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Special Economic Zones in Africa in the context of the Belt and Road Initiative: The Impacts of Eastern Industrial Zone in Ethiopia

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***Abstract**: The Belt and Road Initiative (BRI) is a historical initiative of China. It has played significant roles as the sole most crucial endeavor by the country on the international stage. The initiative aims to put the nations of Asia, Europe, Oceania, and Africa on a new trajectory of human development and higher growth through infrastructural connectivity, investment, and augmented trade. The authors have examined some of the flagship Special Economic Zones (SEZs) in Africa that are included in the initiative to analyze their impacts till now, giving particular emphasis to the Eastern Industrial Zone (EIZ) of Ethiopia. In this regard, the impacts of SEZs on employment creation, investment promotion, export growth, foreign exchange earnings, the contribution for urbanization, skill formation, knowledge and technology transfer, their backward linkages with local firms, and some other specific aspects of the projects were addressed. Besides, critical analysis is made concerning why SEZs in Africa underperform uniquely, and some of the fundamental challenges facing these SEZs are identified. Our findings have revealed that SEZs so far have shown mostly positive impacts and have been facing challenges. Therefore, to make these projects sustainable and successful, the Chinese and African governments need to undertake close follow-ups, work together towards solving concerns, and capitalize on the achievements.*

Keywords: Special Economic Zone or Industrial Parks, Africa, Ethiopia, BRI, Impacts, Eastern Industrial Zone

1. Introduction

The strategic vision for the Silk Road Economic Belt and the 21st Century Maritime Silk Road was introduced by President Xi Jinping in 2013 to guide China's international cooperation for years to come (Biswas, 2018; Campos, 2015; Demissie, 2018; Foo et al., 2019; Mitrovic, 2018; Syed & Ying, 2019). One Belt One Road (OBOR- *Yi Dai Yi Lu Chang Yi*, in the Chinese language) is commonly stated as the Belt and Road Initiative (BRI). Currently, BRI is a foreign policy catchword within China's academic, economic, diplomatic, financial, and development circles. It forms the centrepiece of China's leadership's new foreign policy. In this regard, China's engagement with her immediate neighbours in Asia, Africa, and Europe has centred on OBOR (Githaiga & Bing, 2019; Gholizadeh et al., 2020; Tambo et al., 2019; Xing, 2019). The initiative aims to put the nations of Asia, Oceania, Europe, and Africa on a new trajectory of human development and higher growth through infrastructural connectivity, investment, and augmented trade (Fallon, 2015; Gu et al., 2019; Sachdeva, 2018).

Several African countries have already begun to harness the BRI's concrete benefits (McKenzie, 2017; Senkpeni, 2017). In line with this, the former Ethiopian Prime Minister Haile Mariam Desalegn, hailed the project as 'the largest and non-conflicting economic cooperation of the 21st century' (Githaiga & Bing, 2019: 220). However, it is essential to note that there has been inadequate discussion and limited scholarly work on the significance and impact of BRI projects, including SEZs in Africa so far. As the debate on the effects of the BRI projects intensifies, this article looks at the SEZs operation in some African countries, including Ethiopia. The article mainly focuses on the Eastern Industrial Zone (EIZ), in addition to some African flagship SEZs.

While most articles focus on the Chinese and Western perceptions of BRI projects, the authors of this article aim to add a viewpoint from Ethiopia-centric assessment to the discussion using EIZ as a case study to analyze its economic impacts. In this regard, since EIZ's long-term implications for structural transformation at the national and industrial levels cannot be thoroughly assessed at such an early stage, a micro-level investigation at the worker and investor levels can generate insights regarding their performances and local impacts (Fei & Liao, 2019). This paper's main objective is to explore mainly the economic effects of SEZs/Industrial Parks (IPs) in Africa, mainly focusing on Ethiopia's EIZ. Besides, the review was guided by the following specific objectives.

(1) To explore the significant economic impacts of SEZs or IPs in Africa
(2) To identify why SEZs underperform in Africa and highlight criticisms against SEZs in Africa.

