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The Impacts of Special Economic Zones

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Overview of Special Economic Zones

Special Economic Zones (SEZs) are generally defined as geographically delimited areas administered by a single body, offering certain incentives (duty-free importing and streamlined customs procedures, for instance) to businesses that physically locate within the zone. The World Bank uses the term SEZ to encompass a variety of types of economic zones, including Export Processing Zones (EPZs), Free Ports, Enterprise Zones, and Financial Services Zones. Although the terms SEZ and EPZ are often used interchangeably, including here, Aggarwal (2006) notes that the main difference between the two is that SEZs are integrated townships with fully developed infrastructure, while EPZs are just industrial enclaves. Both types of zones offer some sort of economic incentives for firms located within them, and they differ from agreements that grant temporary economic status to certain industries or firms that are not required to be within a geographical or physical demarcation.

SEZs are economic instruments to attract investment, usually foreign, that might otherwise go elsewhere. They are designed to be mutually beneficial agreements in which the host country gains jobs, exports, and possibly an increase in demand for locally procured inputs other than labor, and the investing firms gain access to relatively cheap inputs, especially labor, and other economic incentives.

Export Processing Zones are used extensively throughout the world. The International Labor Organization estimates that worldwide there are over 2,700 EPZs employing more than 63 million individuals (Appendix A). EPZs are particularly numerous in Asia and along the US/Mexico border.

At least 20 countries of Sub-Saharan Africa (SSA) use some type of SEZ (Appendix B, Boyenge, 2007). EPZs are the most common type of SEZ, in part because many of the value-added products produced in SSA are destined for markets in the more developed countries of North America, Europe, and/or Asia. As a general rule, firms operating inside an EPZ are required to export 80% of their output, however, some EPZs have more lax regulations and allow more than 20% of output to go to local markets (World Bank, 2008). SEZs generally export labor-intensive, assembly-

oriented activities like apparel, textiles, and electrical and electronic goods. In SSA, however, primary exports include processed food as opposed to electrical goods (World Bank, 2008).

Depending on location, SEZs often require extensive, baseline investment in infrastructure, including transportation networks, distribution centers, communication technology, electricity, and running water. In addition to subsidized infrastructure, firms are also promised certain incentives to operate inside the zone, often including but not limited to: duty-free imports of raw and intermediate inputs and capital goods for export production; streamlined processing of permits, investment applications, and other bureaucratic red-tape; less stringent labor laws; and corporate tax holidays or reductions.

Not all countries are able to front the money for the capital and infrastructure investments needed to create an SEZ. Although many SEZs in more developed countries are funded entirely by the location-country government or domestic firms, foreign capital investment is often needed in SSA. Traditionally, most foreign investment in African SEZs has come from European companies, but a number of Asian firms have shown interest in recent years—most noticeably, Chinese firms. For example, the Maputo Corridor in Mozambique, as well as the Chambishi copper belt region of Zambia were funded almost entirely by Chinese investment. Mauritius has been able to secure funding from multiple sources, including firms from China and India (Davies, 2008).

The general trend in SEZs over the past few years has been to expand the activities covered and liberalize the core set of policies. For example, the activities allowed in SEZs have expanded from manufacturing and processing to include commercial and professional services. There has also been a push to provide the same benefits to both foreign and local investors in an effort to increase domestic investment (World Bank, 2008).

Host governments set the rules and regulations for SEZs operating in their country, often through the passage of legislation. The management of the zones can be public, private, or a partnership between the two, and can take the form of an autonomous government authority or corporation, a specialized department within a ministry, or zone-specific management boards. Of the 114 SEZs in SSA (not counting single-factory zones) 65 are privately operated, while the remaining 49 are publicly managed. Private management is on the rise due in part to the perception that privately-managed zones perform better than their publicly managed counterparts (World Bank, 2008).

There is much literature on the efficacy and impacts of SEZs. There is a distinction between those who criticize on social or environmental grounds versus those who question the economic impact of SEZs. SEZs are often criticized based on perceived negative socio-economic impacts—particularly their negative impact on women, labor, and working conditions. Critics claim that women are often exploited to work for lower wages than their male counterparts and do not receive any training or skill upgrades. Additionally, labor unions are often prohibited from operating inside of SEZs and thus labor standards and labor rights are suppressed. Finally, critics argue that SEZs have lax environmental standards (Jauch, 2002).

While environmental and labor conditions within SEZs may be low, it is not always clear whether conditions are measured against the investing country's standards, the host country's standards, or some other country's standards. Many SEZs are located in countries with weak labor and environmental laws and lax enforcement outside the SEZs. The literature includes several country-specific studies that find evidence that SEZs actually have higher environmental standards, and higher worker satisfaction than outside the SEZ. Most responses to criticisms do note, however, that their results are not necessarily generalizable to SEZs throughout the world (Madani, 1999; Aggarwal, 2007; Glick, 2006).

