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China and Africa's Experiences with Special Economic Zones: What Can We Learn?

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Abstract: This study briefly summarizes the development experiences of special economic zones (SEZs) in China and Africa, and also assesses the preliminary results of the Chinese investments in SEZs in Africa, reflecting some lessons learned so far. It also makes recommendations on how to better unleash the power of SEZs and industrial zones in Africa through strategically leveraging the Chinese experiences.

China's growth miracle can be largely contributed to its successful SEZ programs, which piloted many market-oriented reforms. However, while China is rebalancing its economy today, these SEZs also face new challenges, such as vicious competitions and high level of homogeneity, environmental degradation and poor integration with urban development. This calls for a bigger role for the market.

In sub-Sahara Africa, the available evidence suggests that its experience with traditional EPZs and IZs has been relatively poor, except a few countries such as Mauritius. The key challenges include poor regulatory and institutional framework, lack of effective strategic planning, weak governance and implementation capacity, and inadequate infrastructure.

Since 2006, China began to implement SEZ projects globally, including four countries in SSA. It is still too early to conduct a full assessment of these zone projects, however, evidence shows that some zones have begun to attract significant amount of investments and make important contributions to local economy. But overall the implementation of Chinese SEZs in SSA has been slow compared with other regions. The main challenges include access to land, regulatory barriers, resettlement and coordination issues, lack of external infrastructure, etc.

Key words: special economic zone, industrial agglomeration, industrial park, industrial zone, China, Africa, investment, FDI

JEL code: L5, L6, O1, O2, O3, O4, O5, R1, E2

China and Africa's Experiences with Special Economic Zones: What Can We Learn?

China's meteoric economic rise over the past three decades is an unprecedented "growth miracle" in human history. Since the Open Door policy and reforms that began in 1978, China's gross domestic product (GDP) has been growing at an average annual rate of 10 percent, allowing people – among them some 260 million migrants – to move from agriculture to more productive activities. In 2007, China's incremental growth in real GDP actually exceeded its entire real GDP in 1979. In 2010, China outpaced Japan and became the world's second-largest economy. In the process, 500 million people were lifted out of poverty (World Bank and the Development Research Center of the State Council of China 2014).

While China's rapid rise has become a hot topic for development debate among policy makers, business people, and scholars all over the world, the numerous special economic zones (SEZs) and industrial clusters that have sprung up since the reforms are undoubtedly two important engines for driving the country's growth. This study briefly summarizes the development experiences of SEZs in China and Africa. It also reflects some lessons learned so far from Chinese investments in SEZs in Africa and make some recommendations on how to better unleash the power of SEZs and industrial zones in Africa through strategically leveraging the Chinese experiences and investments in the local contexts.

I. China's Success with Special Economic Zones and Way Forward

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 April 2010, this number increased to 69: 18 in the Yangtze River Delta, 10 in the Pearl River Delta, 15 in the central region, 11 in the Bohai Bay region, 2 in the northeast region, and 13 in the western region (see map 1). 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).

Map 1. Economic and Technological Development Zones in China, 2010

Source: Zeng, 2010.

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).

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).

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 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

China-Singapore Suzhou Industrial Park (Suzhou IP) was built in Suzhou in 1994. The core district, covering an area of 80 sq km, 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, bounded 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.

Investment incentives and institutional autonomy. To encourage firms to invest in the zones, the SEZs had in place various preferential policies, including inexpensive land, tax breaks, rapid customs clearance, the ability to repatriate profits and capital investments, duty-free imports of raw materials and intermediate goods destined for incorporation into exported products, export tax exemption, and a limited license to sell into the domestic market, among others (Enright, Scott, and Chung 2005). Favorable policies were also in place to attract skilled labor, including the 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, including local tax rates and structures, and to govern and administer these zones. At that time, in addition to the National People's Congress and its Standing Committee, only the provincial-level People's Congress and its Standing Committee had such legislative power. That discretion allowed them more freedom in pursuing the new policies and the 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, the government was very pragmatic, and its policy innovations were especially successful. In 1992, the central government granted legislative power to Shenzhen.10 With that autonomy, Shenzhen carried out many institutional innovations that played a very important role in its remarkable success. For example, Shenzhen was the first to adopt wage reform, in which compensation was based on three elements: 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).

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, Macao, and Taiwan 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 generous 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 (see table 1 for the FDI inflows to these SEZs).

Table 1. FDI Inflows in Five Comprehensive Special Economic Zones, 1978–2008

Year	*Shenzhen*	*Zhuhai*	*Shantou*	*Xiamen*	*Hainan*
Exports (billion current US$)					
1978	0.009[a]	0.009[a]	0.251[b]	0.082	—
1990	8.152	0.489	0.84	0.781	0.471
2000	34.564	3.646	2.595	5.880	0.803
2006	135.959	14.843	3.484	20.508	1.376
2007	168.542	18.477	3.912	25.555[c]	1.838[c]
2008[d]	163.780	19.730	3.278[e]	26.970	—
Utilized FDI (million current US$)					
1978	5.48[a]	n.a.	1.61[b]	—	0.10[b]
1990	389.94	69.1	98.09	72.37	100.55
2000	1961.45	815.18	165.61	1031.50	430.8
2006	3268.47	824.22	139.60	954.61	748.78
2007	3662.17	1028.83	171.62	1272[c]	1120[c]
2008[d]	3929.58	1138.49	—	1955.63	—

Sources: Yeung et al. 2008; Yeung, Lee, and Kee 2009.
Note: — = not available. a. 1979.
b. 1980.
c. Preliminary figures.
d. January–November. e. January–September.

