

"Africa and Free Trade Zones" * ¹

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One of the more remarkable trends associated with the increasing international integration of the economies of developing countries has been the proliferation of free trade and export processing zones or free trade zones (FTZ). In 1959, the very first zone of any consequence was established as Irish Shannon Export Free Zone. The initial success of this experiment led to organizations like UNIDO encouraging it as a model to be reproduced by developing countries. In 1965 the first zone in a developing country was organized in India. By 1980 more than 30 countries had established export processing zones. Ten years later the number of countries with zones had doubled. While the exact numbers vary in accordance with definitions most estimates placed the total number of zones at well over 200 in 1990 with a total employment exceeding 2.5 million.² Over the 1990s employment and the number of zones rapidly proliferated. The latest ILO survey taken in late 2006 and 2007, indicates a total world wide employment of around 63.1 million in roughly 2700 zones. The vast majority are in developing countries. Roughly 1940 are in developing or transitional countries with a total employment of around 62.6 million.³

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¹ The use of Free Trade Zones (FTZ) in the title refers to export oriented zones which broadly refers to an array of zone types of which the FTZ is but one. See the discussion below

² This figure is based on UNCTAD (1993). The number seems to include only export processing zones which would appear to correspond to free ports or zone areas with the processing of goods. However, this is rather conservative. In China, for example, the UNCTAD figures include seven zones, of which five are the most open special economic zones. However, there are now various types of open zones in China which are similar to EPZs such as Economic and Technological Development zones, Hi-Tech Development Zones and Free Trade Areas. In 1993, depending on the ministry you talked with, the estimates ran from a total of 1700 to 9000 throughout China. See David Wall et al. (1996).

³ The numbers are calculated by adding total regions and deleting out Australia and New Zealand from Pacific,

Most zones and employment are in China. There are roughly 900 plus zones and employment of roughly 40 million. In 1990, Africa accounted for a mere 9% of the total number of zones in developing countries. Only three African countries Egypt, Mauritius and Tunisia had zones with any significant employment or exports. In sub-Saharan Africa, including Mauritius, only eight countries had organized FTZs. By 1996 they have been joined by at least seven other sub-Saharan countries.⁴ The most recent survey lists 18 countries with employment of 828, 715 in more than 90 zones (roughly 4.6% of the total in developing countries including China or 8.6% without China). However outside South Africa which employees more than half the SSA total, the zones seem to be of little consequence.⁵ Only Mauritius, Kenya, Nigeria and Madagascar employ more than 35,000 people in total. Three of these four rely heavily on textile exports and are in danger of collapsing in the wake of the end of the multifiber agreement. Most have small labor forces (less than 10,000 workers) working in the zones (ILO, 2007a,b).

The rather slow expansion of free trade and export zones in many African countries has been disappointing but provides an opportunity to influence the future direction at an earlier stage in their development, if they choose this route. While zones in other parts of the world have had some remarkable successes, others have been rather disappointing for reasons that will be discussed. Ultimately the design and operation of zones that can maximize local and regional impact can also provide an environment conducive to the growth of foreign investment opportunities. However, as we will see many of the zones in Africa, so far, have not done an effective job of enhancing the potential benefits of the zones. This paper will draw on the experience with zones both in Africa and elsewhere to discuss the major issues relating to current and future operations of free trade zones in Africa. The paper begins with a taxonomy of the different types of zones before looking briefly at some of the literature concerned with free trade zones. Based primarily on experiences from other parts of the world the paper then turns to some of the major factors associated with the success cases. In particular, the aims of both host countries and foreign investors are presented along with the strategy used to increase success. Some examples are provided from Taiwan, S. Korea and China, the countries with the most successful zones. Finally the last part of the paper looks at the Onne Oil and Gas Free Zone that is one of the rare zones in SSA not focused on textiles.

Toward a Taxonomy of Terminology

There are a wide variety of terms to describe open trading and manufacturing areas that operated with custom rules and government policy measures that differ from those found in other sections of the country. Given the wide scale imprecision in the use of terminology in the literature it is

Japan, Singapore, Taiwan and S. Korea from Asia, Europe (except Turkey) and the US (ILO, 2007).

⁴ 1990 the sub-Saharan countries included Botswana, Ghana, Lesotho, Liberia, Mauritius, Senegal, Swaziland and Togo (UNCTAD 1993). By 1996 they were joined by Cameroon's, Cote D'Ivoire, Kenya, Namibia, Nigeria, Mozambique and Zimbabwe (Weissman, 1996).

⁵ In South Africa these are mostly known as Industrial Development Zones (IDZs). For a critique of IDZs and other EPZs as part of a neo-liberal "race to the bottom strategy" see Jauch (2002). Given the strong South African expertise at the task force meeting,, there is little I could add in this paper to their knowledge. I have therefore largely avoided discussing South Africa in this paper.

important to carefully define and differentiate a topology of zones.⁶

Free Ports and Trade Zones

A free trade zone (FTZ) is a spatially defined area in a wider political unit, often next to a port where unrestricted trade is permitted with the rest of the world. Merchandise may be moved in and out of the FTZs free of customs, stored in warehouses for varying periods and repackaged as necessary. Goods imported into the host country pay the requisite duty. FTZs provide rapid delivery opportunities while removing the interest costs of custom payments (Hewitt et al., 1992). Free ports (FPs) generally coincide with a political unit where goods are imported without customs regulation and either consumed locally or re-exported. Examples are Hong Kong, Singapore and Gibraltar (DMS, 1996).

