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**BACKGROUND PAPER FOR THE
WORLD DEVELOPMENT REPORT 2013**

Structural Transformation and Employment Creation:

The role of growth facilitation policies in
Sub-Saharan Africa

Christian Kingombe and Dirk Willem te Velde

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Overseas Development Institute
111 Westminster Bridge Road
London SE1 7JD, UK

Tel: +44 (0)20 7922 0300
Fax: +44 (0)20 7922 0399
www.odi.org.uk

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Abstract

Employment creation and structural transformation are amongst the two major challenges facing the countries of Sub-Saharan Africa at present. Based on the understanding that appropriate growth policies will be able to address these challenges, this paper examines whether SEZs could be an important ingredient of such strategies. So far many African SEZs have been unable to create significant employment or foster structural change. However, there are some positive exceptions with respect to employment creation in countries such as Mauritius, Kenya, Lesotho, Madagascar and Ghana. The SEZs that have contributed to structural transformation are located mainly outside Africa (e.g. Malaysia and Singapore) and these experiences show that it takes a great deal of complementary policies to enhance the positive impacts.

We argue that SEZs may still play a more important role in SSA as long as SEZs are retooled to i) facilitate growth adequately using good quality policies and adequate support institutions; ii) emphasise the clustering aspects of zones and iii) are able to adapt to new global conditions. This involves taking risks which may only pay off when policies can be implemented consistently backed up by significant capacity and fit in with overall growth strategies.

The evidence on the success and failure of using SEZs as a growth and employment policy tool seems to indicate that social cohesion, employment generation, and structural transformation are often found together. We suggest there is a virtuous circle amongst social cohesion, good quality growth policies and beneficial outcomes, which in turn increases social cohesion.

We also provide new econometric evidence which suggests that SEZs in Kenya have helped to create some 40,000 manufacturing jobs *and* increased manufacturing labour productivity by some 20% in the decade to 2006 (or 2% per annum). This suggests that in principle it is possible for SEZs to be both job creating and productivity enhancing, although there are also questions about whether the transformative productivity effects can be sustained forever.

1 Introduction

Employment creation and structural economic transformation are amongst the two major challenges at the forefront of current African growth and development strategies. At the micro level, employment creation provides opportunities for earnings and underpins increases in household expenditures and secure livelihoods. At the meso and macro levels, development occurs through the reallocation of labour across sectors towards sectors with the greatest growth potential and the highest productivity. Jobs also facilitate social (e.g. female wage employment) and political (seeking identity) transformations. However, it is not easy to achieve sustained employment generation. This paper examines the role of growth policies in promoting employment and specifically examines whether and how the establishment of special economic zones (SEZs) can help to promote employment that can be sustained over time and which can raise an economy's productivity and have spill-over and linkage effects on the rest of the economy, including through effects on export promotion technology and skills. It then makes the link with social cohesion.

There is a well-established debate on the role of the state in steering development and governing the market (e.g. Wade 1991) and this has recently gained in importance with respect to growth policies. Recent developments in the theory and practice of growth identification and facilitation (see symposium in *Development Policy Review* by Lin et al., 2011) suggest there is an important role for the state in supporting growth. One of the growth policy tools considered in this debate is the creation of SEZs consistent with a country's comparative advantage in order to attract investment. There is a rapidly growing literature on the performance of SEZs or export processing zones (EPZs) (see e.g. Madani, 1999; ILO, 2008; Farole, 2011).

SEZs can provide adequate infrastructure and public sector services in a limited area when it is not possible to provide these on an economy-wide basis, but there is no guarantee that this (i) attracts investors and jobs; and (ii) has positive spill-over effects. In addition, the recent emphasis on the success of SEZs in middle income countries (MICs) and on the new SEZs being built by emerging markets in Africa is leading to a reassessment (Draper *et al*, 2011) of whether SEZs can help to facilitate development transformations and whether and how SEZs are directly related to social cohesion. Jobs in SEZs can lead to more social cohesion by fostering coordination and progress amongst different groups in society, or they could polarise such groups by segregating jobs into those in "enclaves" and those in the rest of the economy, which could affect local perceptions of SEZs. At the same time social cohesion and better state-business relationships will lead to better design and implementation of SEZs.

The structure of this paper is as follows: Section 2 provides background on the possible role of SEZs in fostering a type of growth that can create employment and promote structural transformation. Section 3 reviews the evidence on the extent of which SEZ can boost employment and productivity based on a review of a dozen well-documented SEZs which reflect appropriately the large variety in the performance of the rather large amount of SEZs. Section 4 discusses the conditions under which SEZ policies are most effective. Section 5 concludes.

2 Background on the role of SEZs in promoting structural change and employment

Structural transformation

Ensuring high and sustained economic growth rates combined with high levels of social development in low income countries (LICs) is unlikely to be achieved without productivity changes based on widespread economic diversification and structural transformation (Hall and Jones, 1999; Lin et al, 2011; UNECA, 2011). The achievement of development goals and higher living standards will therefore depend on the ability of countries to foster entrepreneurship and promote innovation, including the spread, adaptation and adoption of pre-existing know-how and techniques, services, processes and ways of working. Unfortunately, much of the growth in low income countries over the last decade has not led to structural changes (see e.g. UNCTAD, 2011 for evidence specifically for LDCs).

Innovation and technological development involves a process of learning and building up technological and human capabilities (Lall, 2001). This process is beset by market and co-ordination failures; the process of addressing these challenges needs to be facilitated by the state (as recently emphasised by Lin and Monga, 2011). The question is what works in practice, especially in LICs where in addition to the what, the how matters too: politics (e.g. elite bargains), capacity constraints and weak institutional contexts are also important considerations in understanding whether state supported interventions help, and may help to explain the lack of growth-enhancing innovation in LICs.

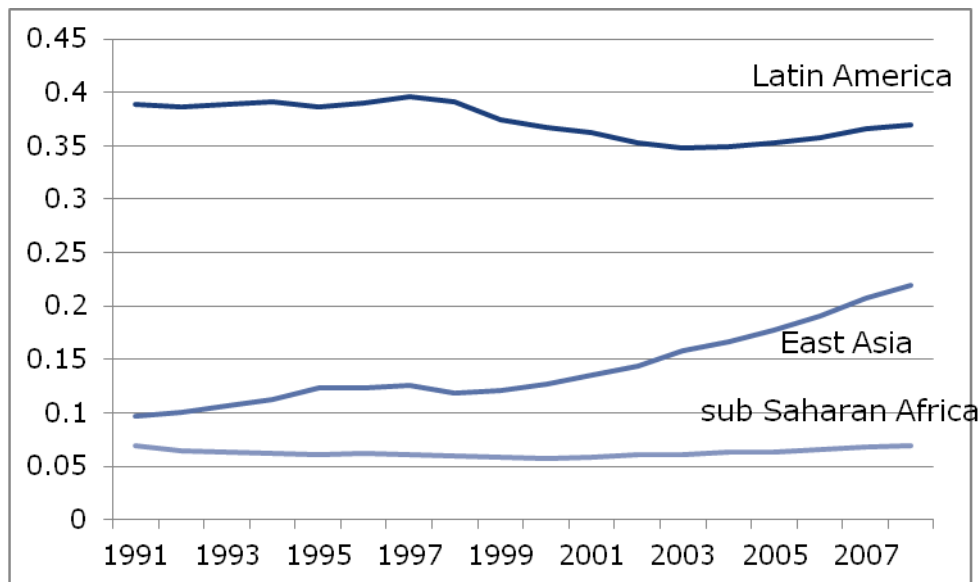
Employment-creation and labour productivity

ILO (2012) argues that the employment-intensity of growth in Africa has been low. Employment growth was 3.1% over 2002-2007, and declined to 2.8% over 2008-2011. Labour productivity growth in sub-Saharan Africa has been lower than in most other developing country regions over the past decade, at around 2 per cent a year, the same as the world average. The gap in labour productivity (output per worker) between SSA and developed countries has not narrowed since 1991 (see figure 1 and ILO, 2005 for earlier evidence). Of course there is wide variety in performance across countries.

