China's Economic and Trade Cooperation Zones in Africa: From Static Model Emulation to Dynamic Learning

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Abstract

This article explores the intricacies of replicating China's structural economic transformation through Special Economic Zones (SEZs) in Africa, with a focus on the East Industry Zone (EIZ) in Ethiopia. Combining insights from empirical research and the literature on China's development model, African SEZs, and Chinese Economic and Cooperation Trade Zones (ETCZs) in Africa, we contend that while static industrialisation policies can be transposed more readily, the dynamic aspects that underpin China's model face challenges due to differences in institutional capacity and contextual synergies (internal and external). This hampers the efficacy of ETCZs in steering structural economic transformation. The article advocates for a more creative adaptation process, urging dynamic learning and leadership level innovation to address institutional and structural weaknesses while reducing vulnerability to externalities.

Key Words: China-Africa – Economic Zones – Chinese Model emulation– Industrialisation challenges – Policy adaptation – African economic transformation – EIZ-Ethiopia

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1. Introduction

Over the past two decades, concepts like the 'Beijing Consensus' and the 'Chinese Dream', have sparked discussions in academic and policy circles regarding the applicability of the Chinese development model to other developing settings. Ironically, Chinese officials have, on various occasions, issued explicit warnings to African audiences against adopting their approach. For example, when Ghana's leader inquired about following the Chinese model, Deng Xiaoping reportedly cautioned against it:

> Please don't copy our model. If there is any experience on our part, it is to formulate policies in light of one's own national conditions. (Zhang, 2006)

During the Forum on China Africa Cooperation (FOCAC) IV in November 2009, Premier Wen Jiabao asserted that both the 'Beijing Consensus' and the 'Washington Consensus' were inadequate for addressing the specific challenges faced by Africans. He recommended the pursuit of a distinctive 'African' model of development instead (Zhao, 2017, p. 4).

Notwithstanding, Beijing actively cultivates interest from developing countries in China's development experience, recognizing it as a significant source of soft power in the Global South (Åberg & Becker, 2020). A notable example of this is the establishment of the Institute of New Structural Economics at Beijing University in 2015. According to the institute's website (2023), its mission is to extract lessons from China's development experience and contribute to discussions and policy dissemination across the Global South. Concurrently, prominent Chinese scholars have endorsed the relevance of China's development experience as an industrial policy blueprint for guiding other developing nations (Lin & Treichel, 2012; Lin & Wang, 2015).

In Africa, China's development blueprint is increasingly attractive to ruling elites seeking to emulate its rapid industrialisation and modernisation (Brautigaum, 2008). Over the past decade, senior African politicians, including from South Africa (Van Staden, 2022) and Nigeria (Xinhua, 2023), have shown interest in learning from China's model. The appeal extends to African society, as evidenced by the 2021 Afrobarometer survey (Sanny & Selormey, 2021), where China's model ranked as the

second most preferred (after the US[2]), surpassing former colonial powers, other African countries (e.g. South Africa), or pursuing independent paths.

According to Fourie (2015) this appeal is rooted in ruling elites' perceptions of the model's suitability to their own domestic contexts (p.295), relying on heuristics shortcuts based on historical affinities and modes of economic and political organisation (p.299). In addition, the deepening North-South divide in the past two decades enhanced the appeal of the Chinese model as a Global South alternative to the western development path. Consequently, Beijing's blueprint naturally resonates with most African states given the apparent affinities with China, whether geopolitical, ideational, historical, political, sociological, or economic.

Understanding the above synergies is crucial for unravelling African motivations and agency in emulating China's development trajectory. Yet, the challenges in replicating policies on the continent extend beyond inherent misconceptions. Zhao (2017, p. 3) contends that downsides like environmental costs, corruption, and a growing inequality gap question China's suitability as an emulation model. Naughton (2010) argues that China's unique government-market nexus and massive domestic market make replication challenging. Babones (2020) notes the model prescriptive vagueness. In African contexts, challenges include weak institutional capacity (Babones, 2020; Ganda, 2020) and hurdles in adjusting policies to diverse contexts (Kinyondo, 2020) marked by governance issues, fragmented land ownership, security concerns, ethnic divisions, high debt burdens, and poor infrastructure. These factors complicate replicating China's top-down development approach. Additionally, political manipulation by African elites to serve short-term domestic and foreign policy agendas, at the expense of long-term economic transformation, appears to further undermine successful policy emulation (Ganda, 2020; Hodzi, 2020; Hodzi & Åberg, 2020).

In this study, we focus on a specific policy tool of China's development model, highly sought after by African ruling elites: special economic zones (SEZs). This interest stems from the stark difference between Beijing's adept use of SEZs as a catalyst in its industrialisation trajectory and integration into global value chains, and Africa's limited success with SEZ experiments in both respects. The significant knowledge gap, therefore, presents a crucial learning opportunity for Africa.

[2] The enduring preference for the American model in public perception is attributed to associating China's blueprint with a less democratic option.

The establishment of the first Chinese-sponsored economic and trade cooperation zones (ETCZs) in Africa in 2006–7 sparked a substantial literature dissecting their dynamics, challenges, and developmental impacts. Many of these studies have focused on the Eastern Industrial Zone (EIZ) in Ethiopia, as it depicts a relatively successful adaptation of elements of the Chinese model (Lin & Wang, 2020; Ziso, 2020). Despite substantive empirical research on African ETCZs, the discussion remains fragmented, with knowledge scattered in the literature. Additionally, empirical scholarship on Chinese-led economic zones in Africa (with rare exceptions; see Tang, 2020) has largely evolved divorced from theoretical academic debates on the Chinese model specificities and its applicability to other developing contexts. It has also operated separately from the broader literature on SEZs and their challenges in Africa.

This paper aims to connect these three parallel streams of literature, driven by a twofold rationale. Firstly, we contend that dynamic features intrinsic to the Chinese model, crucial for comprehending challenges faced by ETCZs in Africa, are largely overlooked in the existing literature. Secondly, we argue that a comprehensive understanding of these challenges also requires an examination of the dynamics and constraints specific to African SEZs. Policies do not exist in a vacuum, and their success is in a great deal intertwined with the political and institutional synergies in which they emerge and evolve.

Our aims are, therefore, to consolidate scattered knowledge in the literature on the current achievements and hurdles of ETCZs and to provide a systematic understanding of the challenges in emulating the structural transformation Chinese SEZs in Africa. Considering this, we seek to answer the following research question: what factors impede African-based ETCZs from replicating the structural transformation achieved by Chinese SEZs? Our goal is to propel academic scholarship on Chinese SEZs in Africa beyond the empirical analyses, and simultaneously provide policymakers with a more focused perspective on potential pathways forward.

