support from both the Chinese and African governments.

⁷ Zones that are not supported formally by MOFCOM were not covered in this study.

⁸ The Eastern industrial Zone is an exception since the Chinese developer is responsible for both on-site and off-site infrastructure (with the government committing to reimburse 30% of the costs of both investments).

Based on a study by the World Bank on four Chinese-invested SEZs in Africa⁹, these zones have several similarities: (i) all four zones are within relatively close proximity to the economic capital of the three countries (Lagos, Addis Ababa, Port Louis) and key existing or planned infrastructural assets (in Nigeria: APAPA Port, Lagos airport, Lekki Port; in Ethiopia: on the main highway towards Port of Djibouti; and in Mauritius: near the Free Port); (ii) all the zones are proposed as mixed-use zones; (iii) the first phase of planned development are approximately 100 ha for all the zones except Ogun-Guangdong, which is relatively bigger in terms of planned area; and (iv) the ownership of the zone projects is dominated by consortiums of 3-6 Chinese business partners. However, there are differences for example in terms of the estimated size of initial investments; provision of fiscal incentives to developers and companies investing in the zones (Nigeria is by far the more generous); and host government equity participation (Nigerian state governments have equity stakes) (World Bank 2010).

It is too early at this stage to draw definitive conclusions on the performance of these overseas Chinese zone projects. Overall the implementation of Chinese SEZs in SSA has been slow compared with other regions. The process has been delayed in some cases due to difficulties over access to land, regulatory barriers, and resettlement issues by the host government, restructuring of the Chinese investments during the global financial crisis, and coordination issues, etc. MOFCOM has highlighted four key challenges faced by these overseas Chinese zones, including those in Africa, as follows (World Bank 2010):

- **Improving the management capability of the zone developers:** the current Chinese investors are largely industrial, engineering or trading enterprises and lack specific experience in developing and managing industrial development zones;
- **Difficulties in coordination with host government counterparts:** the practical problems involving laws, policies, government services and work efficiency require effective communication, which is difficult due to the unequal status of the Chinese developers and local governments during the negotiations as well as communication problems;
- **The lack of external infrastructure:** many zones have to develop their own infrastructure, which increases the development costs and construction difficulties; and
- **Financing difficulties faced by the developers:** the zone developers are facing financing difficulties due to the high capital requirements for infrastructure development and the high cost of finance in the host countries.

Despite these challenges, several zones have made some good progress and began to show positive impact on the host countries. Such initial impact is manifested in the following areas:

- 1) **Investments and employment.** In the Zambia Chambishi zone, 36 firms had signed contract and 26 were operational, with a total investment of \$322 million actual and over \$1 billion committed by July 2013. It employed 7,973 Zambian workers and 1,372 Chinese, including the mine workforce (Brautigam and Tang 2013). The Lekki Free Trade Zone in Nigeria had attracted \$76 million investment (\$700 million commitment) by July 2013. 30 firms had signed lease agreements and 6 were operational, including Imad Oil and Gas FZE; China Railway Construction Corporation; and YFK Pharmaceutical FZE, among others. Among the 30 investors who signed contracts, 60% were Nigerians, 20% were Chinese, and 20% were from other countries including UK, India and Ukraine (Brautigam and Tang 2013; Gabriel 2012). The Ogun-Guangdong Free Trade Zone had attracted 34

⁹ The study was led by Ganesh Rasagam, with the support of Chinese government (in particular the Ministry of Commerce and Ministry of Finance). The zones studied include: (i) in Nigeria, the Lekki Free Trade Zone in Lagos State and the Ogun-Guangdong Free Trade Zone in Ogun State, (ii) in Ethiopia, the Eastern Industrial Park in Dukem (Addis Ababa), and (iii) in Mauritius, the JinFei Economic and Trade Cooperation Zone in Riche Terre.