There is an active debate on the incidence and causes of labour productivity changes in Africa. Much of aggregate productivity change happens within firms in advanced countries (Bartelsman et al., 2009) implying that innovation can be fostered through firm upgrading. For example firm upgrading could occur through managerial changes (Bloom and Van Reenen, 2007). Others argue that productivity differentials are particularly large in developing countries (Hsieh and Klenow, 2009) not within but among firms within a sector, implying that productivity growth happens through enabling entry and exit of firms. Recently, researchers McMillan and Rodrik (2011) and IMF (2012) have highlighted the potential of aggregate productivity change through enabling shifts of labour between sectors. McMillan and Rodrik (2011) argue that labour flows from low-productivity activities to high-productivity activities are a key driver of structural change and development. Importantly, they argue that since 1990 structural change has been growth reducing in Africa. On the other hand, IMF (2012), examining more African countries and over a longer time period, paints a more optimistic picture of structural transformation and productivity change in African countries.

For example, IMF (2012) argues that (i) Burkina Faso succeeded in raising average agricultural productivity levels in recent years through good agricultural policy; (ii) Tanzania has succeeded in rapid productivity growth and developing its manufacturing sector helped by structural reforms, reductions in tariffs and non-tariff barriers, market deregulation and privatization, and large public investments in infrastructure, including in the energy sector; (iii) Namibia has successfully diversified away from non-renewable natural resources, through key interventions including the development of export processing zones, industrial parks, small- and medium-size enterprise (SME) development programmes, and active promotion and marketing of Namibia's investment opportunities to potential foreign investors.

Figure 1: Labour productivity as % of OECD labour productivity



Source: WDI (2012). GDP per employee (PPP dollars)

Labour productivity growth is a crucial element in the structural transformation of economic societies. But broad-based growth based on job-creation is important in maintaining stability and improving social cohesion. In the short-run, increased labour productivity could mean fewer jobs, but in the long-run labour productivity improvements are essential for competitiveness and long-run employment growth (Lall, 2001; ILO, 2005).

Employment-based growth policies

Employment-based growth policies are aimed at facilitating structural transformation and employment-creation. There are three types.

First of all, standard growth policies will increase economic activity (see e.g. Commission on Growth and Development, 2008) and hence create jobs. Growth involves attracting more investment (factor accumulation) and promoting innovation (factor productivity) using innovation and technology policy, industrial policy, trade policy, infrastructure, skills and competitiveness policy and streamlining the administrative procedures. However, economic activity may be insufficiently employment-based, especially as the employment elasticity of growth is declining over time (ILO, 2011).

Secondly, growth policies that attract relatively employment-intensive activities (compared to the country average) or promote technological progress that makes labour more productive try to increase the employment intensity of growth.

Finally, there are a set of other policies such as active labour market programmes (ALMPs) and public works programmes which aim to increase employment. Kingombe (2011) discusses TVET policy as an important component within the toolbox of various ALMPs.

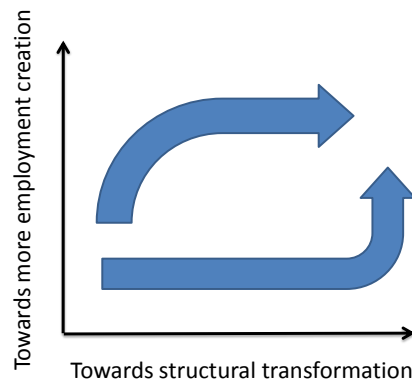
There is an extensive literature on growth policies. For example, growth diagnostics (Hausmann et al. 2005), investment climate support (WDR 2005) and competitiveness studies (Porter, 1998) all try to identify policies that can enhance growth. The Commission on Growth and Development (2008) report is a standard reference referring to five factors of growth important in successful cases of growth: openness, leadership, macroeconomic stability, investment, market allocation. Lin and Monga (2011) introduce a practical procedure to identify the sources of growth and facilitate growth: a 6-step growth identification and facilitation procedure in which SEZs play a direct role.

- Step 1: Governments should select dynamically growing countries with a similar endowment structure and with about 100% higher per capita income than their own average. They must then identify tradeable industries that have grown well in those countries for the previous 20 years.
- Step 2: If some private domestic firms are already present in those industries, they should identify constraints to technological upgrading or further firm entry, and take action to remove such constraints.
- Step 3: In industries where no domestic firms are present, policy-makers may try to attract foreign direct investment (FDI) from countries listed in step 1, or organise new firm-incubation programmes.
- Step 4: In addition to the industries identified in step 1, the government should also pay attention to spontaneous self-discovery by private enterprises and support the scaling up of the successful private innovations in new industries.
- Step 5: In countries with poor infrastructure and a bad business environment, special economic zones or industrial parks may be used to overcome barriers to firm entry and FDI and encourage the formation of industrial clusters.
- Step 6: The government should be willing to compensate pioneer firms in the industries identified above with tax incentives for a limited period, cofinancing for investments, or access to foreign exchange.

A key challenge is to design and implement appropriate growth facilitation policies that can both create employment and promote structural transformation, as visualised in Figure 2. Some policies may promote innovation and transformation but not significant employment (e.g. high-tech R&D), whilst in other cases they may create jobs of low quality (e.g. light manufacturing assembly operations, although this could be more productive than the average of the rest) and the sustainability of policies is questioned. Appropriate employment-based growth policies should be able to achieve both. A major challenge is finding the key ingredients of such appropriate policies.

Te Velde (2002) and Te Velde and Xenogiani (2007) argue that it is not straightforward to move from the bottom left to the top right of the figure because co-ordination and market failures might keep countries in a low-skill low investment trap. There is a need for consistent, active, strategic and market friendly human resource policy to get out of this low-skill, low-income trap and upgrade towards a high skill development path in the top right. For example, Costa Rica was able to use FDI to upgrade on the basis of strategic investment and human resource policies, whilst its neighbours were not.