Successful Special Economic Zones in Sub-Saharan Africa

According to the World Bank, SEZ programs in Mauritius, Madagascar, and Kenya have been successful in terms of job creation, increased exports, and longevity. The Maputo Development Corridor linking South Africa's interior to the port in Maputo, Mozambique, is also an example of a successful economic zone project, though not specifically an SEZ. We explore each below.

Mauritius—The Indian Ocean Rim Trading Hub

In 1970 the government passed the Export Processing Zone Act, which provided powerful incentives to manufacturers catering exclusively to foreign markets. Early on, Mauritian EPZs focused on sugar exports, then expanded to textile and apparel exports in the early 70s as Chinese firms began operations. Firms were offered fiscal, credit, and import duty exemptions as incentives. EPZ firms were subject to general labor laws (including minimum wages), but they were free to fire workers, to demand compulsory overtime work, and to penalize heavily for absenteeism.

Davies et al. (2008) wrote that in July of 2007, the China Development Bank announced it would be financing a new SEZ in Mauritius. The entire manufacturing zone was estimated to require investment worth $500 million, the largest in the country to date, and would host up to 40 Chinese companies, creating a forecasted 5,000 jobs for locals and 8,000 for Chinese contractors. Targeted sectors were to include light industrial goods, medicine production, textiles and electrical goods. It was also forecast that exports from the zones would earn the Mauritian government more than $200 million USD per year. Manufacturing firms in the zone were to enjoy import duty waivers for raw material inputs.

Critics of the EPZs in Mauritius see them as an enclave for foreign investors and foreign asset accumulation, though Bheenick and Schapiro (1989, as cited in Gulhati and Nallari, 1990) suggest that local ownership in EPZ equity was roughly half, a much higher ratio than in free zones in other developing countries. High prices during this period for sugar (Mauritius' main export crop) gave local investors the resources to invest at high levels. However, many experts regard SEZs in Mauritius as a success story because of their positive impacts on wages, exports, and job creation. During the 1980-1986 period, EPZ firms created 30,000 jobs, and were seen as a major instrument for reducing economy-wide unemployment from 17 to 12 percent (Gulhati and Nallari, 1990).

Madagascar—the Zone Franche

Madagascar is hailed as an SEZ success story in SSA by Cling, Razafindrakoto, and Roubaud (2006). According to the authors, in 2004, over 180 firms employed 100,000 workers in the Malagasy EPZs. Primary investors in the EPZs included France (46% of total investment), Mauritius (28%), Madagascar (11%), and Asian countries (7%). Of the 180 firms, 124 were textile factories, 12 were food-processing plants, and 12 were information technology. At the time of printing, firms in the EPZs were required to export 95% of their total output.

By analyzing the results of survey data taken from household surveys conducted by the National Statistical Office of Madagascar[1], Cling et al. concluded that firms in the EPZs contributed to an increase in Madagascar's exports, and the number of jobs available in the country. During the period from 1995 to 2001, average job growth in the EPZs was 27%, compared to 4.5% growth for the Antananarivo market as a whole.

Their findings also dispute claims that wages are lower in EPZs. Using regression analysis, the authors found that even though wages were lower in the Malagasy EPZs, they were not statistically significantly so, and this wage differential was most likely due to the fact that women make up a large portion of EPZ workers. Women, on average, are paid less than men, and it was this disparity in wages that led to the difference in wages between EPZ and non-EPZ workers, rather than the suppression of wages by firms in the EPZs.

Cling et al. also used the results of a logit regression to suggest that labor standards were actually higher in the Malagasy EPZs than in other formal economic settings in Madagascar. Three main types of benefits were reported higher among EPZ workers than other workers: registration with an official social security body, paid holidays, and access to company medical services. Workers did, however, complain about the high workload and fast work pace.

Using regression analysis of the same survey data from Madagascar, Glick and Roubaud (2006) found that both women and those with low levels of education who worked in EPZ firms had higher wages than their counterparts who worked in the informal private sector. This means that EPZ employment represents a significant step-up, in terms of wages, for women who would otherwise be employed in the informal private market.

Maputo Development Corridor from South Africa to Mozambique

According to the Maputo Development Corridor (MDC) website, the MDC was conceptualized in 1995 as a way to link South Africa's inland to the port at Maputo, Mozambique. The corridor was intended to serve as a catalyst for sustainable agriculture, tourism, and resource-processing, and was created as a Special Development Initiative which aimed to create an attractive environment for

[1] A stratified, representative sample of households living in the capital, Antananarivo, begun in 1995 and conducted annually.

private sector investment.[2] The World Bank calls the corridor an excellent example of both intra-country cooperation, and public-private partnership.

