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Strategic Approaches to Free Economic Zones for the Digital Economy: Lessons from a Comparative Study

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Abstract

The paper addresses the importance of redesigning strategies for resilient and sustainable regional economic development – by applying strategic approaches to free economic zones for the digital economy. The purpose of the paper is to provide a broad comparative perspective on developed versus developing country efforts to use free economic zone programs to enhance various economic and social objectives. First, the paper introduces the chronicle experiences of free economic zone programs in South Korea and mainland China – developed versus developing economies. The main results of the analysis indicate that (1) achieving the goals and objectives of free economic zones is challenging over time; (2) trying to upgrade the technical component, develop knowledge-based and eco-friendly new industries, or value-added to the economy through free economic zone policies is even challenging; and (3) incentives and other program-specific variables are highly context-specific and not structurally correlated with free economic zone performance. In addition, the paper shows that the initial conception of the role of free economic zones has undergone significant change as individual countries have tried to enhance the contributions and avoid damages from incorporating free economic zones into their development strategy respectively, over time.

Keywords: Free Economic Zone, Special Economic Zone, Free Trade Zone, Comparative Advantage, Competitive Advantage, Regional Economic Development, Sustainable Development

JEL Classification Code: F02, F16, F18, F21

1. Introduction

In general, this paper will use the term Free Economic Zones (FEZs) interchangeably with Free Trade Zones (FTZs) and Special Economic Zones (SEZs) as well. From time to time, however, it will be essential to note characteristics that distinguish the policy approach or policy objectives of individual countries (see Foreign Investment Advisory Service, 2008).

The creation of such zones aims to create unique investor-friendly places where foreign investors can import duty-free inputs and assemble finished items for sale on worldwide markets. Underlying the initial rationale for the creation of FEZs is the conviction that the comparative advantage of the host economy is low-cost labor. The benefit for the host comes in the form of high-skill job creation in manufacturing and new industries, pulling labor out of primary production (agriculture and extractive industries) and urban unemployment, with the added advantage of strengthening the balance of payments via increased exports (Frick et al., 2019).

Contemporary research shows that large flows of trade and investment are associated with high rates of host country growth. However, it is not easy to establish with certainty the direction of causality - do large flows of trade-and-investment lead to high rates of host country growth or do high rates of host country growth result in large flows of trade and investment (Dollar & Kraay, 2002; Irwin & Tervio, 2002; Rodriguez & Rodrik, 1999; Sachs & Warner, 1995).

Nevertheless, some reports published by the Peterson Institute of International Economics have shown that when trade-and-foreign investment liberalization go together, they cause higher than trend rates of host country growth (Moran et al., 2005). Trade liberalization alone may or may not

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be enough to generate higher growth rates (Moran, 2011). However, there is a synergistic effect of allowing trade-and-investment flows to increase together. Upon reflection, this finding should not be surprising since 60 percent of the transfer of goods and services across borders is generated within transnational corporate networks, and 40 percent takes place between related affiliates of international companies (Moran et al., 2005). Protectionist policies at the national level that hinder trade or retard investment block these international transactions from taking place.

Important as this identification of a primary positive causal link between trade-and-foreign investment liberalization and higher growth rates might be, contemporary analysis shows that an important new empirical discovery must be introduced into the design of development policy. The movement toward higher levels of domestic production and rising living standards come about not simply by producing and exporting more of the same goods and services but by upgrading and diversifying the production and export base of the country. For example, a study shows that the quality of exports (proxied by unit values) is positively correlated with the exporting country's level of development (Schott, 2004). Another study documents that richer countries tend to export more goods and a broader set of higher quality goods. Another study finds that countries that manage to export higher productivity goods enjoy both a faster growth rate and a higher standard of living than those that do not (Hausmann et al., 2007). Rapidly developing countries like China, Vietnam, Indonesia, and India exhibit export baskets with above-average skill-intensive goods in comparison to countries at a similar income level.

As competition for foreign direct investment (FDI) and trade share intensifies in a tightening global environment, more and more countries are looking at the potential of free economic zones to kickstart growth. This study asks: what have we learned from the experiences of developed and developing countries over recent decades? It has been more than 50 years since establishing the first modern free trade zones. However, it is only relatively recently, particularly for special economic zones since the 1990s, and particularly for free economic zones since the 2000s, that their popularity as a policy instrument has taken off.

Export-processing zones were designed to attract investment by a critical source of comparative advantage - low-cost labor - which was otherwise underutilized because of low levels of domestic investment and barriers (regulatory, infrastructure, etc.) preventing FDI. Free trade zones usually have been fenced-in estates with strict customs controls at entry, and sales are typically restricted mainly to export markets. The model has been highly successful in many developing countries. For example, it allowed many countries to create thousands of manufacturing jobs and shift dramatically away from agriculture (i.e., South Korea). Similar stories of industrialization and job creation can be seen in Korea, Taiwan, Singapore, and more recently in China, Vietnam, and Indonesia. However, the success of traditional free trade zone programs owes something in part to an unprecedented era of globalization of trade and investment that took place since the 1970s and accelerated during the 1990s and 2000s, enabled by the vertical and spatial fragmentation of manufacturing into highly integrated global production networks (Farole, 2011; Frick et al., 2019). Nevertheless, this model of free trade zones is now increasingly running up against its limitations. Indeed, it is perhaps no longer fit for purpose, given the global economy's changing macroeconomic and regulatory environment.