Figure 2: Achieving employment creation and structural transformation



The role of special economic zones

The use of SEZs is one element in growth policies that could potentially have a net positive impact on employment as well as foster structural transformation. Farole (2010) defines zones as demarcated geographical areas within a country's national boundaries where the regulation of firms' activity and the dedicated policies are differentiated from those applied to firms outside the zone, and addressed to creating a policy environment and associated infrastructure that is exporter friendly, for both domestic and foreign producers. There are various types of SEZs (for a fuller classification, see e.g. Farole, 2011). The most common zones are export processing zones (EPZs) which are fenced-in zones offering duty free trade and administrative services; in practice EPZ firms can also be single factory schemes. At the other end of the spectrum, enterprise zones or technology parks are aimed to fostering clusters of firms and support industries. Africa contains these two extremes. For example, Malawi has a number of single factory EPZ schemes to avail of US trade preferences for garments, while the Ebone tower in Mauritius is a purpose-built tower hosting a number of ICT companies.

There are essentially two views on the role of SEZs. Many considered the creation of an SEZ (Madani, 1999; Watson, 2001) a second best option when the first best option of free trade is not achievable due to political economy reasons. However, Stein (2008) argues that SEZs should instead be considered a viable policy instrument as part of a more general industrial policy framework (Belloca and di Maio, 2011). In this view, geographical clustering through zone development can be good for raising productivity. Clusters are geographic agglomerations of companies, suppliers, service providers and institutions, linked across the supply chain. Companies in clusters can become more specialised, productive and innovative with externalities for the sector and economy as a whole (see e.g. Porter 1998).

In practice, the rationale for setting up SEZs rests on a combination of such arguments as clustering and streamlined trade policies mixed with pragmatism of supporting economic activity where the state sees an opportunity to help and feels the need to respond to pressures. Therefore it is important to examine the impact of SEZs.

The key hypotheses for this paper include (i) SEZs can raise a country's productivity and change the economic structure and (ii) SEZs can create employment in a sustained way. Moreover (iii) these aims are more likely to happen when SEZs are implemented in socially cohesive society with extensive links between SEZs and the rest of the economy. The rest of this paper examines these issues in greater detail.

3 The effects of SEZs on job creation and structural transformation in sub-Saharan Africa

We explore and categorise available evidence on the role of SEZs in three areas: i) level and type of jobs; ii) productivity and innovation; and iii) social cohesion.

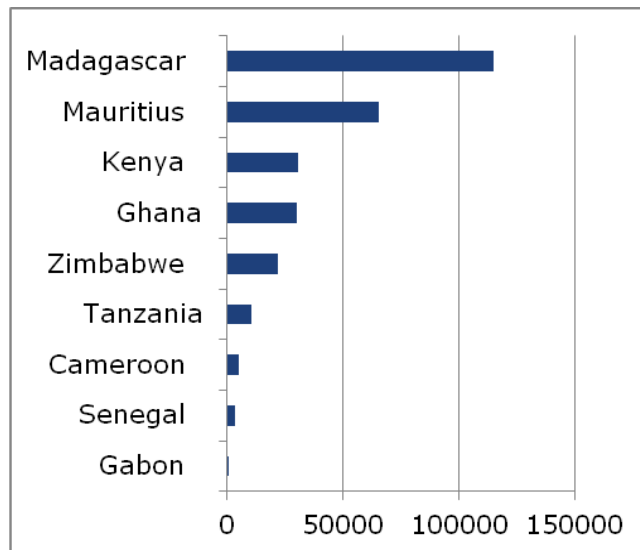
Level and type of jobs

When SEZs are able to attract investment that would otherwise not have been able to come, they create additional jobs. The available data on the employment impact suggests that there are approximately 3,000 zones in 135 countries, accounting for over 68 million direct jobs and over \$500 billion of direct trade-related value added within zones (FIAS, 2008). Overall SEZs do not play a large role in overall employment in most African countries. Some 1 million SEZ jobs were found in 91 SEZs in 20 SSA countries which represents only 0.2% of national SSA employment (table 1). Half of the EPZ employment in SSA is in South Africa, but a significant share of employment in EPZs is also found in Mauritius, Lesotho, Kenya, Nigeria and Madagascar (ILO, 2007; and table A1). Figure 3 provides a number of country examples. There are interesting exceptions and promising examples. For example, in Ghana, employment in SEZs increased from 4,000 in 1998 to 27,798 in 2010. The share of SEZ employment as a per cent of total formal employment is around 3% in Tanzania and Ghana and around 1.5% in Kenya (where the share of SEZs in manufacturing employment is reportedly 15%).

Table 1: Employment in Special Economic Zones

	Direct Employment (millions)	Percentage of National Employment
Global	68.441	0.21%
Asia and the Pacific	61.089	2.30%
Americas	3.084	1.15%
Central / East Europe and Central Asia	1.59	0.00%
Middle East and North Africa	1.458	1.59%
Sub-Saharan Africa	1.04	0.20%

FIAS (2008) using data for 2006

Figure 3: Employment in African SEZs

Source: Based on ILO and own research (data refer to, 2010 or earlier)

SEZs are associated with significant exports and investment. SEZs make up a significant share of total exports (see table 2, and annex table A2). They also attract significant shares of FDI. This suggests that SEZs attract jobs especially linked to the international economy. This can be done in at least two differing ways: building on comparative advantage or utilising trade preferences. Ghana's experience is notable in that it used a zone to bring together cocoa and timber based processing firms and build on its comparative advantage and promote exports. Many jobs in African zones however are linked to trade preferences for garment assembly operations. Based on ILO, WB and local data sources, jobs in SEZ in Africa are in textiles and garments (90% in Mauritius and Madagascar, 33% in Kenya, 11% in Tanzania and Zimbabwe) and agro-processing (60% in Ghana, 50% in Zimbabwe, 18% in Kenya), with other activities covering other light manufacturing and services.

Table 2: Exports by Special Economic Zones

	Zone Exports (US\$ millions)	Percentage of Exports
Global	851,032	41%
Asia and the Pacific	510,666	41%
Americas	72,636	39%
Central and East Europe and Central Asia	89,666	39%
Middle East and North Africa	169	36%
Sub-Saharan Africa	8,605	49%

FIAS (2008) using data for 2006

The additionality of employment could be questioned since significant employment generation takes place in single factory schemes for which it is difficult to construct a counterfactual. Whilst Ghana created quite a number of SEZ jobs, some 90% was due to single factory schemes in Ghana and half in Kenya. On the other hand anecdotal evidence suggests that certain individual investments are additional. For example, following persistent issues with the EPZ scheme, Mount Meru Millers Limited moved its agro-processing activities to Uganda in 2011. While the firm continues to buy sunflower seeds from Tanzanian farmers, the move of the processing facilities reportedly led to the loss of hundreds of direct jobs.¹

The employment impact of zones is directly linked to their overall economic performance. For example in Burundi, although some experience in marketing and selling to Europe has been gained and made available to other exporters, most benefits expected from the Zone Franche did not materialize: there was no significant attraction of FDI, and only slight employment creation in the Zone (Burundi IPR, 2009). By contrast, in Mauritius the EPZ Programme was at the heart of the government's industrial development strategy in the 1970s and 1980s, and helped to attract FDI inflows in labour-intensive manufacturing, mainly from Asia, and concentrated on knitwear and garments manufacture. During this period the EPZ provided a significant amount of jobs, contributed more value-added and earned more export revenue than sugar, which was the primary engine of growth until then (IPR Mauritius, 2001). In Madagascar, EPZ activity grew at an average rate of 20.2 percent between 1996 and 2001, textile exports expanded significantly (thanks to the preferential access of clothing items to the American market within the AGOA), and significant jobs were created as a result (DTIS Madagascar, 2003).