Rogerson (2001) notes that the primary stated objectives of the MDC are as follows:

1. To create sustainable jobs, generating long-term and sustainable employment for the local inhabitants of the MDC area and for South Africa in general
2. To promote sustainable and internationally competitive economic growth and development in relatively underdeveloped areas of South Africa according to the particular localities' inherent economic development potential
3. To maximize the extent to which private sector investment and lending can be mobilized into the MDC area

The MDC project began with the building of a toll-road linking Witbank, South Africa to the Maputo harbor. It was expected that businesses would locate near the new road, and according to Rogerson, in 2001 there were 180 projects under consideration with the potential to create over 35,000 jobs. The road also serves as a conduit for raw inputs flowing into Mozambique from South Africa. The projects focused on expanding existing resource-based developments—for example, a new aluminum smelter was built in Maputo. The MDC also sought to unblock the bottlenecks to private sector investment by providing economic incentives to firms who located in the zone.

Rogerson (2001) found that the MDC had mixed results in terms of impacts. For example, male entrepreneurs were more often awarded contracts for road construction than were female entrepreneurs. Also, many white entrepreneurs were able to get around contract requirements by using a black employee as a front man in order to be perceived as an eligible "emerging contractor." However, most contracts awarded did seem to benefit small, medium, and microenterprises. He also states that much of the foreign investment is going into manufacturing and tourism, and not agriculture and mining.

<u>Kenya</u>

Rolfe, Woodward, and Kagira (2004) looked at the role of investment incentives on EPZs in Kenya. The four types of incentives offered in Kenya are similar to those offered in SSA more generally and include:

1. Corporate income tax holidays
2. Infrastructure improvement
3. Local sales allowance
4. No zone restrictions

[2] Although not SEZs per se, spatial development initiatives (SDIs) are characterized by intensive short-term intervention into an identified area to fast-track private sector investment, to stimulate the growth of small, medium, and mirco-enterprises, and to enhance the empowerment of local communities.

Kenya offers a 10 year tax holiday to business entering its EPZs, and then a reduced tax rate (25% compared to 42.5% outside the EPZ) for the life of the business. Kenya also has located its EPZs in areas that already had good access to roads, water supplies, and telecommunication thus lowering the cost of initial infrastructure investment. Kenya does not allow local sales from its EPZs, despite the fact that allowing local sales of goods produced in an EPZ encourages firms to operate in an EPZ. In contrast, Ghana allows firms to sell up to 30% of their output in local markets.

Through surveying firm leaders' opinions about the four types of incentives, Rolfe et al. (2004) found that firms operating in Kenyan EPZs preferred up-front tax holidays, and high-quality infrastructure services more than local sales allowances and fewer zone restrictions. Firms did point out, however, that even with these incentives, there is no guarantee that firms will stay in country if other factors, such as the cost of labor, change.

Key Elements of Success

Some key elements of success can be drawn from the examples of Mauritius, Madagascar, Maputo, and Kenya. Cling et al. attribute Madagascar's successful implementation of the EPZs to three main factors:

1. Low labor costs accompanied by relatively high productivity
2. Attractive policy for foreign investment through tax and customs schemes
3. Trade preferences by the EU and United States (via AGOA). This is particularly true for Mauritius, which was able to benefit from AGOA in part due to its already existing infrastructure.

Watson (2001) acknowledges that the labor market throughout SSA is generally low-cost, and disagrees with others' arguments that productivity levels in SSA are lower than those in other developing countries in other regions of the world. He gives three reasons why this is not the case: one, simple observation shows that Africans are already performing sophisticated services on a daily basis; two, the number of employees required for SEZs to operate is not enormous; and three, other countries who currently have more "skilled" labor were able to develop that labor force over time, and the same, therefore, should be true for SSA.

In each of these examples, host-country governments played an active role, seeking out private investments to provide start-up capital. In at least some cases, historical and cultural connections may facilitate relationships with foreign countries in ways that benefit the success of SEZs. For example, the historical and cultural connections Mauritius enjoys with China and India does play a role in their level of trade and in the countries' investment in Mauritius. This existence of this relationship is somewhat unique among countries in SSA, although China is forming relationships with an increasing number of countries in SSA.

Failures of Special Economic Zones in Sub-Saharan Africa

Zambia

Zambia's relationship with China began in 1967 with China's first aid payment to Zambia. In the years since, China has been involved in over 35 aid projects in Zambia. In 2006, an agreement between the two countries set up an SEZ in the Chambishi copper belt region, which is also rich in cobalt, diamonds, tin, and uranium. The China Nonferrous Metal Mining Group (CNMC) built a copper smelter at the mine, with the goal of exporting copper products. It was estimated that 6,000 jobs for Zambians would result from the building of the new smelter.

An article in the Zambia Chronicle reported that on March 6, 2008, five hundred striking workers at the Chambishi Copper Smelter were fired in response to their protests against poor working conditions. Mining executives alleged that rioting workers destroyed $200,000 worth of property. Later in the year, Mining Exploration News reported that in response to low metal prices worldwide, Zambia's mining operation halted operations on December 21, 2008.