Based on our analysis, we contend that while the static industrialisation policies spearheaded by domestic Chinese SEZs may be applicable and easier to transfer to African contexts, the dynamic elements that form the foundation for creative and progressive policy adjustments in China's industrialisation model are more challenging to replicate. This difficulty largely stems from differences in institutional capacity and contextual synergies (both internal and external) between China and the studied African contexts. This reality elucidates the challenges faced by ETCZs in transitioning from static outcomes (such as job creation, increased investment and export volumes)

to more dynamic ones (substantial spillovers into the host economy), essential for structural economic transformation.

The study findings are derived from a survey of the literatures on China's development model, African SEZs, and Chinese ETCZs in Africa, particularly focusing on the EIZ in Ethiopia. The EIZ is chosen for it is often hailed by Chinese authorities as an example of successful implementation of Chinese industrial policies in the African context. Moreover, being the most extensively researched ETCZ in Africa provides a reliable and unique insight into the challenges shared by other zones. The case study relies mainly on secondary sources, including academic publications and grey literature, supplemented by primary data collected in Ethiopia in 2012 and 2018.[3] In 2012, informal conversations and formal interviews occurred during the Second Meeting of the China-Africa Think Tanks Forum (CATTF) in Bishoftu, Ethiopia.[4] In 2018, empirical research involved multiple visits to the EIZ between April 20 and May 16, conducting 10 semi-structured interviews with Ethiopian government officials, Chinese managers, local workers at Huajian manufacturing plant in the EIZ, and local businesspeople. The list of interviewees remains undisclosed for anonymity reasons. Fieldwork included passive observation of factory operations, management dynamics, and spatial observation within the EIZ and its surroundings, focusing on value chains and infrastructural linkages to the broader economy. Drawing on our own empirical research conducted in Ethiopia in October 2012 and April–May 2018 enabled us to reflect on aspirational dimensions at the start of the EIZ and its subsequent performance. While acknowledging limitations in the depth and breadth of our primary data, its main purpose is to verify and supplement existing literature findings rather than offer an entirely new empirical contribution, given that this subject has been extensively covered by predominantly empirical scholarship.

The article begins by summarising the idiosyncrasies of China's development model and the challenges in applying it to other developing contexts, particularly in Africa. The subsequent section places Chinese ETCZs in the broader African SEZ experiment context for perspective. Following that, an assessment of the performance of Chinese ETCZs in Africa over the past two decades is presented. The article then delves into a specific case study, the EIZ in Ethiopia, offering

[3] We thank Gideon Jalata for the key role he played in this endeavour.

[4] The meeting of the China Africa Think Tanks Forum (CATTF, 12–13 October 2012) was co-hosted by the Institute for Peace and Security Studies (IPSS) of Addis Ababa University (AAU) and the Institute of African Studies (IAS) of Zhejiang Normal University.

a contextualised analysis of practical challenges to effective policy emulation. The final section concludes with a discussion of the findings and our theoretical interpretation.

2. **Navigating China's development model: idiosyncrasies and replication challenges**

China's development model, on a *macro-economic* scale, centres on combining an export-oriented strategy with an enabling environment for foreign direct investment (FDI) and technology transfer. For Wade (1996), the successes of late twentieth century newly industrialised economies epitomised the strategic protection and targeted investment in key industries to boost international competitiveness and foster local innovation (p. 68). Lin's (2011) 'new structural economics' provides a modern reinterpretation of this, proposing that the stages of development necessitate adjusting both hard and soft infrastructure in accordance with local conditions, with a prominent role for the state in overseeing this process. *Micro-economic and sectoral policy models* complement these macro-economic approaches, targeting specific aspects like agricultural production, industrial development, and technology transfer through interventions such as SEZs and agricultural technology demonstration centres. The logic of *state-led development*, underscored by the Communist Party of China (CPC), persists as the organising principle at the centre of the development model, epitomised by Bell (2015) as 'democracy at the bottom, experimentation in the middle and meritocracy at the top' (p. 180).

Examining the Chinese development model reveals the intricate challenges in replicating it. Its evolution into a dynamic force of change was shaped by specific conditions within China, the actors involved, and their adept management of the process and ability to derive policy lessons from it. China's industrialisation model originated from the gradual liberalisation of its domestic economy, unfolding within the political context of Deng Xiaoping's 'opening and reform'. The establishment of four SEZs in southeast China was subject to factional pressures within the CPC, local politicians, and emerging businesses, all impacting their economic trajectory. Chen and Naughton (2017) outline five discreet phases in China's development, marked by 'crisis and challenge', 'policy movement to economic liberalisation', 'movement from economics to politics', 'emergence of new equilibrium', and 'tensions and "substitution" strategy' (pp. 22–23). At each juncture, the CPC, as the leading political actors, significantly play a crucial part in driving transformative policies and reining them in. Crucially, the CPC imperative is to 'maintain legitimacy that gives coherent shape both to the political response to economic developments and to the policies that shape economic growth' (Chen & Naughton, 2017, p. 33).

In practice, Beijing outlines broad macro-economic targets and criteria, allowing local governments and emerging market actors to improvise solutions to emerging problems on the ground. This approach is reactive and incremental, with new policy guidance issued in response to on-the-ground challenges (Ang, 2016; Naughton, 2010; Tang, 2020). The exploration of these subtle dynamic features of China's development model is a recent addition to ongoing academic discussions. Ang (2016) terms it an 'adaptive approach of directed improvisation', while Tang (2020) describes it as 'co-evolutionary pragmatism', a circular synergism where Beijing sets goals (economic growth and increased productivity) but remains flexible in means. Tang (2021) characterizes China's development experience as a 'model with no model', relying on pragmatism and plasticity to harness market forces and drive economic growth. These insights offer a longitudinal analysis of the Chinese development model, highlighting how policymakers unleash productive forces and then scramble to capture them.

This evolutionary interpretation of the Chinese model emphasises adaptability, pro-active dynamic learning, creative responsiveness to evolving circumstances, and an over-arching agenda to incorporate changes into a manageable framework of political control. However, it does not capture the instrumentalisation of the model as an 'export' to other settings and the respective dynamics involved, particularly concerning Africa. Viewing it from this angle presents a more static idea of the Chinese model, resembling a policy toolkit blueprint rather than a process-oriented approach for potential adherents seeking to emulate the Chinese development experience.

Fitting these development models into the wider ambit of South-South cooperation (SSC), the ideological framework for developing countries' cooperation, offers new insights. The United Nations Office for South-South Cooperation defines SSC as follows:

> *(a) broad framework for collaboration among countries of the South in the political, economic, social, cultural, environmental and technical domains. Involving two or more developing countries, it can take place on a bilateral, regional, sub-regional or interregional basis. (…) Developing countries share knowledge, skills, expertise and resources to meet their development goals through concerted efforts.* (United Nations Office for South-South Cooperation, n.d.)[5]

The ecumenical nature of SSC allows for the flexible adoption of policies and practices that, guided by the conditions in a country, theoretically support the establishment of a process-oriented model.