Productivity and innovation effects

SEZ can also be associated with productivity and innovation effects throughout the economy through technological linkages (e.g. through demonstration effects on technology), skill linkages (e.g. when former SEZ staff set up companies elsewhere), export linkages (does the SEZ help exports by non-SEZ firms), and regulatory linkages (when SEZ regulation changes economy-wide regulation). SEZs can have long-lasting consequences and lead to structural change when they are associated with productivity and innovation effects.

The evidence on SEZ suggests there are a number of successful countries that have used zones to upgrade their economies and change their export structures, but these come mainly from outside Africa, e.g. Malaysia, Singapore, Costa Rica and Dominican Republic. For example, Johansson and Nilsson (1997) use statistical methods to show that in the case of Malaysia the export generating effect of the Malaysian EPZs is larger than the exports from the country's EPZs, indicating the presence of a catalytic effect. Moreover, these successful cases in Asia have put in place deliberate activities to raise the innovation potential of SEZs (e.g. conditions to make it cost-effective to use local suppliers, upgrading of domestic capabilities, encouraging labour circulation, upgrading the investment climate).

There is a large literature on the transformational impact of SEZs in China (see e.g. Yeung et al. 2008). Zhihua Zeng (2011) suggests that SEZs and industrial clusters have made crucial contributions to China's economic success. They have also played important roles in bringing new technologies to China and in adopting modern management practices. The Chinese experience suggests that clustering and impetus for further reform are co-benefits from SEZs (Graham, 2004), in addition to static effect on exports and jobs. Zhihua Zeng (2010) argues that there are a number of factors behind the Chinese model: strong commitment to reform and pragmatism from top leadership; preferential policies and institutional autonomy; strong support and proactive participation of governments: Foreign Direct Investment and the Chinese diaspora; technology

¹¹ <http://allafrica.com/stories/201106080422.html>

learning, innovation, upgrading, and strong links with the domestic economy; innovative cultures; clear objectives, benchmarks, and intense competition; and locational advantages.

Whilst SEZs have coincided with changes in the export structure in successful Asian countries this was less so in Africa, with the exception of Mauritius and perhaps Kenya. The success in Mauritius is due to its efforts in the area of education, innovation, and institutional support (UNECA, 2011). The EPZ sector had multiplier effects on the economy; in particular, it created demand for services in packaging, consultancy, water, electricity, transport, mechanical workshops etc, and it led to some backward linkages for the assembly sector. Domestic firms have been able to learn from foreign firms. While EPZ exports in the 1980s were mainly from foreign firms, by 2000 these exports were often from national firms. Such substitutability is important for the footloose garment industry. Mauritian firms have also been somewhat successful in raising the quality of garment products and in acquiring design and marketing capabilities (UNCTAD, 2001). Annex B shows that EPZs have helped to raise labour productivity in Kenyan manufacturing by some 20% in the decade to 2006, or 2% per annum (in addition to the increase in employment by some 40,000).

Whilst there were significant employment increases in SEZs in Ghana, granting free zone status to individual firms located outside of designated zones may have reduced clustering effects and the opportunities for spillovers (UNCTAD, 2003). The spillover effects in Madagascar are likely to be limited as the Zone Franche companies primarily rely on imported material inputs and the workforce predominantly consists of low-skilled female workers who do not tend to stay with the firm for very long (Cling et al, 2005).

In conclusion, SEZs can have long-lasting innovation, productivity and transformational effects, but this has mainly been the case in Asian countries which have put in place a set of deliberate actions to enhance the positive spill-overs.

Social cohesion

The link between SEZs and social cohesion centres around a set of three tensions: (i) how do the social conditions in SEZs compare with the rest of the economy; (ii) are SEZs a tool for attracting FDI and exports, or are they seen as a social development tool for stimulating jobs and economic activity in backward regions; and (iii) linked to (ii) are SEZs static enclaves or are they fully linked dynamically into the rest of the economy benefitting all groups in society without political protests?

On the first tension, Farole (2011) suggests SEZs tend to pay higher wages than the national minimum wage and employ a relatively large female proportion. They are also less unionised and some unsuccessful zones are segregated from the rest of the labour market. Building on evidence from around the world, Amengual and Milberg (2008) find that wages tended to be higher among EPZ workers than other sectors of the economy (Bangladesh, Costa Rica, Honduras, Madagascar, and Sri Lanka). Workers in EPZs tend to work more hours (excessive, and often illegal overtime) when compared with other sectors in the economy (Bangladesh, Madagascar, Sri Lanka). At an absolute level, there are reports of violations of freedom of association in EPZs throughout the world, but the evidence is inconclusive regarding the differences between conditions inside and outside EPZs. Most studies find very few unions inside and outside of EPZs alike. Further, whilst an ITUC report (2008) and a number of ICTFU (2004, 2003) reports found that the ILO's core labour standards are violated in Madagascar, Cling *et al.*, (2007) argue that the situation within the Zone Franche is not notably different than elsewhere in the country. So whilst it is important to improve labour institutions when a country develops, it cannot be stated a priori that SEZs help or hinder this process.

On the second tension, McCallum (2011) asks how can we reconcile the “success” of the EPZ model as an engine of FDI versus their “success” as instrument of social development? The case of China and South Africa appear to suggest these are contrasting objectives. In China, EPZs have grown in popularity across the economy, attracted many investors, and turned the government further toward capitalist development, whilst at the same time restricting workers’ rights. In South Africa, by contrast, where unions have retained power in government and have succeeded in holding EPZ employers accountable to workers, the strategy has failed to produce noticeable gains or attract sufficient investors. Whereas SEZs in China and maquilas in Honduras were set up primarily in ports with the highest levels of existing industrialisation, South Africa tried to use zones to catalyze social development in places with low levels of industrialisation, where FDI would otherwise not necessarily go. Glick and Roubaud (2006) find that in Madagascar, growth in Zone Franche contributes substantially to improved overall gender equity in earnings in the urban economy.

Finally, with respect to the third tension, whilst SEZs are not important in quantitative terms in most African countries with respect to employment, they are criticised for poor labour standards especially when they are localised enclaves with little interaction with the rest of the economy. But when they work well, and when there is significant interaction between SEZs and the local economy, SEZs can generate significant employment and lead to upgrading. It seems that social cohesion, employment creation, and structural change go hand in hand in the case of SEZs. The experience of several Asian SEZs suggests mobility is good. There is a lot of interaction between SEZs and the local economy in successful zones, e.g. encouraging mobility through transport links in China’s Shenzhen SEZ (World Bank, 2009), or through supplier development programmes (as in Singapore), but in much of Africa where the interaction with the local economy is less, or in areas where SEZs are placed in lagging regions, the dynamic effects are much less. This also applies to Latin American countries where the maquiladoras tend to have weak linkages with the domestic economy (UNCTAD, 2011).