Increasingly it is not the existence of a free economic zone regime, an effective master plan, or even a fully built-out infrastructure that will make the difference in attracting investment, creating jobs, and generating spillovers to the local economy. Instead, it is the relevance of the free economic zone programs in the specific context in which they are introduced and the effectiveness with which they are designed, implemented and managed on an ongoing basis that will determine success or failure.

2. Free Economic Zones (FEZ) in Korea

2.1. Purpose and Incentives of FEZs in Korea

Korea's Free Economic Zones (FEZs) aim to create a world-class industrial and cultural complex by ushering in promising high-tech industries beyond the existing export processing zones or free trade zones. Korean government introduced FEZs that provide a favorable business environment and living conditions for foreign businesses and investors. First, Korea FEZ authorities focus on setting up "Invest Korea" projects to encourage foreign investments. Second, providing foreign investors with financial assistance and incentives, including tax benefits and cash grants. Third, improving the living conditions for foreigners such as foreign schools and medical services, and house rental services under the Special Act on Designation and Management of Free Economic Zones, Republic of Korea (2017) (Act No. 15309, Republic of Korea).

Korea FEZs include tax incentives for foreign companies and foreigners; they aim to promote balanced regional development in the country where at least a quarter of the population lives in the Seoul metropolitan area (United Press International, 2019). Three types of incentives are given: tax reductions, estate support, and subsidies (Free Economic Zone Planning Office, Republic of Korea, 2021): 1) No taxes are levied on corporate and individual income for a few years. In addition, the regional government does not impose the acquisition tax over 15 years and the property tax over ten years. 2) For companies renting an office, at

least 50% of rent reduction can be given to companies. 3) If a business entity has more than 30% of foreign investment, employers and employees of the organization can claim the following benefits: the location subsidies, the facility subsidies, the education subsidies, the employment subsidies, the promotion result compensation, the business transfer subsidies, and the funding subsidies.

2.2. Development and Locations of FEZs in Korea

The Free Economic Zone Planning Office of the Republic of Korea has been in charge of the project under the Special Act on Designation and Management of Free Economic Zones since its establishment in 2002 (Act No. 15309, Republic of Korea). In addition, the Korean government provides various tax benefits for foreign firms and foreigners, a more straightforward regulatory regime, a favorable living environment, and administrative services (Free Economic Zone Planning Office, Republic of Korea, 2021). Since the inauguration of a Free Economic Zone (FEZ) in 2003 in Incheon, FEZs have grown to nine in 2020 (Table 1).

2.2.1. First Stage of Designation

Incheon Free Economic Zone (IFEZ) was the first designated area in Korea in August 2003, comprising Incheon International Airport, Incheon Port, Songdo, Yeongjong, and Cheongna International City. The goal of the IFEZ is to transform these areas into hubs for logistics, international business, leisure, and tourism for the Northeast Asian region. IFEZ plans to be a self-contained living and business district featuring air and sea transportation, a logistics complex, an international business center, financial services, residences, schools and hospitals, and shopping and entertainment centers. In addition, IFEZ aims to bring in regional headquarters of multinationals and build up an international logistics hub by taking advantage of its geographical advantage.

Table 1: Development and Locations of FEZs in Korea

Stage	Designation Year	District Name	Location	Focus Industries
1st Stage	August 2003	Incheon FEZ	Incheon Metropolitan City	IT, BT, International Finance, Tourism & Leisure Industries
	March 2004	Busan-Jinhae FEZ	Busan Metropolitan City & Gyeongnam Province	Maritime Logistics, Shipbuilding Industries
	March 2004	Gwangyang FEZ	Jeonnam Province & Gyeongnam Province	Maritime Logistics, Materials Industries
2nd Stage	July 2008	Yellow Sea FEZ	Chungnam Province & Gyeonggi Province	Automobile Components, Value-Added Logistics Industries
	August 2008	Saemangeum-Gunsan FEZ[1)]	Jeonbuk Province	Automobiles, Shipbuilding, Green Industries
	August 2008	Daegu-Gyeongbuk FEZ	Daegu Metropolitan City & Gyeongbuk Province	Education, Medical, Knowledge-Based Industries
3rd Stage	April 2013	Chung Buk FEZ	Chungbuk Province	Tourism, Automobile Components Industries
	July 2013	East Coast FEZ	Gangwon Province	IT Components, Logistics, Tourism Industries
4th Stage	June 2020	Gwangju FEZ	Gwangju Metropolitan City	Eco-Friendly Future Vehicles, Smart Energy, Biomedical Industries
	December 2019	Ulsan FEZ	Ulsan Metropolitan City	Hydrogen Industry, Eco-Friendly Auto Parts Manufacturing, R&D Industries

[1)]After the cancellation of the designation of Saemangeum-Kunsan FEZ as a free economic zone in April 2018, the Saemangeum project is still underway in accordance with the Special Act on Promotion and Support for Saemangeum Project, Republic of Korea (Act No. 11542, Republic of Korea.