[5] This broad 'catch-all' definition is drawn from the Buenos Aires Plan of Action (1978) and the Nairobi outcome document of the UN High Level Conference on South-South Cooperation (2010), adopted by the UN General Assembly (United Nations Office for South-South Cooperation, n.d.).

However, while adopting specific industrialisation blueprints may be straightforward (creating the requisite regulatory framework, introducing incentives for investors, providing support infrastructure, etc.), changing underlying practices to align with circumstances poses more significant challenges. This highlights the ability of implementing agents in creatively utilising externally-generated frameworks to further development. SSC does not address the role and impact of political management, a cornerstone of the Chinese state-led development model as identified by Chen and Naughton (2017), Ang (2016), and Tang (2020), in fostering this process.

While proponents of an 'experiential model' approach to the fostering of development may tout its utility in transferring experiences across countries and regions, the literature on learning and policy transfer cautions about inherent complexities. Learning encompasses instrumental, social policy, political, and 'mimicking' dimensions (May, 1992, pp. 336–337). Deriving 'lessons' from past policy implementation forms a distinctive but integral part of learning in the policy process, relying on the agency of policymakers and implementing agents embedded within state institutions. Targeting the right individuals and departments, along with developing effective policy transfer methodologies, is crucial to creating a conducive environment for learning, skills transfer, policy diffusion and innovation. Implicit in this approach is an unmitigated faith in bureaucracies to drive the process, although the capacity of borrowing bureaucracies to handle implementation may vary significantly. Commentators note that organisational learning occurs at various levels, especially when authority is distributed across an organisation, but in in general follows a hierarchical logic of top-down or bottom-up approach (Majone & Wildavsky, 1978).

While the notion that there is a Chinese model of development applicable to other settings permeates these debates, in fact, it is a bit of a misnomer to speak of it in singular terms, as is often done in the literature. The presumed Chinese model is better understood as a set of prescriptive experiences rooted in policy decisions and accompanying frameworks by the state, predominantly implemented by local-level officials. As an economic development strategy, it has a two-tiered approach, emphasising both macro-economic and micro-economic aspects, guided by the overarching goal of preserving the legitimacy and authority of the CPC (Chen & Naughton, 2017, p. 19).

The current high interest among African leaders in emulating China's successful SEZ experience is propelled by both, the prospect of political longevity and the pursuit of rapid industrialisation and structural economic transformation. This sets the stage to explore the implementation of SEZs in Africa and the associated challenges and opportunities in the following sections.

3. Placing Chinese ETCZs in the context of African SEZ' experiments

While African economic zones initially emerged in the 1970s in Liberia, Mauritius, Senegal, and Egypt, it was not until the late 1990s and early 2000s that they gained prominence as a strategic industrial policy tool on the continent in (Tao et al., 2016). This surge was largely driven by the preferential access granted to African nations to the American market through the implementation of the Africa Growth and Opportunity Act (AGOA) by the US in 2000.[6] Inspired by the success in East Asian economies and the newfound access to the US market, African SEZs grew substantially in number. Although there is diversity in the activities of each zone, the garments and agro-processing sectors emerge prominently, followed by services, mining, oil, and gas (Tao et al., 2016, p. 3). High-end service sectors are less common, exemplified by countries like South Africa, Benin, and Cote d'Ivoire (p. 15). This trend aligns with the bottom level of the 'SEZ development ladder' developed by the United Nations Conference on Trade and Development (UNCTAD, 2019, p. 141), where low-income economies aim to kickstart industrial development by attracting export-oriented manufacturing investment, fostering employment, and promoting the export of processed goods (similar to China in the 1980s). The subsequent levels of SEZs, seen in middle to upper-middle income countries, focus on industrial upgrading and technological dissemination (China's SEZs in the 1990s / early 2000s) followed by transition to services and attracting high-tech industries, while fostering innovation (China late 2000s/2010s). Meanwhile, SEZ in high-income economies aim to provide efficient platforms for complex cross-border supply chains and avoid distortions in the economy.

Despite over two decades of preferential access to developed markets and sustained enthusiasm from African policymakers, most African SEZs remain at the bottom of SEZ ladder, performing notably poorer than their counterparts in Southeast Asia and Latin America (Farole, 2011, p. 1). Whilst exceptions exist in Morocco, Egypt, South Africa, Mauritius, Kenya, Madagascar, and Ghana, the overall performance of African SEZs in attracting investment, creating jobs, generating revenue and especially in facilitating technology transfer and promoting spillovers to local economies has

[6] AGOA, signed into law in May 2000 by President Bill Clinton, is a unilateral trade instrument granting Sub-Saharan African countries preferential access to the USA market. It provides non-reciprocal duty-free access for approximately 6,500 products, including textiles and apparel, leather products, motor vehicles and parts and agriculture products. Its aim is to boost US-Africa trade by promoting the African manufacturing sector. To qualify and maintain AGOA benefits, African countries must exhibit progress in the rule of law, human rights, and core labour standards. Originally set to expire in 2008, AGOA has been extended twice, most recently in 2015, ensuring its validity until 31 December, 2025. Its extension was under negotiation at the time of writing. For more information see: https://agoa.info/about-agoa.html

been lacklustre. Existing literature on African SEZs reveals numerous structural shortcomings and bottlenecks contributing to this bleak picture on the continent, encompassing an unfavourable investment environment (e.g. cumbersome trade facilitation systems and inadequate infrastructure), weak regulatory and institutional frameworks, deficient political leadership and institutional coordination, and challenges in establishing both forward and backward linkages (Farole, 2011; Newman & Page, 2017; Tao et al., 2016). Rodríguez-Pose et al. (2022) expertly consolidate these challenges into four categories: strategic country assessment, SEZ policy design, specific SEZ set up, and institutional considerations (p. 470).

Although persisting challenges have led to some scepticism about the effectiveness of SEZs as an industrial policy tool in Africa, numerous policymakers on the continent remain enthusiastic, resulting in a continued proliferation of SEZs. According to the Africa Economic Zones Organization's (AEZO) *Economic Zones Outlook 2021*, there were 203 operational SEZs by 2021 (with an additional 73 in planning) across 47 African countries, a significant rise from 103 in 2010 and 73 in 2000. The majority of these SEZs are concentrated in North and East Africa, with Morocco and Nigeria jointly accounting for nearly half. The rapid expansion in the 2000s is attributed to a combination of intertwined internal and external factors. The robust economic growth experienced by many African countries after the turn of the century made industrial policies more viable, especially given the persistent quest for structural change in African economies to break free from volatile commodities cycles. Externally, factors such as newly acquired preferential access to the US market and evolving structural changes in international markets continued to fuel the appetite of African policymakers' for SEZs. These changes include the relocation of China's manufacturers due to rising domestic production costs, increased demand in Asian consumer markets, and a greater influx of FDI into the continent.