(3) To analyze the impacts of EIZ in Ethiopia and identify the main challenges the Zone has been facing.

2. Methodological and Theoretical Framework

The data for this article was acquired through an extensive review of relevant literature. Books and journal articles from the Huazhong University Library database and internet sources like Google scholar and Bing were used based on recency and appropriateness. Besides, some very critical unpublished reports were used with the utmost care. The authors synthesized and analyzed the acquired data thematically. Theoretically, this article is based on the heterodox approach. The Heterodox school of thought argues that local firms lack the marketing, technical, and managerial know-how and rarely access international distribution channels. In this situation, SEZs/IPs are government-sponsored initiatives to fill these gaps for the domestic firms. By providing enabling investment situation in terms of efficient infrastructure, simple regulatory system, good governance, availability of skilled labour, finance, strategic locations, and tax incentives, SEZs are influential in attracting FDI. According to the school, foreign companies' localization also produces significant spillovers, including labour and management on-the-job training, knowledge sharing, skill upgrading, technology transfer, human capital formation, investment promotion, export growth, and foreign exchange earnings in host countries (Chang, 2006; Sosnovskikh, 2017). SEZs can thus provide superior room for multidimensional improvement, learning, and transformation in host economies (Milberg, 2007).

3. Special Economic Zones in Africa in the Context of the BRI

The extraordinary growth of China–Africa cooperation, under the BRI, has expanded from traditional economic interactions to inter-regional sharing of industrial strategies and development experiences (Alden & Large, 2015; Fourie, 2015; Yeh & Wharton, 2016). One such areas of engagement is Economic Zones (EZs). In fact, EZs have been crucial for China's economic take-off and urban development since its national reform in 1978. They facilitated the "bringing in" of technology and know-how from developed countries and augmented China's transition to a manufacturing powerhouse (Ven Seyhah, 2018). Chinese EZs as architects of job creation, urban growth, political and economic transformation has created much hope among African leaders who believe EZs can enhance export-oriented production and foster national industrialization in their countries (UNDP & IPRCC, 2015). In this regard, the emphasis has been attached to SEZs' building-up in African countries, following BRI's promises (Demissie, 2018).

SEZs comprise various benefits such as alleviate large-scale unemployment, support broader economic reform strategies, promote and diversify exports, and attract Foreign Direct Investment (FDI). Besides, they boost manufacturing production and manufactured exports, allow governments to test out new policies and approaches, contribute to much-needed industrial and socio-economic development (Farole, 2011; FIAS, 2008). However, an increasing number of countries have started to encourage industrialization and economic restructuring through SEZs/IPs only since the 1960s (Zhang et al., 2018). In line with this, most African countries are comparatively latecomers to promote IPs or SEZs (Elhiraika & Mbate, 2014). As a result, except for limited countries such as Liberia, Djibouti, Senegal, Mauritius, and Togo that had launched their SEZ programmes in the early 1970s and 1980s, many national SEZ programmes in Africa began only in the late 1990s or early 2000s (Farole, 2010). In line with this, the launch of FOCAC in 2000 in Beijing marked a new era for China's relationship with Africa and paved the way for expanding SEZs in the continent (Hanauer & Morris, 2014). In 2000's FOCAC meeting, *the Programme for China-Africa Cooperation in Economic and Social Development* was launched. In this meeting, China agreed with African countries to share its investment promotion experience relating to the establishment and management of SEZs/IPs.

