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A comparative study of export processing zones in the wake of the Sustainable Development Goals

The cases of Botswana, Kenya, Tanzania, and Zimbabwe

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Abstract: The objective of this research is to assess the extent to which export processing zones in Botswana, Kenya, Tanzania, and Zimbabwe integrate the Sustainable Development Goals in their implementation and operations. We focused on four Sustainable Development Goals—gender equality, decent work, industry, and climate action. We interviewed four zone authorities, one in each country. A total of 12 firms in the agro-processing, textiles and garments, construction, and real estate sectors were also interviewed. All four zone authorities demonstrate a measure of environmental inclusiveness in their zone programmes. We found that firms in Kenya and Zimbabwe have a higher number of male than female employees, while zones in Tanzania employ more women. We propose that to promote sustainable development in these zones, policy action should concentrate on attracting firms that (are willing and able to) align with the particular Sustainable Development Goal that zone programmes are intended to achieve.

Key words: export processing zones, sustainable development, Botswana, Kenya, Southern Africa, Tanzania, Zimbabwe

JEL classification: O25, O55, O57, Q01

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1 Introduction

Export processing zones (EPZs), or variants such as the special economic zones (SEZs), free trade zones (FTZs), and free zones (FZs), have been influential in transforming national economies since the second half of the twentieth century. They are spaces where national laws are suspended in order to favour firms with special incentives to create products and services for the export market (Adu-Gyamfi 2017; Johansson and Nilsson 1997). According to Papadopoulos (1987), such EPZs transformed the Asian Little Dragons—Hong Kong, Taiwan, Singapore, South Korea, and Malaysia—into world economic powerhouses. Similarly, China’s success as an economic powerhouse can be attributed to the establishment of EPZs in specific provinces to serve as test laboratories to attract foreign direct investment (Farole 2011; Farole and Akinci 2011). The successful use of EPZs by the Asian bloc caused demonstration effects across the world, prompting many developing countries to adopt this model of development.

While there has been successful use of EPZs among countries in Asia, countries in Africa have failed to reap the associated benefits. EPZs are created, *inter alia*, to attract foreign direct investment (FDI), generate employment and foreign exchange, stimulate exports, transfer technology, and forge linkages with the host economy (Adu-Gyamfi 2017; Farole 2011; Kuada 2005; McIntyre et al. 1996). Yet, with the exception of Mauritius, which rigorously adopted EPZs as part of its development strategy (Baissac 2011; Kinunda-Rutashobya 2003), African countries have not experienced quantum gains from their adoption. For instance, EPZs’ share of national FDI in Kenya, Tanzania, and Nigeria has been largely minimal, amounting to 20 per cent, 18 per cent, and 1 per cent respectively (Farole 2011). And in Liberia, a civil war in the 1990s stalled the EPZ there, preventing it from yielding any positive effect (Adu-Gyamfi 2017; Botchie 1984). Elsewhere, in Senegal EPZs suffered many challenges, including incessant red tape, high minimum employment requirements in the EPZs, rigid labour market regulation, and the low productivity level of EPZ workers (Madani 1999).

Despite these challenges, there has been an exponential increase in the number of EPZs in recent times. By 2006, there were over 3,500 EPZs in 130 economies across the world (Singa Boyenge 2007). This has since shot up to about 5,400 EPZs across 147 economies (UNCTAD 2019). Specifically in Africa, Bräutigam and Xiaoyang (2011) reveal that EPZs are being constructed in Zambia, Mauritius, Egypt, Ethiopia, Nigeria, and Algeria. Indeed, the dynamism with which EPZs are springing up in Africa, despite challenges, is also worthy of mention. In Ghana, for instance, Adu-Gyamfi (2017) gathers that EPZs have been developed into a multi-purpose industrial park to boost productive capacities. In Ethiopia, some EPZs, such as the Hawassa Eco-Industrial Park, have been designed to promote sustainable development by providing infrastructure that discharges zero-liquid effluence (UNCTAD 2019). These cases reflect the growing importance of EPZs integrating new dynamics of sustainability into their character.

1.1 The research problem

Economic improvements in Asia provide avenues for ‘latecomers’ in industry to increase their participation in the global market (Newman et al. 2016a, 2016b). The growing cost of production in China, the evolving domestic demand in Asian economies, and China’s growing focus on trade with Africa are opening up considerable opportunities for industrialization in Africa (Asongu 2016; Asongu and Ssozi 2016). Arguably, EPZs have become conduits through which to stimulate this industrialization. Indeed, EPZs have been used to promote labour-intensive industries (Bheenick and Schapiro 1991; Jayanthakumaran 2003; Kaplinsky 1993; Newman and Page 2017). Yet many new EPZs have also attracted industries in the high tech, financial services, or tourism sectors (UNCTAD 2019; ILO 2003). This illustrates the dynamic and adaptive nature of EPZs in responding to changing

industrial trends. EPZs offer both fiscal and non-fiscal incentives to attract investment. In most cases, certain laws, particularly those relating to labour and the environment, are relaxed in order to increase the competitive advantage of a country to allow it to attract investment. However, how business is conducted in recent times and in the future is being shaped and will be shaped by the challenges confronting our planet (UNCTAD 2019). EPZs cannot afford to operate based on relaxed laws that have negative implications for sustainable development. In this context, Guruswamy (2018) inquires whether EPZs can advance the Sustainable Development Goals (SDGs). The author finds that green EPZs have been created, solar energy has powered EPZs, sanitation and cleanliness have improved, law and order has been strict, and the overall workplace experience has been improved. Yet it is unclear where these advances have taken place. In effect, there is no clarity as to which EPZ in the developing world integrates SDGs to achieve a better and more sustainable future for all. Thus, the extent to which EPZs align with the SDGs *vis à vis* industrialization in Africa is still a matter to be fully explored.

Given this background, the objective of this research is to assess the extent to which EPZs in Southern Africa integrate SDGs in their implementation and operations.

1.2 The significance of the research

This research has relevance for policy. On the one hand, it should facilitate the formation of policies that address the sectors and the associated firms to be attracted into EPZs in Southern Africa. Governments in Southern Africa can use the results of this research to strongly align to or consolidate SDGs in EPZ programmes. On the other hand, the research will assist in identifying strategies to implement and operate effective EPZ models for Southern African countries. Moreover, this research will serve as platform on which other policy-relevant research can be carried out.