As the global authority on using SEZs for successful industrial policy, China's 2006 announcement of establishing three to five ETCZs in Africa, during the FOCAC summit, sparked enthusiasm. This initiative origins trace back to Chinese companies negotiating SEZs in Zambia and Nigeria in 2003/2004 to pursue their business interests. As state-owned enterprises (SOEs), they sought clearance from the State Council, turning the idea into official policy within FOCAC.[7] A high-ranking FOCAC official[8] outlined Chinese aims as twofold: fostering Africa's industrialisation through technology transfer and job creation, and encouraging Chinese investment in Africa by minimising

[7] Personal Interview, Ministry of Foreign Affairs, FOCAC Secretariat, Beijing, 3 June 2010.
[8] Personal Interview, Ministry of Foreign Affairs, FOCAC Secretariat, Beijing, 3 June 2010.

perceived risks and costs. After the official launch at the FOCAC summit in 2006, many African countries competed for the opportunity, enticed by the promise of significant Chinese investment and the chance to overcome existing obstacles by leveraging China's unparalleled SEZ expertise. Six official ETCZs were announced between 2006 and 2007: one in Zambia (with sections in Chambishi and Lusaka), two in Nigeria (Lekki and Ogun), and one each in Ethiopia, Mauritius, and Egypt (see table 1).

Table 1: Official Chinese ETCZ in Africa

Official Name (country)	**Year of tender (year of establishment)**	**Location**	**Targeted sectors**	**Owner/ Master Developer**
Zambia - China ETCZ (Zambia)	2006 (section 1) (2010) (section 2)	Chambishi (380 km North of Lusaka) Lusaka (near international airport)	Copper mining and smelting, mining equipment and services, construction vehicles and materials, chemicals, logistics and banking Agri-processing, construction vehicles and materials, pharmaceuticals, logistics and services	ZCCZ Ltd (subsidiary of Non-Ferrous China Africa,NFCA , which parent company is China Non-Ferrous metals Corporation, CNMC)
Jinfei Smart City + Freeport Zone (Jinfei ETCZ until 2016) (Mauritius)	2006 (2009)	Riche Terre (5km from Port Louis)	Hospitality, logistics, finance and business, Education	Smart City: Shanxi JinFei Investment Co. Ltd* Freeport Zone: Shanxi JinFei Investment C. Ltd + the Government of Mauritius
Lekki Free Trade Zone (Nigeria)	2006	Lekki (50 km East of Lagos)	Light manufacturing, textiles, logistics, warehousing	JV: China- Africa Lekki Investment Co** (60%) + Lagos State Government (20%) + Lekki Worldwide Investment Ltd (20%)
Ogun-Guangdong Free Trade Zone (Nigeria)	2006	Igbesa, Ogun State (30 km from Lagos)	Light manufacturing, logistics, Pharmaceuticals, warehousing	JV: China Africa Investment company (CAIC).*** (82%) + Ogun State Government (18%)
Eastern Industrial Zone (Ethiopia)	2007	Dukem (35km from Addis Ababa)	Leather and leather products, textiles and garments, construction materials	Jiangsu Qiyuan Group (private)
China-Egypt Suez ETCZ (Egypt)	2007 (2009)	Aiz Sokhna, Suez city (120km from Cairo)	Textile, garments, automobile assembly, electronics	Egypt-TEDA Investment Company****

Sources: Compiled by the authors based on the various ETCZ websites, Xinhua online news, MOFCOM and MOFA Press releases and Peter Gakunu *et al*. (2015, p. 13)

* Consortium of three provincial companies from Shanxi province - Taiyuan Iron and Steel Company- TISCO (50%)+ Shanxi Coking Coal Group (30.2%) + Shanxi Tianli Enterprise Co (19.8%). This consortium took over Tianli Co which was originally the Master developer and owner of the zone.

** Consortium of Chinese companies registered in Beijing (China Railway Construction Corporation + China Civil Engineering Construction Corporation + + China Africa Development Fund)

*** Consortium between Guangdong Xinguang International Group and China-Africa Investment.[9]

Due to China's prominent role in developing and managing these zones, ETCZs carry higher expectations than other economic zones in Africa. They are seen as potential catalysts for the continent's long-awaited industrialisation and enhanced integration into global markets, aligning with the current emphasis on structural transformation in African political discourse.

While the number of official Chinese ETCZs (six) remained constant since 2009, there has been a significant rise in the number of industrial parks and other economic zones in Africa managed by private Chinese companies or central and provincial SOEs outside the official arrangement. Examples include the Djibouti SEZ, Huajian International Light Industry City in Ethiopia, Xinguang Industrial Group-run parks in South Africa and Sudan, and the Hisense industrial park in South Africa. An estimate suggests that by 2019, there were over 30 operational China-Africa joint special zones and industrial parks (including the ETCZs), with nearly 70 more under construction (Hongyi, 2019, p. 71). These figures indicate a broader impact potential beyond the officially recognised FOCAC-endorsed zones and highlight the increasing African interest in learning from China's development experience. Concurrently, during the 2015 FOCAC summit, President Xi Jinping pledged support to African industrialisation (South African Government, 2015), a commitment echoed in the FOCAC 2015–2018 action plan (FOCAC, 2015).

For China, the significance of these economic zones, especially ETCZs, extends beyond serving as exclusive entry points for Chinese enterprises into Africa or driving the continent's industrialisation. Their performance is intrinsically tied to validating China's development model as a blueprint for other developing nations to emulate.

In addition to facing the same structural obstacles, Chinese ETCZs resemble other African SEZs in targeting sectors like light industry, construction materials, mining processing and equipment, logistics, and services. The absence of high-end service sectors in Chinese SEZs also mirrors the

[9] Geoff de Freitas (2019, December 12), *China's First Nigerian Free Trade Zone Reaches 10-Year Milestone*. HKTDC Research. Retrieved May 21, 2021, from: https://research.hktdc.com/en/article/MzE0NzgyOTM3

prevailing pattern in African SEZs, and incentives such as tax breaks and import-export duties show no major discrepancies (Newman & Page, 2017, pp. 7–14).