During the third FOCAC Summit in 2006, the Chinese government identified SEZ projects in 19 countries – including seven in Africa (Algeria, Egypt, Ethiopia, Mauritius, Nigeria (two), and Zambia) that would be formally supported by the Ministry of Commerce of China (MOFCOM) (Nicolas, 2017). While the existing zones continue to grow, several new Chinese-invested zones have been set up in Uganda, Nigeria, Mozambique, and Ethiopia outside of MOFCOM programme. Beijing and the several host African governments have promoted the SEZ model as the basis for future extended collabouration between China and the continent. Besides, the development of large infrastructure projects, the development of SEZs, and port-adjacent industrial production hubs are regarded, by Chinese protagonists, as a crucial prerequisite for the successful incorporation of Africa into the BRI (Ehizuelen & Abdi, 2018; Wenping, 2015). To this effect, in December 2015, China hosted a major conference entitled "*Industrial Parks and Globalization: Experience Sharing Between China and Africa*," which sought to discuss past experiences and best practices. The achievements or otherwise of existing Chinese SEZs in Africa and the processes created by the various projects are critical for discussions around African development and the role that China may or may not play (Giannecchini &Taylor, 2018; NDRC, 2015).

African countries have established the IPs mostly as a response to the US-Africa Growth and Opportunities Act (AGOA), the Belt and Road Initiative, and the Multi-Fiber Arrangement (MFA), or to replicate the economic success of SEZs in East Asia, among other things. In line with this, the first Chinese SEZs in Africa were seven in number. These are Chambishi and Lusaka zones in Zambia, Lekki free trade zone in Nigeria, Jinfei economic and trade cooperation zone in Mauritius, Ogun state economic and free trade zone in Nigeria, Tianjin TEDA Suez economic and trade zone in Egypt, Eastern industrial zone in Ethiopia, and Algeria-China Jiangling free trade zone. Except for the Algeria zone, the rest are in operation. However, due to some conflicts between the developers and the Algerian government, the SEZ in Algeria failed (Antonio & Ma, 2015; Nicolas, 2017). Nowadays, these and oher parks are being considered as a policy tool to create employment opportunities, attract FDI, to upgrade skills, transfer technology and knowledge (Asfaw & Lemi, 2019; Farole, 2011; FIAS, 2008; Newman & Page, 2017).

4. Impacts of Special Economic Zones in Africa

According to X. Tang (2015), the existing Chinese zones in Africa have so far demonstrated some promising effects on Africa's economic transformation. For instance, the firms in two Nigerian zones mainly produce consumer goods and construction materials, and the zone in Chambishi, Zambia, has developed a group of mineral processing plants. The Egyptian zone also produces machinery, and most of the manufacturing investors in the zones are from China. These Chinese zones target manufacturing enterprises as their priority because Africa's market and clients offer immense opportunities for Chinese manufacturers. Besides, China's increasing labour costs are pushing companies to seek alternative production bases. As the Chinese zones in Africa grow, they may bring a significant amount of FDI in the manufacturing sector with managerial know-how and accelerate Africa's industrialization.

Many researchers have argued that IPs or SEZs have one of the highest potentials for job creation. For instance, Jenkins (2005), Frick et al. (2019), & Narula & Zhan (2019) have strongly argued that SEZs have succeeded in driving employment in several countries. They have also served as pressure valves to increase employment or create a job (Abeywardene et al., 1994; Cortés 2014). According to Olugboyega et al. (2010), several benefits accrue from FDI, including employment creation. For instance, by the end of 2015, the Ogun-Guangdong FTZ in Nigeria had attracted 32 investors, mainly from China, India, and Lebanon, with nearly US$300 million investment and generating 4,100 jobs of whom 4000 were locals. In early 2016, the zone had also signed an agreement of US$154 million with the Xi'an Municipal Government of China to build a high-tech park within the zone. By November 2015, the Lekki FTZ in Nigeria had attracted US$124 million investment and 43 investors (Zeng, 2016). The Chinese zones in Africa have also played a significant role in sharing Chinese practices and zone development experiences. Through training, seminars, and study tours, often facilitated by the Chinese government and international donors, such as the World Bank, the host government officials, and zone managers shared and learned a lot about East Asia's or China's experiences and lessons. Such learning and knowledge sharing helped many host governments in Africa to understand the concept and operation mechanisms of IZs (Kim, 2013). This has also helped these governments test specific new policies to build a more pro-business environment, such as opening-up to FDI, setting up one stop shop, and improving trade logistics. As a result, African governments extend the experiences shared from the Chinese zones to the broader economies (Gebreselassie, 2015). Moreover, the Chinese zones have contributed to Africa's urbanization. For instance, according to X. Tang (2015), a Chinese manager in the Egypt-TEDA zone said, 'The cooperation zone's ultimate goal is urbanization'. This is because Chinese developers develop industrial facilities and build commercial and living areas in proximity to enable synergic growth.