Senegal

Senegal was a pioneer in the creation of free zones, establishing its first in 1974. The project generated significant hope, as Senegal expected to profit from the relocation of enterprises from industrialized countries to less developed countries, following in the footsteps of countries of the Maghreb, the Caribbean, and Southeast Asia. The scheme's promoters sought to exploit Senegal's geographical position as well as the port and airport facilities offered by Dakar (Cling and Letilly, 2001, as cited in World Bank, 2008).

In 1999, 25 years after its creation, Senegal's authorities closed the Dakar EPZ, which at the time was home to just 14 active enterprises. The principal obstacles to success for this program included:

- Excessive bureaucracy involving different institutions in the country, especially customs
- Unnecessarily long delays in obtaining necessary permits (often more than one year)
- Unrealistic goals imposed on potential investors, both with regard to jobs to be created (each company was required to employ at least 150 people) and to initial investment
- Poor reputation of the local workforce, which was labeled unproductive and overly expensive
- Elevated cost of other factors of production (energy, water, communications)
- Rigid and constraining labor regulations: employment contracts were permanent and employers did not have complete freedom to recruit the people they wanted

Key Elements in Failure

The problem in evaluating success or failures is we can never know what conditions would have resulted in the absence of the SEZs. Even so, critics of SEZs claim that zones fail on several accounts by decreasing labor standards, offering low wages, having poor environmental standards, and being cost-ineffective. For example, Jauch (2002) considers all EPZs in southern Africa failures.

He uses Namibia as a case-study to show how EPZs exemplify the "race to the bottom". Jauch contends that although at first glance, it may appear that EPZs have created many jobs, closer examination reveals that these jobs are often of poor quality.

Jauch's claims are seen in the Zambia situation, where several jobs were promised and now cease to exist because the copper smelter was closed. There are, however, authors that regard some EPZs in southern Africa as successful—for example, the Maputo corridor in Mozambique, Madagascar, and Mauritius.

Watson (2001) points out that management of the SEZs plays a large role in whether or not an SEZ will succeed. If the managers are not responsive to the needs of the firms located in the SEZ, the firms will go elsewhere. Watson claims that generally management by the public sector does not meet the needs of private industries operating in SEZs, and recommends private management of SEZs.

Watson also discusses the role of incentives, and points out that countries in SSA are often times less able to compete with incentives offered by more developed countries like those in Southeast Asia. Similarly, African countries often need to provide substantial infrastructure improvements, which are time-consuming and costly. In cases where there are delays or problems in building infrastructure, this has caused SEZs to fail.

Table 1: Key Elements of Success and Failures in SEZs in SSA

Acknowledged Successes	Acknowledged Failures
• Long-term foreign investment	• Reliance primarily on extractive industries
• Government support	• Questionable long-term production ability
• Focus on manufacturing of apparel or textiles	• Excessive bureaucracy in zone administration
• Infrastructure	• Unrealistic goals—# of jobs created, etc.
• Streamlined bureaucracy	• Rigid labor regulations
• Privately developed and operated	• Poor zone location
• Host country has open trade policy	• Poor coordination between government regulators and private investors
	• Host country has protectionist trade policy
	• Reliance on tax holidays as primary incentive

Impacts on Smallholder Farmers

Among many potential benefits, SEZs and EPZs can create positive relationships with foreign countries, promote exchange, facilitate and increase the value added by developing countries, increase employment, raise long term productivity and incomes of producers, and transmit more advanced production and management technology. Often governments hope that SEZs and EPZs will provide benefits for smallholder farmers. Effective relationships between smallholder farmers

or cooperative unions and processors can be created through production/marketing contracts. Contracts have been used in Peru, Taiwan, Ecuador, Ghana and other counties to ensure the quantity and quality of raw materials over many seasons, by detailing technical rules for production (Abbott, 1994).

In some cases, processors also channel resources to the farmers (suppliers) in order to maintain a flow of raw materials which meet specific quality standards. The resources provided to farmers include credit at rates lower than bank rates, technical or managerial assistance, pesticides, seeds and fertilizer on credit or in small quantities. While these provisions can help increase the output of local farmers, the farmers can become increasingly dependent on the processor as their primary market, which may lead to lower prices for their goods. In order to ensure fair pricing, some contracts allow for pricing changes as indicated by national or international commodity exchange rates (Abbott, 1994).

While contracts can help processors ensure timely and guaranteed supplies and compliance with strict quality requirements, contracts are often made with larger farmers, excluding smallholder farmers (Escobal, 2000). Even when smallholders are not specifically excluded, contracts that require farmers to have sufficient land, irrigation, human capital and managerial skills may preclude participation by small farmers.

There is limited research on the effects of agroindustiralization on rural institutions (such as markets and property systems, land tenure, or other systems of exchange). Some believe that agroindustiralization resulting from the development of SEZs and EPZs may spur local rural employment and development, while others disagree. The evidence seems mixed: agroindustrialization may in some cases lead to increased employment from participating firms; however, processor contracts may also support less labor intensive crops or production techniques, leading to lower employment levels (Escobal, 2000). The effects of agroindustializtion for small holder farmers depend primarily on the contracts created, the assistance offered, indirect effects including the labor intensity of the crop selections and where processors buy machinery and inputs. Additionally, the transition costs can be destabilizing to small holder farmers. Overall, Escobal suggests that the direct employment benefits are ambiguous and that gains tend to be concentrated among larger farmers.