The measures for attracting FDI included streamlined administrative control; concessionary tax rates, breaks, and exemptions; preferential fees for land or facility use; reduced duties on imports; free or low-rent business accommodation; flexibility in hiring and firing workers; depreciation allowances; and favorable arrangements pertaining to project duration, size, location and ownership (Ge 1999). Some of these incentives were applied to all firms but many are only for FDIs. 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.

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, ranging from RMB 10-30 (US$2-6) per square meters per year for industrial land to RMB 70-200 (US$15-42) per square meter per year for commercial land. These fees 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 competition" system for land allocation. On December 1, 1987, China's first state land auction took place in Shenzhen. In 2001, Shenzhen officially abolished negotiation-based stand land transfer for all land allocated for commercial use. In the following year, this was adopted nationwide. In 2007, this new practice was extended to all industrial land as well. In parallel to the land transfer reforms, 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 whole China's urban landscape.

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 government set up an intellectual property office and issued a number of policies and regulations to protect intellectual property rights. It also implemented many preferential tax policies and financial 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, recently, from overseas, who hope for better jobs and new opportunities. Such 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. Besides the many innovative policies mentioned above, Shenzhen was 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).

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 government. 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, China) and the Min Delta region (close to Taiwan, China). Hong Kong 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).

Performance Gaps and Key Challenges

It is worth noting that, despite the overall success of China's SEZs, they have great disparities in performance and speed of growth. Given the numerous SEZs, a broad assessment is difficult, but a preliminary comparison among the three initial SEZs in Guangdong Province could yield some interesting lessons. Although all three were given the same privileged status at almost the same time, Shenzhen has been growing much faster and is much more innovative than the other two. This superiority could be attributed to many factors, but one could be the capacity of an SEZ to identify its comparative advantages, business demand and bottlenecks accurately and implement the right strategy to remove problems as well as to build a conducive business environment. While Shenzhen was quick in identifying its industrial position and to build a good enabling environment, Zhuhai and Shantou seemed a step behind. With the intense competition for FDIs, the first-mover advantage is always important. Zhuhai actually overbuilt its infrastructure beyond sustainable market demand, and the symbolic relationship with Macao has not blossomed (Yeung, Lee, and Kee 2009). Its over- sized airport exhausted its initial capital and became a drag on its economy (Zhong et al. 2009). Shantou has reached average rates of economic growth, but at various times that growth has been stalled by scandals traced to corruption, customs irregularities, smuggling, and the like. It also suffers from poor social credit and trust. In addition, the urban and zone management is not well planned, and there have been some institutional conflicts (Zhong et al. 2009).

While the overall success of the SEZs in China is inseparable from the effective government role (especially at the initial stages) to address the market failures, such as the public infrastructures, such a government-led approach (with little private sector participation) has also encountered some serious challenges:

1) ***Vicious competitions and high level of homogeneity.*** Many of the SEZs or industrial parks now competing in the same or similar sectors lack conspicuous sector or product differentiation. Many provinces have set up many zones or parks that are targeting almost the same set of industries, such as electronics, ICT, automobiles, pharmaceuticals, new materials, to name a few (table 2). Even within one city, there are several zones/parks are set up to compete against each other in the same or similar sectors. These zones/parks are backed up by different line ministries.

Table 2. Key Sectors of Selected National Level ETDZs Across China (2009)

Name	Region	Size (KM^2)	GDP (RMB 100 million)	Population (10,000)	**Key Sectors**
Qinhuangdao	East	56.7	161	15	Electronics & ICT, pharmaceuticals, new materials, new energy, environment protection, aviation, maritime engineering, etc.
Yantai	East	220.7	704.7	15.3	Electronics, electrical machinery, automobile, pharmaceuticals, food processing, petrochemicals, textiles, etc.
Tianjin	East	40	1231.1	16.9	Electronics & communications, pharmaceuticals, machinery, food processing, etc.
Guangzhou	East	393	1321.8	37	Electronics & communications, electrical machinery, food processing, chemicals, etc.
Shenyang	East	484	700	100	Automobile & auto parts, equipment manuf., pharmaceuticals, chemicals, etc.
Wuhu	Middle	122	247.1	n/a	Electronics, electric appliances, automobile & auto parts, new materials, etc.

Wuhan	Middle	31	367.9	2	Automobile & auto parts, electronics & ICT, food processing, machinery, pharmaceuticals, etc.
Zhengzhou	Middle	82.1	110	5.5	Automobile & auto parts, equipment manuf., electronics & ICT, aluminum, etc.
Changsha	Middle	38.6	300.9	7.5	Electronics & ICT, machinery, new materials, biotech, food processing, etc.
Nanning	Middle	10.8	87	17.3	Electronics, pharmaceuticals, telecom fibers, refined chemicals
Chengdu	West	26	268.9	25	Automobiles, electronics, machinery, pharmaceuticals, food processing, tourism, etc.
Xi'an	West	23.5	364.5	n/a	Electronics, machinery, biomedicines, new materials, petrochemicals, etc.
Lanzhou	West	9.5	59	n/a	Electronics, machinery, pharmaceuticals, building materials
Urumqi	West	85	175.2	15	Electronics & ICT, machinery, new materials, pharmaceuticals, chemicals, etc.
Kunming	West	156	74.2	8	Electronics & ICT, new materials, biotech, environment conservation, etc.