5. Why Special Economic Zones Underperform in Africa?

The success of SEZs in China provides evidence that enclaves can contribute to a country's overall economic, political, and social transformation, which then justifies SEZs' official promotion in Africa (Fei, 2017). However, SEZs in China were developed under a specific historical and socio-political context, and their success is capitalized on a unique set of geographical, historical, political, economic, cultural, and ethnic factors, which are different from those in current African countries. Even more critically, one also needs to be aware that the global economic context is different from that when China opted for SEZs, at a time when there were more chances to seek FDI and a place in a potentially broader market (Zarenda, 2012). Besides, the SEZs in China were not free from challenges or concerns (Cartier, 2001). In this regard, scholars have revealed widespread issues with respect to land disputes, environmental degradation, and social inequality (Wong & Tang, 2005). Howver, the African practice with SEZs over the past two decades has been less remarkable. Except Mauritius and the partial initial success of Kenya, Madagascar, and Lesotho, most of the earlier African zones unable to attract significant investment, create sustainable employment and promote exports (Farole, 2011). In Africa, many countries have not managed to use SEZs to back a successful structural transformation process. Even where SEZs have had some earlier success, the quality of investment and employment has often been low, adversely affecting their sustainability (Staritz & Morris, 2013). Moreover, many African SEZ programmes have suffered from both imperfect information and distorted incentives (Farole & Moberg, 2017).

Besides, one of the indicators of SEZs Africa's poor performance is that the number of firms per zone is deficient compared to Asia and Latin America (Cissé, 2012; Narrainen & Charitar, 2009). Moreover, among the main factors that have been contributing to unsuccessful zones in Africa is the inability to establish a conducive environment inside the zones. In this regard, according to anecdotal information, African zones are plagued with the same problems – unstable electricity, lack of water, incompetent bureaucracy, inefficient and corrupt customs – that hinder investment in the broader economy (Farole, 2010). PoulosNicolas & Malhotra (2014) argues that the remoteness of many zones, and their low attraction, compounded by poor marketing and management, can inhibit the success of SEZs. In line with this, according to Watson (2001), in many countries in Africa – including Nigeria, Malawi, Senegal, Namibia, and Mali – zones appear to be struggling for a variety of reasons, including poor locational choices. There are also national policy instability problems, lack of effective strategic planning and management, and weak governance. Furthermore, according to Farole (2011), one reason for African SEZs' underperformance may be poor timing. This is because East Asia's success was driven in part by an extraordinary era of globalization and supported by the emergence of global manufacturing production networks. On the other hand, most African zones were established during and after Asia's rise as a manufacturing giant and the subsequent structural shift in trade and FDI patterns. Consequently, SEZs in Africa faced a more established global competition (Farole, 2010; Nel & Rogerson, 2013).

One of the determinant factors for the underperformance of SEZs/IPs in Africa is the lack of African governments' ownership in the Chinese zones. According to Bräutigam & Tang (2011), there are minimal linkages between zone developers and local suppliers, and limited local participation in zone design and operation (Dannenberg et al., 2013; UNDP & IPRCC, 2015). This has also led some African governments to consider the zones only as Chinese projects. Due to the reasons discussed above, most African SEZs could not bring the changes expected to the continent. As a result, they were criticized by different commentators. One of these criticisms is that they make limited developmental contributions to Africa's local society (Sargent & Matthews, 2001; Schrank, 2001). Besides, while IPs/SEZs can promote investment, create jobs, and catalyze regional development, they can also be associated with labour abuse, limited local upskilling, low levels of investment, and excessive establishment costs (Palit, 2009). In this regard, the violation of minimum wage legislation and the poor working conditions in many SEZs in Africa have generated anger among local people. This, in turn, might adversely affect the SEZs to promote its credibility (Kim, 2013). In line with this, SEZs in Africa have been blamed for a low wage, inadequate safety measures, labour treatment concerns, and the frequent generation of fewer than expected spillovers including limited skill and technology transfer (Herbertson, 2011; Nel & Rogerson, 2013).