The Busan-Jinhae Free Economic Zone (BJFEZ) is divided into five areas and 19 subdistricts - New Port, International Business Town, High-tech & Manufacturing Area, Mechatronics, Education & Research Area, and Tourism & Leisure Area. The goals of BJFEZ are 1) to provide an optimal environment where people, capital, and technologies can come together to create synergy effects in Northeast Asia, 2) to develop the optimal logistics base bringing together ports, airports, railways, and roads, and 3) to facilitate easier interaction of the New Port and the neighboring industries: aviation, automobile, machinery equipment, and shipbuilding.

The Gwangyang Bay Area Free Economic Zone (GFEZ) is located on the Pacific Ocean's main sea route. GFEZ is positioned as the starting point for overland transport between Northeast Asia and Europe and between Northeast Asia and Central Asia when connected to the Trans-Siberian Railway, Trans-Manchurian Railway, and Trans-China Railway. Based on this geographical advantage, the area provides a business-friendly infrastructure with plentiful water and electricity supplies.

In summary, the first stage of designation of Korea FEZs - Incheon FEZ, Busan-Jinhae FEZ, and Gwangyang FEZ – is based on its location advantages and logistics and supply chain-related advantages. The value propositions of the first designated FEZs offer 1) these areas are located at excellent shipping and air logistics bases in Northeast Asia, and 2) they provide excellent industrial infrastructure. The primary industries for foreign investments include the high-tech industry, logistics, shipbuilding, materials industry, and manufacturing industry.

2.2.2. Second Stage of Designation

The Gyeonggi Free Economic Zone (GGFEZ) is located at the center of the West Coast Economic Belt, consists of three districts - the Pyeongtaek-Poseung District, the Hyeondeok, and the Siheung-Baegot District. GGFEZ invites foreign investments from high-tech, logistics, distribution, autonomous vehicles, automobile parts, and IT/BT-related industries. GGFEZ is one of the largest knowledge-based manufacturing clusters in Korea. Samsung Electronics, Hyundai Motor, Kia Motors, LG Display from Korea, and more than 300 global conglomerates - including 3M, Siemens, Sony, and Bosch - are located.

Saemageum-Gunsan Free Economic Zone (SGFEZ) consists of Saemangeum (a reclaimed region) and the Gogunsan archipelago, comprising 60 beautiful islands. SGFEZ focuses on futuristic new industries and international marine tourism and leisure industries. SGFEZ is designated as a model district for low-carbon green growth and is now being developed under the Special Act on Promotion and Support for the Saemangeum Project (Act No. 11542, Republic of Korea). SGFEZ is characterized by environment-friendly industries such as new recycled energy and bio-industries, leisure, and tourism.

The Daegu-Gyeongbuk Free Economic Zone (DGFEZ) aims to become one of Korea's largest knowledge-based industry clusters. DGFEZ offers excellent R&D facilities, commerce, and residential areas focusing on IT convergence, transport components, and medical businesses. DGFEZ is located in the center of the largest automotive cluster and a center of IT/SW, healthcare, and steel industries in South Korea. DGFEZ focuses on four major industries - IT convergence, high-tech transportation components, green energy, fashion design, and medical services. DGFEZ has 135 R&D institutions and 52 universities and colleges within the region, and more than 70,000 college graduates annually prepare to enter the job market in the region.

In summary, the second stage of Korea FEZs - Yellow Sea FEZ (now Gyeonggi FEZ), Saemangeum-Gunsan FEZ, and Daegu-Gyeongbuk FEZ – is based on strategic advantages for new industry clusters with strong government supports. The value propositions of the FEZs include 1) providing large-scale and various government supports and 2) providing excellent R&D, human resources, supporting industries, and infrastructure. The focus industries for foreign investments include IT, BT, high-tech, knowledge-based, low-carbon, R&D, medical and healthcare industries.

2.2.3. Third Stage of Designation

The Chung Buk Free Economic Zone (CBFEZ) is located at the center of Korea, allowing fast access to South Korea's inland regions. It is the largest IT-biotechnology convergence industry hub in South Korea - equipped with a cluster of facilities for solar energy generation, semiconductor manufacturing, and biotechnology businesses. CBFEZ aims to become a hub of the high-tech aviation industry, the aviation maintenance, repair, and operations industry in Northeast Asia, and a hub of intergraded R&D centers in Korea. CBFEZ has four major government R&D facilities and national biomedical facilities.

The East Coast Free Economic Zone (EFEZ) has rich reserves of nonferrous metals and minerals, basic materials for the ultralight material industry. EFEZ has rich reserves of nonferrous metals, minerals, and rare earth minerals –90 percent of its limestone, 50 percent of its dolomite and seawater lithium, and 25 percent of its silica stone come from this region. The EFEZ area was home to host the 2018 PyeongChang Winter Olympics. EFEZ aims to become a hub of cutting-edge green materials industries, international logistics, four-season maritime tourism, and winter sports businesses.

In summary, the third stage of Korea FEZs - Chung Buk FEZ and East Coast FEZ – is based on location advantages for rich natural resources availability. Therefore, the value propositions of the FEZs include 1) the availability of rich natural resources in the region and 2) excellent accessibility to supporting industries and infrastructure. The primary industries for foreign investments include green industry, tourism, leisure, sports, eco-friendly industry, and low-carbon industry.