Source: China Development Zones Association 2011; and Li 2011.

While a reasonable level of competition is good for innovation and growth, too much competition across the country or a city lead to a waste of public resources, fragmentation of industries and human talents and oversupply of infrastructures. This is actually hindering the real process of agglomeration and weakening the technology innovation capacity and overall industrial competitiveness. It would be more desirable to concentrate the same, similar, or closely related sectors in a few locations where they have the best comparative advantages. This will require a market-based consolidation process. For example, in Japan, 1% of land produces 20% of national GDP, and in the U.S., 20% of land produces 50-60% of GDP. These are made possible because the optimal agglomeration efficiency which is achieved through the right mix of industrials.

2) ***Environmental degradation and Resource Constraints.*** Related to China's growth model based on low technology and labor- and resource intensive manufacturing, many SEZs face serious environmental and resource challenges. One is the serious water, air, and land pollution and the huge amount of industrial waste; another is, with the rapid industrial expansion, land, skilled labor, and energy resources such as oil, water, and electricity have all become more expensive and limited. In some cities, virtually no more land is available for heavily resource-based manufacturing activities, which require a lot of physical space. In many SEZs, the land cost now is several times higher than it was when they were established. These problems have forced some firms to move inland or abroad; however, that is only a short-term solution. In the long run, the SEZs will need to focus more on growth quality than on quantity.
3) ***Poor integration with urban development.*** While the special economic zones have achieved obvious economic success, they are somewhat lagging behind in providing the commensurate social and urban services. Although some SEZs enjoy a good living environment, many of them are not well integrated into the overall urban development plan, lacking sufficient health and education services, entertainment facilities, 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 a situation cannot be sustainable.

Way Forward…

Given the enormous success that the SEZs in China have achieved and the challenges they are experiencing today, what are the best ways to move forward? Is there an optimal solution which can help sustain the economic growth and industrial agglomeration to the next level, while avoiding or overcoming the challenges mentioned above? The key to answer this question is how to balance the roles of government and market through series of carefully designed reforms. The right combination of these two can help unleash new waves of growth dynamics, which will be crucial for China's long-term sustainable development.

At global level, there are many industrial zones are also successfully built through an effective public-private partnership or a private sector-driven approach. Available data suggests that—from the perspective of a host country—private zones are less expensive to develop and operate and yield significant economic results. Private zones usually require less public funding to establish and operate, mainly because private developers finance onsite infrastructure and facilities; governments are required only to provide offsite (external) infrastructure and facilities, which are only a small part of total development costs (usually a maximum of 25 percent of onsite costs). In addition, most private zones (the Dominican Republic and the Philippines are good examples) are required by law to provide offices and other facilities for government authorities to be based onsite. Government costs of administering zone programs are also reduced in a number of countries. Most private zones in Latin America and the Philippines, for example, pay overtime and other special benefits for customs officers and other officials to remain onsite on a 24- hour basis. In other programs (Kuwait, Costa Rica, Uruguay, Colombia), zone operators assume specific "regulatory functions" such as inventory counts on behalf of customs authorities, thereby further reducing administrative costs of governments (FIAS 2008). The Science Park of the Philippines, Inc. is a good example of private developer of economic zones (Box 2).

Box 2. The Science Park of the Philippines, Inc. – A successful Private Developer of Economic Zones

Science Park of the Philippines, Inc. ("SPPI"), a member of the ICCP Group, was established in 1989. It is one of the country's pioneers and is now a leader in industrial park development.

It has completed the following industrial estate projects: the Light Industry & Science Park I ("LISP I") and the Light Industry & Science Park II ("LISP II"). Both are very successful world-class industrial estates in the Philippines. LISP I and LISP II are the first privately-owned industrial estates in the Philippines to be ISO 9002 (Quality Management Systems) certified and the only ones to date to also be ISO 14001 (Environmental Management Systems) certified.

SPPI is now offering its third and fourth projects, the Cebu Light Industrial Park ("CLIP") and the Light Industry & Science Park III ("LISP III"). SPPI's fifth project, Hermosa Ecozone Industrial Park ("HEIP"), is in the master planning stage.

SPPI's industrial estates provide a work place under a well-managed environment for light to medium industries with clean and non-polluting manufacturing operations as well as support industries. They are dedicated to companies that strongly advocate environment-friendly operations.
SPPI's industrial estates offer complete and advanced infrastructure and facilities to support manufacturing operations. The parks provide abundant supply of power/energy, water and telecommunications to ensure non-stop manufacturing activities.

Source: SPPI website: http://specialeconomiczone.org/science-park-of-the-philippines-inc.

In addition, it's very important for the zone initiatives to be fully integrated with the regional or municipal urban development. It needs to start with the coordination across different government players such as the land bureau, urban development bureau, development and reform bureau, etc. The close consultations with the developers, the private sector, relevant scholars/experts, and communities need to be carried out to make sure all the aspects are taken into consideration. Such an approach can help a region/city to build an efficient, inclusive and sustainable urban community and industrial agglomeration with high-level integration. The Aqaba Special Economic Zone in Jordan offers good lessons in terms of community engagement in economic zone development (Box 3).