6. Belt and Road Initiative in Ethiopia: The Impacts of Eastern Industrial Zone (EIZ)

Economic zone-based cooperation between China and Ethiopia emerges in the context of intensified bilateral cooperation in diverse areas (Brautigam et al., 2016; Fei et al., 2018; Xu et al., 2016). Being a resource-poor country hosting a vast Chinese investment, Ethiopia has become a prime example in official speeches to showcase China's genuine intentions in Africa (Xinhua, 2015). The country's pursuit of state-led growth under the paradigm of the 'East Asian developmental state' (Oqubay, 2015) further legitimizes the transfer of industrial strategies from China – especially the Chinese SEZs. It was under Meles Zenawi (former Ethiopian prime minister) that the particulars of the economic zones mainly EIZ were agreed upon and Ethiopia embarked upon a remarkable capital spending programme on large investments in infrastructure projects (Abbink, 2015; Chrysanthos, 2019). Among these, the railways, roads, and dam projects have all been the major ones, including the industrial parks (Rahmato et al., 2014) cited in (Giannecchini & Taylor, 2018). Initially, the government has introduced the "developmental state" language as its policy principle regarding the state-business relationship being inspired by the East Asian experience (Gebreeyesus, 2013: 2; Fourie, 2015).

The privately-run EIZ in landlocked Ethiopia is located 35km southeast of Addis Ababa, Oromia Regional State. It is one of the first six Chinese SEZs established in Africa under the FOCAC framework (Aynalem, 2019; Zhang et al., 2018). The EIZ project was initially planned in 2007 but was halted in 2008 due to the global financial crisis and unexpected institutional and logistical difficulties in Ethiopia. As a result, it was launched in 2009 (Bräutigam & Tang, 2014). The original plan was to establish a $5km^2$ zone operated by the Qiyuan Group and Yonggang Group (Bräutigam & Tang, 2011). However, the Yonggang Group soon left the project, and the zone currently consists of $2km^2$, a downsizing of over 50per cent. Like most other Chinese SEZs in Africa, the Ethiopian zone is 100per cent Chinese-owned, developed, and operated by the Qiyuan Group. The Ethiopian government has provided land at a very low cost rate and has also agreed to offer all the necessary infrastructure outside the zone and to cover 30per cent of the internal infrastructure cost. This is a remarkable commitment from Ethiopia and hints at Ethiopia's focus to promote industrialization (Giannecchini & Taylor, 2018; UNDP & IPRCC, 2015). Currently, EIZ is one of the BRI projects in the country.

Unlike some other African countries, Ethiopia has a few prior industrial zone experiences (Rohne, 2013). Given this insufficient knowledge and experience regarding industrial zones and limited institutions and policies to support their operation, the EIZ initially was treated as a normal industrial estate in Ethiopia. There was no 'national strategy to replicate some of the Chinese special zone dynamism' (Bräutigam & Tang, 2011:38). Consequently, there was a running sense of reservation and pessimism towards the future of the EIZ among the first batch of investors. There was also several financial, bureaucratic, and logistical challenges, among other things, they experienced during relocation, including the difficulty of obtaining Chinese government subsidies and the overall shortage of foreign currency in Ethiopia (Gebeyehu, 2017; Gizaw, 2015; UNDP & IPRCC, 2015). This was primarily because of the reason that the EIZ was the first industrial zone for the country and the private sector.