Donor Involvement in SEZs, including Funding and Trade Preference Programs

A sampling of the available literature shows that while donors do not usually provide direct benefits to businesses (they do not tend to fund tax incentives, for example), they do support the development of the private sector in general. For example, the Government of Bangladesh received funding for a World Bank led, multi-donor Private Sector Development Support Project (PSDSP), which included funds for several purposes. Initially, the project funded study tours to East Asia and to Dubai and Jordan for officials in the Bangladesh Private Sector Development Core Group. The study tour to the Middle East visited eight different economic zones in Dubai and the SEZ in

Aqaba, Jordan, learning about the regulatory arrangements in each zone, the perspectives of regulators and investors, and the involvement of the private sector. Currently, the project is also providing support to regulatory reform efforts, provision of infrastructure for SEZs, and capacity building for those parts of the Government involved with private sector development.

Donors may also be involved in supporting productive interactions between private industries (including those in SEZs) and the government. As one example of this type of interaction, the International Finance Corporation (IFC) provided direct support to the Cambodian Government-Private Sector Forum (G-PSF) from 2002 through at least 2005. The G-PSF is designed to convene government and private industry officials with a goal of bringing up and addressing policy and operational impediments to private industries including export processing. The IFC has been providing support in the form of staff who coordinate the Forum, interpretation services during the forum, translation of laws and regulations, printing costs for relevant documents, and refreshments (Brew, 2006). The IFC also organizes and hosts working group meetings in preparation for the Forum, coordinates nominations and elections for working groups, and encourages input from the national and international private sector.

As a development tool, SEZs have also been suggested to help economies recover from shocks. For example, after the tsunami in Southeast Asia, Suthad Setboonsarng (2005) suggested that special economic zones could aid in long-term post-tsunami economic recovery. Within this proposal, it was suggested that the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) play the following roles:

- fund and conduct a feasibility study
- work on drafting legal documents (subject to review, consideration, and adoption by the tsunami-affected countries involved)
- establish a monitoring system for trade and investment issues

There was no evidence suggesting that donors fund SEZ projects directly. Their support comes only from technical assistance and facilitating communications between countries. Davies (2008) notes, however, that China is investing a lot of money in SSA infrastructure projects which could potentially benefit SEZs.

Trade Preference Policy

In 2000, the United States initiated the African Growth and Opportunity Act (AGOA), with the purpose of bringing about fair and equitable trade between the U.S. and Sub-Saharan African countries through duty-free and quota-free access to the U.S. market for various textiles and apparel. Rolfe et al. (2004) show that as a result, from 2000-2002 knit apparel exports from Kenya to the United States jumped from $261,039 to $22,602,000, while woven apparel exports increased from $43,571,018 to $102,890,964. More than 80% of these exports came from firms operating in the EPZs. The authors also point out that after AGOA was implemented, garment factories that had been previously closed re-opened and new plants started up in Kenya.

Adala (2007) also studied the impact of the AGOA, comparing the impacts in Kenya and Mauritius. Both countries have experienced export growth in clothing and textiles under the EPZ program. He presents his findings as a case-study of the two countries. He finds that although both countries had increased exports in clothing and textiles from their EPZ regions, Mauritius was better able to capitalize on the increased market access due to the vertical integration of firms operating in their EPZs.

In their work on Madagascar, Cling et al. note that the AGOA has the potential to play an important role in Madagascar's cotton industry. AGOA stipulates that inputs used in creation of products that qualify for duty-free export must come from either a) the United States, or b) other AGOA member states. Currently, Madagascar receives an exemption from this rule, but in the future could be required to rely on its own cotton industry to supply inputs for its textile firms.

Recommendations for Further Research

Based only on our review of the literature cited in the text and below, we found the following topics received relatively limited attention and/or analysis:

i. Public/private sector tradeoffs. It is argued that public sector managers do not adequately respond to the needs of private firms. Unfortunately, we were unable to find any good comparative studies of the differing impacts of private versus public ownership of SEZs. These studies may be limited by the general unwillingness of privately-run SEZs to share information with researchers, making it difficult to compare the benefits and drawbacks of the two ownership strategies. We found very few impact studies of privately-run SEZs in general. It is also unclear if the economic benefits of private management come at the expense of social and environmental goals. For example, the literature suggests that SEZs are more cognizant of labor and environmental implications when there is a strong government presence in the zones, but strong regulations are also cited as a barrier for SEZ success.