2 EPZs in Africa

Africa is home to over 230 EPZs, which is close to about 5 per cent of the entire number of EPZs in the world (UNCTAD 2019). This is a low percentage: China alone has about 47 per cent of all the zones globally. The relatively low figure can be explained by the late start of EPZ establishment in Africa. The first EPZs in Africa operated in the 1970s, beginning with Liberia, Senegal, and Mauritius. Many other EPZs in Africa were established in the 1990s. Newman and Page (2017) opine that the relatively young EPZs in Africa were often created in response to the US Africa Growth and Opportunities Act and the Multi-Fibre Agreement. By extension, we concur with Adu-Gyamfi (2017) that the young age of EPZs is also in part a result of the economic structural transformations that occurred in the 1980s.

In Africa, Mauritius is considered the most successful country in terms of EPZ implementation. According to Baissac (2011) and Auty (2011), this was achieved through the successful combination of the export-led and import substitution economic development models, where the EPZ formed part of the export-led development model. Mauritius was able to attract investment to the island, which generated technology transfers that ushered the country into the global economy. According to the World Bank's Doing Business Index, Mauritius ranks 20th in the world (World Bank 2019).

The successful case of Mauritius is not reflected broadly across the African continent. According to UNCTAD (2019), there are 61 SEZs in Kenya, 38 in Nigeria, 18 in Ethiopia, 10 in Egypt, and 9 in Cameroon. Yet, as Newman and Page (2017) and Farole (2011) suggest, EPZs in many African countries are struggling. The late start of EPZs in many countries may explain the fact that so far they have not generated wide economic gains. But many EPZs have failed as a result of other factors. Adu-Gyamfi (2017) suggests that the EPZ in Liberia, for instance, could not live up to expectations due to

the country's history of civil war in the 1990s. According to Madani (1999), bureaucracy, rigid labour market regulation, and low levels of worker productivity are some of the factors that resulted in the collapse of the zone in Senegal.

A study by Newman and Page (2017) provides a comprehensive view of many EPZs in Africa and their year of establishment. Like many others, EPZs in Africa were established to attract foreign direct investment, create employment, and stimulate exports. With some modifications, these same ambitions and motives for EPZs were identified in this research. According to Marandu and Amanze (2016), an SEZ policy was adopted by the government of Botswana in 2010. This was 'designed to attract world class domestic and foreign investors by offering them developed infrastructure, state of the art technology and economic incentives' (Marandu and Amanze 2016: 1). The study by Newman and Page (2017) shows that the EPZ in Kenya was established in 1990. Kinyondo et al (2016) notes that in Tanzania, the EPZ was officially established under the Special Economic Zones Act 2006 (Kinyondo et al. 2016). The objectives were to attract both foreign and local direct investment to generate employment and promote exports. According to Newman and Page (2017), the EPZ in Zimbabwe was established in 1996 but recent changes in zone strategy have created an SEZ which came into existence in 2018. We see that zones are generally not old, and some are barely as old as two years. This reflects the growing importance of zones on the continent.

2.1 Theoretical views of the EPZ

Aggarwal (2010) identifies various theoretical views that underpin the EPZ. These include the neoclassical, political economic, heterodox, global value chain (GVC), and agglomeration economies views. The neoclassical view is premised on the argument that EPZs are not the first best policy to introduce a country to wider free trade reforms at the developing stage. They serve as conduits to experiment in free trade in secluded parts of a country, before being introduced countrywide. The works of Hamada (1974), Ge (1993), and Spinanger (1984), among others, differ in their conclusions as to whether resources allocated to creating EPZs fulfil the purpose for which they are created. According to the political economic view, governments play only a regulatory role (Baissac 2004), though they can endorse a few members of the capitalist class to access the privileges attributed to regulatory, legal, and administrative incentives (Aggarwal 2010). The heterodox view theorizes from the endogenous, neo-institutionalist, and developmental state perspectives. The endogenous view emphasizes local firms' improvement via EPZs. In connection with this, Johansson and Nilsson (1997) illustrate the role that EPZs play in catalysing export manufacturing via learning by doing. According to Baissac (2004), institutional arrangements have a more influential impact on the development of a country than do pure market functions. Thus, the neo-institutional view posits that EPZs are an institutional move by a government to facilitate the transfer of technologies and managerial knowledge from foreign to local firms. In relation to this, Altenburg (2000) articulates the neo-institutional view by describing knowledge transfers between foreign and local firms. From a developmental state view, the state initiates EPZs to favour specific industries (Baissac 2004). Empirical evidence from research on EPZs in Ghana shows a strong tendency towards EPZs focusing on agro-processing industries (Adu-Gyamfi 2017). The GVC view gives preference to the firm, in that EPZs facilitate the insertion into GVCs of developing-country firms which may find it difficult to integrate when only market forces are at play (Aggarwal 2010). Gereffi's (2016) work illustrates the role that FTZs played in catapulting Costa Rica's medical services sector to prominence in global medical services. From the standpoint of agglomeration economies, EPZs are clusters that promote value chains with associated knowledge spillovers, resource sharing, and labour pooling (Aggarwal 2010; Johansson and Quigley 2003; Sokol 2011). This is evidenced by the work of Newman and Page (2017), which gives an overview of SEZs in Africa and the policies recommended to enhance their performance as industrial clusters. The various theoretical views of the EPZ combine to allow us to derive a sustainability view of the EPZ, eliciting a nexus between EPZs and SDGs.

2.2 The nexus between EPZs and SDGs

Guruswamy (2018) offers insights that reveal the nexus between EPZs and SDGs. According to the author, it is logical to associate EPZs with SDGs because the goals are fundamentally aimed at fighting inequality, ending poverty, tackling injustice, and addressing concerns pertaining to environmental sustainability (Guruswamy 2018). Though not actively framed from an SDG standpoint, the EPZ literature has enhanced our understanding on inequality and injustice (Tejani 2011) and environmental sustainability (Yeo and Akinci 2011). Accordingly, when the formulation and implementation of policies surrounding EPZs are guided by SDGs, such EPZs will be tailored towards providing economic prosperity for all, optimally using the resources of the planet, ensuring decent work for all, and improving living standards (Guruswamy 2018).

Furthermore, Guruswamy (2018) shows that across different parts of the world, there is a broad consensus among experts that EPZs have substantially generated investment, boosted economic activities, promoted infrastructure, improved gender equality, generated jobs, and enhanced human resource development, particularly in low-income and emerging economies. These views have been confirmed by a substantial body of literature supporting the role of EPZs in sustainable development, notably in generating inflows of investment (Darley 2012; Graham 2014), employment opportunities (Cizkowicz et al. 2017; Newman and Page 2017), industrial production boost, and export-driven economic development (Farole 2011; Johansson and Nilsson 1997; Zeng 2010). In essence, EPZs can provide support for local communities and economies while at the same time enabling countries to leverage global market dynamics within the framework of the SDGs (Guruswamy 2018).