Distinctively, Chinese ETCZs in Africa feature a business model with extensive involvement of Chinese authorities. The overall framework agreement, encompassing land allocation and investment incentives, is typically negotiated between the Chinese and host governments. The Ministry of Commerce of China selects a Chinese enterprise or consortium through a tender process to develop the project on the ground. Infrastructure development responsibilities are divided, with the host government handling external infrastructure, and the master developer focusing on the allocated land plot. To undertake its duties, the company taps into funds disbursed by national policy banks, provincial governments, or the China-Africa Development Fund. After launch, Beijing primarily assumes a follow-up role through its local embassy.[10]

Beyond its initial involvement, the Chinese government sustains ongoing political support by sending high officials to landmark events (e.g. zone launching or inaugurations), conducting official visits, and occasionally intervening to resolve challenges. For instance, following a visit to the Mauritius ETCZ in 2009, President Hu Jintao personally directed the replacement of the financially troubled master developer (Alves, 2011). This not only underscores China's commitment but also highlights its crucial oversight role in advancing this experiment overseas.

Apart from the Egypt-Suez Zone, Chinese ETCZs in Africa have predominantly attracted Chinese enterprises due to their distinctive management features deeply infused in Chinese language and business culture. It is important to note that although some of these ETCZs are fully owned and managed by Chinese SOEs, this is not always the case. For instance, the EIZ in Ethiopia is operated by a private Chinese company, and the Lekki Industrial Zone and the Ogun-Guangdong Zone in Nigeria are joint ventures involving Chinese SOE consortiums and host country provincial governments or companies.

The deep involvement of Chinese counterparts in establishing, managing, and operating ETCZs, vertically integrating central and provincial governments, SOEs, private investors, and contractors, mirrors the ecosystem of agents in the early days of Chinese SEZs domestically (1980s). Superficially, this setup might appear more favourable for successful emulation as it incorporates knowledge and dynamic synergies unique to the Chinese experience, extending beyond the simple transplant of static SEZ policies. Yet, the hybrid reality of implementation on the ground, entailing an intricate

[10] Information in this paragraph according to personal interview, Ministry of Commerce, Department of Trade and Economic Relations, Beijing, 3 June 2010.

network of host country agents and agencies alongside Chinese players, presents several challenges to a seamless emulation, as detailed in the following two sections.

4. Evaluating the impact: Chinese ETCZs and their role in African economic transformation

According to AEZO (2021), African economic zones aim to diversify the economy by attracting foreign investment into processing industries, boosting exports, creating jobs, and integrating into global value chains, while facilitating technology and skills transfer. Expectations for Chinese ETCZs in Africa are no different in this respect. In their early years, these zones experienced slow progress due to structural bottlenecks common to many African SEZs, including inadequate soft and hard infrastructure. Specific challenges, like business culture differences, language barriers, and issues within master developer consortiums, added complexity (Alves, 2012). The 2008 global financial further impeded progress, affecting investment capital and demand from consumer markets. These factors collectively hindered zones from attracting investors and becoming fully operational in the early stages (Alves, 2012).

Over the past decade, the outlook for Chinese ETCZs has markedly improved. In 2012, only the China-Egypt Suez Zone was fully operational, with the Zambia-Chambishi Zone being only partially so. However, by 2016, five out of the six established zones in Africa were in operation, albeit at varying paces. While Egypt-Suez seemed to have consolidated operations earlier, the Ethiopia EIZ made substantial progress in recent years, followed by the Lekki and Ogun Zones in Nigeria. Surprisingly, the Jinfei Zone in Mauritius, despite a successful SEZ history, appears to lag behind.

Table 2. Progress of Chinese ETCZs in Africa (as of 2015)

Zone	**No of Companies operational** (registered)	**Investment by management** USD million	**Investment by tenants** (committed) USD million	**Jobs created**
Zambia - China ETCZ Chambishi Lusaka*	26 (45) 10*	170 15*	322 (1,300) 19*	8,735* 125*
Jinfei ETCZ (Mauritius)	(5)	38	-	-
Lekki Free Zone* (Nigeria)	21 (100) *	265*	156 (418) *	551*
Ogun-Guangdong Free Trade Zone (Nigeria)	19 (40)	150	58 (150)	4,250
Eastern Industrial Zone (Ethiopia)	10 (25)	89	159 (192)	4,975
China-Egypt Suez ETCZ (Egypt)	38 (58)	93	358 (610)	2,000
Total	124 (283)	820	1,072 (2,670)	20,636

Sources: compiled by the authors from data in Tang Xiaoyang (2015, p. 5), and *Peter Gakunu et al (2015, pp. 36, 38, 74)

Challenges in obtaining reliable recent figures make it difficult to present an updated table. However, recent media reports suggest a sharp upward trend across ETCZs. For instance, the Ogun-Guangdong Free Trade Zone entered its second phase in 2017, generating over US$ 2 billion in investments, 6,000 jobs, and an annual revenue of US$ 234 million by 2019 (de Freitas, 2019). By 2023, it hosted 56 operating companies, with 23 more under construction (OGFTZ, 2023). That same year, Lekki Free Zone housed 30 companies, setting revenue records, having created 5,000 jobs (LFZDC, 2023). The Suez ETCZ entered its second phase in 2016, aiming with for 100 companies and 10,000 jobs (Xinhua, 2019). By 2019, eight companies operated there, with a cumulative investment of US$ 200 million. In 2023, Chinese companies pledged over US$ 3 billion in investments (Shaw-Smith, 2023). In 2018 Ethiopia EIZ was developing additional land after reaching full capacity.[11] As of 2022, it hosted 132 companies, creating 22,110 local jobs (New Business Ethiopia, 2022). The Zambia-China ETCZ had attracted nearly 100 enterprises by 2023, with investments exceeding US$ 2.5 billion and creating over 10,000 jobs (Xinhua, 2023b). In 2015, a joint venture with the Mauritius government revived the Jinfei Zone for a smart city project (Government Information Service, 2015) and freeport; however, the pandemic scuppered these plans and Jinfei remains virtually moribund.[12]

Yet, to grasp the true impact of these zones on structural transformation, one must move beyond numerical achievements and examine how they generate dynamic vertical and horizontal spillovers, creating multiplier effects in local economies.