2.2.4. Fourth Stage of Designation

The Gwangju Free Economic Zone (Gwangju FEZ) is a hub of AI-related industries in Korea - by integrating future eco-friendly vehicles, smart energy, and biomedical industries with artificial intelligence. In the Gwangju FEZ, there are Gwangju-type jobs for the labor-management win-win program, which is considered a new model for industrial sites in Korea. The Gwangju FEZ aims to build a future car industrial complex, a smart energy industrial complex, and an AI convergence industrial complex.

The Ulsan Free Economic Zone (Ulsan FEZ) is home to more than 80 companies and organizations - such as the Hydrogen Fuel Cell Demonstration Center and Korea Institute of Energy Research. In addition, the Ulsan FEZ aims to build Hydrogen Green Mobility Regulatory Free Zone, Next Generation Hydrogen Convergence Technology Research Center, Hydrogen Power Plant Technology R&D and Demonstration, Hydrogen Fuel Cell Demonstration Center, Hydrogen Economy Leading City, and Electrogen Auto Valley.

In summary, the fourth stage of Korea FEZs - Gwangju FEZ and Ulsan FEZ – is based on strategic advantages for new industries for the 4th industrial revolution. The value propositions of the FEZs include 1) new business opportunities for the 4th industrial revolution and 2) excellent accessibility to high-quality human resources, supporting industries, and infrastructure. The primary industries for foreign investments include the green industry, eco-friendly industry, AI convergence industry, future mobility industry, and future energy industry.

2.3. Lessons From Development of FEZs in Korea

KFEZs were developed to take advantage of the locations. The nine FEZs are scattered throughout South Korea, and development is still ongoing for many KFEZs. At the same time, the Korean government has already spent billions of dollars on laying the infrastructure to promote new high-tech, international business, leisure, and tourism hubs there. The country's state-of-the-art infrastructure and public transportation systems, admired by the rest of the world, are often cited as key advantages that allow businesses to reduce operating costs, shorten delivery times and provide better customer service (Forbes, 2017). As a result, the FEZs have attracted numerous businesses from all over the world, and while almost everyone acknowledges that the Korean labor force is highly educated (Forbes, 2017).

So far, FEZ policy has concentrated on building residential areas with insufficient foreign direct investments. It is advisable to encourage joint development or joint venture investment between local companies and multinationals to increase foreign direct investments. In this regard, a government task force concluded at the end of 2009 that the nationwide FEZ projects performed poorly and needed some changes (Free Economic Zone Planning Office, Republic of Korea, 2021; Yonhap News, 2020). Most FEZ projects focused on a mere urban development plan and would be modified to build up the original foreigners-oriented business environments as follows:

1) To allow international middle and high schools, which accommodate both foreign and Korean students to be established; 2) To establish international general hospitals for profit to treat foreigners under the Presidential Decree; and 3) To make test-beds for the deregulation of foreigner-related public services.

Korea FEZs accommodate many businesses, from manufacturers to logistics firms. The Korean government puts much effort into revitalizing its ailing exports amid the COVID-19 pandemic, disrupting global business activities and supply chains (Yonhap News, 2020).

3. Free Economic Zones in China

3.1. Special Economic Zones (SEZs) in China

Special Economic Zones (SEZs) in China are defined as small geographical areas that allow foreign companies to access lower taxes and better economic conditions for their business. SEZs were created as a catalyst for the Chinese economy to transition from a centrally planned economy to one that incorporated aspects from a centrally planned and free-market economy (FDIChina, 2020).

SEZs can have different definitions, and officially, in China, there are 14 open coastal cities, five special economic cities, and one special economic province. Some of these zones and areas could be close, but the content of the experiment is further specified for SEZs. For example, some focus on the coordinated development of urban and rural areas, while others focus on resource and environmental issues. They are part of China's gradual reform strategy, first conducting partial trials and then promoting experience adopted in the early reform period and opening up. After the reform and opening-up period, SEZs are mainly used as the new beginning of China's foreign trade. They have received

the country's comprehensive opening policy regarding the environment for investment, operating conditions, and preferential policies (FDIChina, 2020).

The country has comprehensively explored the establishment of SEZs that can quickly adapt to the laws of the national market. Particular policies of currency exchange control and tariff reduction better connect with foreign countries and attract foreign investments to China. To a large extent, these SEZs in China have developed rapidly in culture, economics, and trade. Compared with the surrounding provinces and cities, SEZs are one step ahead. SEZs focus on introducing foreign capital, the overseas Chinese capital, and Hong Kong and Macao-funded enterprises. Products from SEZs are mainly sold to foreign countries. By improving and promoting their economic conditions and preferential policies, SEZs attract foreign investment to build factories in China to produce those products. While developing the local economy, SEZs introduce cutting-edge advanced science, technology, and management technologies.

Foreign-invested enterprises established in SEZs shall be levied corporate income tax at a reduced rate of 15%. These are only the stippled-in-paper version of the benefits and the most direct ones. China has been famous for its socialist regime with a relatively tight grip upon foreign capital (FDIChina, 2020). The most significant benefit of opening a company in SEZs or places of that nature is that local governments are often allowed, and most importantly, motivated to loosen up somewhat. The development scope and current distribution of SEZs in China are shown in Table 2.