There are 17 SDGs as espoused by the United Nations but, guided by the literature, we focus on the following four: SDG 5 (Gender equality), SDG 8 (Decent work and economic growth), SDG 9 (Industry, innovation and infrastructure), and SDG 13 (Climate action). We contend that these selected SDGs clearly relate to EPZ implementation and operation. SDG 5 has nine targets and aims to ‘Achieve gender equality and empower all women and girls’. In this research we focus on the eighth target, 5.C: ‘*Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels*’ (UNDP n.d.). Relating this to our research, we want to see how gender equality is being implemented at both the EPZ and the firm level. Specifically, we are interested to know whether there is an interest in (i) increasing or (ii) maintaining the percentage of women employees.

SDG 8 is to ‘Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all’. There are 12 targets under this SDG and we focus on target 8.8: ‘*Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment*’. For this research we consider only decent work. Specifically, we are concerned with (i) medical service for employees, (ii) the presence of first aid at work, (iii) the availability of protective clothing, (iv) employee training on occupational safety and health, and (v) security checks to ensure the safety of other employees.

According to SDG 9, the world should be able to ‘Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation’. We apply the third of the overall eight targets, 9.3: ‘*Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets*’. We concentrate on the linkage between EPZ firms and the host economy. This should guide us to learn how small and medium-sized enterprises are integrated into the supply chain of EPZ firms to promote industrialization. In this case, we focus only on industry.

SDG 13 is to ‘Take urgent action to combat climate change and its impacts’. Out of the five main targets, we find the second target 13.2 most relevant to our research: ‘*Integrate climate change measures into*

national policies, strategies and planning?. In this context, we look at the extent to which EPZs identify with the following: (i) interest in controlling emissions, (ii) effort to reduce waste, (iii) renewable energy usage, and (iv) recycling. We argue that the integration of these efforts should help EPZs and their firms to minimize actions that have negative consequences for the environment and for subsequent changes in climate.

These targets guide our quest to assess the extent to which EPZs in Africa integrate the four SDGs. In particular, the assessment should inform policy directives that will influence the implementation of EPZs and firm operations in Southern Africa. Table 1 summarizes the research dimensions and indicators.

Table 1: Research dimensions and indicators

Dimension	Indicator	Targeted respondent
<i>Demographic characteristics</i>		
	Sectors under the EPZ	EPZ authority, EPZ firm
	Support scheme under the EPZ	EPZ authority, EPZ firm
<i>Sustainable Development Goals</i>		
Gender equality	Gender policy	EPZ authority
	<i>Interest in increasing percentage of women employees</i>	EPZ firm
	<i>Interest in maintaining percentage of women employees</i>	
Decent work	Labour, health and safety policy	EPZ authority,
	<i>Medical service for employees</i>	EPZ firm
	<i>Presence of first aid at work</i>	
	<i>Availability of protective clothing</i>	
	<i>Training on occupational safety and health</i> <i>Security checks</i>	
Industry	Linkage policy with the host economy	EPZ authority
	<i>Supply linkage</i>	EPZ firm
Climate action	Policy on the environment	EPZ authority
	<i>Interest in controlling emissions</i>	EPZ firm

Effort to reduce waste

Using renewable energy

Recycling

Source: authors' compilation.

3 Research methodology

This research is conducted within the framework of the 'Southern Africa—Towards Inclusive Economic Development' programme. In relation to this, the research initially planned data collection for EPZs in Botswana, Lesotho, South Africa, Tanzania, and Zimbabwe. However, it was later found that data collection in Lesotho and South Africa would impede the swift completion of this research due to difficulty in finding responsive contacts in these countries. Following this, the authors included Kenya in an effort to meet the number of initially planned cases studies. Though Kenya is not a member of the Southern Africa Development Community (SADC), it was included for two main reasons. First, Kenya is well versed in the use of EPZs. In comparison with other EPZs in Africa, the Kenyan EPZ has been in existence long enough to provide sufficient information for potential investors from the SADC region. Second, it is part of the East African Community, of which Tanzania is a member as well as being part of SADC. Kenya is also part of the Common Market for Eastern and Southern Africa (COMESA), of which Zimbabwe holds membership as well as being part of SADC. From a regional trade perspective, therefore, it makes sense to include Kenya as a case to be studied in this research. Thus, the countries captured in the study are Botswana, Kenya, Tanzania, and Zimbabwe.

The research employed a qualitative research method for data collection. The instrument for data collection was two different semi-structured questionnaires serving as a guide for face-to-face and telephone interviews. One questionnaire was designed for the EPZ authority and the other for the firms under the EPZ scheme. The former was intended to enable us to understand how the EPZ authorities manage the EPZ under an SDG framework. The latter was to assist us to gather information in relation to the extent to which EPZ firms integrate SDG goals in their daily operations. The face-to-face interviews served as tools with which to acquire reliable data from credible respondents. In most cases, we conducted a follow-up to initial interviews to ensure that data were reliably captured. In cases where an interview was conducted only once, we ensured that the respondent confirmed the responses given as the correct information.

We first identified high-level representatives of EPZs in the four countries selected. At the respective EPZs we interviewed the Market Research Executive (Botswana), the Assistant Manager for Planning, Monitoring and Evaluation at the Department of Research Planning and Innovation (Kenya), the Corporation Secretary (Tanzania) and the Technical Head (Zimbabwe). The positions held by those interviewed give a high level of credibility to the information obtained. From a snowballing perspective, they were able to assist in gaining access to representatives of EPZ firms for further interviews. In Botswana, three firms were interviewed. These firms were not directly under the jurisdiction of the Special Economic Zone Authority (SEZA) but rather under the Botswana Innovation Hub, which is a close partner of the SEZA. In Kenya, four firms under the EPZ scheme were interviewed, and in Tanzania three were interviewed. In Zimbabwe, only two firms were interviewed for the research. In line with confidentiality agreements made between the authors and the EPZ firms, we disguise their identity under different names in the research findings. The shortest interview duration was 25 minutes while the longest was 2.5 hours, with an average duration of about one hour and 13 minutes. Data

collection began in late November 2019 and ended in late January 2020. We analysed the empirical data by establishing patterns and themes to provide insights on EPZ implementation and firm operations. Quotes from respondents have been used to buttress data authenticity. Table 2 summarizes the interviewed EPZs and firms.