Export Processing Zones and Units and Special Economic Zones

The Export Processing Zones (EPZs) generally go beyond the conditions of FTZs to include a variety of measures aimed at encouraging investment in manufacturing capacity exclusively for export.⁷ In addition to the exemption from duties on imported intermediate goods, raw materials and equipment when output is sold abroad, taxation and industrial regulations are typically more generous than elsewhere in the country. Tax holidays and the guarantee of the repatriation of profit are often provided. Infrastructure is typically well developed and often subsidized. Wages are sometimes lower than elsewhere with unionization discouraged. Red tape measures are minimized with approval often on a one-stop basis. A variety of other extension services are typically provided. EPZs are the most wide-spread examples of zones.

The most wide scale activity found in the EPZs is labor-intensive using non-complex manufacturing processes with a heavy emphasis on assembly operations (Johansson, 1994). Two activities are overwhelmingly dominant in the EPZs textiles and garment production and electronic assembly. For instance textile and garments in the early 90s account for almost 90% of employment in zones of Jamaica, Mauritius and Sri Lanka. In Malaysia employment in electronics accounted for 74% of the total (UNCTAD, 1993).

Closely related to the EPZs are the Economic Processing Units (EPUs). EPUs are single firm units operating as if they were EPZs. They are generally not restricted to any specific area in a country. Imported inputs are held in bond inside the factory. Imports may be subject to continuous

⁶ The etymology of the imprecision of language use in this area is probably linked to the comparative newness of these zones, the lack of any systematic use of terminology in the zones (zones with similar functions are called by many different names) and the dynamic character of some zones due to the shift of government policy. Even the library of congress subject index refers to all types of zones as "free ports and zones".

⁷ This export exclusivity seems to be ubiquitous with one prominent exception the Manaus Free Zone in Brazil where production seems to be aimed largely for the domestic market. This could almost be deemed an "import processing zone". See UNCTAD, 1993 for more discussion of this zone. In 2001, Nigeria moved in this direction by abrogating the rule that the EPZs must export at least 75% of their production (see footnote below).

verification by officials or by random spot checks (DMS, 1996). The EPU's have the advantage of firms fully factoring locational variables into their decision making. The major drawback is the loss of economies of scale and some externalities that can arise from the situational proximity of firms.

Special Economic Zones (SEZs) include many of the features of EPZs, EPU's and Free Ports. Companies receive many the benefits of firms in EPZs. They are able to locate anywhere within the zone and the political and spatial unit are coterminous. They also have features which differ from other zones including a diversity of economic activities that have drawn foreign investment into agriculture, manufacturing, construction, communications, trade, catering, housing, public utilities and other services like finance and tourism. China, the main proponents of this approach, organized five SEZs between 1979 and 1988.

The SEZs provided a unique opportunity to experiment in market reform which has been slowly emulated by many townships and regions. They also demonstrated the viability of the Chinese two systems approach for Hong Kong and Macau prior to their annexation. The SEZs were selected for geographical and historical reasons (Shenzhen by Hong Kong, Zhuhai by Macau, Xiamen by Taiwan, Shantou because of its connections to overseas Chinese and Hainan which is easily accessible to Singapore, Japan and Taiwan). The zones have attracted a large amount of foreign investment. By 1994, the accumulated foreign funds attracted for capital construction reached \$6.4 billion. While overall Hong Kong has provided the most important source of investment funds, the origins of funds, in each zone have, relatively speaking, generally reflected the original design.⁸

It should be noted, however that over time the number of joint ventures and investment sources other than FDI grew appreciably. For example in Shenzhen, more than half the investment funds came from foreign sources in 1981. By 1993, the figure had fallen to only 13% with most funds from self-raised, domestic loans and other sources. In 1981 only 13% of FDI were joint ventures. By 1993, 64% of total FDI was in joint ventures (Ge, 1999). As discussed below, this is an important conduit for channeling foreign technology and managerial expertise to local companies. There are other variations of zone types such as science and technology parks found in Taiwan, Korea and China which are aimed at increasing research and development spending.

In China, the High and New Technology Industrial Development Zones (HNTIDZs) have played an increasingly important role in fostering research and applying it to the development of new industrial products. In 1988 after the State S&T Commission announced their Torch program to assist in organizing the zones, 14 HNTIDZs were launched by provincial and municipal governments. 13 more were launched two years later. These were formally approved in 1991. with a further 25 were approved in 1993. By 1997 the 53rd zone was organized in Shaanxi (focusing on agriculture). Through 2001, the numbers have continued to rise to a total of around 150 with 53 central level

⁸ For instance in Xiamen, the same number of projects in 1991 were approved for Taiwanese investors compared to Hong Kong investors. In Shenzhen where you would expect a smaller Taiwanese presence, Taiwan only had 5% of Hong Kong's number of projects. Hong Kong's large presence in most of the zones is partly due to the number of Chinese that use Hong Kong as a base for investing in China and who are fully counted in the Hong Kong investment figures in the zones. (Wall et al., 1996).

zones, 68 provincial and 30 at the university level. The HNTIDZs were provided with an array of incentives including no import licenses for inputs related to export processing, bonded warehouses and factories, zonal import/export agencies, right to run a foreign trade business, low income taxes (15% rate across the board) and complete income tax exemption for the first two years after the start of operation. Between 1992 and 1994, the central government invested about RMB50 billion to construct the zones. Closely associated with the zones are a series of government sponsored incubator programs aimed at providing training, consulting, information, exhibition centers, and a one-stop approval service for registration, insurance, commodity inspection, customs bonded warehousing etc.