Box 3. The Aqaba Special Economic Zone (Jordan) - A Community Based Development Approach

Background

In 2000 the government of Jordan declared the city of Aqaba a Special Economic Zone. In place of the city municipality, the Jordanian government formed a statutory institution called the Aqaba Special Economic Zone Authority (ASEZA), to which it gave regulatory, administrative, fiscal and economic responsibilities within the Aqaba Special Economic Zone (ASEZ). From a sleepy entryway into Jordan, Aqaba became a tax- and duty-free zone that has attracted billions of dollars' worth of investments and development projects to the Zone. However, these investments rapidly altered the characteristics of Aqaba both as a city and a community; serious tensions arose in many parts of Aqaba's community, which felt uneasy about the implications that the pace and nature of investment would have for the people's heritage and way of life. In 2008, ASEZA requested technical assistance in defining the needs of an effective community development strategy, the ideal organization to coordinate the activities to successfully pursue that strategy, and a five-year strategic plan to realize its goals. ASEZA and USAID hired e3CLO to help lead this effort, which would evolve from assessing community needs to the creation and facilitation of ASEZA's Community Development Strategic Plan.

Working at Both Ends of the Power Ladder: An Integrated Approach

In order to assist ASEZA in creating and implementing an effective longer-term community development strategy, e3CLO looked at the dynamics and economic and social behavior within the ASEZ from an integrated perspective. It was clear that an effective, sustainable relationship required a two-way commitment: ASEZA's commitment to serving the community, and the community's commitment to working with ASEZA. To begin helping people to understand this dynamic, e3CLO began by defining the ASEZ 'community' as all the persons and families living and/or working within the ASEZ. The definition demonstrated the inclusiveness of the ASEZ 'community' and began to break down perceptions among people in the ASEZ of irreparable divisions and interests between ASEZA and the ASEZ community.

From the outset, the consultants applied their approach at both ends of the power ladder. Without a commitment on the part of those who control the power ladder – in this case ASEZA, and in particular its Commissioners - to face and seek to resolve the most challenging issues, long-term change could not happen. Furthermore, all other groups and individuals at various levels of the power ladder - the entire ASEZ community - needed to start taking on a greater level of responsibility. In a society such as Aqaba, Jordan, this would require a cultural shift away from the ancestral tribalism and 'wasta'[2] at the core of social behavior. After assessing both the influence and impact of the major entities in the ASEZ and the interface between ASEZA and the community, a whole-community assessment and needs report was presented to ASEZA and the community. The report was used as a platform for open discussion among the stakeholders (ASEZA and community) to decide the key priorities for Aqaba. But before a strategy could be developed, it is necessary to bring together the ASEZA Commissioners and community leaders to define what they saw as the mission, vision and purpose of the ASEZ. Once these had been determined, the stage was prepared for ASEZA and the revitalized community leadership to develop a strategic plan for the ASEZ.

In order for this new partnership to work effectively in the long-term, there first had to be transparency and collaboration within the leadership of both ASEZA and the community. Through careful organizational design and

[2] 'Wasta' is an Arabic expression that loosely translates into 'who you know'. It refers to using one's influence or connections to get things done, such as quick renewal of a passport, waiving of traffic fines, and even garnering prestigious jobs. Wasta is deeply ingrained in Middle East culture, having been the de facto way of getting things done for decades."

facilitation, the development partners and external consultants assisted ASEZA in its own strategic reorganization in order to serve and partner the ASEZ community now and in the coming years. Meanwhile they worked with the community leadership to reorganize and enhance itself as a more responsible and accountable participant in making the choices that affect the future of Aqaba.

Ownership: the key to sustainability
For Aqaba to have sustainable growth, the ASEZA needed to bring the wider community into the decision-making process; at the core of the strategic redesign of ASEZA was the creation of a more transparent, inclusive collaboration with the leaders of all stakeholder groups within the community. Drawing from the leadership and resources of key community groups, associations and umbrella organizations, the ASEZA and community stakeholders were brought together to jointly determine their own interactive relationship. Through a series of meetings and retreats, a collaborative system was formed that is responsive and adaptable to changing dynamics and situations. In this way, the ASEZ community became empowered because the leadership became the shared responsibility of the entire community. The Aqaba community – including ASEZA - now has ownership of its own decision-making process, and the foundation on which to build a prosperous, sustainable future for all its citizens.

Source: e3CLO, "The Aqaba Special Economic Zone, Jordan: A case study of e3CLO's Community Based Development in Action". *http://www.*e3clo.net/aqabacasestudy.pdf

After 30 years' reform and rapid development, Chinese market has become mature enough to carry on many functions. The role of the government has inevitably to change from the active "doer" to an "enabler" or "facilitator".

It's important to bear in mind that any type of government interventions to boost competitiveness should start with a clear understanding of the market and the main drivers of city economic growth. In most cases, it is the local private firms that determine competitiveness, and local government intervention should merely complement the market and take effect only where market failure is present. Such scenarios include government provision of public goods, mitigation of negative externalities such as environmental pollution and traffic congestion, promotion of positive externalities such as knowledge sharing, and addressing coordination failures. It is also important, however, for local policy makers to recognize the risks associated with an intention to correct market failures. As the planned interventions may be of the wrong type or scale, or implemented poorly with inadequate competence, the possibility of public interventions failing can be significant (Zhang 2009).