Table 2: Summary of interviewed EPZs and firms

Country	EPZ authority	EPZ firm	Total
Botswana	1	3	4
Kenya	1	4	5
Tanzania	1	3	4
Zimbabwe	1	2	3
Total	4	12	16

Source: authors' compilation.

3.1 Limitations

The initially planned model for data collection was a mixed method—combining qualitative and quantitative approaches. For quantitative data, both descriptive (mean and standard deviation) as well as inferential statistics (correlation and regression analysis) were to be employed. This would have helped to gain clarity on which sectors and firms in EPZs are influenced by the SDGs. However, due to delays in accessing research funds we resorted to employing qualitative methods to enable us to gather data on a timely basis.

In Botswana, we were unable to gain direct access to SEZ firms due to a confidentiality agreement signed between the SEZA and its firms. Access to the three firms interviewed was obtained through the networking support of the SEZ authority. These firms are generally not export-led. Nevertheless, we include them because we see sustainability as broad enough to affect both EPZ firms and non-EPZ firms that are affiliated to the SEZ. In Kenya, although respondents generally responded to our interview, some firms did not cooperate for fear of being summoned by the Directorate of Criminal Investigation or the Ethics and Anti-Corruption Commission in Kenya to write a statement should this research fall in the public domain. Two interviewees dropped out after long waits and back-and-forth discussion. In one particular instance, the owner of one EPZ firm in Kenya reprimanded the manager for neglecting his managerial role to engage in storytelling. Access to some firms was extremely difficult, as some wanted our interviews to be done strictly by email and it took ages to obtain a reply. Three firms were ready to participate but promised appointments for later dates which never materialized. In Zimbabwe, one firm assured us of its participation, but could not in the end commit to an interview due to busy schedules. Another firm promised to respond to our interview, but all other follow-ups did not result in our being able to arrange it. Many other firms did not respond to our initial call for engagement even after several attempts. These cases notwithstanding, the data obtained are credible enough to enable us to analyse them for the research.

4 Research findings

4.1 Sectors under the EPZ

We observe that there are common sectors among the EPZs interviewed (see Table 3). We find that among the four EPZs interviewed, agro-processing is practised in all countries. Finance-related sectors were found in EPZs in Botswana and Zimbabwe. The textiles and garments sector is common in Kenya and Tanzania. We also find that horticulture and pharmaceuticals are common sectors shared by the EPZs in Botswana and Kenya. EPZs in Botswana and Tanzania also allow investment in the

engineering sector. We find that EPZs in Botswana accommodate sectors including coal beneficiation, oil and gas, renewable energy, medical devices, electronic equipment, cargo freight and logistics, and aerospace and aviation. EPZs in Kenya also accommodate meat processing and fisheries. EPZs in Zimbabwe also include the tourism sector.

Table 3: Sectors in EPZs in selected countries

Sector	Botswana	Kenya	Tanzania	Zimbabwe	Total
Agro-processing (cereal and horticulture)	x	x	x	x	4
Aerospace and aviation	x				1
Cargo freight and logistics	x				1
Coal beneficiation	x				1
Cotton, textiles, and apparel		x	x		2
Energy (coal beneficiation; oil and Gas; renewable Energy)	x				1
Engineering and electronic equipment	x				1
Food and meat processing		x			1
Fisheries		x			1
Health				x	1
High technology				x	1
Industrials (heavy and light sector)				x	1
International finance	x			x	2
Manufacturing			x		1
Meat and leather	x				1
Mineral processing				x	1
Oil and gas	x				1
Pharmaceuticals and medical devices	x	x			2
Tourism				x	1
Total	10	5	3	7	25

Source: authors' compilation.

The composition of various sectors as found in the EPZs suggests that EPZs in Africa are not static, but are dynamic entities responding to changing patterns of competitive sectors in the global economy. Furthermore, it reflects the assumption that 'zones have evolved from initial assembly and simple processing activities to include high tech and science zones, finance zones, logistics centres and even tourist resorts' (ILO 2003: 2). We found that firms in EPZs, and in the case of Botswana the Business Innovation Hub (BIH), operate under these sectors. The sectors shown in Table 3 are based on the information provided by the interviewed representatives of the various EPZs. It is possible that this may not represent the absolute number of sectors. See Table 4 for a complete overview of the type of business activity.

Table 4: Characteristics of interviewed firms

	Botswana			Kenya			Tanzania			Zimbabwe		
Type of business	Fares Farming and real estate	Conwama Construction, waste management, and manufacturing	Manuf Manufacturing	NutPro Nut Processing	Pharma Pharmaceuticals	Cotepp Cotton, textiles, and apparel	Texti Textiles	Print Printing	GarPro Garment production	AgriPro Agriculture production	FoodPro Food processing	Infradev Infrastructure and property development
Ownership	Local	Local	Local	Local	Local	Foreign	-	Foreign	Foreign	Foreign	Local	Local
Length of operation	10 years	> 2 years	> 4 years	4 years	2 years	19 years	10 years	47 years	11 years	32 years	17 years	23 years
Year of entry into EPZ	Award from BIH in 2019	Award from BIH in 2018	Award from BIH in 2018	2016	2018	2004	2015	2014	2010	2018	2019	2019
Total number of workers	6	5	10	100	70	1,845	43	95	2,400	565	438	15
Local workers	6	5	10	100	70	1,840	40		2,386	506	-	-

Source: authors' compilation based on field research.

4.2 Support schemes

We also find a recurring theme of fiscal and non-financial incentives being offered by all four EPZ authorities interviewed, but each individual EPZ offers a competitive advantage to attract investors. Taking each case one by one, we find that Zimbabwe has much more favourable tax incentives. The interview revealed the following:

We have a regime for tax concessions whereby corporate tax is zero for the first five years and 15 per cent thereafter. We also offer duty exemptions for raw material, capital equipment, and goods coming into the country. Foreign investors can repatriate 100 per cent of their profit back home. (Technical Head, ZIMSEZA, Zimbabwe)

The firms FoodPro and Infradev, operating under the EPZ in Zimbabwe, confirmed that tax incentives are enshrined in the SEZ Act but are yet to fully materialize. FoodPro brings this out clearly:

We are still using the benefits which are in the SEZ Act. You do not need a licence to import or export something. You also do not pay income tax for the next five years. You also are approved to receive or sell forex to any company which is not in the special economic zone and also you get rebates for all your imports. Even those ones which I have given you we have not yet started enjoying them because the people who work within the various government departments do not know how those benefits should be operated. At times we also try to seek clarity from their bosses who are also new. We are all learning the whole thing and in trying to get the benefits it is taking a little bit of time. (FoodPro, Zimbabwe)

Despite being new, the generous incentives offered by the SEZ in Zimbabwe remain a source of debate as to whether such tax incentives ultimately generate revenue for the host economy. This notwithstanding, we deduce, based on the interviews conducted, that the SEZA in Botswana has a competitive advantage in providing non-fiscal incentives relating to business facilitation. According to the Market Research Executive, the SEZA facilitates services for investment attraction by assisting firms to acquire a business licence; open a business bank account; register the company; obtain tax IDs and work and residence permits; follow up on investor requests and provide feedback; and coordinate with relevant government ministries and departments to ensure action and consumer satisfaction.