The number of enterprises and employment rapidly proliferated. By 1997 there were 15,000 new technology firms, employing 1.4 million people with an annual income of 339 billion RMB-(40 billion dollars at the exchange rate of 8.3RMB/dollar in 1997) and a profit of RMB10.8 billion. The most important areas of product development have been in electronics and information, optics-machinery-electronics integrations, new materials, and bioengineering/pharmaceuticals. In some zones a number of firms grew to large sizes. In the Beijing zone, three companies (Legend, Stone and Founder) accounted for RMB 20 billion of output in 1996 or roughly half of the total of the zone (Jici and Wang, 2002)

The Literature: A Brief Comment

While the literature on export oriented zones on sub-Saharan Africa is slowly growing, a fairly extensive set of articles and books have been published based mostly on the experiences in Asia and Latin America and the Caribbean. The shortness of this paper precludes an extensive review of the literature. Broadly speaking, the literature in economics can be divided into four types of evaluations based on formal modeling which is heavily influenced by neo-classical welfare analysis, descriptive case studies, cost-benefit approaches and policy modeling.

The pioneering neo-classical study was undertaken by Hamada (1974) and Hamilton and Svensson (1982). The argument is that EPZs will not attract domestic investment since it provides a lower return (given that all prices are assumed to be international) than the protected segment of the economy. Similarly, foreign investors will also be discouraged since they will need to accept a lower return compared to other parts of the economy. Moreover, the neo-classicals argue that the zones will create distortions and be welfare reducing since the inflow of capital into the zones will attract labor from labor-intensive sectors of production (as countries follow their comparative advantage due to large labor endowments) to comparatively more capital-intensive sectors in the zones.

This counter intuitive argument arises from the assumptions embedded in the model. The models focus on tariff on outputs ignoring the importance of other factors that attract capital including tariff reductions on inputs, reduction in transactions costs due to simplifying customs regulation, the ability to repatriate profits, lower taxes etc. Moreover, the models also assume full employment which is of course completely contrary to the conditions of labor surplus which propel countries to

organize zones in the first place. Other studies in this vein have provided somewhat more realistic assumptions, but like most neo-classicals, they focus on the impact of the measures on the increase or decrease of distortions in some hypothetical world (Johansson, 1994).

The case study approach has led to a wide variety of conclusions concerning the effectiveness of the zones. Disagreements often exist due to the focus on different zones which have included a variety of failures due to poor location, inadequate infrastructure and gross mismanagement. However, there has also been some fervent debate in the literature on the effectiveness of specific zones in countries like the Dominican Republic.⁹

Cost-benefit analysis is aimed at quantifying the more qualitative evaluations of zones by arriving at a bottom-line net present value or internal rate of return. Benefits include the foreign exchange earned due to the usage of local inputs like labor including adjustments for the difference between the official exchange rate and the shadow rates (where exchange rates are under or overvalued), the revenue gained by the government, the employment benefits as measured by the difference between the wage and the social opportunity cost of labor (what labor can earn elsewhere) and the net profits share to local joint partners (taking into account the opportunity costs of the inputs provided). Costs are associated with infrastructural expenditures, administrative costs and the subsidies and incentives provided by the government.

The results of studies have been generally positive. Chen (1994) has shown very strong social benefits for the Chinese SEZ of Shenzhen. Other studies have indicated positive values in the zones in Indonesia, Sri Lanka, China, S. Korea and Malaysia, but a negative return for the Philippines Bataan EPZ (UNCTAD, 1993; Jayanthakumaran, 2003). However, these results should be qualified due to the weaknesses of the methods used which include heroic assumptions about shadow prices and discount rates. It also misses important aspects of zones including demonstration effects, technical transfers, linkages, externalities inside the zone and important features of institution building (building relations between foreign and domestic capital, trust between governments managing zones and foreign capital, organizational structures for industrial policy etc.)

A fourth approach in the literature is policy modeling which relies less on mathematical proofs using unrealistic assumptions and more on conceptually linking causal factors to explain the varied outcomes of zones. Yuan and Eden (1992) relate eleven measures of zone performance to 14 causal factors under three general headings, the international environment, domestic conditions and the role of the state. Amirahmadi and Wu (1995) pinpoint the source of the success of EPZs in the confluence of three well designed sectoral and spatial policies free trade zones, industrial policy and a growth centered strategy. While policy modeling can seem somewhat ethereal compared to case studies and can lead to varying interpretations of actual events, it does provide one with a set of concepts and issues which can be useful when considering the design of EPZs. However, from a developmental perspective one needs to focus on a wide variety of indicators and strategies that will

⁹ See for example the exchange between Raphael Kaplinsky (1993, 1995) and Larry Willmore (1995) over the impact of EPZs in the Dominican Republic on wages, technology transfer and linkages.

increase the overall benefit of zones.

