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Overview

Special Economic Zones (SEZs) have become a popular policy instrument around the world. Encouraged by the success stories of SEZs in the 1980s and 1990s in East Asia, policymakers in the developing world increasingly see them as a way to easily promote industrial development, attract foreign investment, and stimulate job creation. However, results have not always lived up to expectations – for example, in most sub-Saharan countries, SEZ policy has failed to generate significant upticks in investment, exports, or job creation in recent years (Farole and Moberg, 2014).

In this brief, we argue that SEZs should not be perceived as a silver bullet for industrial development. The success of SEZs in China is appealing and policymakers in other developing countries may be tempted to implement copycats of the Asian model. Instead, SEZ policy is more likely to succeed if it takes a country-specific approach, aiming at reducing the most stringent barriers to growth and making sure that the benefits of zones outweigh their costs.

In the medium term, governments should ensure that zones do not become isolated islands. Instead, they should produce benefits for the economy at large. Finally, SEZs can serve as a means for policy experimentation to test reforms and measure their impact before being scaled to the rest of the economy. To assess the effect of such policies, and more broadly whether SEZs have achieved their objectives, Monitoring and Evaluation (M&E) programmes should be put in place.





In brief:

- SEZs are not a miracle solution for industrialisation and job creation.

 The success of SEZ programmes in China is unlikely to deliver the same impact everywhere. Several underperforming zones around the world have unsuccessfully pursued this strategy, especially in sub-Saharan Africa.

 Policymakers should instead focus on adopting a country specific approach to SEZ policy and use cost benefit analysis to determine whether an SEZ is an appropriate policy intervention.
- SEZs can generate important positive spillovers, which governments should promote through soft policies. SEZs can generate positive externalities on firms, inside and outside zones, through several channels. This has the potential to increase aggregate productivity. Soft policies, such as linking zone investors with local suppliers or promoting trainings on the job, can help maximise the benefits of SEZs for the host economy.
- Effective Monitoring and Evaluation (M&E) should be a crucial component of SEZ policy, particularly if zones are used as policy laboratories. To effectively manage zones and learn about and improve SEZ regulations, policymakers should set up rigorous M&E systems. This can allow policymakers to use SEZs as a testing ground for economic policies and identify those that work before rolling them out more widely.

1. Introduction

Special Economic Zones (SEZs) have become a popular policy instrument for governments, particularly in developing countries. SEZs exist in very different forms and sizes and under various names: Free zone, export processing zone, enterprise zone, and so on. They can generally be defined as geographically delimited areas where the government provides infrastructure support and implements a lighter regulatory and fiscal regime than the one that prevails outside the zone. In their most common structure, SEZs offer lower customs duties and tariffs, income tax breaks, streamlined administrative procedures, and more business-friendly regulations with respect to land access or employment rules.

Over the last two decades, the number of SEZs in the world has increased six fold, from about 900 zones in 1998 to 5,400 in 2018 (UNCTAD, 2019). While the majority of SEZs are in Asia, with more than half of the zones being in China alone (see Figure 1), 147 countries have now implemented SEZ policy.

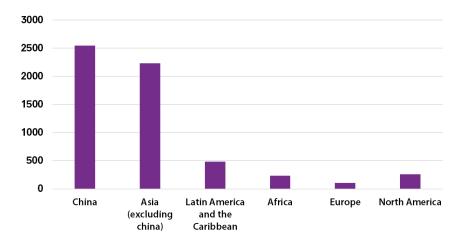


Figure 1: Number of SEZs by region, 2019

While the objectives behind SEZ policy also vary, most governments in lowand middle-income countries build SEZs with the hope that they will attract Foreign Direct Investment (FDI), create jobs, boost and diversify exports, initiate the industrialisation process of the economy, and generate inclusive growth.

In the next sections, we discuss three pillars of SEZ policy. The first relates to adopting a country-specific approach to zones. The second aims at promoting spillovers from FDI firms located in the zones. The third is Monitoring and Evaluation (M&E), which is a necessary instrument to measure the performance of zones and the policies being tested there.

2. A country-specific approach to SEZ policy

Asian SEZ success

SEZs in Asia, and particularly in China, through their impressive outcomes, have become an inspiring model for industrial policy globally. As shown in Figure 1 above, China is home to about 2,500 SEZs. In 2010, zones in China accounted for more than 30 million jobs, 22% of national gross domestic product (GDP), 46% of FDI, and 60% of exports (Zeng, 2010).

A study by Wang documents that the first four SEZs in China (Shenzhen, Zhuhai, Shantou, and Xiamen) accounted for around 60% of all FDI flows during the years that followed their establishment. Shenzhen, once a traditional fishing village, has now become a megacity and one of China's most important manufacturing bases. Between 1980 and 2008, Shenzhen's GDP grew at an average of 27% per year (Zeng, 2010).