The United Nations Conference on Trade and Development (2019, p. 178) recently proposed a innovative and comprehensive assessment framework for SEZs. It evaluates SEZs sustainable development impact by weighing direct (FDI, job creation, exports, and foreign exchange earnings) and indirect (supplier linkages, broader job creation) economic contributions against the net costs of the zone. The framework also considers dynamic economic impacts (technology and skills transfer, industrial diversification, and regional cooperation), social and environmental effects (e.g. labour conditions, land issues, illicit flows…) and policy learning effectiveness. However, due to limited information on certain indicators (e.g. net cost and revenue of the zones, environmental impact, and policy learnings), we will use a simpler framework by Farole (2011, p. 62) to qualitatively assess the transformative impact of Chinese ETCZs. Farole focuses on short-term static economic

[11] Figures according to information collected during fieldwork conducted by the authors in April-May 2018 in Ethiopia.
[12] Fieldwork conducted by author in April 2023 in Mauritius.

outcomes (investment, employment, and exports) and long-term dynamic economic outcomes (technology and knowledge transfer, integration with local economy, industrialisation or diversification of exports, and positive social impacts). In both frameworks, dynamic indicators play a crucial role in driving structural transformation:

> *Economic zone programs that are successful in contributing to long-term development leverage these static benefits into dynamic economic benefits, which include the promotion of non-traditional economic activities, hard and soft technology transfer, the encouragement of domestic entrepreneurism, and the promotion of economic openness.* (Farole, 2011, pp. 62–63)

> *Dynamic effects of SEZs, especially their impact on technology and skills development and their spillover effects on the broader economy, are especially important to industrial development and upgrading.* (*United Nations Conference on Trade and Development*, 2019, p. 178)

The progression from static to dynamic outcomes is interconnected but not automatic. Initial static outcomes, like investments and job creation, lay the foundation for dynamic outcomes to unfold overtime. However, specific conditions are crucial for meaningful transformative results. The literature underscores the need for effective institutional coordination and support (Farole, 2011), policy learning, and creativity to effectively adapt to changing circumstances (UNCTAD 2019). Robust infrastructure is also vital for establishing comprehensive value chains and local economy linkages (Gakunu et al., 2015). Moreover, strategic industrial policies, unwavering political commitment and continuous investor engagement are crucial for overcoming bottlenecks (Tang, 2019a; Fei & Liao 2020). When these conditions align, SEZs can facilitate technology transfer and integration with the local economy. Conversely, the absence of these factors may hinder the transition, restricting SEZs to functioning primarily as export enclaves with limited transformative impact.

Based on the cited news reports, by African standards, these six zones collectively attracted an impressing investment exceeding US$ 7 billion, generating over 40,000 jobs. Some zones significantly contributed to host countries' exports, such as processed copper exports in Zambia-Chambishi, mushrooms in Zambia-Lusaka, and shoes in Ethiopia's EIZ.

Positive developments are also evident in the social impact of Chinese ETCZs. Key companies in ETCZs, particularly in Ethiopia, Zambia and Nigeria, offer various benefits to their workforce, including training, healthcare, meals, transport, and community support. However, training efforts are primarily directed toward lower skills workers, with limited investment in developing higher

skills among locals in management.[13] In terms of other dynamic economic outcomes, some technology transfer occurred from Chinese ETCZs in Africa, especially in manufacturing (Ethiopia and Nigeria), and mining processing (Zambia). However, transformative achievements in broader technology dissemination, forward and backward linkages appear limited across these zones (Chen, 2021; Frick & Rodriguez-Pose, 2022) including China-Egypt Suez Zone (Joudeh, 2023) which consolidated operations much earlier (. Currently, integration with the domestic economy primarily occurs through the local labour market, with fewer engagements with local suppliers. The intensity of these linkages varies significantly between SEZs (Gakunu et al., 2015, p. 41). The main challenge at this juncture lies in structuring a functional value chain and supplier network within the host country, attributed to the lack of local options or Chinese companies reliance on sourcing materials from China (Tang, 2015; Frick & Rodriguez-Pose, 2022).

In the next section, we delve deeper into the factors that contribute to the underwhelming performance in dynamic outcomes, with a close analysis of the progress of the EIZ in Ethiopia.

5. Case study: the Eastern Industry Zone (EIZ), Ethiopia

Established in 2007 and located 35 kilometres from Addis Ababa in the town of Dukem, the EIZ (now Eastern Industry Park) became operational in 2010 under the ownership of the private Chinese enterprise Jiangsu Qiyuan Group (JQG), a steel pipe and aluminium producer. The zone accommodates diverse industries, including garment, shoes, leather processing, packaging, automobile assembling, and steel and of construction materials manufacturing. With the completion of the Addis-Djibouti Port Railway line in late 2016, transportation challenges were alleviated, leading to a rapid increase in investors. [14] The original land plot is fully occupied, prompting JQG to develop an additional 137 hectares in 2018.[15]

The EIZ stands out in three key aspects: unwavering commitment from political leaders to leverage economic zones for industrialisation; proactive top-down institutional coordination; and the absence of infrastructure challenges like unreliable power and poor transportation networks (Gakunu et al., 2015; Phiri & Manchishi, 2020) – attributes identified as pivotal for zone success in mainstream literature (Rodríguez-Pose et al., 2022; UNCTAD, 2019). These factors showcase Ethiopian agency and closely mirror key features observed in China's SEZ experiments.

[13] According to information gathered in our interviews conducted during fieldwork to Ethiopia in 2018.
[14] Personal Interview, Ethiopia Investment Commission officer, Addis Ababa, 11 May 2018.
[15] Various personal interviews, EIZ Dukem and Addis Ababa, April-May 2018

Being the inaugural industrial park in Ethiopia, the EIZ played a pivotal role in the country's strategic industrialisation planning and Prime Minister Meles Zenawi (1995–2012) commitment to draw inspiration from East Asian models (Nicolas, 2017; Oqubay, 2015).[16] The creation of the zone triggered intense exchanges between Ethiopian policymakers and Chinese counterparts at various levels, notably JQG, (Tang, 2019c), shaping Ethiopia's ambition to emerge as a prominent apparel manufacturing hub in Africa by 2025. This collaboration influenced the formulation of supporting institutional frameworks, policy incentives, and administrative services (Fei & Liao, 2020, pp. 629–630; Giannecchini & Taylor, 2018). In addition to aiding Ethiopian policymakers in early-stage policy design, Chinese agents (SOEs, private companies, and provincial governments) have spearheaded Ethiopia's industrial park surge[17] serving as financiers, developers, operators, investors, and promoters actively contributing to the establishment of 13 economic zones by 2017 (Fei & Liao, 2020).

Like with other African SEZs, the EIZ was established to capitalise on the preferential access to the US market conferred by the AGOA.[18] Ethiopia gained AGOA beneficiary status in October 2000, with access benefits extended to the textile sector the following year after the successful implementation of an apparel visa system. A standout inside the zone is Huajian shoe factory, a Guangdong-based footwear manufacturer, that started operations in 2012. Much research, including our own, draws from fieldwork conducted in this factory, focusing on Huajian's swift success in making leather shoes a significant Ethiopian export item from a very low basis in 2011. The opening of the Huajian shoe factory came in the wake of the passage of Ethiopia's Growth and Transformation Plan I in 2010. In that context, Huajian Group explored opening a branch outside Addis Ababa, a process initiated in 2011 through meetings between the company founder and the Ethiopian prime minister.[19] Huajian, having generated 3,800 permanent jobs, stands as an exemplary investor, providing free meals and training, and spearheading Ethiopia's leather shoes exports (Gakunu et al., 2015, pp. 19-22). The factory specialises in high-end women's shoes, featuring brands like Guess, Tommy Hilfiger, and March Fisher.