ii. Long term versus short term considerations: There is limited understanding of the costs and benefits around the longevity of tenants in the SEZs. A more creative look at where environmental and labor goals can be complementary to investment objectives might reveal opportunities within SEZs to experiment, for example, with "green" processes that reduce waste and are more efficient in the long run, and training programs that more effectively use local labor and enhance productivity. Long term incentive guarantees might make it more attractive to foreign firms to invest in labor and the environment, and also allay some of the concerns that local input suppliers (e.g. small holder farmers) could have about making investments and production changes to cater to a "temporary" buyer.

iii. The comparative advantage of SSA: Most existing research on SEZs extensively covers the economic impacts of publicly-owned SEZs in Asian countries. It is unclear whether the lessons learned are generalizable to countries in SSA. There are, for example,

unresolved questions around the skill level and reliability of the labor force, the quality and extent of the infrastructure, the technologies available, and the political stability, relative to alternative host countries. Obviously these conditions vary by country in SSA, as does land quality, market development, port access, etc.

iv. Distributional issues: beyond simple labor issues, how the gains from exchange are shared between firms within the SEZ and locals is poorly understood. It is unclear if different levels of competition within the SEZ, for example among food processors, would increase the gains realized by local farmers supplying the inputs (e.g. if there was competition for the tomatoes from the tomato paste producers). In general, the relationship between backward linkages and SEZs is unclear. Though SEZs are generally not producing output for local markets, they are often procuring inputs locally. Little is known about the impact of SEZs on input markets and local food markets, and the limited research is not focused on SSA.

v. Smallholder farmer concerns: we found little literature on SEZ impacts on smallholder farmers – the direct risks supplying to firms in SEZs and the indirect market consequences of other, perhaps larger local farmers, becoming the primary suppliers. There is likewise little discussion in the literature on mechanisms within the SEZ contract to mitigate these risks.

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Appendix A: Geographic Listing of Export Processing Zones Worldwide 2005/06

Export processing zones		
Geographical Area	**Employment**	**Number of zones**
Asia - of which China - of which bonded factories in Bangladesh	53,089,262 (40,000,000) (3,250,000)	900+
Central America & Mexico	4,988,459	155
Middle East	1,070,275	50
North Africa	643,152	65
Sub-Saharan Africa	816,474	90+
United States	330,000	713
South America	456,175	43
Transition Economies	1,131,462	400
Caribbean	542,163	250
Indian Ocean	189,412	1
Europe	45,472	50
Pacific	145,930	14
Total (estimated)	**63,118,236**	**2,700+**

= approximately 100,000

or = approximately 1,000,000

Source: International Labor Organization
http://www.ilo.org/public/english/dialogue/sector/themes/epz/stats.htm

Appendix B: Export Processing Zones by Sub-Saharan African Country

Country	Number of EPZs in 2005/06	Number of Workers Employed with EPZ firms in 2005/06
West Africa		
Cape Verde	1	1,180
Cote d'Ivoire	SEZ	-
Cameroon	1	4,690
Gabon	1	791
Ghana	4	9,828
Mali	3	17,593
Nigeria	6	111,375
Senegal	3	3,409
Togo	1	9,000
East Africa		
Kenya	43	38,851
Sudan	3	1,033
Southern Africa		
Lesotho	8	44,000
Malawi	1	29,000
Mozambique	SEZ	
Namibia	1	29,000
South Africa	6	535,195
Zimbabwe	7	22,000
Indian Ocean SSA		
Madagascar	SEZ	115,000
Mauritius	SEZ	65,512
Seychelles	1	2,200

- not given

Source: Boyenge (2007) ILO working paper 251. Retrieved: http://www.ilo.org/public/english/dialogue/sector/themes/epz/epz-db.pdf

Appendix C: Suggested Readings

The following articles provide a more in-depth look at the role of SEZs (and EPZs) in economic development.

1. Aggarwal, A. (2007). "The Impact of Special Economic Zones on Employment, Poverty, and Human Development." Indian Council for Research on International Economic Relations Working Paper 194. Available: http://www.icrier.org/pdf/Working_Paper_194.pdf.

Abstract:
This study aims at examining the impact of Special Economic Zones (SEZs) on human development and poverty reduction in India. It identifies three channels through which SEZs address these issues: employment generation, skill formation (human capital development), and technology and knowledge upgradation. It examines how the impact of SEZs is passed through each of these channels. The study finds that the modality differs significantly according to the characteristics of the SEZs, in particular, the level of their development as reflected in the composition of economic activities.
Within this framework, the study examines the sectoral and economic composition of SEZ activities in India. It finds that labour intensive, skill intensive and technology intensive firms co exist in India's zones and, therefore argues that all the three effects described above are likely to be important in theIndian context. Empirical findings reported in the study are based on the data collected from both secondary sources and primary surveys. The primary survey based data was generated through extensive interviews of entrepreneurs and workers across the three largest SEZs (in terms of their contribution to exports and employment): SEEPZ, Madras and Noida. The analysis reveals that 'employment generation' has been the most important channel through which SEZs lend themselves to human development concerns, in India.