In Search of the Determinants of Success

Both Africans considering the design of export oriented zones and companies considering investing in Africa can gain from a careful weighing of the factors responsible for the relative success and failure of zones. To understand this one must first identify both the economic aims of countries interested in organizing zones and the underlying criteria companies will use in assessing any possible participation. It will be argued below that successful zones are generally those that can harmonize the somewhat divergent aims of host countries and potential investors. This will not arise from a laissez-faire approach but through the careful intervention and sequence of state initiatives. Based on the literature, what are the general aims of export oriented zones?

Country Aims

Attract Foreign Capital

The most obvious criteria for success will be the ability to attract foreign capital into the zones particularly at levels that exceed the normal inflows. There is an enormous need for private direct foreign investment in Africa which has done poorly in the era of structural adjustment. The share of developing country FDI going to SSA has fallen by 70% in 2000 from the first half of the 80s to a very low 2.4%. The story of FDI in Africa during adjustment era has largely focused on oil. . During the 1980-85 period 52% of the total excluding South Africa went to the four oil exporting countries Angola, Nigeria, Cameroon and Congo. By 1985 to 1990, two oil producers Angola and Nigeria, alone were attracting more than 50% of the FDI to SSA excluding South Africa rising in 92 to 97 to 57%. Although FDI picked up after 1980 it is due almost exclusively to investment in new oil producers like Equatorial Guinea. In 2005, around 75% of all FDI to non S. African SSA went to 7 oil producing countries (Sudan, Congo, Chad, Congo DR, Equatorial Guinea, Gabon and Nigeria) (UNCTAD, various years).

Expand Employment

African countries have large reserves of labor with significant levels of urban unemployment and underemployment. In many countries levels of wages have declined significantly under the austerity of adjustment and formal sector employment has collapsed. The social opportunity costs of employing labor in zones will therefore be low. Moreover, there is a great need for the increased demand linkages which can be generated from employment particularly in view of the protracted economic crisis of the past decade. However, as discussed below the emphasis on textile exports in zones has been particularly problematic in the wake of the end of the multifiber agreement.

Increase Foreign Exchange

There has been a serious deterioration in the trade position and external accounts of sub-Saharan African countries through the 1980s and 1990s? The issue is sufficiently important that I have reproduced a table I have compiled for a recent lecture.

Table 1
Exports, Manufactured Exports, Current Account Balance and Net Barter Terms of Trade
for SSA, 1980-2003*

Year	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
Merch Exports	52715	45738	47434	55585	55970	46469	50629	65606	62902	65462	82833
Manuf. Exports		3899	5621	5971	5582	5358	5250	6318	5380	5223	6522
Percent		8.5	11.9	10.7	10.0	11.5	10.4	9.6	8.6	8.0	7.8
Bal. On Cur.Act	-3240	-9550	-10139	-4157	-6734	-15615	-14254	-2632	-10815	-15185	-12286
Bal/GDP	-1.6	-5.2	-6.2	-2.2	-3.5	-8.3	-7.6	-1.3	-5.2	-6.7	-4.8
Terms of Trd.	142	97	85	93	88	76	84	100	100	102	99
World Merch Exports	1,997,905	3,475,109	5,168,042	5,398,808	5,585,193	5,503,777	5,706,419	6,446,307	6,185,332	6,480,740	7,545,646
SSA/ World Percent	2.6	1.3	.9	1.0	1.0	.8	.9	1.0	1.0	1.0	1.1

*all figures are in millions of current dollars except for percentages; balance of payments exclude net capital grants; figures exclude S.Africa ; Terms of Trade, 2000=100

Source: Stein, 2007 taken from various World Bank sources

Over the adjustment period, the share of global merchandise exports (excluding South Africa) fell from around 2.6 % in 1980 to only .8 % in 1998 or more than two-thirds before recovering slightly to 1.0-1.1% after 2000. The problem is not only in relative terms to the rest of the world but in absolute terms.. In 1998 SSA merchandise exports in nominal not real dollar terms were actually 12% below the level of 1980. In 2000 to 2002, the exports finally exceeded the 1980 nominal level by about 25%. The rise in 2003 is mostly due to increases in the value of oil exports from countries like Nigeria and Angola. What is particularly interesting is the structure of merchandise exports. In 1983, less than 10% of exports from SSA (excluding S.Africa) were of manufactured goods (World Bank, 1989) . In 2000 to 2003, the figure was still below 10% falling to a tiny 7.8% in 2003. This is back to the levels last seen in 1965 when manufactured exports were around 8% of total exports (World Bank, 1989). This is a remarkable indictment of the orthodox policies of the IMF and World Bank which has emphasized static comparative advantage and limited the ability of African countries to move up the industrial ladder. In contrast, East Asian and Pacific countries' exports of manufactured goods relative to total merchandise went from 52% in 1983 to 82% in 2003 over the same period. The extremely poor performance in exports has led to a deteriorating situation in the balance of payments. The deficit on the current account increased five fold between 1980 and 1998 and reached 8.3% of the GDP in 1998 up from a more manageable 1.3% in 2000. The large improvement in the terms of trade between 1998 and in 2000 finally helped to reduce the current

account deficit by contributing to a significant trade surplus (of \$15 billion from a deficit in 1998 and 1999). However in most years SSA countries have been running massive service deficits partly due to the large service payments on debt which have been running between 8 and 11 billion dollars in most years after 1995.