Other Asian countries have also run very successful SEZ policies. In its first five years of operations, the Korean Masan SEZ zone attracted over US\$ 88 million of FDI (Aggrawal, 2012). The zone was also an important source of employment in the initial stages of the country's development with over 21,000 jobs created. Moreover, the SEZ created market opportunities for firms outside the zone. The share of domestic procurement in total imports to the zone reached 40% by 1990 (Dorsati, 1999).

Country context matters

This success has promoted a wave of SEZ projects in developing countries, especially in sub-Saharan Africa, where even more zones are expected to be built over the next decade (Farole and Moberg, 2014). However, a number of case studies have documented failures of SEZs, at least in their early stages.

In 2005, India announced a comprehensive SEZ policy that was established by the SEZ Act. Despite the generous benefits that this Act has provided, India's SEZs have underperformed relative to expectations. As of 2014, although 625 SEZs had been formally approved across the country, only 152 sites were operational (Khandelwal and Teachout, 2016). According to a government audit, the SEZ programme employed 284,785 people, a fraction of the projected total of 3,917,677 (Comptroller and Auditor General of India, 2014).

In Africa, SEZs have failed to generate significant improvements in employment, exports, and investments, particularly in comparison to the Asian and Central American metrics. For example, SEZs in Honduras and the



Dominican Republic have generated 10 - 15 times more employment per capita than in Kenya and Ghana (Farole, 2011). In a snapshot study of SEZs in 2019, the United Nations Conference on Trade and Development (UNCTAD) documented that in 65% of countries, investment promotion agencies depict their zones as not sufficiently occupied by tenants and hence are classified as underutilised zones.

A broader empirical analysis of zone performance was recently conducted by the World Bank. The study uses data from 553 zones in 22 countries and covers the period of 2007 to 2012. The results show that zone growth is difficult to sustain over time. The economic dynamism of the most successful zones happens in their early years and typically slows down over time. Moreover, rather than catalysing economic development, most zones' performance has resembled their national average (World Bank, 2017).

It is also important to put the success of SEZs in China into historical and economic context. SEZs were an important pillar of the Open Door Policy in 1978. This programme was aimed at transitioning China from a closed centralised economy to a more open market economy. As such, it is not clear whether the success of Chinese SEZs should be attributed to zones themselves or to this transition that revealed China's strong latent comparative advantage in manufacturing activities.

This observation is particularly important for countries considering to simply implement the Chinese SEZ model in other contexts, as it is unlikely to bear the same fruits. In particular, most countries in Africa today do not resemble China in the 1980s. This brief advocates for a country-specific approach to SEZs. The next subsection describes how this advice can be implemented in practice.

3. A framework for SEZ policy

The objective of SEZ policy should be to remove particular economic distortions that cannot be addressed through countrywide reforms, either as a result of political constraints or because of the high costs of implementing certain policies on a large scale. As such, the decision to establish a zone should be backed by evidence that demonstrates why SEZs constitute an appropriate form of policy intervention.

Developing countries are typically subject to a wide range of market failures. Customary land titling systems or poorly protected property rights can significantly reduce investment (Besley and Ghatak, 2010). Poor quality infrastructure typically increases trade costs and is especially so for firms serving export markets (Donaldson, 2010). Red tape and unreliable electricity supply considerably increase the cost of doing business (Alcott et al., 2016).

All of these constraints are present in low-income countries, but their prevalence may vary from one country to another. By dedicating land for industrial activities, providing high quality infrastructure, and streamlining bureaucratic procedures, SEZs have the potential to overcome these distortions.

The country's industrial strategy should also dictate the type of SEZ to be built and the services provided to investors there. The quality of port infrastructure and streamlined customs procedures typically play a more important role for firms integrated in global value chains than FDI firms sourcing their inputs locally and serving the domestic market. In this regard, considerations should be given to the country's competitive advantage and its stage of economic development.

This is reflected in the case of Bangladesh, whose SEZ programme first focused on attracting labour intensive export oriented industries. To reach this objective, zones significantly reduced the delay to obtain an import license, to clear customs, and the number of power outages (Khandelwal and Teachout, 2016). In turn, the country's eight zones attracted US\$ 2.6 billion worth of investment and generated more than 350,000 jobs (IFC, 2016).

In summary, simply allocating land and offering tax incentives for foreign investors to relocate to this land is unlikely to be a successful SEZ strategy. The "build it and they will come" approach only works when there is huge pent-up demand for investing in a given country.

The determinants of SEZ success

Systematic studies on the factors contributing to the success of SEZs are rare, in part due to the difficulty in collecting data on the performance of these zones across countries. This implies that work on the issue mostly consists of case studies from which it is difficult to infer clear patterns. Moreover, for the reasons presented previously, as SEZ policy should be country-specific, this exercise may

not be particularly meaningful. However, a number of lessons applicable to most countries have emerged from a series of recent global studies on SEZs.