However, later on through EIZ, the Ethiopian government started learning about the concept of industrial zones and ways to make them function smoothly (Fei & Liao, 2019). Therefore, the EIZ has been serving as a basis for the Government to build multiple IPs throughout the country (Gebremariam & Feyisa, 2019; World Bank, 2015). Besides, the initial development of the EIZ made the Ethiopian government aware of the necessary institutional contexts, legal frameworks, and policy incentives for EZs to foster domestic industrialization. Although the specifics of knowledge transfer from the EIZ to the Ethiopian government are unknown, various studies suggest that Qiyuan played a proactive role in this process (K. Tang, 2019; X. Tang, 2019). Moreover, Chinese governments at different administrative levels have become more involved in promoting EZs in Ethiopia. The Ministry of Commerce organised multiple training trips for Ethiopian government officials to learn about China's experiences with EZs. Jiangsu and Suzhou governments incentivized their local businesses to invest in the EIZ through tax reduction, insurance credits and cost compensation (Fei & Liao, 2019).

The initial problems and gaps EIZ has been facing changed tremendously in the following years after the Ethiopian government strengthened its measures to improve the institutional support for industrial zone development and regulation. IPs were also identified in national development plans and legal documents as a crucial strategy for promoting an agriculture-based, manufacturing-driven, and export-oriented industrialization. In particular, the 2012 Investment Proclamation (No. 769/2012) specified the agenda of using IPs as platforms for manufacturing-based value creation activities (FDRE, 2012; FDRE, 2014a). In addition, a special state commission – the Industrial Parks Development Corporation (IPDC) – was established to manage the development of state-owned IPs across the country, and to supervise the lease, transfer, and sale of lands to developers (Azmach, 2019; IPDC, 2016). The formation of the IPDC in 2014 signaled somewhat of a change in direction (Giannecchini & Taylor, 2018). The IP Proclamation (IPP) was subsequently enacted in 2015, explicating the rights and obligations of IPs or economic zone developers, operators, enterprises, and residents (FDRE, 2015).

7. Impacts of the Eastern Industrial Zone

Rresearch shows that SEZs/IPs play a significant role in the overall socio-economic change and development of a country. They have also direct benefits and a pervasive effect on other elements in an economy, such as increasing competitiveness and attraction of resources for local investment (Anh et al., 2019; Yu et al., 2020). According to Farole (2011), Warr & Menon (2015), IPs/SEZs can be instrumental in the socio-economic development of a country. In this regrad, the creation of IPs has undoubtedly helped put Ethiopia on the radar of foreign companies, and FDI inflows have been on the rise ever since (Zhang et al., 2018). In line with this, since its inception, as Ethiopia's first industrial zone, EIZ has been showcasing the positive effects of Chinese industrial development and has become a place for manufacturing excellence and a stage for developing or upgrading and transferring skills. The Ethiopia government also praises EIZ for motivating the country's journey to industrialization and as an institution where thousands of Ethiopians have been employed and gained skills (Aynalem, 2019; Ning, 2017). The zone's contribution to Ethiopia's structural transformation is vital if the EIZ is to have a demonstrable impact on sustainable development in Ethiopia (Sindzingre, 2013).

7.1 Employment Creation

According to Sharma (2009) & Devi (2016), IPs are an engine of growth and play an important role in employment generation. The development of IPs or SEZs in a given country is mainly related to creating employment opportunities. In other words, the primary goal of industrial park establishment is employment generation. In most developing countries, including Ethiopia, SEZs are recognized as a potential sector to minimize unemployment problems. Besides, industrial parks in a given locality have multiplier effects because those employed people in SEZs/IPs earn an income and spend it within the locality. This either directly or indirectly benefits other business entities resides in the locality (Gebeyehu, 2017). In line with this, according to Gebremariam & Feyisa (2019), one of the very aims of developing SEZs/IPs in Ethiopia is creating jobs. That's why the Government has prioritized manufacturing sectors that are labour-intensive. In this regard, the existing studies on the EIZ have acknowledged its contribution to local employment generation (Bräutigam & Tang, 2011; Gizaw, 2015; Rohne, 2013). For instance, as of March 2017, about 8,000 permanent job opportunities were created. From these, 7,357 were local employees, and 685 were foreign employees. However, as of March 2019, EIZ generated more than 13,000 employment (Cepheus, 2019). In addition to the permanent employment opportunities, 700 to 1000, additional jobs have been available as temporary or daily labour arrangements. The income the workers get in a month in EIZ ranges between 1,150-25,000 birr. Even some of the employees have noticed positive changes in their living standards. The Zone has a great potential of creating 100,000 jobs when operating at its fullest capacity (Gebeyehu, 2017). The jobs created in EIZ are not only for those who have taken formal training in centres like TVETs or higher education institutions of the country but also for those who have no adequate academic qualifications and displaced farmers from their lands for the development of this zone (Gebremariam & Feyisa, 2019).