According to its chairman (and founder), Huajian's pre-pandemic success was linked to its export-oriented production, mainly targeting the US market (Ethiopian News Agency, 2023), underscoring

[16] A cornerstone of Ethiopia's long term development strategy, outlined in Growth and Transformation Plan I and II, (issued in 2010 and 2015, respectively), is the expansion of the manufacturing sector's contribution to the national GDP (which was less than 5% in 2010) and export volume.
[17] By 2022, 22 economic zones/ industrial parks had been established in the country.
[18] Personal Interview, Huajian manager, EIZ Dukem, 14 October 2012.
[19] Personal Interview, Huajian manager, EIZ Dukem, 14 October 2012.

the importance of the AGOA. The positive outcomes prompted plans in 2015 to establish 'Huajian International light Industry City', near the capital, with aspirations to create 30–50,000 jobs and significantly amplify apparel and footwear production for export upon full operation (Ethiopian News Agency, 2023). While specific export figures for Huajian are elusive, AGOA (2021) data reveals a substantial surge in Ethiopian leather shoes export from 2012 to 2020 totalling nearly US$ 200 million, with over 90% directed to the US under the AGOA.[20] However, pandemic-related disruptions in 2020 and Ethiopia's AGOA suspension in January 2022, citing human rights violations linked to the Tigray conflict, led to a production halt. Operations resumed in March 2023, with a temporary shift to local market production (military and police forces' shoes), awaiting Ethiopia's AGOA reinstatement (Ethiopian News Agency, 2023). This incident highlights the exposure of African SEZs to external influence, underscoring the risks associated with overreliance on unilateral preferential agreements.

Regarding the EIZ, existing studies, including our own empirical findings, consistently highlight increase in foreign investment and manufactured exports, improved local investment climate, job creation, establishment of rudimentary local supply chains, and skills upgrading as the major contributions of the zone to the Ethiopian economy (Fei & Liao, 2020; Gakunu et al., 2015; Giannecchini & Taylor, 2018; Tang, 2019c; Zhang et al., 2018). While the EIZ has accomplished many short-term static goals and even exhibited some dynamic outcomes, doubts linger about its ability to progress from a successful export enclave into a catalyst for structural transformation. Sluggish progress in developing higher skills and establishing more substantial backward and forward linkages to the broader economy (Kumera & Woldetensae, 2023) contribute to this uncertainty.

Job creation and training have certainly had positive impacts on the local economy, especially considering the predominantly unskilled labour. However, the training is typically focused on low-skilled jobs,[21] and the multiplier effects primarily result from the mobility of workers (Alves & Lee, 2022; Nicolas, 2017; Tang, 2019c) like in other Zones (Frick & Rodriguez-Pose, 2022). Insufficient policy incentives, weak enforcement mechanisms in Ethiopia (Fei, 2018), and high labour turnover[22] deter investors from extensive training, especially at management levels, where it requires significant investments and time (Tangc, 2019). Despite the emphasis on skills transfer in policy documents and official speeches, investors fall short, and local authorities struggle with

[20] A parallel trend is evident in Ethiopian apparel exports, experiencing exponential growth from 2015 onwards, with 98% occurring under AGOA.
[21] Personal Interview, EIZ One Stop Shop official, Dukem, 20 April 2018.
[22] Personal Interview, EIZ One Stop Shop official, Dukem, 20 April 2018.

enforcement[23] (Fei & Liao, 2020). Interviews conducted in Ethiopia revealed that the law requiring manager localisation after three years was not enforced due to a lack of local skilled managers. Additionally, although links are forming between economic zones and local academic institutions, these connections are mostly *ad hoc*, lacking sufficient institutional intervention to align curricula with industry needs and ensure that jobs created can be filled by locals (Fei, 2018; Fei & Liao, 2020; Gukunu et al., 2015).

Moreover, the labour policy reform in Ethiopia in the past decade, prompted by International Labour Organisation's criticism, has strengthened labour agency (Huang et al., 2022) and indirectly led to worker unrest. The 'wildcat strikes' in the EIZ, Hawassa, and Bole Lemi zones in 2018 resulted in production and export losses, posing problems for investor retention. These costs, not captured in conventional accounts (Ali, 2021), act as a disincentive for foreign investors, highlighting institutional coordination loopholes and the limited capacity of Ethiopian authorities to capture and manage the unleashed productive forces effectively, hampering spillovers to the broader economy.

The zone's full ownership and occupation by Chinese companies, a common feature across most ETCZ, coupled with limited connections to the broader economy, impedes substantial knowledge and technology transfer to Ethiopian firms (Giannecchini & Taylor, 2018). Contributing to this challenge, Ethiopian SMEs struggle to meet the zone's investment threshold, and to establish themselves as subcontractors or suppliers due to a significant technological and knowledge gap with their Chinese counterparts (Alves & Lee, 2022; Giannecchini & Taylor, 2018; Nicolas, 2017). Moreover, misalignment of many factories in the zone with Ethiopia's comparative advantages (cotton, wood, and leather) and the low quality and scale of local materials and services constrain backward linkages through local sourcing (Nicolas, 2017; Tang, 2019b).

Additionally, forward linkages to the local economy are constrained as the factories within the zone primarily produce for export, and, by law, exporting companies cannot supply inputs to Ethiopian manufacturers (Tang, 2019b). Nonetheless, limited horizontal spillovers are happening via competition mechanisms. Tang's (2019c) study found that two Ethiopian shoe factories attempted to upgrade and emulate Huajian's success, hiring foreign experts for training; however, their endeavours were in the end unsuccessful due to a lack of experience in international markets and connections to global supply chains.

[23] Some of our interviewees attributed the limited impact of knowledge transfer to greater focus of the government on attracting investment and creating jobs at this early stage.

This contrasts with a key aspect of the Chinese SEZ model, which involved supporting local market forces, especially private players, to access knowledge, technology, and integrate into global value chains. In a parallel scenario in the 1980s, China swiftly enforced joint ventures between foreign investors and local firms to transfer technology and know-how to the emerging business class and integrate them into global value chains. Another notable deviation from the Chinese blueprint is that the EIZ is entirely owned by a foreign private company. While this offers advantages for a government facing resources constraints amid rapid demand, it introduces a 'principal-agent dilemma'.