3.2. Free Trade Zones (FTZ) in China

Free Trade Zones (FTZs) are types of Special Economic Zones (SEZs) where goods may be imported, handled, manufactured, and exported without direct intervention from Customs of the People's Republic of China. Each FTZ in China has industry and economic focus, with different incentives to fulfill its requirements. Incentives and regulations in FTZs align with the government's ongoing reforms to open up the economy (The State Council of the Chinese Government, 2021).

FTZs offer several incentives such as reduced corporate income tax of 15 percent and duty-free import of machinery and equipment have given that the firms fulfill certain conditions. In addition to incentives in taxes and customs duties, the customs clearance process is more streamlined for declarations and payments. For example, companies can declare several batches of goods on a single form and issue a collective declaration for export and import, reducing clearance costs and increasing flexibility. Firms with adequate guarantees can also pay their tax in a one-time lump sum payment within a specific period for goods already imported. FTZs liberalize foreign enterprises in logistics and pharmaceuticals that are not widely available in China. The development and locations of FTZs in China are as follows (Table 2).

3.3. Prospects and Lessons from SEZs and FTZs in China

The purpose of the Chinese SEZs is to attract foreign investments, innovation, and knowledge. These opportunities for China, and the fact that it is a low-cost labor country, stimulate the build and development of infrastructure. As one of the initial four SEZs, Shenzhen in the Guangdong province is the beneficiary of this SEZ: transformed from a fishing village to a nationwide, even worldwide, center of innovation and development. Housing tech giants, telecommunication companies, and even claiming to be the first to achieve "full coverage" of 5G within the tech hub of China's Silicon Valley. As a reaction, the initial four SEZs transformed into 19 local development zones, seven large-scaled SEZs, local and national free trade zones, and high-tech zones to foster globalization in China (Global Connect Admin, 2021).

Currently, the incentives of SEZs do not need to be causally related to the success of the high-tech and developed metropolises (e.g., Shenzhen). While the economic liberation is indeed impactful for the growth of particular districts and businesses, not all of the 54 SEZs have been successful. With constant development, creating new SEZs, changing regulations, the business-friendliness, and the special tax programs for new entrants, Chinese SEZs are even more convenient for new investors aiming to advance to the Chinese market.

In 2013, China began experimenting with a new type of specialized SEZ - Pilot Free Trade Zones (FTZs). Beyond operating as export-manufacturing areas with traditional fiscal incentives, pilot FTZs received targeted support from the central government on economic liberalization and investment policy experimentation. For example, China first tested its negative list approach to foreign investment in its Shanghai FTZ in 2013 (China (Shanghai) Pilot Free Trade Zone, 2021). The locations of FTZs are not chosen randomly, but there is a strategic and long-term plan for each zone. Each zone serves specific purposes, covering different industries and improving the connectivity and collaboration with neighboring regions. Since the first FTZ in Shanghai in 2013, the Chinese government has added a dozen more and has plans to expand further and create new zones. It is a crucial brick of the One Belt One Road Initiative (BRI). In addition, China plans to develop infrastructure and invest in many countries in Africa, Asia, and Europe (South China Morning Post, 2021).

Table 2: Development and Locations of SEZs and FTZs in China

Development Stage	Designation Year	District/Location	Strategic Objectives
Development and Locations of Special Economic Zones (SEZs) in China			
1st Stage SEZs (Four Coastal Cities)	1979	• Shenzhen • Zhuhai • Shantou • Xiamen	To provide broader flexibility to the coastal provinces of Guangdong and Fujian to attract foreign investment, with additional exemptions in the four cities.
2nd Stage SEZs (14 Coastal Cities)	1984	• Dalian • Qinhuangdao • Tianjin • Yantai • Qingdao • Lianyungang • Nantong • Shanghai • Ningbo • Wenzhou • Fuzhou • Guangzhou • Zhanjiang • Beihai	China further opened 14 coastal cities to overseas investment to provide broader flexibility to the coastal provinces.
3rd Stage SEZs (Eight Coastal Areas/Regions)	1988	• Hainan Island • Yangtze River Delta • Pearl River Delta • Xiamen-Zhangzhou-Quanzhou Triangle • The Shandong Peninsula • The Liaodong Peninsula • Hebei Province • Guangxi Autonomous Region	China further opened its border areas to the outside world and overseas investment. The Chinese government decided to turn Hainan island into the biggest special economic zone in China and to enlarge the other four special economic zones. The State Council[1)] expanded the open coastal areas, extending into an open coastal belt.
4th Stage SEZ	1990	• The Pudong New Area in Shanghai city[2)]	The Chinese government opened the Pudong New Area in Shanghai to overseas investment.[3)]
5th Stage SEZs	1992	• 15 Free Trade Zones • 32 State-level Economic and Technological Development Zones • 53 High-tech Industrial Development Zones	The State Council[1)] has opened several border cities, and in addition, opened all the capital cities of inland provinces and autonomous regions. In addition, 15 free trade zones, 32 state-level economic and technological development zones, and 53 new and high-tech industrial development zones have been established in large and medium-sized cities. As these open areas adopt different preferential policies, they play the dual roles of “windows” in developing the foreign-oriented economy, generating foreign exchanges through exporting products and importing advanced technologies, and accelerating inland economic development.
6th Stage SEZs	2010	• Kashgar in Xinjiang	The State Council[1)] designated the city of Kashgar in Xinjiang as an SEZ. Kashgar is close to China’s border with the independent states of former Soviet Central Asia and the SEZ seeks to capitalize on international trade links between China and those states.