7.2 Investment Promotion, Export Growth, and Foreign Exchange Earnings

Following the development of IPs in Ethiopia, many well-known international companies are making the country their investment destination (Mulu & Daba, 2017), and currently, the Ethiopia has become the biggest economy in the East African region (Gebremariam & Feyisa, 2019). According to the UNCTAD Investment Report of 2017, FDI in Ethiopia is rising dramatically at about 50per cent per annum, i.e., 1.2 billion in 2014, $2.2 billion in 2015 (UNCTAD, 2016), and $3.2 billion in 2016 (UNCTAD, 2017). According to EIC, China is the largest source of wholly-owned and joint venture FDI in Ethiopia (Addis & Zuping, 2019; Gebreselassie, 2015). In line with this, as of June 2018, the total capital invested in 141 IPs tenants currently operational in Ethiopia was around Birr 15bn. From this amount, about 5,591bn was invested by EIZ, which presently has 91 tenants. Given this cumulative sum of all industrial parks invested over three years, the indicated average annual inflows were Birr 5bn ($ 180mn) per year, corresponding to five per cent of annual FDI inflows in recent years (Cepheus, 2019).

According to Zeng (2015) & Aynalem (2019), one of the potentials and direct benefits of IPs/SEZs is government revenue. For instance, in 2016, a total amount of 21,790,382.64 USD has been earned from the export market. This was only by the three companies in EIZ, such as Huajian International shoe city (Ethiopia) PLC, Linde (Ethiopia) Garment PLC, and Dongfang Spinning Printing and Dyeing PLC. The EIZ also generated about 14,807,387 USD which is about 20per cent share of the export made by the operational IPs for the export value of the fiscal year 2017-2018. Besides, the Zone has generated about 22,195,422 USD which is about 22per cent of the total share of the export value for the fiscal year 2018/19 (Cepheus, 2019). On the other hand, there are critics of IPs who argue that industrial parks cause government revenue losses through incentives (Wang, 2013; Zhang et al., 2018).

7.3 Skill Formation, Knowledge and Technology Transfer

Governments worldwide, specifically in developing countries, are keen to establish IPs/SEZ programmes to benefit from skills and technology transfer and generate employment (Farole & Akinci, 2011). Basically, FDI brings with it technology transfer, managerial, and other skills access to markets, and trainings for staff (Aggarwal, 2007; Cheesman, 2012; FIAS, 2008; Warr & Menon, 2015; Yu et al., 2020) since these factories are established by investors who have a different educational, occupational, and cultural background. They also will have a significant role in broadening opportunities for the transfer of knowledge. On the other hand, knowledge transfer makes individual workers able to do their job effectively within the factories and outside in the future. Moreover, the employed people in IPs may accrue and start their own business by upgrading them from the factories and employing extra labour forces. The cumulative impact of this ultimately widens the locality's economic base, which is one of the principal objectives of local economic development (Gebeyehu, 2017). In this regard, countries like Ethiopia, where the technology of factory production is underdeveloped, it is a good opportunity to learn different countries skills and experiences from the working environment of SEZs/IPs. Specific training and education programmes in IPs/SEZ are also essential to upgrade the local workforce's skills (Naeem, Waheed & Khan, 2020).