The advantages of export diversification and moving into manufacturing is significant not only in the domestic economy but in international price movements. Terms of trade for Africa have been declining at a terrible rate in the past 20 years. In sub-Saharan Africa the net barter terms of trade fell by 47% between 1980 and 1998 before rising through 2000 and constant thereafter but still roughly 33% below 1980. In contrast, Malaysia exports of manufactured goods relative to total merchandise went from 19% in 1980 to 80% in 2002 over the same period and saw its terms of trade rise by 38% (World Bank, 2005). The need to expand and diversify exports to increase foreign exchange earnings can not be emphasized enough. However have the EPZs in Africa been of assistance?

Countries like Madagascar and Kenya have been able to expand jobs and increase exports by emphasizing low wage labor intensive industries like textiles, and AGOA eligibility. French and Mauritian capital were particularly attracted to Madagascar in the 1990s although Asian capital also become interested as countries came up against their multi-fiber ceilings. In Madagascar, by 2004 there were over 100,000 employees in the Zone Franche (more than 90% in textiles). Increasingly most exports have been aimed at the US. Monthly wage for an unskilled textile industry machine operator was less than one-third the equivalent wage of Mauritius, half of China and 60% of the average wage of India. Although productivity was lower unit labor costs are among the lowest in the world. Generally wages are even lower with longer working hours compared to industrial jobs outside the zone although the wages exceed informal sector levels. There is a very high labor turnover rate, although the high unemployment levels on the island ensure a ready supply of labor (Cling et al, 2005).. However, even these somewhat problematic jobs could be lost due to the end of the multifiber agreement. Textile exports to the US have fallen from \$324 million in 2004 to \$239 million in 2006 or nearly a 30% decline(USITC, 2007).

Kenya also rode the multifiber agreement and AGOA to focus on textiles in their FTZs. Between 2000 and 2004 the number of jobs in the garment sector of the EPZs went from 5,600 to 34,614. The zones were overwhelmingly in garment production and constituted roughly 92% of the total employment in 2004. However, like Madagascar, the end of the multifiber agreement was taking its toll with garment exports to the US from the zones falling from \$221 million in 2004 to \$195 million in 2005 or nearly a 12% decline. The trend it likely to have continued through 2006 with overall textile and apparel exports falling again(KEPZA, 2005). Moreover, the first quarter 2007 fell by roughly 10% relative to the comparable period in 2006. The declines in Kenya and Madagascar are pretty typical for all of SSA in the garment field following the end of the multifiber agreement. SSA textile and apparel imports to the US fell from \$1.8 billion in 2004 to \$1.3 billion in 2006 a drop of nearly 30%. Over the period, SSA has become even more dependent on oil product export to the US. In 2004 73% of all imports to the US from SSA were in energy related products. By 2006, the figure was up to 81%. If you exclude South Africa the figure in 2006 was 93%! These are the stats from a

country that is supposedly helping to create opportunities for SSA to diversify its exports through AGOA(USITC, 2007). .

Increase Backward and Forward Linkages

Export processing zones have generally had poor forward and backward linkages due to the nature of their design. The zones in Africa are no exception. In Madagascar roughly 75% of non-labor inputs in its EPZs are from foreign sources which is considerably higher than the non EPZ industrial sector (Cling et al, 2005). Since inputs can be brought in duty free it is difficult for developing countries to compete with the high quality goods available elsewhere. As we will discuss below, zones that have avoided being mere enclaves have managed to provide incentives for companies to utilize more local inputs.

Maximize Training and Technology Transfer

Foreign investors often have a well developed understanding of technology and an ability to synthesize the new forms of technology as they appear. These are two capacities which are woefully inadequate in Africa. In general, SSA's share of medium and high technology activities in its MVA is the lowest in the world and has been falling over time in contrast to most regions (Lall, 2005). In addition human capital tends to be poorly developed in Africa. Employment can lead to training which enhances human capital. Even where there is little formal training a modern industrial setting with quality control, punctuality, organizational discipline and a spirit of innovation and drive can leave a significant impression of lasting consequences to future industrialization (UNCTAD, 1993).

Increase Ownership Linkages with Local Capital

Studies have shown that the most successful zones from a developmental perspective have been those with significant partnerships between local and foreign capital not only for technology sharing benefits discussed above but also because it can lead to higher levels of backward linkages.¹⁰ Much can be learned from foreign investors. Joint ownership arrangements with local capital are more conducive to the spread of technology which is one of the reasons for the success in China (Gi, 1999). In Madagascar only 11% of enterprises had local ownership (Cling et al., 2005). The Kenyan EPZs are also overwhelmingly foreign owned. Only 28.4% were joint ventures (KEPZA, 2005).