Table 2: (Continued)

Development Stage	Designation Year	District/Location	Strategic Objectives
Development and Locations of Free Trade Zones (FTZs) in China			
1st Stage FTZs (One FTZ)	2013	• Shanghai Pilot Free Trade Zone (Shanghai FTZ)[2]	The State Council[3], as the first, acted as a testing ground for legal innovation, offering fewer restrictions to attract foreign investments. In particular, it • offered relaxed incorporation requirements • adopted the use of the Negative List for pre-approval procedures • implemented a one-stop application process
2nd Stage FTZs (Three FTZs)	2015	• Fujian FTZ • Guangdong FTZ • Tianjin FTZ	The State Council[1] announced three more FTZs in Fujian, Guangdong, and Tianjin, each with strategic objectives. Fujian FTZ supports trade with Taiwan, Guangdong FTZ supports economic integration with Hong Kong and Macao, and Tianjin supports Northeastern China and helps develop offshore financial markets.
3rd Stage FTZs (Seven FTZs)	2016	• Chongqing FTZ • Liaoning FTZ • Henan FTZ • Hubei FTZ • Shaanxi FTZ • Sichuan FTZ • Zhejiang FTZ	The State Council[1] announced seven more FTZs to help support economic development in Western China and the Belt and Road Initiative (BRI).
4th Stage FTZs (Seven FTZs)	2018	• Hainan FTZ	The State Council[1] announced an FTZ in Hainan to help support the economic development of the island.
	2019	• Jiangsu FTZ • Shandong FTZ • Hebei FTZ • Heilongjiang FTZ • Guangxi FTZ • Yunnan FTZ	The State Council[1] announced six more FTZs to help support economic development in six additional provinces.
5th Stage FTZs (Three FTZs)	2020	• Beijing FTZ • Anhui FTZ • Hunan FTZ	Beijing – Fintech, financial services, and service trade innovation. Anhui – AI, robotics, integrated circuits, fintech, and smart cars and appliances, incorporating cities of Hefei, Wuhu, and Bengbu. Hunan – AI manufacturing, quantum computing, renewable energies, and green tech, biomedicine, agritech, and e-commerce, incorporating cities of Changsha, Yueyang, and Chenzhou.

[1] The State Council of the Chinese Government (2021).
[2] China (Shanghai) Pilot Free Trade Zone (2021).
[3] The State Council of the Chinese Government (2019).

Thus far, FTZs have been an effective means of testing new economic policy under Xi Jinping and often forecast Beijing's long-term policy objectives (Henderson, 2020). FTZs also account for a significant portion of China's foreign trade and investment. As China pivots away from export-manufacturing to a "dual circulation" strategy focused on domestic demand and technological self-sufficiency, FTZs are again leading the way. China's aspirational objectives to

establish self-sufficient technology supply chains become a global leader in the digital economy, and transition from low- to high-value-added manufacturing are apparent in the structure of China's newest FTZs. On the other hand, the lack of practical measures to increase foreign access to China's domestic consumer market indicates that Beijing may not be as eager to open up its domestic economy as some policymakers have recently indicated.

We notice that FTZs in China are mostly located close to major harbors and airports, where much commercial activity occurs. In recent years, the government has established new FTZs in central parts of the country due to strategic reasons. The FTZs will play a crucial part in China's long-term development as a developing country and be necessary for the initiation and expansion of the BRI. On September 21, 2020, the State Council of the Chinese Government announced plans to establish three new pilot FTZs in Beijing, Hunan, and Anhui provinces. In the announcement, the authority said the new batch of pilot FTZs "demonstrates the country's firm determination to accelerate the formation of a new development pattern through a higher level of opening-up" (Central Committee of the Communist Party of China, 2021). While this "new development pattern" will become more apparent as new FTZs are constructed, initial plans indicate a heavy emphasis on technological innovation and supply chain restructuring. The Beijing FTZ focuses on digital payments innovation - local officials will work with the People's Bank of China to establish a legal digital currency zone and digital finance system in the Beijing FTZ using a standardized system for digital assets exchange (China Daily, 2020).

The Hunan and Anhui FTZs, while not as experimental as the Beijing FTZ, similarly aim to support technological development. Plans for the Hunan FTZ include the construction of advanced manufacturing clusters that produce high-end equipment, new-generation information technology, and nonferrous metal processing. In addition, the Anhui FTZ will have an advanced manufacturing center to produce integrated circuits, artificial intelligence, and financial technology (fintech) applications (Xinhua News, 2020a, 2020b).

However, how China's new FTZs promote "a higher level of opening-up" in the domestic economy is less clear? While plans for all three new FTZs encourage regionally "integrated development," the proposed methods for achieving such integration do not represent the kind of needle-moving policy shift necessary to increase foreign access to the Chinese economy indeed. Instead, focusing on regionally integrated development in the new FTZs may reinforce Beijing's long-standing preference for domestic champions, which will benefit from investment in regional economic integration while enjoying exclusive full access to China's domestic market.