Persistent institutional inefficiencies, often highlighted in studies and mentioned by interviewees, involve deficient coordination among government agencies (central and local) and multiple stakeholders (Fei & Liao, 2018; Gakunu et al., 2015). This challenge persists in other zones, like Nigeria's Lekki Free Zone, where the Chinese developer recently cited customs clearance issues negatively impacting production and sales (LFZDC, 2023). Additionally, limited delegation of authority to the local level causes delays and inefficiencies (Knoerich et al., 2021; Tang, 2019c). This is exacerbated in a fragmented federal political system with ethnic rivalries, leading to challenges in coordinating between central and local government agencies, causing frictions with the EIZ developer, Chinese investors, and local communities – mostly over land compensation issues and adverse environmental impact (Chen, 2021). Similar issues affect other zones, namely Ogun-Guangdong FTZ, where a 2019 dispute between the Chinese developer and local communities, stemming from miscommunication with the state government, centers-ed on concerns about the zone encroaching on communal land (Ogunyemi, 2019). These institutional hurdles obstruct positive interactions needed for fostering key synergies and spillovers between stakeholders.

The above contrasts with China's domestic experience, where a top-down approach, facilitated by a clear hierarchy and more homogeneous demographics, was balanced with dynamic bottom-up insights. Continuous interpretation of ground-level feedback fine-tuned policies and ensured synchronisation with the changing surrounding economy. The observations above suggest limited policy learning and weak institutional capacity in Addis to dynamically guide and leverage the economic forces in the co-evolutionary fashion seen in China's development model.

Conclusion

This paper explores the factors impeding African-based ETCZs from replicating the structural transformation achieved by Chinese SEZs. It does so by integrating literatures on Chinese

development model, African SEZs and ETCZ in the continent, aiming for a comprehensive exploration of the variables at play. Utilising Farole's SEZ assessment framework, our analysis reveals significant progress in static outcomes (e.g. investment, job creation) but modest achievements in dynamic outcomes (spillovers to the local economy). The underperformance is attributed to two main factors: the same structural challenges faced by African SEZ's (such as deficient hard and soft infrastructure) and the challenges in implementing the co-evolutionary/directed improvisation nature of the Chinese model in Africa, stemming from a gap in institutional capacity.

While replicating static elements of China's industrialisation policy (e.g. specific regulations, incentives, and policies) in African contexts yielded impressive static outcomes, achieving dynamic ones is uncertain as they depend on pervasive economic spillovers. This transition, represents a formidable challenge for SEZ across the developing world (Frick & Rodriguez-Pose, 2022). Replicating China's dynamic outcomes demands long-term vision, steady commitment, and strong institutional capacity. Efficient coordination and monitoring at both central and local levels are essential for conducting controlled experiments on the ground and dynamically fine-tuning policies at the top. This policy learning process is crucial for fostering multiplying effects and ensure continuous alignment with the overarching aim of structural transformation.

It is important to emphasise that this study's findings and arguments primarily derive from the case study of the EIZ due to limited research on other zones regarding dynamic outcomes. While more in depth studies are necessary to enhance generalizability, the observed parallels in longitudinal progress and challenges across zones warrant consideration when applying these insights more broadly.

The EIZ, unlike most other ETCZs, emerged in a country where the government effectively synchronised economic zones creation with a coherent long-term development plan. This approach, supported by strong leadership commitment, the provision of necessary hard and soft (e.g. regulatory framework and investment policies) infrastructure through a centralised top-down approach, successfully emulated key static features of China's SEZ blueprint, producing meaningful static outcomes like FDI attraction, job creation, and export growth. Yet, the EIZ faces challenges in achieving dynamic outcomes, specifically skills and technology spillovers, essential for self-sustainability. This obstacle is similarly apparent in other ETCZs.

To enhance resilience, Addis should learn from the dynamic features of the Chinese model to enable constant policy fine-tuning. To promote domestic resiliency, emphasis should be on promoting

labour skills upgrades and consequential forward and backward linkages between foreign and local firms suited for the specific conditions of the Ethiopian market. While China achieved this through compulsory partnerships with local firms, African solutions offer alternative paths – e.g. Ghana's Tema Zone installed a multipurpose park inside the zone (without the benefits) to host local supplier firms, (UNCTAD, 2019, p. 191), and the Tanger Med Zone in Morocco established training centres tailored to the needs of the zone (AEZO, 2019, p. 26).

In addition to the challenges endogenous to African contexts, several externalities impend on the future of economic zones on the continent. While the relocation of China's factories to countries like Ethiopia has triggered a 'flying geese' effect in the past decade, the likelihood of these nations replicating China's upward trajectory in the value chain is uncertain. The present global context differs significantly from the 1980s, with African ETCZ hosts more intertwined with international trade and regulations than China was then (Knoerich et al., 2021). The forthcoming shift in manufacturing through automation and artificial intelligence not only limits the scale of Chinese factory relocation but also questions the sustainability of labour-intensive models.

The EIZ case study illustrates another critical externality: overreliance on external forces. The severe repercussions on Ethiopian exports after the AGOA suspension[24] following the conflict in Tigray, highlight the risks of unilateral trade preferential regimes. Many apparel factories exporting to the American market temporarily closed, including Huajian shoemaker, which established its own apparel industrial park in 2015 banking on the American market and is now reassessing its strategy. Other global clothing manufacturers voluntarily closed, apprehensive of backlash for indirectly supporting human rights violations (Bessette, 2022, p. 3). One year after the conflict's end, the reinstatement of Addis trade benefits remains uncertain.

Additionally, pandemic-induced trade disruptions, coupled with great power rivalry and economic decoupling, highlight the drawbacks of global value chains, emphasising the need to restructure around geographically closer spaces. African SEZs could enhance resilience by minimising reliance on external inputs, leveraging SEZs to develop regional economies of scale and value chains within the African Continental Free Trade Area, focusing more on the emerging African market.

Rather than the model emulated, the fate of ETCZs in Africa, and economic zones continent-wide, hinges on the local conditions and the authorities' capacity to overcome institutional constraints, foster significant spillovers, and capitalise on competitive advantages for a more secure position in

[24] By 2020, nearly half of Addis manufacturing exports were apparel (up from 8% in 2011). Of these, 98% were exported to the US market under AGOA (AGOA, 2021).

global value chains. Despite the prevalent challenges, some African SEZs in Morocco, Egypt, Ghana, Tanzania, and Kenya have successfully navigated limitations, presenting viable pathways closer to home. The limited pollination across SEZs in the continent suggests the need for more intense and purposeful policy exchanges to explore African solutions.

Notwithstanding, achieving transformative change necessitates more than basic model transplant trials; it requires embracing a proactive and creative policy adaptation approach. This involves dynamic learning at leadership levels, innovating to address structural and institutional challenges, and actively reducing vulnerability to external factors and dependency on external players.

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