Augment Institution Building

Broadly speaking institutions are habits of thought common to the generality of men and women. They are embodied not only organizational forms but incorporate social and mental constructs that allow economies to operate with greater efficiency and fluidity. The impact of a zone on the labor force has already been discussed. Trust, a central part of the successful operation of a market economy can be built up within a zone. African governments have had a tendency to be ambivalent

¹⁰ As the Mauritian Minister of Industry and Commerce pointed out at a Corporate Council on Africa workshop I chaired in 1997, local capital (often from the sugar sector) used joint operations to learn about textile manufacturing. By 1997, over 60% of investment in the export processing units was from local capital. The Minister emphasized that one of the major reasons for the success of the EPU's in Mauritius, is their domination by local capital which has a vested interest in developing linkages to the local economy.

about foreign capital with too many policy shifts. Continuity and stability in the policy of governments can build up the relationships that can lead to a greater commitment to foreign investment.

African customs and other government bodies have been bureaucratic and at times corrupt. The zone allows an experimental forum to learn to develop habits that will lead to efficiencies that can be emulated elsewhere in the country while at the same time building up trust with foreign investors. A successful drive to industrialization will require the development of capacities and policies to foster private sector investment. The operation of a zone is a good starting point to begin to learn to apply those capacities. Even if zones become mere enclaves a successful operation of the zones can have an important demonstration effect.

So what motivates companies to locate in these EPZs.

Corporate Aims

Ease of Entry and Exit

This refers to the ability to move capital and profits, labor, raw materials and finished goods in the out of the country with little cost or paper work.

High Quality, Reliable and Low Cost Infrastructure

Examples of infrastructure include roads, telecommunications, electricity, water supply, ports, airports etc.

Propitiously Located Zones

This refers not only the proximity to export facilities, but also the closeness to input and output markets.

Low Cost, Reliable and Well Trained Labor Force

This will be linked to the educational levels, work habits, wages and benefits, nature and extent of unionization and the supply of labor.

Ease of Operations

The nature and exercise of regulations effecting areas like production, labor and the environment will have a direct bearing on the ease of operations.

Political and Economic Stability

Frequent political changes combined with destabilizing impact of high levels of inflation and frequent devaluations produce high levels of uncertainty which are inimical to foreign investors.¹¹

¹¹ The political crisis of 2002 led to nearly 50% drop in exports from the zone in Madagascar and the departure of a number of key investors in the zone (Cling et al, 2002).

Economies and Externalities

Zones frequently specialize in operations of a similar nature. Companies are able to arrange joint strategies in bargaining, gain from labor force training of similar companies and develop significant economies through specialized services and infrastructure.

Access to Domestic Markets

While most zone have almost exclusively exported products the zones in places like China and Brazil have been located with the eventual access to domestic markets in mind.

Flexibility of Zone Administration

Easy access and openness on the part of zone administrations to accommodating corporate needs through shifts in procedures is an important aim of foreign investors.

Incentives Provided by the Government

Tax reductions, holidays, subsidies on infrastructure, access to inexpensive credit, extension services etc are just some of the things that can be used to enhance the profitability of investors in zones.

The Design of Export Oriented Zones: Toward a Harmonization of Aims

By almost any measure, the most successful export zones in the world have been located in Korea, Taiwan and China. Taiwan, like many Africa countries, was searching for ways to enhance export promotion after focusing initially on import substitution. However, complex administrative procedures and a heavy handed bureaucracy impeded efforts in this area. In 1966 they established the first zone at Kaohsiung aimed at offering incentives and minimizing administrative procedures. Two more zones were quickly organized. The zones were wildly successful relative to the criteria used above. FDI grew annually at a rate which varied from 10 to 81% between 1967 and 1979. Average annual exports increased at an astounding 61.3%. Net exports were a very impressive 40% of total exports between 1966 and July 1980. The zones became increasingly important to the trade accounts of Taiwan. Net exports from the zones relative to the total increased from 3.3% in 1967 to 53.4% in 1976. Employment peaked at more than 80,000 workers in 1986 before declining to about 70,000 in 1990.

Unlike many other zones in other parts of the world the EPZs were not mere enclaves with both significant backward linkages and technology transfer. In 1967 only 2.3% of all inputs were of local origin. By 1973 the figures rose to 17% finally reaching about one-third of the total by 1980. More than 1000 factories were organized to provide inputs to the zone. There were 40 technical cooperation agreements with between foreign investors and suppliers aimed at upgrading the quality of inputs in turn leading to significant technology transfer. In addition, more than 4000 people were sent abroad for technical training between 1966 and 1979. Over time, local Chinese technicians and managers replaced expatriates (Yuan and Eden, 1992;Amirahmadi and Wu, 1995)

Although slightly less significant, Korea's zones have also generated high levels of employment, foreign investment, net exports and significant backward linkages and technology transfers. The key

to the success in Taiwan and Korea has been the ability to meet the needs of foreign capital while providing the incentives for foreign investors to undertake activities with greater developmental consequences. An important element of the dynamics of harmonization is a staged approach which is carefully integrated into a broader strategic or industrial policy domain.¹² Incentives to influence the direction and nature of foreign investment must shift in line with the development of indigenous capabilities.

Zones were carefully situated by major port cities where the basic infrastructure was in place and easy to expand. For example Kasoshiung was Taiwan's second largest city and a major port which allowed the country to combine the advantages of a free port and an industrial estate (Yuan and Eden, 1992).