The responses from firms in Botswana (Fares, Conwama, and Manuf) do not directly reflect the incentives provided by the SEZA in Botswana but reveal the indirect support provided. In one relevant case:

The company receives no direct benefits from the SEZA as an individual entity. However, the Authority supports the Sandveld Farmers by contributing towards the development of infrastructure to improve ease of doing business to promote the beef industry in support of the Leather Park—a Special Economic Activity. We shall benefit from such development when it materializes. (Fares, Botswana)

Kenya has a good infrastructural base on which to attract investors. It manifests in access to fast internet, electricity, water, and factory buildings. A description given in interview is provided below:

The Kenya Power and Lighting Company (KLPC) provides zone electricity to the EPZ. The company has upgraded the power stations and now has three phase transformers. Hence they are able to run heavy machinery used in production. There is constant water supply by Kajiado County government. The EPZ acts as the treatment plant for the supply of clean water for commercial use by EPZ firms. We

have constructed standard factory setup buildings for lease by companies' attracted by the EPZ authority. (Assistant Manager, Planning, Monitoring and Evaluation, Department of Research Planning and Innovation, EPZA, Kenya)

All four firms in Kenya (NutPro, Pharma, Cotepp, and Texti) confirmed this infrastructural strength of the Kenyan EPZs. They all reiterated the availability of electric power from KLPC and water from Nairobi Water Company. Again, all firms confirmed the purchase of internet service from different internet service providers, as the EPZAs do not provide internet themselves. Texti provided a background to this:

The EPZA has allowed pre-installation of internet. For example, a company called ACCESS Kenya provides internet services. Individual firms request installation at an affordable fee. (Texti, Kenya)

In the case of Tanzania, the competitive advantage is also found in the zone's ability to provide a complete infrastructure and further allows investors the flexibility to build their own factories despite pre-installed infrastructural buildings. According to the Corporation Secretary:

The Benjamin William Mkapa (BWM) SEZ is complete with everything. We have internet, electricity and water supply. Some investors are given factory building and others are only given the land to build their own, this depends on the type of business and specifications of the buildings. Others build their own factory buildings. (Corporation Secretary, BWM SEZ)

A response by GarPro in Tanzania also confirmed the flexibility offered by Tanzanian EPZ:

Without the EPZ it could be very expensive to invest, [and] perhaps there would be no GarPro in here. It is the EPZ that made it possible for us to be. The EPZ has done everything; giving licences and lands to build factories. (GarPro, Tanzania)

4.3 Integrating the Sustainable Development Goals

Gender equality

We see a clearer agenda to promote gender equality on the part of the EPZA in Kenya than in the rest of the four EPZs. At the level of the EPZ, we also found that the percentage of men and women is highly disproportionate. As shown in Table 5, men constitute 70 per cent of employees in EPZs in Kenya and 75 per cent in Zimbabwe. Conversely, women constitute about 70 per cent of employees in the EPZs in Tanzania. No data were provided by the EPZ authority in Botswana. Table 5 shows that there are generally more men at the individual firm level, though the difference between the numbers of female and male employees is not great. Out of the 12 firms, six firms (50 per cent) draw attention to the fact that women constitute the higher proportion of employees. Two of these firms are in each of Botswana, Kenya, and Tanzania. One firm from Zimbabwe showed interest in increasing its percentage of women employees. This is evident in the text below:

We are one of those companies who employ a low percentage of women. Therefore, we are trying to balance the gender. (FoodPro, Zimbabwe)

Table 5: Commitment to gender equality

Indicators	Botswana				Kenya				Tanzania				Zimbabwe				Average							
	Fares	Conwama	Manuf		NutPro	Pharma	Cotepp	Texti	Print	GarPro	AgroPro	FoodPro	Infradev											
% female workers	-	60%	70%		25%	40%	65%	65%	60%	23%	60%	28%	45%	44.25%										
% male workers	100%	40%	30%		75%	60%	35%	35%	40%	77%	40%	72%	55%	55.75%										
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Total	
Interest in increasing percentage of women employees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	1
Interest in maintaining percentage of women employees	-	-	-	-	x		x		x		x		x		-	-	-	-	-	x	-	-	-	6
Interest in increasing gender diversity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total					1		1		1		1		1						1		1			7

Source: authors' compilation based on field research.

Six firms (50 per cent) sought to maintain the status quo per the percentage of the women employees. We provide below one response providing evidence of this:

We have 65 per cent women and 35 per cent men. We maintain a high percentage of women because our company targets women empowerment agencies as our main clients, hence they would like to see high percentage of women engaged in production. (Texti, Kenya)

Despite this, we found that some firms neither show commitment to increasing nor maintain the number of women employees. The responses below confirm this:

Gender is well observed in spite of our many jobs which can be done by females but we have what belongs to male. (Print, Tanzania)

Gender balance is compromised by nature of work due to labour intensive nature of work and inherent hazards such as the presence of wild animals—no females are employed but they are present on farms belonging to families. (Fares, Botswana)

Other firms also do not place much emphasis on gender but remain neutral, with no aim of maintaining the status quo. One EPZ firm responded that:

The company is at infancy stage and staff number is low. It has started well on gender diversity and the nature of work does not place much restrictions on gender diversity since the required skills are gender neutral (Conwama, Botswana)

Decent work

When comparing countries, we find that the EPZA in Kenya and the SEZA in Tanzania narrate a deeper and more comprehensive view about decent work. Specifically on labour issues such as adherence to minimum wage, working hours, and the right of the employee to unionize, our interview reviewed that in Kenya there is regulatory backing for adhering to the minimum wage:

The EPZ advocates for the implementation of labour laws gazetted per industrial labour relations through compliance audit to ensure that minimum wage is adhered to. The EPZ ensures compliance with working hours provided for industrial labour relations as stipulated in the employment act. It understands that the right to unionize is a constitutional provision hence we work in harmony with employers to ensure compliance. (Assistant Manager, Planning, Monitoring and Evaluation, Department of Research Planning and Innovation, EPZA, Kenya)

The SEZA in Tanzania goes further to illustrate how it exercises its oversight role regarding labour issues. However, the nature and the number of employees of the firm compromises the right to unionize.