In sum, with the introduction and rapid development of FTZs, the Chinese government has made it remarkably easier to open and do business domestically. Moreover, China recently also announced big plans to further boost the cross-border E-commerce market by easing regulations and expanding the areas of FTZs (Export2Asia, 2020). As a result, the Chinese E-commerce market has exploded, and we still see a high demand among foreign companies that wish to set up manufacturing operations in China. However, doing business in China is still not the most straightforward task on hand, and many stand on the sidelines without knowing how to get started.

4. Lessons from the Comparative Study

The recent success of the first SEZs in China underscores the importance of positioning the zone program to leverage the country's comparative advantage. While the program in the first SEZs initially aimed to attract high-technology investment, it took off when it made a concerted effort, which allowed it to leverage its comparative advantage in low-cost labor. Beyond the low-cost labor-based advantages of the first SEZs, the critical contribution of the zone program was not, in fact, incentives, which are relatively modest in global terms, but rather the provision of serviced industrial land infrastructure and relatively reliable supply chains. Indeed, some research (Farole, 2011; Foreign Investment Advisory Service, 2008) showed that on a global basis, infrastructure reliability has a strong association with special economic zone success, while incentives have no measurable effect.

In contrast, the generally unsuccessful experience of zones in Korea and China to date highlights some critical lessons in zone development.

First, separating political support from political objectives in zone projects is essential. While solid commitment from the government is needed, projects must be carefully designed based on clear strategic plans - the business economics must be there.

Second, despite the concept of zones as enclaves, in practice, their success is almost entirely entwined with the competitiveness of the national economy and the national investment environment. Many special economic zones are operating in an environment of poor regional competitiveness. Furthermore, regardless of what is done inside the zones, they face challenges linking the zones and global markets, including critical infrastructure challenges.

Third, a clear and transparent legal and regulatory framework codifies the program strategy and establishes the "rules of the game" for all stakeholders involved in the process. However, de facto implementation is of equal importance. In many free economic zones, the authority responsible for developing, promoting, and regulating the

program lacks resources, capacity, and institutional authority to carry out its mandate.

For special economic zones to be a success in the long term, they should contribute to the economy's structural transformation, including diversification and economic upgrading. Thus, it requires leveraging dynamic economic benefits from investment and employment. Countries that have been successful in deriving long-term economic benefits from their special economic zone programs have established the conditions for the ongoing exchange and the accompanying hard and soft technology transfer between the domestic economy and investors based on the zones. The transformation includes investment by domestic firms into the zones, forward and backward linkages, business support, and the seamless movement of skilled labor and entrepreneurs between the zones and the domestic economy.

The principal factors explaining why many countries have distorted economic structures and lack sufficient dynamism are political. In this context, free economic zones can perhaps be most effective in catalyzing economic reform processes. Indeed, this is the classic case of China's SEZs, which were used as a vehicle to test liberal economic reforms and introduce them to the broader economy in a gradual way. One of the main differences between zone programs that have been successful and sustainable and those that have either failed to take off or have become stagnant enclaves is the degree to which they have been integrated into the broader economic policy framework of the country.

Finally, SEZ's impact on host societies goes well beyond economic efficiency. SEZ programs benefit from ensuring ESG investment and environmental sustainability. However, they are unlikely to achieve the benefits possible from the current ongoing SEZ programs and are likely to be forced into a race to the bottom. With economic prosperity, social justice, environmental sustainability, culture is recognized as the fourth pillar of sustainable regional development. There is a new positive direction of involving the cultural sector and communities while developing strategies for regional development. Culture with sustainable regional development is a horizontal priority, and it plays a vital role in promoting and enabling sustainable development. Therefore, creativity, creative society, and the creative economy are the essential drivers of regional prosperity. Sustainable regional development requires ascertaining a region's identity, values, and forces shaping its future. Identity enables values, and values define the direction of actions. This direction is only effective when trends and the broader strategic framework are applied. In this context, culture helps define regional identity, express its core values, and communicate the desired change. Each region is a unique territory as a geographic area and a specific historical and cultural domain.

Regional planning needs to encompass the identity arising from the place and often has contradictory value logics. Taking cultural dimension into account invites regional stakeholders to decide which values to prioritize and move away from crisis management towards sustainable development. When it is exercised locally by stakeholders, culture can be practiced at the organizational, local, regional, national, and international levels and become a great planning tool. Without seeking synergies between the local cultural context, the complex past, and an uncertain future of the region, development goals can remain simply declarative slogans that mean nothing to places and people. Regions now have a unique opportunity to take advantage and localize the principles of sustainable development according to their local cultural context.

5. Discussion

The traditional rationale for SEZs, as indicated earlier, focused on low-wage job creation and labor-intensive export generation, with hopes for a bit of increased value-added within SEZ operations accompanied by the beginnings of backward linkages into the domestic economy. Instead, it is a primitive appraisal of how SEZs can be used to promote a nation's economic and regional development. In the contemporary period, a much more dynamic appreciation of the role that an FDI-SEZ-development strategy can potentially play as part of a more sophisticated contemporary development policy. The section concludes with a recommendation of what is needed to generate backward linkages from foreign investors in SEZs to local businesses in the host economy.