There was an abundance of nearby low-cost, relatively skilled labor. In Taiwan, for example, the policies of widespread education for literacy under the Japanese, was continued by the KMT government which by 1968 included free and compulsory education for the first nine years. In line with encouraging an increasing sophistication in industry and creating a dynamic comparative advantage emphasis was on vocational education in high school reaching 66% of total enrollment in 1980 (from 37% in 1950) and scientific and engineering skills in university (40% of total enrollment already by 1972) (Brautigam, 1995).¹³

Over time and in line with broader industrial policy priorities, they encouraged the development of certain sectors, emphasized value added production and provided incentives to increasingly purchase local inputs. To date this has not been done in any African EPZ. In 1979 in Korea, for instance, a Machinery Purchase Fund to finance the purchase of machinery by EPZs was organized. Overall the countries offered a wide variety of exemptions and reductions in taxes and customs duties and many of the other mechanisms used elsewhere to encourage FDI in their zones (Yuan and Eden, 1992).

Finally in the context of Africa what can be learned from the discussion of the aims of both countries and foreign investors and the policy experiences from successful cases. A useful exercise might be to look at a comparatively new zone in Africa to examine its organization against the experiences elsewhere. The Onne zone in Nigeria, which I visited in 1997, provides an opportune example. This can only be very briefly done.

Onne Oil and Gas Free Zone

Under the Oil and Gas Free Zone Decree No. 8 of the 31st of March, 1996, all approved enterprises operating within the zone were exempt from taxes. Any goods imported into the zone were free of

¹²For a more detailed analysis of the industrial policies of Korea and Taiwan and its relevance to Africa see Stein (1995).

¹³Of course the breakdown of the total is one indicator. Another is the number per capita. In engineering, for example, in 1985, Taiwan had 767 engineers per 100,000 population. A study of 13 African countries put the number at 9 per 100,000 (Brautigam, 1995). Initially, until Africa can increase the supply of human capital, the emphasis in most countries will need to be on export zones with labor-intensive processing.

customs duties as long as it is in connection with an approved activity. Under section 18 the other provisions to attract foreign investors included repatriation of capital with appreciation, remittance of profits and dividends earned by foreign investors in the zone, no import or export licenses, rent free land (only guaranteed at the construction phase), up to 100% ownership of business, employment of foreign personnel subject to visa approval by the Authority operating the zone and no strikes or lockouts for a period of 10 years.

The project was divided into three phases. The first stage, which commenced on March 8, 1997, provided a Free Port/Free Trade Zone at the Onne Port Complex covering an area of 220 acres. It included fencing off the territory, streamlining the port facilities to accommodate the traffic, expanding customs and pre-inspection capabilities and clarifying the procedures for moving cargo from the airports into the zone. The focus was primarily to act as a transshipping point to service the oil and gas industry. The second phase at some point was to expand the area to cover 730 hectares. The second phase could be aimed at more systematically developing an EPZ. A third phase would make available more territory by incorporating the undeveloped Ikpokiri island area into the zone.

Evaluation-2007

There are a number of issues that can be raised. At its initial phase, the developmental potential of the zone is limited. There has been a significant increase in port activities. However with the exception of a cement factory, precast panel factory, pipe coating and machine shop, most of the activities are focused on warehousing for oil companies. Still roughly 7000 jobs have been generated with about 112 companies using the site (as of January 2007). To date the main beneficiaries are the oil companies which have a free and secure area with few hindrances for storage. They are able to obtain equipment and parts for expansion or servicing much more rapidly allowing economies to be gained in shipping and the reduction in delays in production. Nigeria and other regional countries gain largely from the potential increase in oil exports¹⁴ There are, however, significant institution building opportunities. It can provide the training of organizations that will need to operate an EPZ. To upgrade and expand the zone into an EPZ, the FP/FTZ must be successful. This is an ideal chance to solidify relations and build up trust with companies that can participate in future assembly/manufacturing activities.

The key to a successful zone is the ability of the overseeing Authority to act efficiently and independently to ensure a harmonization of aims. In a zone organized as a storage and shipping depot, goods must be moved rapidly to accommodate the oil industry. The organization of the zone, as originally specified in the Decree, created some potential difficulties (as the discussion below indicates many of these have now been addressed). The Decree established various agents of the government in the zone (customs, police, immigration etc.) and if the experience of other countries is any indication, this created the danger of red tape or corruption. The ability of the Authority to intervene against representatives of other government agencies was also uncertain in the Act. Under Section 5-1-f, labor disputes could not be settled independently of the Federal Ministry of Labor

¹⁴ Onne is perhaps the most propitiously located port in West Africa in terms of its centrality and proximity to oil and gas zones in and around Nigeria while being well sheltered but readily accessible to ocean vessels.

Productivity.

Also as established in the Decree, the Governing Board was given wide representation from ministries, agencies and business organizations. The powers of intervention were not clearly specified. This created some opening for patronage or political interference in the running of the zone. The management of the zone, in the Decree, was initially specified as the government organization the Nigerian Export Processing Zone Authority. The zone like most successful operations must implement "one stop" procedures for approving operating licenses. Procedures were not clearly defined in the Decree.

In the early stages, the Nigerian government, began to address some of the concerns.¹⁵ Based partially on the poor response to the Calabar zone¹⁶ which was organized along similar lines and due to the comments by the oil companies planning to participate in the zone, the government moved forward to reconstitute the composition of the Governing Board to include broad representation of oil related companies operating in the zone.¹⁷ The Ministry of Commerce and Tourism signed a 5 year technical management contract to run the zone with Intels, a private jointly Nigerian and foreign owned company that has been running three ports in Southern Nigeria (Warri, Calabar and Onne) since 1982. The contract was subsequently extended, Intels was given broad powers to act as the agent dealing with immigration, registration, marketing and police affairs while acting as the intermediary between customs, shipping and terminal handling (www.onnefreezone.com).