It is the EPZ's responsibility to ensure government policies are in place. Investors meet with officials from the Ministry of Labour, Employment and Youth Development which has a representative in the EPZ for issues related to employment. Here they are told not to offer less than the minimum government wage. They have to abide by the working hours per the country. (Corporate Secretary, BMW SEZ, Tanzania)

Regarding health and safety issues, firms drew attention to measures they had put in place for the employee. The SEZA in Botswana conducts a social impact assessment prior to licensing SEZ firms.

In Kenya, all employees are medically covered, giving them access to universal health coverage. They are also provided with additional health and safety measures:

The authority ensures compliance with employee safety by providing protective measures such as protective gadgets, biometric security, security checks at entrance and exits, CCTV surveillance and security guards. The EPZ has a fire station managed by the county government of Kajiado. The buildings have fire safety measures i.e. fire exits, fire assembly points, fire blankets, fire brigades, fire extinguishers, smoke detectors. (Assistant Manager, Planning, Monitoring and Evaluation, Department of Research Planning and Innovation, EPZA, Kenya)

In Tanzania, our findings reveal that the BWM SEZ coordinates with government agencies to ensure employee health and safety:

We work with the Occupational Safety and Health Authority (OSHA), the government agency set up with the aim of supporting workplaces. OSHA has an office in the EPZ to ensure safety and health in workplaces are maintained. Firefighting education is provided including knowing the locations for assembly in cases of fire. (Corporate Secretary, BMW SEZ, Tanzania)

In Zimbabwe, ZIMSEZA also works with enforcement agencies to monitor how firms operate in relation to health and safety. The interview with the representative from ZIMSEZA revealed that:

We go with health council officials and environmental health inspectors to inspect whether the laid down procedures in terms of standards, health and safety issues are in place within the factories and premises. We tick a checklist to ensure that they are speaking to the requirements as required by the government. (Technical Head, ZIMSEZA, Zimbabwe)

At the firm level, our findings include generally positive responses regarding the relationship between the employer and employee across board (see Table 6). We found that seven firms (58 per cent) provide medical services such as health insurance. These firms are spread across all four countries, although the majority are concentrated in EPZs in Kenya and Tanzania. Furthermore, eight firms (67 per cent) indicated the availability of first aid for any work-related emergencies. Again, the majority of these firms are concentrated in Kenya and Tanzania but overall they are spread across all countries. Six firms (50 per cent) indicated the use of protective clothing for employees. Five of these firms are in Kenya and Tanzania while one is in Botswana. Similarly, six firms (50 per cent) confirmed that they conduct training on occupational safety and health matters such as using the fire extinguisher in case of fire outbreak. Five of these six firms are found in Kenya and Tanzania, with the remaining one in Zimbabwe. Three firms (25 per cent) conduct security checks at entrance and exit points, and ensure that the workplace is safe for the employee. These firms are found in Botswana, Kenya, and Zimbabwe. Two firms from Botswana have very little to offer in terms of health and safety. This is quite intriguing, given that the third firm in Botswana exhibits considerable attention to health and safety. Our interviews in Botswana revealed that occupational health and safety programmes are not the main concern currently:

Our staff team is working on part-time basis. Therefore no medical benefits are offered yet. This shall change once employees are engaged on full time basis and spend most of their time at work. Occupational Health and Safety programmes are yet to be developed. (Conwama, Botswana)

We grant basic entitlements such as annual and sick leave ... We hope to improve our working conditions for our employees as we grow bigger and make better profit. However, production risks are minimal and occupational health and safety programmes are not a main concern currently. (Manuf, Botswana)

Industry

According to Newman and Page (2017), the nature of the link between an EPZ and the host economy gives a clue as to how long-term industrial development may play out. In connection with this, our consideration of linkages is confined to supply and employment linkages and how they are harnessed for sustainable local economic development. Our research shows that there is no clear-cut backward linkage programme or policy instituted by EPZs to promote sustainable local sourcing. In Botswana and Tanzania, respondents are unable to tell whether zone programmes embody local content policies. Our findings therefore confirm the research by Kinyondo et al. (2016), which concluded that EPZs, particularly in the case of Tanzania, have missed the opportunity to actively integrate local sourcing within the zone programme. This notwithstanding, the EPZA in Kenya and ZIMSEZA in Zimbabwe exhibit interest in promoting local sourcing. In Zimbabwe, we found that ZIMSEZA has a unique approach to promoting local sourcing. According to the Technical Head of ZIMSEZA:

ZIMSEZA has come up with a monitoring and evaluation framework where we have key performance indicators such as linkages with other local companies. In each industry, we sit down with each investor and then ask how they are going to contribute in terms of foreign direct investment and linkages with other local industries in the country. (Technical Head, ZIMSEZA, Zimbabwe)

In the case of Kenya, though the EPZA does promote local sourcing, it is unclear whether this is carried out from a sustainable development perspective.

The EPZ promotes backward linkages to enable enterprises to source raw materials locally in Kenya, especially for agro-processing such as macadamia, fresh produce like avocado, and flowers. The EPZ also supports the growing of such materials like cotton, which are used for production by the enterprises. (Assistant Manager, Planning, Monitoring and Evaluation, EPZA, Kenya).

Table 6: Decent work for employees

Indicator	Botswana				Kenya				Tanzania				Zimbabwe				Total																				
	Fares		Conwama		Manuf		NutPro		Pharma		Cotepp		Texti		Print			GarPro		AgroPro		FoodPro		Infradev													
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		Yes	No	Yes	No	Yes	No	Yes	No												
Medical service for employees	x	-	-	-	-	-	x	-	x	-	x	-	x	-	-	-	x	-	-	-	x	-	-	-	7												
Presence of first aid at work	x	-	-	-	-	-	x	-	x	-	x	-	x	-	-	-	x	-	-	-	x	-	x	-	8												
Availability of protective clothing	x	-	-	-	-	-	x	-	x	-	x	-	x	-	x	-	-	-	-	-	-	-	-	-	6												
Training on occupational safety and health	-	-	-	-	-	-	x	-	x	-	x	-	x	-	x	-	-	-	-	-	-	x	-	-	6												
Security checks	x	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	3												
Total	4				4				5				4				2				2				-				3				2				30

Source: authors' compilation based on field research.