5.1. Rethinking Relationship Between Foreign Direct Investment, Trade, and Development

The diversification and possible upgrading of a country's production and export base does not come about smoothly and naturally. There are essential market failures that inhibit the process. Identifying the nature of these market failures and devising policies to overcome them are central for a country to climb up the development ladder. For example, the growth diagnostics theory suggests that when a country liberalizes trade and investment and improves business and financial regulations, these reforms might be sufficient to expand the base of low skill-intensive exports, consistent with the most primitive form of comparative advantage (Hausmann & Rodrik, 2003; Hausmann et al., 2004). However, the economy may fail to move beyond this low skill-intensive export base while per capita income levels stagnate.

International markets cannot be called upon to generate development on their own. Trade and investment liberalization remain central to generating growth and expanding welfare. However, public authorities in the developing world must

devise carefully calibrated interventionist policies to overcome the obstacles and market failures that inhibit the rise of new players on the international scene. Imperfections in the way international markets work to frame the puzzle for contemporary debates about development strategy: why do economic, institutional, and regulatory reform not result in higher levels of national income? Frequently, the failure cannot be traced directly to a high cost or unavailability of capital, nor obstacles to business activity in general. Instead, the bottleneck is an inability of local entrepreneurs to identify new non-traditional business activities that might be based in the domestic economy.

Here a given country does not have to depend solely upon the entrepreneurial abilities of the local business community when the economy needs to break out of the mold it finds itself. As the new development models that comprise "endogenous growth theory" teach, foreign direct investment and the formation of multinational partnerships and alliances can be the transmission mechanism for ideas about new and more sophisticated economic activities. Foreign direct investment and the formation of multinational partnerships and alliances in today's world mean that developing countries do not have to produce ideas to use ideas. The already developed countries have a large stock and a continuous flow of technologies, quality control standards, and marketing procedures that can yield significant living standards as they are deployed worldwide. This competitive advantage provides the setting where an FDI-SEZ-development strategy can become a central element in recasting a developing country's development trajectory. As the earlier country narratives suggest, to tap into these vast flows of high-skill intensive FDI operations, developing countries have to create attractive SEZs with an effective foreign investment promotion effort.

5.2. Creating Linkages Between Foreign Investors and Local Community Resources

Multinational investors that locate their operations in developing country SEZs take great care to avoid technology transfer horizontally to prevent the emergence of rivals. However, as the earlier country case studies showed, some transfer of technology, management, and production skills nonetheless occurs as managers, engineers, and workers move from foreign firms to set up their own SEZ companies.

In the vertical direction, much different dynamics are at work. Foreign investors in developing country SEZs are self-interested in finding low-cost, reliable suppliers in the host economy. Javorcik and Spatareanu (2005) showed that these foreign investors help potential local suppliers set up production lines, quality control training, management practices, and other kinds of financing and introduction to export markets. So, the spread of links between foreign investors and local companies is an alluring possibility for any country considering the option of beefing up an FDI-SEZ-development strategy.

However, the spread of backward linkages has varied dramatically across countries and is by no means assured. In the first instance, the extent of local procurement by foreign investors depends on a host country business-friendly climate that allows local firms to grow and prosper. Local companies need contract enforcement, reliable infrastructure, and access to duty-free inputs no less than the foreigners if they become certified as suppliers to foreign exporters in the SEZs. The nature and extent of subcontracting also depend upon the gap between the capabilities of the local business elite and the sophistication of what is demanded by the foreign investors, so a more robust local private sector provides means a greater probability of successful supply chain development.

6. Conclusion

In SEZs, foreign investors can import duty-free inputs and assemble final goods for sale in international markets. Underlying this rationale is the conviction that the comparative advantage of the host economy is low-cost labor. The benefit for the host comes in the form of high-skill job creation in manufacturing and new industries, pulling labor out of traditional production (i.e., agriculture and extractive industries), and urban unemployment, with the added advantage of strengthening the balance of payments via increased exports.

The paper shows that this initial conception of the role of SEZs has undergone significant change as individual countries have tried to enhance the contributions and avoid damages from incorporating SEZs into development strategy respectively, over time.

To a certain extent, individual country cases with more positive SEZ outcomes show mirror-image characteristics than less-successful SEZs, but each experience offers instructive new features. The country narratives included here show that countries can benefit from SEZs without getting everything right all at once; they can use SEZs to contribute to host country growth and welfare through various policy improvements at the margin. Moreover, the country narratives demonstrate that countries can replicate the success of others if they are ready to commit themselves to start down what will be called an FDI-SEZ-development path.

In conclusion, achieving success with SEZ programs in the future will require adopting a more flexible approach to using the instruments of SEZs in the most effective way to make the most of the country's sources of comparative advantage. The new strategy will require much broader policies than the narrow scope of any SEZ program alone,

such as: 1) Promoting skills development, training, and knowledge sharing; 2) Promoting new industry clusters (i.e., for the 4th industrial revolution); 3) Supporting the integration of regional value chains; and 4) Supporting public-private institutions, both industry-specific and transversal. In doing so, achieving success with SEZ programs in the future will lead to a change from relying on fiscal incentives and wage restraint to facilitating a more effective business environment to foster firm-level competitiveness, local economic integration, and social and environmental sustainability.

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