investors who signed contracts, and 7 were operational, with actual investment of \$58 million and committed investment of \$150 million. As of June 2013, all the committed investors were private firms. They employed 1,619 African workers and 177 Chinese workers (Brautigam and Tang 2013). Latest report indicates that the zone procures about N3 billion worth raw-materials locally per annum, remits N800 million yearly as salaries for local workers and spends N500 million as import duties on container clearing per annum (Ayinla 2014). In Ethiopia, all the factory shells in the Eastern Industrial Zone have been leased out with 12 investors, and one remarkable story is the Huajian Shoe Manufacturer from China, which has set up 2 production lines in the zone with a production capacity of 2,000 pairs per day, exporting to the US and European markets. It employs around 3,000 people, mostly local, and provides vocational training to its employees, including training of local technicians overseas.¹⁰

- 2) **Infrastructure and regional development.** This potential will become more prominent once the zones are more successful. The Lekki Zone is planned as part of the urban development of Lagos, and the zone and its associated (planned) port and airport are intended to form a coastal city in the Gulf of Guinea and the logistics center of West Africa (Xinhua 2011). The Chambishi Zone in Zambia is located in the country's industrial hub, and envisaged to forge a relatively complete value chain of copper/cobalt mining and processing, eventually creating a regional "strategic base" using the Tanzam Railway and extending through Central Africa (Brautigam and Tang 2013). The China-Egypt Suez zone is situated near Egypt's new deep-water Sokhna Port and 40 km away from the South entrance of the Suez Canal. It will be integrated with the port facility, the canal to be part of the regional industrial and logistics hub (GAFI 2011).
- 3) **Knowledge learning and policy experiment.** The Chinese zones in Africa have played an important role in sharing the Chinese experiences and practices in the zone development. Through seminars, training and study tours, often facilitated by the Chinese government and international donors, such as the World Bank, the host government officials and zone managers learned a lot about the experiences and lessons from East Asia, especially China. Such knowledge sharing and learning helped many host governments to understand the concept and operation mechanisms of industrial zones and began to accept SEZs as an instrument for development and to experiment certain new policies to build a more pro-business environment, such as opening-up to FDI, improving the trade logistics and setting-up one stop shops. In Ethiopia, both the World Bank and the Chinese government work actively to assist the Ethiopian government's SEZ initiatives.
- 4) **Backward linkages.** Besides the employment and skills linkages, some backward linkages seem to begin to emerge among the firms. In Ethiopia, the Huajian Group in the Eastern Industrial Zone is actively seeking local material suppliers, though so far it can only source no more than 30% of its leather inputs locally. In the Ogun zone, Hazan, a major Chinese shoe manufacturer from Wenzhou, had identified a potential to produce rubber soles in Nigeria from local rubber and were in discussions with one of the suppliers, though in the end this process was stopped in 2012 due to the financial problem of its parent company (Brautigam and Tang 2013).

In comparison, Chinese overseas zone projects in other regions beyond SSA, such as those in Egypt, Thailand and Vietnam, seem to be more successful. Box 2 outlines some of the lessons learned from the Egypt Suez Economic and Trade Cooperation Zone developed in partnership with the Tianjin Economic-Technological Development Area (TEDA) Investment Holdings.

Box 2: Lessons from the TEDA Zone in Egypt

¹⁰ Based on author's field visit to the Eastern Industrial Zone in Ethiopia in November 2014.

After a challenging start, the TEDA zone in Egypt now appears to be gaining traction. By 2013, 49 companies have signed contract and 38 are operational, with a total investment of \$358 million, and around 1,000 local employees. Banking, catering and customs clearing facilities are available in the zone. Current companies include some selling into the local market, some exporting back to China, and others serving third-country markets. Key success factors are as follows:

Experienced partner on the Chinese side: While many of the Chinese zones in Africa are led by infrastructure companies, the Egyptian zone is led by TEDA, which is China's first provincial-level SEZ and currently the largest multi-industry, economic-technology development area in China.

Properly structured joint ownership with active local partners: While Chinese ownership accounts for at least 75 percent of the project, Egyptian partners have active interest, include banks and state-owned enterprises (SOEs).