In Madagascar, there are strong links between EPZ firms and local suppliers. As a result, the indirect to direct job ratio is relatively high. In 1997, it was estimated that 1.4 indirect jobs were created for every direct Zone Franche (Cling and Letilly, 2001). A more recent study estimates an indirect to direct job ratio of 0.7 (Cling, et al., 2005). Both compare favourably to the indirect to direct job ratio in Mauritius, which an ILO study put at 0.25 in 1998 (Cling and Letilly, 2001). In Mozambique there have been some inward linkages between Mozambican metallurgy service firms in the Bebeluane EPZ and a big Mozal smelter (Government of Mozambique, 2004).

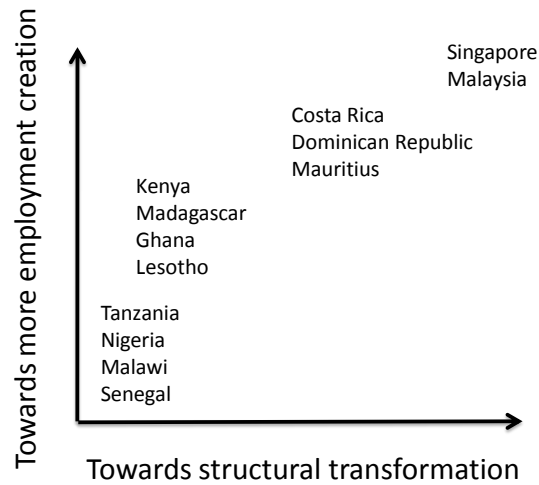
Conclusion

This review suggests that the wide variety of zones world-wide have a mixed performance. Zones in some countries have not progressed significantly on any of the indicators (e.g. Nigeria and Senegal). The most successful zones in Africa include Ghana, Lesotho, Madagascar and Kenya, but with the latter suffering from or at risk from declining preferences, and all are facing stagnation at present, so some note of caution is required when describing them as successful. Whilst these countries have used their zones to promote employment, albeit under severe challenges, they mostly failed to use the zones for structural transformation although the evidence on the past role of EPZs in Kenya was positive. Promising zones in Mauritius, Dominican Republic and Costa Rica have helped to upgrade the country towards higher value added actions. Singapore and Malaysia are examples of where zones (e.g. Jurong, Penang) have transformed the country with significant job creation. For the successful cases it seems that social cohesion, employment creation, and structural change go hand in hand.

Figure 4 presents a crude overview along the employment creation – structural transformation scale. Countries such as Singapore, Malaysia and Costa Rica have been able to get out of the low skill – low income trap and these countries also have a high score on social cohesion measures

such as lack of political troubles. The same is true for African countries: countries with non or weakly-functioning zones (e.g. Burundi, Nigeria, Senegal) have a much higher score on political troubles (African Economic Outlook) than countries such as Ghana, Lesotho and Mauritius.

Figure 4: SEZs, employment creation and structural transformation



4 Policies related to Special Economic Zones

In order to promote structural transformation as well as employment, we need to examine the key ingredients behind growth policies that can attract (good quality) jobs, facilitate positive spill-over effects through innovation and do not undermine social cohesion. Under what circumstances can SEZs be a policy tool for countries to transform their economies structurally? For example, what policies have been effective in enhancing the linkages between SEZs and the rest of the economy? What institutional set-up and capacity is needed for this?

We suggest that countries need to think about 3 types of issues if they want to have effective SEZs. They need to (i) find solutions to meeting global opportunities, (ii) regard SEZs as a strategic tool, and (iii) consider lessons learned from some of the above mentioned best-practices in implementation.

Do SEZs respond to global developments?

There are at least three types of SEZs that can successfully address global developments. First, SEZs can be designed to make use of trade preferences, e.g. countries that receive trade preferences in G20 countries (e.g. via US AGOA or EU's EBA) could import materials and export process goods whilst drawing preferences. This is often time bound and production may shift when preferences change (e.g. the end of the MFA quotas for textiles and clothing), and hence countries can use this method only temporarily as long as they are sufficiently flexible to respond and when they do, they need to ensure they draw long lasting benefits from it (see annex C for the effect of preferences). With tariffs declining the value of the SEZ benefits are also declining. Most zones in sub Saharan Africa fall in this category, but others such as maquiladoras in Latin America do as well.

This strategy comes with a risk. Cling et al (2007) suggest that EPZs which are focused only on garment assembly can no longer be placed at the core of development and employment policies in Africa after the end of MFA quotas. Mauritius, Madagascar and Kenya have already suffered declines in recent years. For example, the value added in the EPZs in Madagascar dropped 5% in 2010, repeating the negative performance of 2009. The *textile industry* accounts for about 95% of the firms in these zones, with ownership largely foreign – French, Mauritian and Chinese (AfDB et al., 2011).

Box 1: Clustering and Special Economic Zones

A number of examples of successful SEZs centre around clusters that build on comparative advantage. Clusters fall into Schmitz's definition of a cluster as a geographic and sectoral agglomeration of enterprises. Clusters of firms can learn from each other and benefit from scale. Successful clusters from the literature include: The Tema cluster in Ghana which builds on the agri-business sector; the Shenzhen cluster in China; Jurong Park in Singapore which e.g. built a petrochemical cluster; Penang in Malaysia which built a skills and technology park around electronics, and the Ebone Tower in Mauritius which builds on the offshore services market. Some of these clusters fit well in the country's development stage or comparative advantage, others seem to be comparative advantage defying. Nadvi and Barrientos (2004) present evidence on the incomes and employment impacts of clusters. Clusters are particularly useful if and when there are dense interactions amongst firms and support institutions, and these interactions may not occur just because of the close geographical proximity. From this perspective it may also be beneficial to create a SEZ for existing clusters that are already characterised by dense relationships amongst its stakeholders.

The other two motivations for SEZs which can also aim to meet global demand and can do so from a position of (i) comparative advantage conformity or (ii) comparative advantage defiance under the right circumstances. For example, we discussed how in Ghana (the Tema SEZ) the main SEZ is based on a clustering of agro-companies around the comparative advantage. With commodity prices high and scarcity of natural resources increasing, countries that possess such natural resources could build on the comparative advantage by building SEZs (see also box 1). This would fall under what Justin Lin call comparative advantage conforming industrial policy.

Yet, comparative advantage defying SEZs could, under the right circumstances, also address global opportunities; see e.g. the zones in Singapore and Malaysia which helped to put the country on a technologically more advanced path. Employing SEZs to follow a comparative advantage defying path requires significant implementation capacity and (additional) strategic interventions. Singapore and Malaysia implemented alongside SEZs a set of human development, incentive and technology measures, and involving a range of activities (box 2). This ensured that these zones became a success even though they at first attracted activities that were new to their economies. This could now apply to off-shored services which could be attracted to African countries (e.g. Ghana, Rwanda and Mauritius).