Based on this, we argue that there is no clear-cut policy for featuring local content in the EPZs due to the zones' own promising incentive of allowing import-free duties for inputs. Despite the fact that no comprehensive local content scheme exists in the EPZs studied, we witnessed a mix of local and foreign sourcing of inputs among some firms. Out of the 12 firms in this study, six (50 per cent) source inputs only from the host economy. These firms are mainly agro-processing firms. We find a unique case of local sourcing whereby the firm combines internal and external sourcing within the host economy. The case of one EPZ firm in Zimbabwe reflects this:

In our company we have actually invested in the whole value chain as far as food processing is concerned. Knowing that we are an agro-based economy, we process mainly into maize products. We have invested into a milling plant for us to be in a position to supply ourselves in some of our production factories. We buy maize from the Grain Marketing Board, which means we are supporting local farmers as far as their production of maize is concerned. (FoodPro, Zimbabwe)

This case reveals that sustainable development rests in the sustained linkage between EPZ firms and the host economy. In other words, investment in the entire value chain is an approach to engaging the host economy on long-term basis rather than in a one-off transaction.

We also found that two firms (17 per cent) source inputs from the host economy as well as imports from abroad. The statement below by an EPZ firm in Kenya justifies local sourcing:

We do 60 per cent local sourcing of raw materials due to their local availability including canvas, sisal palm, and leather such as hides and skins. We have a long-term contract with producers hence assurance of market for their raw materials produced. (Texti, Kenya)

Seven firms (59 per cent) confirmed that they only import inputs for production. We see this trend mainly in non-agro-processing firms. GarPro, which produces garments under the EPZ scheme in Tanzania, stated unequivocally that all of its primary inputs for production are imported. Even in a situation where a non-agro-processing firm sourced from the host economy, this has been short lived. One firm, Cotepp—another garment-producing firm in Kenya—described the situation:

We used to source raw materials locally before all the processing companies for our products such as cotton, silk, and other products died. Now we import almost all the fabrics because they are not available locally. (Cotepp, Kenya)

While the situation may not be advantageous to the firm, the importation of inputs does not provide a sustainable link to the host economy. Such a situation leads EPZ critics to contend that they are enclaves with no prospect for local supplier development, which is a very useful approach to stimulating integrated industrial development in the host economy. We also find that though some firms import inputs from abroad, this is done to create the conditions to ultimately set local sourcing in motion. One firm in Botswana described this case:

The company is currently importing materials from China because it is in the process of acquiring equipment to process waste products and train staff on the requisite skills to do so. Once equipment is acquired and staff are trained, materials shall be sourced from local suppliers. (Conwama, Botswana)

What this case from Botswana suggests is that there is a local supply base that can feed Conwama, but that this is only possible when certain equipment is available. The case under study is a non-agro-

processing firm; it draws our attention to the fact that a local supply linkage can be created with certain non-agro-processing firms provided certain conditions are met.

With respect to local capacity-building, we see all firms providing opportunities for local employees. Most of the firms employ local workers and capacity-building manifests itself in managerial and technical training. In other words, the employees serve as the human and sustainable link to the host economy. Except for one EPZ firm which did not respond, all firms conduct knowledge transfer sessions to enhance the capabilities of the local workforce. One example from Zimbabwe is described below:

Most of the formulations we are using are coming from as far as Switzerland. We have our own food technologists who are tethering from the Swiss in terms of transfer of skills and technology. We are further making knowledge transfer from our food technologists to our plant operators. In relation to this, we have come up with a training centre for skills and technology transfer. (FoodPro, Zimbabwe)

Climate action

Under this goal, our concern is mainly with environmental activities that eventually have a devastating effect on the climate. In our findings, all four EPZ authorities demonstrate a measure of environmental inclusiveness in their zone programmes (see Table 7). The SEZAs in Botswana and Tanzania highlight the enforcement of environmental impact assessments before granting a firm the licence to operate within an EPZ. The interview with the respondent in Zimbabwe brought this out clearly:

We work closely with one of our agencies, which is responsible for environmental management. For any investor to be considered under the special economic zone they should have an environmental impact assessment certificate or a prospectus indicating mitigating measures that they have put in place. (Technical Head, ZIMZESA)

The EPZs in both Kenya and Tanzania place emphasis on emissions and waste disposal, as detailed in the interview with the representative of the EPZA in Kenya:

Our commercial and technical services directorate within EPZ in Kenya works to reduce environmental pollution through such initiatives as ensuring compliance with environmental regulations, tree planting to increase forest cover and vegetation. At designated waste dumpsites, waste is segregated, some recycled, and others destroyed. The authority also encourages use of green energy such as solar panels. (Assistant Manager, Planning, Monitoring and Evaluation, Department of Research Planning and Innovation EPZA, Kenya)

Only Kenya strongly promotes recycling and sustainable energy use. The description below confirms this:

[The] EPZ encourages use of natural light during the day and minimizes the use of unnecessary electricity during the night hence preventing wastage. The authority also encourages use of green energy such as solar panels. In terms of recycling, gaps exist although plastics are being recycled. There is a need to offer better technology at the dumpsite to promote recycling. (Assistant Manager, Planning, Monitoring and Evaluation, EPZA, Kenya)

At the firm level, eight firms (67 per cent) demonstrated the use of renewable energy as a way to reduce environmental emissions. Four of these firms are found in Kenya, two are in Botswana, and one each

is found in Tanzania and Zimbabwe. The case of Zimbabwe reflects an EPZ firm's effort to limit environmental pollution:

We do not have any equipment which is more than four years old. We are catering for and looking after the environment so we try as much as we can not to pollute like by avoiding coal-using machinery. We also have an electric boiler for our stock feed plants that does not really affect the environment. We are trying as much as we can to reduce and limit pollution as far as our processes are concerned. (FoodPro, Zimbabwe)

Seven firms (58 per cent) showed interest in controlling emissions that harm the environment. Five out of these firms are found in Kenya and Tanzania and one each is found in Botswana and Zimbabwe. The evidence shows that five firms (42 per cent) reduce waste in order not to harm the environment. Such waste is either segregated or made harmless through EPZ pre-installed treatment plants. One EPZ firm in Kenya elaborated on this as follows:

There are modern machines with improved technology. The EPZA has an effluent treatment plant that renders harmful wastes harmless before release. (Pharma, Kenya)

The case of Pharma reveals the effort of the EPZ in Kenya to control harmful emissions in the environment. At the same time, we witness the compliance on the part of the EPZ firm with due diligence in the disposal of unwanted waste.