Clear management and regulatory structure in place: There is: (i) a tiered management structure, with an informal high level joint China-Egypt Task Force for the Suez Economic Zone; (ii) an Egyptian SEZ Authority for the zone that operates under the Prime Minister; (iii) a licensed joint-venture—Main Development Company (MDC)—with authority to develop the zone; and (iv) a development company (Egypt TEDA) that executes what has been licensed to the MDC.

Active joint marketing: Tianjin Municipality supported the State-owned Assets Supervision and Administration Commission (SASAC) to promote SOEs to invest in the zone. TEDA also formed the China-Egypt Commercial Association in Suez that organizes market information seminars and participates in large-scale trade fairs. The Egypt General Authority for Free Zones and Investment (GAFI) and the General Authority for the Economic Zone North-West Gulf of Suez also market the SEZ.

Clear legal framework on use of local labor and suppliers: Egypt has a clear regime for foreign labor: one foreign employee is allowed for every nine Egyptians employed. The first stage of the TEDA zone has more than 1,800 local workers of which less than 5 percent are Chinese. The general contractor for the zone is an Egyptian company and some of the construction work was subcontracted to local Egyptian companies.

Source: Bräutigam and Tang 2010, 2013.

In conclusion, the concept of SEZ and its impact on economic growth is gaining more and more acceptance globally and the instrument has been widely applied. However, the mixed results of SEZ development in different continents/countries show that it is not a panacea and has to be implemented properly and carefully tailored into a country's specific situations. It is not necessarily a suitable instrument for any country. Given the complex and heterogeneous environments in which zone programs are implemented, it would be useful to establish a clear framework to guide the operations of SEZs in countries where they are deemed relevant. Such a framework may include the following elements (Farole 2011):

- Ensure that SEZ programs are focused where they can best complement and support comparative advantage, as validated through a detailed strategic planning, feasibility, and master planning process.
- Integrate SEZs as part of a broader package of industrial, trade, and economic development policies.
- Integrate SEZs with support to existing industry clusters rather than as an alternative or greenfield approach to cluster development.
- Ensure high-level political support and broad commitment—including the establishment of an inter-ministerial committee to oversee program development—before launching any program.

- Promote exchange between the zone and the domestic environment through both policy and administrative reforms.
- Support the provision of high-quality hard and soft infrastructure encompassing zones, key urban centers, and trade gateways. The focus should be on leveraging SEZs to support existing and planned infrastructure to facilitate the potential for growth catalysts/poles.
- Put SEZs on the regional integration agenda, with an emphasis on their role in facilitating regional production scale and integrating regional value chains.
- Ensure the development of sound legal and regulatory frameworks, and cement them by also addressing the challenges of institutional design and coordination.
- Promote private sector participation and public-private partnerships (PPPs), along with technical assistance for structuring and negotiating PPP deals.
- Take into greater consideration the capacity of governments to deliver on SEZ programs, particularly given their integrated and long-term nature. This will require a focus on institutional development and political economy factors that influence zone policy and implementation.
- Establish clear standards with regard to environmental, labor, and social compliance, and identify clear regulatory responsibilities for monitoring and enforcement.
- Develop and implement a comprehensive monitoring and evaluation (M&E) program from the outset, with safeguards in place to ensure that SEZ program developments remain aligned with strategic and master plans.
- Recognize the long-term nature of SEZ program development. This means planning beyond short-term project cycles and monitoring progress on an ongoing basis.

The Chinese investments in Africa in the backdrop of a new wave of industrial transfer from East Asia, present an unprecedented opportunity for Africa. It could be the continuation of the “Geese Pattern”, which created the “East Asia Miracle”, from Asia to Africa. However, to make this truly successful, the host governments and investors need more mutual understanding of the differences in development stages, legal and governance systems, institutions, social norms, cultures and even mindsets, etc., and to use a pragmatic approach that builds on the strengths of both sides and fits into the local context. Such an approach will eventually lead to a win-win situation.

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