In the areas of industrial agglomeration, the government could focus on the following in the future:

1) Providing overarching regional industrial planning guidance based on the comparative and competitive advantages of different regions or city clusters. Under such an overarching umbrella, provinces and municipalities can come out their more specific plans, which should be well integrated with local urban development plans. In order to successfully implement such plans, the governments at different levels need to have high-level coordination and cooperation across the administrative boundaries. Certain policy and financial incentives could be directed towards such regional cooperation.
2) Delivering public services and infrastructures which have high externalities and public goods nature. Such services include urban community services, such as education, health, rural labor training. Infrastructures include public transportation system, water, waste water treatment, garbage collection/disposal, and other environment related facilities. Certain infrastructures for industrial zones, especially the off-site infrastructures which are integrated with urban development can be financed by the government as well, assuming these zones are based on the market demand and

regional comparative advantages. Beyond the government support, such infrastructures can also effectively tap into the private sources of funding through PPP arrangements.

3) Strengthening industrial standards, quality assurance and the S&T infrastructure. While China is gradually losing its low-cost labor advantages to other countries such as Bangladesh and Vietnam, it needs to upgrade the current SEZs and clusters through technology innovation, adaptation, and diffusion as well as through skills training. For China to achieve such an ambitious goal, it will have to take a comprehensive approach that will involve but not be limited to the following:
    - Strengthening the industrial standards and quality assurance. This is not only an issue of setting up these standards and regulations, but mostly importantly they need to be effectively enforced. An area of particular attention is the food and drug sector, where the fake and harmful products have caused public outcry.
    - Strengthening intellectual property rights protection.
    - Providing the right incentives or pressures for enterprise-led innovation.
    - Improving SME innovation capacity.
    - Strengthening university-industry linkages.
    - Strengthening the financial sector, especially the ecosystem of the venture capital industry.
4) Deepening the institutional reforms. Since the SEZs and industrial zones are gradually losing their privileged status, it is important for them to explore new ways of cooperation and integration within a wider territorial and regional context. Meanwhile, they need to deepen institutional reforms and create a more conducive business environment, including a better legal and regulatory environment, a more effective monitoring and supervisory system, and a more efficient administrative system. In order to further encourage the consumption of the population, it's important to further open up the service sectors, including within the zones. The recent Shanghai Free Trade Zone[3] and Qianhai (Shenzhen) Special Economic Zone [4] are the right moves towards this direction. Currently the private consumption as a share of GDP is about 36%, which still has a large room to increase. Meanwhile, the social safety net needs to be strengthened to cover the whole population.
5) Implementing strict environmental and energy standards to move towards green zones, eco-industrial parks or eco-cities. Enforcing stronger standards will not only improve the environment and increase the focus on quality of growth rather than on quantity, but also force firms to invest more in environmental and energy-related innovations. This measure, however, also needs to be implemented with public assistance. Because many firms in the Chinese clusters or zones are still operating in the low-tech and environment-polluting sectors, they are unable to comply with certain standards due to lack of innovation capacity or access to new technologies, but simply closing them down or moving them away may be not the best solution for many regions. Because certain "green" technologies have characteristics of public goods, government and public institutions may need to provide R&D and technological support to enable these firms to upgrade.

[3] Officially named China (Shanghai) Pilot Free-Trade Zone, launched on September 29, 2013. The zone covers an area of 29 km^2, integrating four existing bonded zones — Waigaoqiao Free Trade Zone, Waigaoqiao Free Trade Logistics Park, Yangshan Free Trade Port Area and Pudong Airport Comprehensive Free Trade Zone. It is seen as a testing ground for a number of economic reforms, including liberalizing foreign currency exchange and trying out market-set interest rates, and will allow more open trade in services, permitting foreign and private investment in many service sectors including finance, shipping, commerce and culture. For the first time in China, it will apply a negative list for investments in a zone.

[4] The project, known as the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone, was established in 2010, to focus on developing financial, logistics and computer services on the mainland. It will cost around $45 billion to develop, and is due for completion by 2020. It is regarded as a major step for the Yuan liberalization and financial reforms in China.

What's laudable is that some SEZs and industrial parks have already begun to incorporate green facilities as part of the zone design, such as in the Tianjin Binhai New Area, where a Sino-Singapore Tianjin Eco-City is being developed. The eco-city is envisioned as an "economically sustainable, socially harmonious, environmentally friendly and resource-conserving" city, which will become a "model eco and low carbon city replicable by other cities in China." (Box 4). A road map to transform Jilin City in Northeast China to the first low-carbon SEZ (city) is underway in a partnership between EU and China, with participating institutions from UK's Chatham House, E3G and the Chinese Academy of Social Sciences, etc. Meanwhile, China's National Development and Reform Commission has identified 6 provinces and 36 cities as low-carbon pilots to help reach the country's carbon intensity target.