Zhang et al. (2018) revealed that most of the surveyed Chinese firms in the EIZ had provided formal training programmes in Ethiopia. Similarly, according to Fei & Liao (2019), within the EIZ, certain job categories, such as machine operators receive more training than manual workers do. In this regard, on-the-job training has been the most common method to improve labour skills in the EIZ. Due to the limited number of Chinese expatriates, many factories in the zone follow a 'trickle-down' scheme, in which Chinese technicians train a small group of local foremen and have them teach other local workers. Beisdes, enterprises with greater financial capacity send a selected group of local technicians to China for additional learning, with the expectation of developing a class of local managerial staff. However, it is very difficult to generalize that the transfer of skills and technologies to local companies and citizens is successful (Chakrabarty, 2016; Gebremariam & Feyisa, 2019).

8. Challenges Eastern Industrial Zone Faced

Gebremariam & Feyisa (2019) argue that one of the utmost challenges that make investors ineffective and inefficient is lack of a skilled and trained workforce. Similarly, Hilton (2019), World Bank (2015) & Wallis (2013) cited in (Bräutigam & Tang, 2014) underlined that as low-income countries like Ethiopia go through the initial stages of industrialization, a lack of access to skilled labour is often the primary constraint to output growth and competitiveness. In line with this, IPs in Ethiopia, including EIZ, have suffered from a lack of capable and experienced human power, low institutional, regulatory, and administrative capacity to develop and manage the parks. In addition, poor local development in the areas where the IPs are established and the absence of business linkages in domestic and international markets are the challenges to the overall development of the IPs in Ethiopia. According to Gebeyehu (2017), Gizaw (2015), & Zhang et al. (2018), specifically, EIZ has encountered several challenges since its inception, which have had a significant impact on its development. Initially, infrastructure financing has been the main challenge for the zone's developer, especially given the developer's responsibility to finance infrastructure leading to and within the zone. Besides, both the developer and zone enterprises have experienced difficulties finding local suppliers. Moreover, Mains (2012) strongly argues that electricity and water shortages are endemic to Ethiopia and at times, these have even impeded the smooth development of EIZ and has led to a wholesale termination of construction efforts. As to Fei (2018), in Ethiopia, inadequate payment to the workers is one of the top challenges across IPs, including EIZ. For instance, according to Giannecchini & Taylor (2018), the average monthly salary paid for a worker in EIZ by Huajian is about 300 yuan ($50) while it is 3000 yuan at its headquarters in Guangdong province.

9. Conclusions

BRI is a vast and complex project which has aimed at enhancing infrastructural connectivity and global cooperation. It provides new opportunities to Africa, contributing to SEZs/IPs' development and consolidating economic and trade cooperation between China and Africa. However, there has been few discussions in African countries regarding the BRI, SEZs, and their possible future impact on the countries in the continent. IPs/SEZs have many benefits such as they alleviate large-scale unemployment, promote and diversify exports, contribute for knowledge and skill transfer, and attract FDI. They also increase manufacturing production, allow governments to test out new policies and approaches, and contribute to the over all socio-economic development. In line with this, EIZ in Ethiopia has helped the Ethiopian government to learn the concepts of EZs and improve the national institutions and policy environments to facilitate the growth of EZs across the country. EIZ also has great potential to contribute to the socio-economic development of Ethiopia. Hence, enhancing the efficiency of EIZ would positively contribute to the country's development and transformation plan. However, there are various challenges the Zone has been facing. Therefore, the government should address the fundamental and critical challenges that investors and employees face inside the EIZ. Besides, the plans and programmes of EIZ has to be carefully implemented and adequately synergized into a country's specific socio-economic situations. Moreover, the investors in EIZ have to give special attention to realize the spillover effects of the host government. Finally, the Ethiopian and other African governments should continuously evaluate their Zones and work together to ensure good quality and hasten technology transfer and local professionals' employment.

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