Employment generated by zones is remunerative. Wage rates are not lower than those prevailing outside the zones. Besides, working conditions, non monetary benefits (such as transport, health and food facilities), incentive packages and social security systems are better than those prevailing outside the zones, in particular, in the small/informal sector. The role of SEZs in human capital formation and technology upgradation is found to be rather limited. The study argues that the zones' potential could not be exploited fully in India. This could primarily be attributed to the limited success of SEZs in attracting investment and promoting exports. The new SEZ policy gives a major thrust to SEZs. However the creation of SEZs alone does not ensure the realization of their potential. The government will need to play a more proactive role for effective realization of the full range of benefits from SEZs.

Notes:
Key points made regarding farmers and/or poor households:

- EPZs target women as their primary sources of unskilled labor. Women are generally perceived to work more diligently and create less demand for better labor practices and higher wages
- From a human capital standpoint, economists conclude that EPZs generally bring increased job skills and better marketability for unskilled workers in developing countries. Additionally, increased earnings bring positive externalities such as improved health and education. There was also evidence in the India survey that companies provided training and advancement opportunities
- A potential negative labor effect was the migration of unskilled workers to EPZ zones
- Successful examples of EPZ zones in Africa include: Mauritius, Madagasgar, Tunisia, Egypt and Togo. Mauritius has been the most successfully with the introduction of their first EPZ in 1970 and a decrease in unemployment so drastic that they have to import labor

2. Madani, D. (1999). A Review of the Role and Impact of Export Processing Zones. *The World Bank, Policy Research Working Paper Series: 2238*.

Abstract:
As instruments for encouraging economic development, export processing zones have only limited usefulness. A better policy choice is general liberalization of a country's economy. Traditional export processing zones are fenced-in industrial estates specializing in manufacturing for ***exports***. Modern ones have more flexible rules, such as permitting more liberal domestic sales. They provide a free-trade and liberal regulatory environment for the firms involved. Their primary goals: to provide foreign exchange earnings by promoting nontraditional exports, to provide jobs and create income, and to attract foreign direct investment and attendant technology transfer and knowledge spillover.
Domestic, international, or joint venture firms operating in export processing zones typically benefit from reduced red tape, flexible labor laws, generous long-term tax holidays and concessions, above-average communications services and infrastructure (and often subsidized utilities and rental rates), and unlimited duty-free imports of raw and intermediate inputs and capital goods needed for production.

In this review of experience, Madani concludes that export processing zones have limited applications; the better policy choice is to liberalize a country's entire economy. Under certain conditions - including appropriate setup and good management - export processing zones can play a dynamic role in a country's development, but only as a transitional step in an integrated movement toward general liberalization of the economy (with revisions as national economic conditions change). The World Bank, writes Madani, should be cautious about supporting export processing zone projects, doing so only on a case-by-case basis, only with expert guidance, and only as part of a general reform package. It should not support isolated export processing zone projects in unreformed or post-reform economies.

Notes:
Lengthy work (108 pages) broken into 6 sections:
1. Definition and zone characteristics
2. Theoretical pros and cons accompanied by examples of each
3. EPZs integration with preferential-trade agreements (The authors find that exclusion from trade agreements may hurt the country, but membership does not guarantee success of EPZ firms.)
4. Practical aspects of setting up an EPZ
5. SSA case study—EPZs in Mauritius and Senegal
6. Policy suggestions and general administrative and regulatory guidelines

3. Jayanthakumaran, K. (2003). Benefit–cost appraisals of export processing zones: A survey of the literature. Development Policy Review, 21(1), 51–65.

Abstract:
This article surveys research on the performance of Export Processing Zones (EPZs) using a benefit-cost analytical framework. Results suggest that zones in South Korea, Malaysia, Sri Lanka, China and Indonesia are economically efficient and generate returns well above estimated opportunity costs. On the other hand, the heavy infrastructure costs involved in setting up the zone in the Philippines resulted in a negative net present value. The zones have been an important source of employment in all cases and have promoted local entrepreneurs in some. However, as industrial development proceeds, the gap between the market and opportunity costs of labor narrows and the interest in EPZs tends to disappear. It may hold only if the zones generate private profit to domestic shareholders.

Notes:
This article provides a good overview of the literature available on SEZs, especially pertaining to benefit/cost analysis. There is, however, no mention of SEZs in SSA.

4. Papadopoulos, N., & Malhotra, S. (2007). Export Processing Zones in Development and International Marketing: An Integrative Review and Research Agenda. *Journal of Macromarketing, 27*(2), 148.

Abstract:
Export processing zones (EPZs) are areas within developing countries that offer incentives and a barrier-free environment to promote economic growth by attracting foreign investment for export-oriented production. The number of zones internationally, countries hosting EPZs, and firms operating in them, and the business volume they handle, are all growing rapidly, suggesting their importance. Yet, business research on EPZs is virtually nonexistent, leading to poor understanding of their role in international marketing. This article draws from the literature in economics, macromarketing, and other disciplines to provide an integrative review of the concept. The authors then adopt a macromarketing perspective to develop a new definition of EPZs, typologies of free export zones and of their benefits for host nations and investors, and the notion of a "virtual network" of free zones as part of the international market system. The authors conclude by highlighting the need and potential directions for new research in this field.