Box 4. Sino-Singapore Tianjin Eco-City

The Sino-Singapore Tianjin Eco-City aims to achieve this vision by taking an integrated approach to planning a new urban area in an environmentally sustainable manner. According to the master plan, Sino-Singapore Tianjin Eco-City (SSTEC) promotes integrating land use and urban transport and balancing employment and housing supply. SSTEC promotes the "use of clean/renewable energy and reuse/recycle of resources through innovative technologies and environmentally friendly policies and investments across various sectors," including water, energy, land, and transport, among others. Global climate change and social equity issues are also incorporated into the master plan by explicitly including greenhouse gas reduction and affordable housing targets. The development work of phase one of the project has been completed.

Source: Baeumler et al. 2009.

II. SEZs in Africa – A Long Journey Ahead

Although several African countries launched EPZ or free zone programs in the early 1970s (Liberia in 1970, Mauritius in 1971, and Senegal in 1974), most African countries did not operationalize programs until the 1990s or 2000s (table 3). Almost all the African zones developed over the past two decades have involved traditional export processing zones (EPZs) and industrial parks (IPs), which differ considerably from the modern large scale multi-use SEZ development programs that are currently being proposed.

Table 3. 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, Zambia, Eritrea, Mauritania, Tanzania, Ethiopia

Source: FIAS (2008) with 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 4).

Table 4. Estimates of direct employment and exports in zones in select regions around 2004-06

Region	Direct employment (million)	Exports (US$ million)
Sub-Saharan Africa	*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).

However, the fact that most African countries are relative latecomers to economic zones has several important implications in considering their success to date. First, few zones see rapid growth in their early years. Even the most successful zones grew slowly in the first 5–10 years, later shifting to an exponential growth curve before eventually reaching maturity and experiencing slowing growth. Thus, for many African zone programs, it may be too early to pronounce on their success or failure. Second, the macro environment in which these zone programs have been developed differs substantially from that experienced by zones setting up in Asia and Latin America during the 1970s and 1980s. Specifically, most African zones were established during and after the rise of Asia as a manufacturing superpower and the subsequent structural shift in trade and FDI patterns. Thus, the level and nature of competition for traditional manufacturing export platform FDI is a significant factor that may hinder the speed and scale of growth for African zones (Farole 2011).

Anecdotal evidence suggests that success in African zones (even defined narrowly in terms of scope and time) has been limited to a few countries, such as Mauritius, Kenya, Madagascar, and possibly Ghana. In many other countries in the region—including Nigeria, Senegal, Malawi, Namibia, and Mali—zones appear to be struggling for a variety of reasons, including poor location, lack of effective strategic planning and management, and problems of national policy instability and weak governance (Watson 2001). Even where programs have been relatively successful in attracting investment, creating employment, and generating exports, concerns remain over the quality of investment and employment, as well as its sustainability.

The following section presents the results of a recent World Bank study that focuses on six African zone programs (Ghana, Kenya, Lesotho, Nigeria, Senegal, and Tanzania) along with four non-African countries (the Dominican Republic, Honduras, Vietnam, and Bangladesh) to shed some lights on the performance of SEZs in Africa.

Investment

The first proximate measure of success of an SEZ program is the investment it attracts. Without investment, there will be no employment or exports and no possibility of realizing structural economic benefits. On measures of FDI stock and FDI per capita, limited data shows that the non-African zones generally outperform the African zones. One exception is Ghana, which experienced large-scale investment in its free zone program during the 2000s (Table 5). A large majority of FDI in Ghana's program has come through single unit free zones rather than through investment in firms based in the Tema Free Zone. These single unit firms are licensed as free zone companies but entitled to operate anywhere in Ghanaian territory. A similar program operates in Kenya, Senegal, and Tanzania. The last column shows the relative importance of the SEZ program as a source of FDI. It is striking that—with the exception of Nigeria, whose free zone program has failed to attract significant investments by almost any measure—the African zone programs show relatively high contributions to national FDI inflows from the SEZ programs, despite low absolute levels of investment in the SEZs (Farole 2011).

Table 5. SEZ Investments in Selected Countries

	FDI statistics		
	Total SEZ FDI stock (2008) (US$m)	*SEZ FDI per capita (2000–2008) (US$)*	*SEZ FDI as % of total national FDI (2000–2008)*
Bangladesh	1,435	6	30
Dominican Republic	2,611	141	18
Vietnam	36,760	325	100
Ghana (Tema)	68	3	48
Ghana (single units)	2,806	120	
Kenya (EPZs)	162	6	20
Kenya (single units)	155		
Nigeria	N/A	<1	<1
Tanzania	210	5	18

Source: Farole 2011 and National FDI data from UNCTAD.

Most African countries have relatively high labor costs, low productivity, and high costs of transport and other inputs. Suffice to say that in the absence of comparative advantage in labor-intensive assembly, it is not surprising that African zones have had a poor experience in attracting investment in traditional export processing activities, such as textiles and garments, except Lesotho, and to some extent, Kenya and Ethiopia.

Exports

As was the case with investment, while nominal exports from the African zone programs were extremely small (on average 10–15 times smaller than the corresponding absolute and per capita exports in the non-African programs), their contribution to national exports seemed to be much more in line with international SEZ norms. However, in some countries— particularly Kenya, Nigeria, and Tanzania—the relative contribution of the SEZ program is limited (Table 6).