Table 7: Contribution to climate action

Indicator	Botswana		Kenya				Tanzania				Zimbabwe				Total										
	Fares		Conwama		Manuf		NutPro		Pharma		Cotepp		Texti			Print		GarPro		AgroPro		FoodPro		Infradev	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Interest in controlling emissions	-	-	x	-	x	-	x	-	x	-	x	-	x	-	-	-	-	-	-	-	x	-	-	-	7
Effort to reduce waste	x	-	-	-	-	-	x	-	x	-	x	-	-	-	x	-	-	-	-	-	-	-	-	-	5
Using renewable energy	x	-	x	-	-	-	x	-	x	-	x	-	x	-	x	-	-	-	-	-	x	-	-	-	8
Recycling	-	-	x	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	2
Total	2		3		1		3		3		3		3		2					2				22	

Source: authors' compilation based on field research.

4.4 Firm performance in the SDG context

We find that there are many different views on firm performance in terms of profit, quality, and employee retention. Some firms have a positive outlook in terms of their performance and are therefore not affected by the incorporation of sustainable development into their operations. The cases of Infradev in Zimbabwe and Botswana reflect the point:

The company is in a profitable position with high return on investment. Quality of product and customer retention are also very high because of positive achievements. (Infradev, Zimbabwe)

No serious risks are associated with the manufacturing process. Good quality raw materials are used to ensure the product quality. (Manuf, Botswana)

Yet other firms lament that their businesses are affected by regulations related to the SDGs. The quote below provides evidence of this:

There are too many regulations that have cost attachments. They increase the cost of doing business that in turn reduces the profit margin due to high cost of doing business; they limit ability to scale up operations. (Cotepp, Kenya)

Nevertheless, many firms agree that without considering the SDGs, there are many uncertainties at stake with far-reaching repercussions for the host economy. One example is provided here:

Not caring for environmental, health and safety, labour issues, and the inability to create links with the local economy affect employees. Once employees are affected output will go down, quality will be affected, production will be victimized, the returns and the profit will be affected. (Print, Tanzania)

Though other firms also lament the change in their businesses, their responses indicated that the integration of the Sustainable Development Goals may require short-term adjustments, but that there are future prospects when strategically managed. The following example speaks to this:

Sometimes additional cost reduce our profit margin. For example additional cost of disposing harmful wastes attract additional charges. The company used to be affected at the initial stages by other additional charges but with expansion, it has been able to absorb such costs considered as liabilities to the company. I would say our return on investment is about 80 per cent. (Pharma, Kenya)

5 Conclusion and policy direction

This paper began with the objective of assessing the extent to which EPZs integrate SDGs in zone implementation and firm operations. We interviewed four EPZ authorities in four countries—namely Botswana, Kenya, Tanzania, and Zimbabwe. Twelve EPZ firms were also interviewed. These were found in the agro-processing, textiles and garments, construction, and real estate sectors. We found that each country has a competitive advantage in providing incentives to attract investment. The majority of the firms interviewed can be classified as small and medium-sized enterprises due to the relatively small firm size in terms of number of employees. However, two firms employing over 1,000 workers can be termed large firms operating under the EPZ scheme. The findings reveal a mix of both old and young firms operating under an SDG context. Generally speaking, there are more male workers in the EPZs than there are female workers. This proportion

in favour of men is found in Kenya and Zimbabwe, although the balance in Tanzania favours women. The EPZs in Kenya and Tanzania provide a comprehensive view on decent work. Eight firms indicated the availability of first aid as a proactive response to work-related emergencies. The findings also reveal that linkages between EPZ firms and the host economy focus on supply linkage and local employee capacity-building. The majority of the EPZ firms interviewed confirmed the use of renewable energy as an approach to mitigating climate change.

The findings show that to enhance sustainable development in EPZs, the sector in which a business activity takes place should be critically considered before allowing investment in the zone. This sector should also be considered in the context of the particular Sustainable Development Goal that is intended to be achieved. We find that to promote gender equality, EPZ policy should target firms in the agro-processing and textiles and garments sectors. Firms in these sectors have demonstrated a willingness to increase or maintain a high level of female employment. A push by policy should favour a gradual balancing of male and female employment in EPZs.

We find that promoting industrial linkages with suppliers requires attracting agro-processing firms into EPZs in Africa. Our findings show that it is mainly agro-processing firms that allow supply linkages with the host economy. In most cases, inputs for textiles and garments firms were completely sourced from outside the country. This was due to the absence of inputs in the host economy. To stimulate supply linkages with non-agro-processing sector firms, EPZs should come up with innovative policies that will indirectly stimulate local supply for EPZ firms. They could begin by engaging in public-private investment in desired sectors. By so doing, a sustainable link between the EPZ and the host economy could be forged.

Furthermore, we recommend that if the main aim of an EPZ is to create employment in a decent work context, a sector that employs on a massive scale should be considered. We find that the garment and textiles sector, on average, employs more workers than the other sectors considered in this research. Focusing on such a sector will highlight the employment-creating function of the EPZ. We also caution that employment should be based not on an arms-length approach but on developing a comprehensive local capacity plan to enable technology transfer to the host economy. This will break away from the neoclassical understanding of the EPZ as producing only short-term employment. Host country policies should identify sectors that deal with modern technology but in which it is made to function in a sustainable way to reduce waste or environmental pollution. Such use of technology will also open local employees to new trends in modern business and support them to adjust accordingly.

To achieve decent work and climate action, we recommend that host country policies make it imperative for all firms allowed into EPZs to integrate these SDGs, regardless of the sector. Host country policies that relax labour and environmental practices should give way to policies that promote sustainable businesses. EPZ authorities can find new ways to attract investment by leveraging their competitive advantage in other spheres, such as business facilitation or sustainable infrastructure provision. We argue that these actions may rather attract sustainable firms, which are also scanning for sustainable business opportunities in zones that promote sustainable development. For instance, a renewable-energy-backed processing firm looking to invest in an EPZ will find it attractive to apply to operate in a zone where renewable energy is the source of production.

We conclude that the findings of our research are thus far not generalizable due to the small number of interviews conducted on a qualitative basis. In this context, the interpretation arising from the findings should be treated with caution. Further research could increase the number of EPZ firms interviewed to increase the generalizability of the results.

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