Box 2: Best practices in market-friendly human resource development in Malaysia and Singapore

Malaysia has seen government initiatives for providing training, aimed at encouraging the role of the private sector and reducing the role of the government in training activities. Malaysia introduced (the following policies in the 1990s:

- 1) Promoting private sector participation in human resource planning through the National Vocational Training Council.
- 2) Promoting the role of the private sector in the provision of training through tax deduction on training expenses in approved institutions; the establishment of a Human Resource Development Fund (HRDF) imposing a levy of 1% of employees' wages which employers can partly reclaim for training budgets; as well as a liberalisation of regulation of private sector training. The performance of the HRDF was impressive, helping more than 5% of the workforce in the first three years.
- 3) Promoting the sharing of public and private sector training resources, through exchange of trainers or allowing the use of public training facilities (this was less successful).

The private sector in Malaysia has played an increasingly important role in (the planning of) training. The Malaysian Penang Skills Development Centre (PSDC) is a good practical example of coordinating public and private sectors with respect to post-secondary training. The PSDC was set up in 1989 in response to a growing shortage of skilled labour in the skills-intensive operations (e.g. electronics and IT) of multinational enterprises (MNEs) in the free trade zones and industrial estates. Financed initially through a pooling of public (grants, training materials, equipment and trainers) and private (donations, loan of equipment, furniture, private training facilities) resources, it is now self-financing, offers courses at competitive rates and is officially recognised to offer technical and managerial skills training and higher education. The centre is in the unique position of obtaining immediate feedback from the private sector about course content and future training needs.

The Skills Development Fund in Singapore is another example of how private firms (including MNEs) can be engaged in more training. The Productivity and Standards Board (PSB), responsible for the fund, imposes a 1% levy (it was 4% before the economic crisis in 1986) on the payroll of employers for every worker earning less than a predetermined amount. This levy is distributed to firms that send their low-earning employees to approved training courses. This has had a significant impact on skills upgrading in Singapore (an estimated 10% of the workforce has been to approved training courses, which has led to notable skills upgrading)

Source: Lall (1996); te Velde (2002)

Do SEZ policies fit in overall development strategies?

The available evidence overwhelmingly supports the view that SEZs work best if they are seen as an integral part of a country's development strategy. For example, FIAS (2008) suggests that the success of zone initiatives is largely determined by the choices made in the establishment of policy frameworks, incentive packages, and various other provisions and bureaucratic procedures. The experience suggests that maximizing the benefits of zones depends on the degree to which they are integrated with their host economies and the overall trade and investment reform agenda. In particular, when zones are designed to pilot legal and regulatory reforms within a planned policy framework, they are more likely to reach their objectives. The establishment of a successful EPZ programme does not require removing one or two obstacles, it requires removing all of them simultaneously (Aggarwal, 2005).

Reinforcing the view that SEZs need to be seen as an integral part of a country's development strategy, Virgill (2009) emphasises the complementary role of EPZs to reform. EPZs were emerging in countries where institutions such as the financial system, governance and corporate governance were experiencing improvements suggesting that EPZs were complements to reform. As EPZs did not emerge in the most distorted economies, EPZs can be an important complement to further economic reform, however EPZs alone will not encourage entrepreneurial activity in an economy; fuller reforms are necessary. Countries should focus on demonstration and failure, network and knowledge externalities.

Omar and Stoeber (2008) argue that EPZs alone do not lead to the structural transformation that developing countries seek, but they can be a significant factor in a developing country development strategy when managed right. They argue that investments in human resource development and technology upgrading are necessary to support the emergence of local suppliers and thus stimulate EPZs to move further along the life cycle trajectories.

The evidence suggests the following policies need to be taken into account when implementing SEZs: Skills, technology, trade, business climate and other policies. Various type of other policies can be regarded as complementary to SEZs in order to stimulate innovation through SEZs (Farole, 2011): linkage policies to incentivise local content (China, Ireland, Mozal), increasing domestic capabilities (e.g. skills in Singapore and Malaysia Penang), labour circulation (placements in Shenzhen, China; and Mauritius), investment climate reform outside the zone and exploiting the infrastructure (e.g. building specialised infrastructure inside and to and from the zone). All of these also help social cohesion by building bridges amongst various groups and sectors. At the same time, a more socially cohesive society is less likely to strike and more likely to lead to productive linkages.

SEZ implementation issues

There are a range of factors that need to be taken into account when implementing SEZs. For example, the location matters. Baissac (2003) suggests that an EPZ policy should not be developed to simply generate static benefits such as employment and foreign exchange earning in an enclave system. In such a case, it is likely that the net benefits will be marginal and probably negative. The EPZ scheme should not seek to achieve regional development objectives. To the contrary, the scheme should seek to foster economic concentration around a well-developed urban centre so as to attract the best layers of domestic capital, the most educated and productive labour, and provide accessibility to urban infrastructure and amenities to foreign investors. Thus the location needs to be such that it can reach the market destination with ease.

A further discussion surrounds clustering vis-a-vis single factory schemes. It is generally regarded that clustering of firms in a zone has the potential for firms to enjoy agglomeration economies,

whilst single factory schemes do not. Further the type of management agency for the zones also matters, with FIAS arguing that the private sector is more efficient in supplying many types of SEZs services.

Farole (2011) discussed management and implementation issues factors behind successful implementation of SEZs. This includes (i) high level active and consistent government commitments to zone programmes over at least 5-10 years; (ii) more private sector participation where practically feasible; (iii) backed by an effective legal and regulatory framework; (iv) improved capacity, budget and accountability of regulatory authorities; (v) backed up by effective monitoring and evaluation.

Conclusions

In conclusion, governments wanting to use SEZs as a tool for both employment creation and structural transformation need to (see also table 3):

- 1 Build up the capacity to respond appropriately to the global environment which is changing constantly;
- 2 Consider SEZs only when they fit in a wider development strategy involving a range of complementary policies designed by a range of stakeholders that interact continuously; and
- 3 Implement SEZs with real purpose and consistency.

Table 3: What factors and policies can situate SEZs as a tool for employment creation and structural transformation

Responding to global developments	Place SEZs in growth strategies	Best-practice implementation
Building on comparative advantage (e.g. agri-business, offshored services) more likely to succeed especially when state capacity is lacking	Complementary policies required such as linkage policies and building of local supply capabilities	SEZs near main markets or ports more likely to succeed
SEZs based on clustering more likely to succeed	Active human resource development (skills and technology centres)	Zones in lagging regions less likely to succeed
SEZs linked to trade preferences (e.g. garments and AGOA) are vulnerable	Providing specialised infrastructure	Consider adequate public / private mix in implementing zones
Requires flexible approach, with good quality institutions and effective state-business relationships	Promoting mobility	Leadership and strong commitment from top
	Promoting labour institutions nationally	Single factory schemes deny clustering benefits
	Requires effective state-business relationships (and social cohesion)	

There are clear links between the aims and objectives of various policies. For example policies that promote linkages between zones and local firms are also policies that can capture technology spillovers from zones and such linkages will normally promote social cohesion. At the same time, a more social cohesive society is likely to be more supportive of fostering linkages.