Table 6. SEZ Exports in Selected Countries

			SEZ share of national		Growth in exports		
	Exports 2008 (US$m)	*Exports per capita 2008 (US$)*	*Non-oil exports*	*Manufacturing exports*	*2000–2008 (CAGR)*	*2000–2004 (avg.)*	*2004–2008 (avg.)*
Bangladesh	2,430	102	15%	16%	13%	11%	16%
Dominican Republic	4,545	462	69%	96%	–1%	0%	–1%
Honduras	4,000 (est.)	550	61%	98%	10%	15%	6%
Vietnam	16,175	188	30%	41%	29%	24%	35%
Ghana (Tema)	281	12	33%	590%	29%	56%	31%
Ghana (single units)	1,019	44					
Kenya (EPZs)	145	4	9%	25%	31%	57%	10%
Kenya (single units)	265	7					
Lesotho	425	211	64%	64%	1%	19%	–7%
Nigeria (Calabar) (est.)	100	1	4%	16%	N/A	N/A	N/A
Senegal (DIFZ)	50	4	16%	42%	26%	144%	–3%
Senegal (single units)	350	29					
Tanzania	59	1	3%	14%	N/A	N/A	N/A

Source: UN COMTRADE statistics and Farole 2011.

Employment

While SEZs are often major contributors to FDI and exports in a country, their overall impact on the labor market tends to be rather less. That is not to say that economic zones are not often a major generator of

employment; rather, it reflects the relative share of the export sector in a most countries' economies. In small countries, SEZs are often large contributors to employment. As can be seen in Table 7, the absolute and relative contributions of the SEZ programs to employment in African countries is limited (with the significant exception of Lesotho), even when measured against the limited scale of their industrial sectors. There is one exception - Lesotho, which is nearly five times more labor-intensive, owing to its nearly exclusive concentration in the garment sector (Farole 2011) .

Table 7. Employment Contributions of SEZs in Selected Countries

	SEZ employment (2008)	*SEZ employment as % of national industrial sector employment*
Bangladesh	218,299	3%
Dominican Republic	124,517	30%
Honduras	130,000	30%
Vietnam	1,172,000	19%
Ghana (Tema)	2,025	3.5%
Ghana (single units)	26,534	
Kenya (EPZs)	15,127	15%
Kenya (single units)	15,551	
Lesotho	45,130	>80%
Nigeria (Calabar) (est.)	1,156	<1%
Nigeria (Onne, oil & gas)	20,000	N/A
Tanzania	7,500	2.5%

Source: Country SEZ authorities and Farole 2011.

Overall, various evidence show that so far none of the African zones (except Mauritius) appears to have made any 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 2012):

- *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.
- *Poor business environment.* In most Sub-Sahara 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, 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 is crucial.
- *Zone management and operational know-how.* Most of the zone developers, including the relevant government agencies, do not have the zone management and operational experiences, 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 and or fully acknowledge the commitments made by the previous governments. Strong and long-term government commitment is crucial for the zone's success.
- *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. This is especially prominent in some of the zones in Nigeria.

Despite the experience to date, governments throughout Africa remain keen to develop SEZ programs in order to support economic diversification, attract investment especially in the manufacturing and services sectors, create employment, and benefit from skills and technology transfer. New SEZ programs are being launched in several countries and a number of major investments are being made to establish new economic zones, coming both from the public and the private sector. Among these are investments from foreign developers, including from China, India, Korea, Singapore and Turkey among others.

A New SEZ Strategy

In order to avoid falling into the same pitfalls in the past, Africa needs a new SEZ strategy, which builds on the following thrusts (Zeng 2012):

- *A stronger stakeholder ownership,* which includes a sound legal, regulatory framework, and effective institutions, as well as a better communication and consensus building strategy between the government and private sector/civil society.
- *A better business environment inside the zone,* including efficient services, such as one-stop shop and good infrastructure.
- *A realistic scheme - starting small and implementable.* It's crucial to make one or two zones work first before scaling-up.
- *Certain-level flexibility and autonomy at local level:* using SEZs to pilot new reforms, as East Asian experience shows, which would require certain level of autonomy at local level.
- *Technology transfer, diffusion and skills training.* This is crucial for the zones to acquire sufficient manpower and make their products competitive.
- *Better linkages with local economy.* The zones need to build on local comparative advantages and have local suppliers as part of their value chains.
- *Clear objectives, coupled with sound benchmarking/M&E and competition.* While zones may enjoy certain level flexibility and strong support from the government, they also need to be accountable for the intended results, measured rigorously against the pre-set targets and benchmarked across different zones. Certain level of competition can be a positive catalyst.

III. Chinese Investments in SEZs in Africa: Extending the Geese Pattern across the Indian Ocean?

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 Egypt to establish an industrial zone in the Suez economic area.[5] 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 fifty special economic and trade cooperation zones outside the country.

Under the 2006 policy, the Chinese government identified SEZ projects in about 15 countries[6]—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 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).

Subsidies can cover up to 30 percent of specific development, for pre-construction (feasibility studies, visits for planning and negotiation, securing land, the costs of preparing a bid) and actual implementation (the purchase or rent of land, factory or office space, legal and notary fees, customs, and insurance). These costs can be made retroactively to January 1, 2004, for pre-construction and January 1, 2006, for implementation. They can also access rebates on interest for Chinese bank loans, as well as diplomatic support in working with host governments (MOFCOM and MOF 2008). With official support of MOFCOM, zone projects are expected to be in a better position to access low-cost finance from Chinese banks (China Development Bank or China Eximbank). Finally, Several Chinese provinces offer additional incentives; for example, the developers of the Eastern Industrial Park can be reimbursed by Jiangsu Province for up to 20 percent of infrastructure costs.