Notes:
This article provides a review of relevant literature for Export Processing Zones (EPZs). The author begins with a review of EPZs and a typology to define the different types of zones and their primary functions. EPZs are defined as deregulated zones less than 200 hectares with an objective to promote foreign direct investment in the manufacturing sector. SEZs, or Special Economic Zones, are typically larger than EPZs and have both manufacturing and support services. Lastly, there are FSZs, which are very small individual facilities that generally support only one manufacturing firm. An example of an FSZ could be maquiladoras in Mexico and the Phillipines. The principal concept for all three types of zones is that the firms operating within them are granted special privileges that include the reduction of tariff and trade restrictions which are not available to other foreign exporting firms outside of the zone. Exports from these types of zones are estimated to channel as much as 20% of the total world trade, with over 500,000 firms operating in these zones in 57 developing countries.

The benefits for EPZ s are promoted as a tool for developing countries to increase foreign direct investment (FDI), shift the emphasis away from volatile commodities and towards higher value-added products, and serve as a testing ground for continued market liberalization. The SEZ in Shenzen is noted as a major success story through transforming a small town into modern city of 4.5 million and significantly raising GDP. However, critics point to labor concerns such as lack of job training, inadequate worker protection, targeting of women. Essentially, these practices represent a race to the bottom for competing developing countries. Additionally, negative or inadequate externalities are cited such as urban migration, low tech transfers, and the incentive for firms to move to lowest cost EPZ. The article concludes that many of concerns are not focused on the concept of the EPZ but rather the process of implementation.

The number and percentage of trade continues to rise in EPZs despite a rise in market and trade liberalization. This paradox lacks significant research into why this is the case except for a theory that the existence of these zones suggests that the barrier still remain significant outside the zones despite market liberalization. The article concludes with the EPZ perspectives of the host countries and firms. From a host country perspective, the benefits from the zone are difficult to ignore because of the increase in FDI. The benefits to the firms include labor and cost advantages which are summarized in a benefit typology. Overall, the article stresses that there are significant gaps in research from the business perspective to foster a better understanding of implementation from a host country and firm perspective.

5. Watson P. (2001). "Export Processing Zones: Has Africa Missed the Boat?" World Bank Africa Region Working Paper Series 17 (May).

Abstract:
Attempts in Africa to use Export Processing Zones (EPZ) as an instrument for economic development, with the exception of Mauritius, have been less successful then in countries in East Asia, Central America, and the Caribbean basin. This paper examines the literature on Export Processing and Free Trade Zones. Successful zones in Mauritius, Tangiers, Panama and the Dominican Republic, were visited and investors, developers and government officials in the zones were interviewed in order to determine what were the factors that resulted in their success.
The paper concludes that there is substantial potential for African countries to benefit from export-oriented growth based on the development of EPZs. Any country attempting to develop an EPZ program will have to enlist the concerted and coordinated support of its development partners in the implementation of its program.

6. Miyagiwa, K. (1986). A reconsideration of the welfare economics of a free trade zone. *Journal of International Economics*, 21(3–4), 337–350.

Abstract:
This paper presents a model of a free-trade zone which incorporates the fact that such zones are often established by government subsidies designed to promote non-traditional exports. In our model the condition is derived under which the establishment of a free-trade zone can increase welfare regardless of the relative factor intensity of a zone-based industry. However, the relative factor intensity of a free-trade zone plays a crucial role in determining the change in welfare following economic growth and foreign investment.
7. Miyagiwa, K. (1993). The locational choice for free-trade zones : Rural versus urban options *Journal of Development Economics*, 40(1), 187-203.

Abstract:
Urban and rural areas are compared as appropriate locations for a free-trade zone within a developing country suffering from urban unemployment. If domestic capital is mobile between the two regions, then the rural area is shown to be preferable to the urban area, and sufficient conditions for this conclusion are presented. This conclusion may be reversed, however, if capital is sector-specific. The condition for this reversal is also discussed.

Notes:
These papers present a theoretical framework of SEZs. We are including these in the suggested reading, and would like to note that there is a substantial body of literature around the theoretical basis of SEZs. We have, however, chosen not to explore this in depth.

8. Reardon, T., & Barrett, C. B. (2000). Agroindustrialization, globalization, and international development - An overview of issues, patterns, and determinants. *Agricultural Economics, 23*(3), 195-205.

Abstract:

This paper offers an overview for a special issue on agroindustrialization, globalization, and international development. It sets out a conceptual framework for understanding the links among these three broad phenomena and then discusses emerging issues and evidence concerning the factors conditioning agroindustrialization in developing countries and the subsequent effects on employment, poverty, and the natural environment. We conclude with a research agenda.