Figure 5 expresses this virtuous circle amongst social cohesion, good quality growth policies, beneficial outcomes and back to social cohesion. It is notoriously hard to measure social cohesion

or social capital. In the context of formulating appropriate growth policies, Sen and Te Velde (2009) argue that an effective state-business relationship (SBR) is needed. They measure effective state-business relationships on the basis of capacity in the state, capacity in the private sector, presence of formal links between state and business, and restraints on collusive behaviour, for 20 African countries over 1970-2005. Using sophisticated econometric techniques, they find that a higher score is associated with better scores on investment climate indicators and with faster productivity growth.

Figure 5: The virtuous circle of social cohesion and well performing SEZs



In addition, Qureshi and Te Velde (2012) find that labour productivity is higher for members of business associations, based on a sample of 1000+ firms in 7 African countries, which suggests that better links can be good for firms. In both papers, the argument is that better state-business interactions will improve the quality of policies which will affect performance. It is also noticeable that the scores for SBRs are also greater for countries that have more successful zones. It suggests that countries will have greater success in using SEZs when they also have better state-business relations.

5 Conclusion and policy suggestions

Sub-Saharan countries face the twin challenge of achieving both employment-creation and structural transformation of their economies. Addressing these challenges requires appropriate growth policies, and as part of this, SEZs could play an important role. However, in order for zones to work in sub Saharan Africa they need to be retooled to i) ensure that they respond to the latest global developments (e.g. increased demand for natural resource rich products, off-shored services, etc); ii) are regarded as tools in a wider growth strategy which coincides with good quality policies and support institutions; and iii) follow a set of best-practices such as emphasising the clustering aspects of zones. All of this requires significant capacity of the state and a consistent and coherent approach.

The evidence on zone development suggests that some zones (esp. in Asia) have worked whilst many others (esp. in Africa) have failed. Nonetheless, some zones in SSA have attracted significant employment, at least for some time (Madagascar, Mauritius, Ghana, Kenya, Lesotho), although the transformational aspects have been largely absent with exceptions such as Mauritius and perhaps Kenya. The observation based on a limited sample of SEZs that have used clustering tended to be more successful is indicative that there is a need for SSA zones to focus more on the clustering aspects as well as complementary reforms and innovation policies.

The use of SEZs as a growth tool seems to indicate that social cohesion, employment generation, and structural transformation go hand in hand. For example, significant and sustained employment generation only occurs when there is a strategy for the zone to contribute to innovation and structural transformation, because zones without such a strategy will not succeed in the long run and are vulnerable. Any SEZ strategy will need to ensure that zones are not implemented as enclaves, but involve significant linkages between zone firms and local firms, and use social standards that are similar to the rest of the economy. These factors together are associated with social cohesion which in turn can lead to good growth policies and well-designed SEZs.

This paper also provided new econometric evidence which suggests that SEZs in Kenya have helped to create some 40,000 manufacturing jobs *and* increased manufacturing labour productivity by around 20% in the decade to 2006, or 2% per annum. This suggests that in principle it is possible for SEZs to be both job creating and productivity enhancing, although there are also questions about whether the transformative effects can be sustained.

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Annex A Employment in EPZs

Table A1. EPZ employment in selected countries, 2002-06 (ranked by 2002 employment)

Country	2002	2006	Percentage change
Mexico	1 355 000	1 212 125	-11.0
Philippines	820 960	1 128 197	37.0
Tunisia	239 800	259 842	8.0
Malaysia	200 000	369 488	85.0.
Dominican Republic	170 833	154 781	-9.0
Macao, China	131 010	131 010	0.0
Bangladesh	121 000	188 394	56.0
Sri Lanka	111 033	410 851	270.0
Viet Nam	107 000	950 000	788.0
Mauritius	87 607	65 512	-25.0
Madagascar	74 000	115 000	55.0
Morocco	71 315	145 000	103.0
Costa Rica	34 000	36 000	6.0
Kenya	27 148	38 851	43.0
Zimbabwe	22 000	22 000	0.0
Haiti	10 000	10 000	0.0
Cameroon	8 000	4 690	-41.0
Senegal	940	3 409	263.0
Gabon	791	791	0.0

Source: ILO (2002), Singa (2007).

Table A2: Change in EPZ share of exports, selected economies (2002, 2006)

Country	2002	2006	Percentage change
Philippines	87.0	60.0	-31.0
Malaysia	83.0	83.0	0.0
Mexico	83.0	47.0	-43.0
Gabon	80.0	80.0	0.0
Macao, China	80.0	80.0	0.0
Zimbabwe	80.0	80.0	0.0
Viet Nam	80.0	80.0	0.0
Dominican Republic	80.0	80.0	0.0
Tunisia	80.0	52.0	-35.0
Kenya	80.0	86.9	9.0
Senegal	80.0	n.a.	n.a.
Mauritius	77.0	42.0	-45.0
Morocco	61.0	61.0	0.0
Bangladesh	60.0	75.6	26.0
Costa Rica	50.0	52.0	4.0
Haiti	50.0	50.0	0.0
Madagascar	38.0	80.0	111.0
Sri Lanka	33.0	38.0	15.0
Cameroon	32.0	33.0	3.0
Maldives	13.2	47.7	261.0
Colombia	9.3	40.0	330.0

Source: ILO (2002), Singa (2007).

Annex B The effects of special economic zones on labour productivity in Kenyan manufacturing

We follow Barrell and Te Velde (2000) who use a two-factor CES production function with employment (L) and capital (K)

$$f(L_t, K_t) = \left\{ \lambda (\psi_{L_t} L_t)^\rho + (1 - \lambda) (K_t)^\rho \right\}^{\frac{1}{\rho}} \quad (1)$$

Where $\varphi_{L_t} \equiv \ln \psi_{L_t}$ is a function of labour efficiency units, and the parameter $\rho < 1$. The labour efficiency index can be interpreted as accumulated human capital or the skill-specific technology level. The elasticity of substitution between L and K is $\sigma = 1/(1 - \rho)$. In neo-classical theory, the technology level changes exogenously. However, it is perfectly possible to have shifts in the pattern of technical change (endogenous technical change), dependent on such factors as EPZ. For example, EPZs help to attract high productivity firms that can also act as a pool of knowledge for other firms so that EPZs can lead to greater labour productivity through greater spillovers and through aggregation. We model the effects of EPZs on the market for skills as follows:

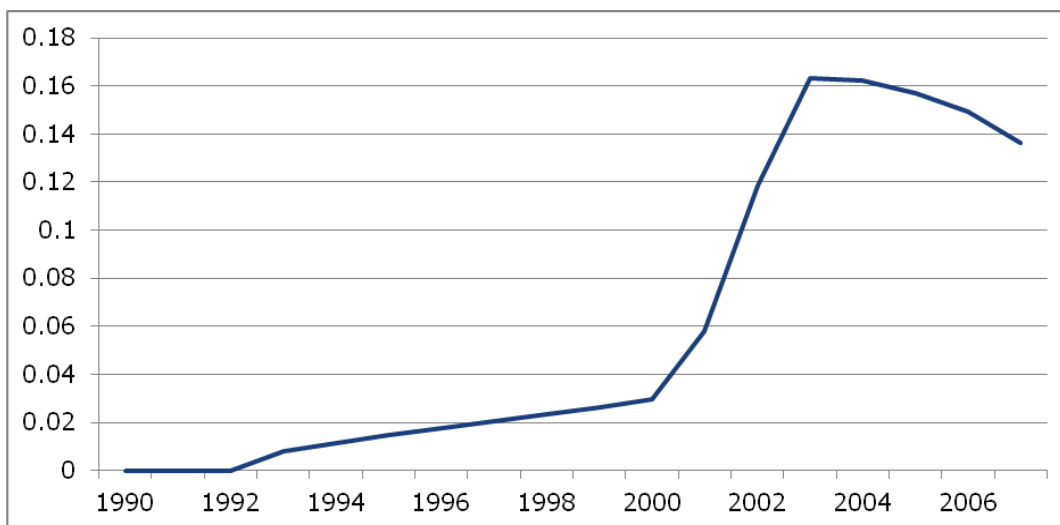
$$\varphi_{L_t} \equiv \ln \psi_{L_t}; \varphi_{L_t} = \gamma_{1L} + \gamma_{2L} EPZ_t; \quad (2)$$

and using the first-order condition that factor productivity equals the real factor price we can derive a formula for labour demand (and also capital demand which we not show):

$$\ln \left(\frac{L_t}{Y_t} \right) = \sigma \ln(\lambda) - \sigma \ln \left(\frac{w_t}{P_t} \right) + \gamma_{1L} (\sigma - 1)t + \gamma_{2L} (\sigma - 1) EPZ_t + \varepsilon_t \quad (3)$$

We take data from UNIDO for manufacturing employment, wages and value added, and use the WDI GDP price deflator, and use Kenya's EPZA publications for data on employment in EPZs (we have data for 1993, and 1998 to 2007, with extrapolated data for 1994-1997, and zero before 1993) to estimate the share of employment in EPZs. The data are plotted in figure 1 and show there has been a considerable increase in the share since the start in 1993.

Figure B1: The share of EPZ employment in Kenya manufacturing employment



Sources: EPZA and UNIDO

The estimations use data for 1990 – 2007 so we need to treat the results with extreme caution. The estimate (in first column) for the elasticity of substitution is not far from unity (so in fact it is close to a Cobb Douglas production function); the productivity variable is not significant for this period but negative. When we include the EPZ variable this is highly significant which suggests that EPZs has led to higher labour productivity in Kenyan manufacturing. The time variable is again not significant suggesting that manufacturing productivity has not increased except for its impact of EPZs. The final column (3) of table B1 estimates an error correction model using a lagged dependent variable as explanatory variable, and a change term as dependent variable, and a change term in real wages. We also lag the EPZ variable. Again, the EPZ variable is significant and correlated with higher labour productivity.

Table B1: EPZ and labour productivity in Kenyan manufacturing

	Estimating (3), no EPZ	Estimating (3) with EPZ	Estimating dynamic (3) with EPZ, and $\Delta \ln \left(\frac{L_t}{Y_t} \right)$ as dependent variable
$(L/Y)_{-1}$			-0.50 (-1.97)*
$(w/P): -\sigma$	-1.15 (-8.96)***	-1.05 (-8.68)***	
$(w/P)_{-1}$:			
$\Delta (w/P)$			-0.87 (-5.96)***
Time: $\gamma_1(\sigma-1)$	-0.01 (-0.83)	0.02 (1.27)	
EPZ: $\gamma_2(\sigma-1)$		-2.41 (-2.62)**	
EPZ ₋₁ :			-1.33 (-2.01)*
Constant: $\sigma \ln(\lambda)$	-0.62 (-1.25)	-0.97 (-1.96)*	-0.12 (-0.37)
Observations	18 (1990-2007)	18 (1990-2007)	17 (1991-2007)
R-squared	0.87	0.90	0.83

Notes: Uses robust standard errors. *(**) is significant at 10% or 5% or 1% level

We can also estimate approximately by how much EPZs have increased manufacturing productivity over the decade to 2007. The EPZ share variable increased by around 0.12 over the decade to 2007 and if we multiply this by -2.41 we get that labour intensity (productivity) has decreased (increased) by some 29% which is around an annual 2.5% increase in labour productivity in manufacturing due to SEZs. If we take the lagged variable, the effects are 16% and 1.5% respectively.

Annex C: Employment declines in zones linked to building zones around temporary trade preferences: the example of Kenya and Lesotho.

The export oriented apparel sector in Kenya achieved rapid growth between 2000 to 2004, due to improved access to the US under the African Growth and Opportunity Act (AGOA). Apparel exports from Kenya to the US increased from US \$ 44 million in 2000 to US \$ 226 million in 2004, making Kenya the second-largest exporter of clothing to the US from SSA after Lesotho. Most of the new clothing factories have been established within EPZs. By December 2004, the EPZ clothing sector employed 34,614 workers in 30 world-class factories with an investment of US \$ 144 million (Ksh 8.6 billion) in 2004.

However, the third-country fabric provision under AGOA ends on September 30, 2012. At present, EPZs in Kenya depend on developing countries like India, Bangladesh, China and Malaysia for their raw material supply. After September 2012, Kenyan textile and apparel companies would need to source raw materials like cotton and yarn locally to avail the duty-free benefit to the US. Currently, textile manufacturers in Kenya are concerned over the delay in extension of the September 2012 deadline for AGOA. The delay will have serious impact on their business as the uncertainty over possible extension may lead to loss of thousands of jobs. Thus, one of the Key Kenya Challenges Regarding AGOA is to ensure sustainability of AGOA after the framework expires in 2015.

Table C1 Zones and trade preferences

	Kenya	Lesotho
AGOA: US Legislation 2000 providing duty access to US. Extended to 2015 in 2003.	Kenyan textile and apparel exports were US\$ 292 million in 2011, which made the country the largest African supplier to the US under AGOA	Lesotho has emerged as one of SSA's largest garments exporters to the US.
Textile and Apparel: US Imports from in 2010, Value (1000 USD)	202,256	315,365
Textile and Apparel: US Imports from in 2008, Value (1000 USD)	247,100	278,388
Post-MFA effect on EPZ firms:	12 factory closures -22 remain open	
Post-MFA effect on EPZ employment:	Loss of approx. 20,000 jobs. 38,600-39,800 current employees.	

Sources: Authors based on Kenya's EPZ Authority, Lesotho's EPZ Authority; Mangieri, 2006 and AGOA.info.

The US has traditionally provided a ready market for Lesotho's exports of apparel, which have been strongly bolstered by the advent of the AGOA. In 2001 and 2002, 99% of Lesotho's exports fell into the 'textiles and apparel' category, of which 98% were AGOA-eligible, a feat achieved by no other AGOA-eligible country. Due to the highly concentrated nature of Lesotho's exports, the country has the distinction of having virtually 100% of its exports falling under AGOA. However, as in Kenya, the act will require countries to source fabric locally from 2012, a condition that Lesotho is unlikely to meet. Both countries need to make sure that the zones also attract business that is not dependent on such trade preferences.