In addition to these incentives, the China-Africa Development Fund (CADF) is a potentially critical facilitator of these zone investments. CADF was launched in June 2007 by the Chinese State Council with

[5] Other Chinese zone investments were in Cuba, Zambia and Dubai.

[6] A total of 19 zones were approved in 2006 and according to MOFCOM, 16 were under construction by June 2010.

an initial US$1 billion provided by the China Development Bank[7]. It is expected to reach US$5 billion over the next few years. CADF invests in joint ventures with Chinese companies that do business in Africa and it has taken equity positions in several zones. CADF is currently the second largest shareholder in the Lekki FTZ (Nigeria) and the JinFei Zone (Mauritius).

Chinese companies moving into the zones are also eligible for a number of incentives. They can be reimbursed for up to half of their moving expenses, receive export and income tax rebates or reductions on the materials sent for construction, and get easier access to foreign exchange. They can also apply to a second 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 (Brautigam and Tang, 2010). These incentives were designed to reduce the commercial risk for the Chinese investors to venture into new markets.

MOFCOM 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 8. 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.[8] 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 8. SEZs Officially Supported by MOFCOM

Region	Zone	Initiated	Status
Sub-Saharan Africa			
Zambia	Chambishi Nonferrous Metal Mining Group Industrial Park Lusaka sub-zone	2003	Operational Under construction
Nigeria	Lekki Free Trade Zone Ogun Guangdong Zone	2003 2009	operational operational
Ethiopia	Eastern Industrial Park	2007	operational
Mauritius	JinFei Economic and Trade Cooperation Zone	2009	Under construction
North Africa			
Algeria	Jiangling Economic and Trade Cooperation Zone	2007	Delayed due to policy issues
Egypt	Tianjin TEDA Suez Zone	2007	Operational
East Asia			
Vietnam	China-Vietnam (Shenzhen-Haiphong) Economic and Trade Cooperation Zone Longjiang Industrial Park	2008 2009	Under construction Operational
Thailand	Thai-Chinese Rayong Industrial Zone	2007	Operational
Cambodia	Sihanoukville SEZ	2008	Under construction
Indonesia	China-Indonesia Economic Trade Zone	2008	Under construction
S. Korea	Korea-China Industrial Park	2008	Delayed due to funding problem
South Asia			
Pakistan	Haier-Ruba Industrial Zone	2006	Operational
Latin America			

[7] China Development Bank is a stakeholder of CADF.

[8] Interviews with MOFCOM officials in 2010.

Venezuela	Venezuela-China Science Technology Industry Zone	2007	Partly operational
Mexico	Mexico and China (Ningbo) Geely industrial and trade cooperation zone	2007	Canceled due to land access issue
Eastern Europe			
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	Unknown

Note: Due to limited information, the status of the zones is not necessarily the latest.
Source: World Bank (2010) 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.[9]

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 investments[10]. Finally, all these zone projects involved high level political support from both the Chinese and African governments.

Based on a study by the World Bank on four Chinese-invested SEZs in Africa[11], 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

[9] Zones that are not supported formally by MOFCOM were not covered in this study.
[10] 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).
[11] These 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.

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, 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 achieved laudable progresses and made significant contributions to local economy and employment. For example, the Lekki Free Trade Zone has attracted $1.1 billion (N170.5 billion) investment commitment from 48 investors, including Imad Oil and Gas FZE, which is investing $200 million; China Railway Construction Corporation ($50 million); and YFK Pharmaceutical FZE ($30 million), among others (Gabriel 2012). The Ogun-Guangdong Free Trade Zone has attracted 35 investors, and it procures about N3 billion worth raw-materials locally per annum, remits N800 million yearly as salaries for 2,500 Nigerian 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, 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 2,300 people, mostly local, and provides vocational training to its employees, including training of local technicians overseas[12]. The company plans to spend $2 billion over the next 10 years to create a manufacturing base that will employ up to 100,000 Ethiopians (Mengistu 2014).

Meanwhile, successful experiences of the more advanced zone projects elsewhere such as those in Egypt, Thailand and Vietnam also provide useful lessons for the zones in SSA. For example, Box 5 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 5: Lessons from the TEDA zone in Egypt

After a challenging start, the TEDA zone in Egypt now appears to be gaining traction. At least 16 companies are established in the 1 km^2 start-up phase. Banking, catering and customs clearing facilities are available in the zone. Approximately 1,850 local jobs had been created as of July 2009 and the zone aims to attract and host around 50 companies by 2011. Current companies include some selling into the local market, some exporting back to China,

[12] Based on author's field visit to the Eastern Industrial Zone in Ethiopia in 2013.

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.

In conclusion, the concept of SEZ and its impact on economic growth has been globally accepted 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. The environments in which zone programs are developed are complex and heterogeneous. Therefore, it would be useful to to establish a clear framework for situations in which SEZs are appropriate, and the likely preconditions for their success. The following are suggested elements of such a framework (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 difference of development stages, legal and governance systems, institutions, social norms, cultures and even mindsets, etc., and come out a pragmatic approach which builds on the strengths of both sides and fits into the local context. Such an approach will eventually leads to a win-win situation.

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