The infrastructure has been gradually upgraded. Measures included a dual carriageway into the port (which was a two lane congested mess when I was there in 1997), a fibre optic cable into the zone, extending the runway at Port Harcourt airport to accommodate larger aircraft, and completing the

¹⁵ The discussion below is based on interviews in April 1997 in Lagos, Port Harcourt and Abuja with officials of the Nigerian Port Authority, Customs Authority, oil supply companies, Ministry of Commerce and Tourism and Intels the private company contracted to run the port and zone.

¹⁶ The Calabar export processing zone, which was constituted in 1992, has been a great disappointment. Although the infrastructure has been well developed there have been a number of operational problems. First, no provision has been made for a free port in Calabar due to disagreements between ministries. Second, the port is situated far from the ocean up a river which is in constant need of very expensive dredging. Third, before the zone was organized little effort was taken to locate potential users. Fourth, mixed signals have been sent. A 1994 Executive Council ruling permitted companies to receive the same benefits as those operating in the zone if they were exporting more than 60% of production thus providing little incentive to participate in the Calabar zone. By April 1997 only two companies were operating in the zone. Partly to address the failure Nigeria abrogated the rule that companies must export at least 75% of their production effectively making Calabar a free trade zone. By 2004, 22 firms were located in Calabar with employment of 2000 workers producing goods mostly for the domestic market. This is still a terrible disappointment by any standard given what has been invested in the zone (IMF, 2005)

¹⁷ A 1997 business guide for the zone indicated a board structure chaired by the Minister of Commerce and Tourism with representation from the Nigerian Port Authority, the Nigerian Customs Service, The Ministry of Petroleum Resources and five representatives from the oil producing and service companies (Intels, 1997, p.15). In my interviews in Nigeria in 1997 other structures have been discussed including representation from a larger number of ministries and oil companies as well as from regional countries permitting companies operating in their territorial confines to utilize the zone. The latter representation might encourage more regional participation and diminish the possibility of costly duplication and competition.

Federal Ocean Terminal to handle larger ocean going vessels. The quay length is currently 790 meters but is being expanded to 1,576 meters to accommodate up to a 70,000 ton vessel(NPA, 2005).

Intels has moved toward the simplification of procedures for granting a license which moves in the direction of a one stop approach. All applicant companies require a Free Zone License and operate in the zone under two categories "Special" and "General" Licenses, the former for companies incorporated outside of Nigeria and the latter for companies incorporated in Nigeria. The former is limited to doing business outside the zone within Nigeria through an agent or distributor. While the management contract gives Intels the right to issue Free Port, Special and General Licenses, all companies require registration by the Nigerian Department of Petroleum Resources (DPR) to operate in the zone and companies operating under the General License category also need a certificate of incorporation from the Nigerian Registrar of Companies.

Overall, the Nigerian government took early steps in response to participants which indicated that kind of flexibility associated with successful zones elsewhere. Moreover, they have recognized the need to move slowly and prudently in order to gain experience and credibility.¹⁸

Ultimately for the zone to have greater consequences for local or national development goals, a careful phasing process must be planned including the design of the proper incentives to encourage more value-added activities, more upgrading of infrastructure within and to the zone, the creation of facilities to train the labor force in line with new production, encouragement of more joint production agreements with local capital etc. To date, however, there seems to be little understanding of the kind of interventions and industrial policy that is required to transform this zone into a center of oil and gas related manufacturing.

Conclusions

This paper has presented a rather lukewarm endorsement of FTZs in Africa. There are some serious challenges ahead. First there are some potential fallacy of composition problems that could occur if too many countries produce the same types of labor intensive goods (Kaplinsky, 1993). Second, competition to attract a fixed amount of foreign capital might lead to high levels of expenditures on infrastructure and very costly provisions of incentives that might lead to a significant loss of net benefits for countries operating zones. Third, one of the big incentives of investment in zones in the past has been the Multi-Fiber agreement and AGOA. However as we saw, since the expiration of the agreement in 1994, there has been a precipitous decline in textile imports into the US from SSA.

These caveats point to the need to avoid a laissez faire approach to organizing export oriented zones. One way of addressing these issues is through spatial conceptions that might lead to the specialization of zones by product type that matches the design of zones with potential users. In this regard within the Nigerian context, the contrast between Calabar (which only employs 2000 people) and Onne which is organizing the zone in close cooperation with oil related companies, is striking.

¹⁸ This was very explicit in my discussions with officials at various government levels.

International or regional bodies can help coordinate efforts to ensure zones encourage economies and regional market access while avoiding costly duplication and competition. However, an industrial policy using better sequencing and incentives to use local inputs with the encouragement of joint ventures between FDI and local capital must be put in place-something that does not seem evident at this time.

Zones should not be seen as a panacea for solving the diverse and complex economic problems of all African countries . However, well designed zones that carefully harmonize aims in the context of regional coordination can provide important opportunities for both investors and host countries.

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