Although tax breaks are thought to play an important role in the value proposition of zones, Farole (2011) documents that the provision of financial incentives does not correlate with SEZ outcomes. By contrast, rules aimed at improving the business climate matter for explaining zone performance. In other cases, incentive packages may even engender a rent-seeking behaviour by firms in the zone, undermining the entire viability of the SEZ scheme (Rodríguez-Pose and Arbix, 2001; Sarif and Ismail, 2006; Farole and Akinci, 2011).

Evidence generated by an International Growth Centre (IGC) funded project in the Kigali SEZ in Rwanda shows that financial incentives are among the least important factors for the flow of investment into the zone (Steenbergen and Javorcik, 2017).

In 2010, the United Nations Industrial Development Organization (UNIDO) conducted a business survey of 7,000 companies in 19 sub-Saharan African countries across several sectors. The results suggest that tax incentives packages ranked 11th out of 12 in importance compared to other factors, like economic stability and costs of raw materials (UNIDO, 2011). Tax incentives are an important component of international competition to attract investment, but this evidence suggests that countries should not aim to provide more incentives than their neighbours to increase FDI flows.

The choice of location of SEZs appears to be particularly important. SEZs located closer to big cities are more likely to succeed, at least in the short run (World Bank, 2017). Furthermore, all of the first four Chinese SEZs were located in coastal areas near thriving markets like Hong Kong, Macao and Taiwan (Wong and Johanne, 2017).

Finally, the governance structure of SEZs around the world varies. Some countries adopt government funded zones, while others provide the land but contract with private companies to develop the land. The evidence on the optimal structure of zones is thin, but a few studies argue that they are not a crucial element of zone performance (World Bank, 2017). This stresses again the point made earlier that zone development should be country-specific.

Towards a cost-benefit analysis of SEZs

Even when many of the country specific conditions dictate that SEZ policy would be an appropriate instrument for economic development, a decision to establish an SEZ should ultimately be based on a cost-benefit analysis. Too often, feasibility studies are seen as a procedural activity that must be 'ticked off' for investments to go ahead (Farole and Moberg, 2014). The analysis must extend beyond measuring the direct benefits generated and the associated costs as they do not give a full picture.

Hence, a first order priority is to measure the expected gains generated from the direct economic benefits of the zone. The array of direct economic benefits includes: Employment generation, foreign exchange earnings, FDI, and export growth (White, 2011). Duranton and Venables (2018) argue that this evaluation should not be limited to quantity change (the economic activity generated by the project) but also include valuation changes (the net social value for the economy for the quantity changes).

In other words, there should be a clear vision on why certain economic

impacts are being targeted (COMCEC, 2017). These benefits should be monitored on a regular basis to ensure that targets are being met. A limited set of objectives to focus on during the early stages of an SEZ is likely to be preferable to following too many targets at the same time.

These benefits should be weighed against the costs of an SEZ. While there may be significant savings from concentrating infrastructure and public services in one delimited area, the costs of SEZ policy remain high. Infrastructure development, operating the zone authority, and revenues foregone from tax exemptions should all be incorporated into the costs of the zone. Unfortunately, revenue loss from financial incentives is rarely a concern for policymakers when they consider establishing an SEZ. In sum, SEZ policy should be subject to an exhaustive profit and loss statement as any other project (World Investment Report, 2019).

Indirect factors should also be considered. On the cost side, SEZs have long been criticised for their negative social and environmental impacts. Labour standards and working conditions in zones have been highlighted (ILO, 2017) as an important downside, as well as pollution or land rent-seeking opportunities. On the indirect benefits side, SEZs generate indirect economic benefits and can exert positive externalities on the rest of the economy. They also provide an opportunity for policy experimentation and learning. We explore these two topics in detail in the next sections.

4. Promoting spillovers from SEZs

Policymakers typically consider SEZ policy for its potential impact on investment, job creation, and export diversification. However, these effects can remain relatively small compared to the size of the economy, particularly if only a few zones are built. Additionally, focusing solely on these direct economic benefits risks creating zones that resemble offshore platforms where investors take advantage of an inexpensive, low-skilled labour supply, with no connection to the rest of the economy.

Thus, adopting a wider lens when designing and evaluating SEZs is essential. SEZs and the foreign firms they attract can generate positive externalities to the wider economy, which policymakers should seek to understand and promote.

Positive externalities from FDI and SEZs

SEZs can generate spillovers through a number of channels. First, they can be an important source of economic development for neighbouring regions. Hyun and Ravi (2018) show that SEZs in India *significantly increased economic activity in areas around the zones*, promoting structural change by encouraging movement into a larger and more productive formal sector. The authors argue that nearby firms are incentivised to register in order to signal their quality to firms inside the zones. Nightlight data also confirms that cities bordering SEZs benefit from the zone's presence (World Bank, 2017).

Spillovers can also take the form of the *diffusion* of ideas and technology. Duranton and Venables (2018) discuss the agglomeration effects of SEZs, which promote knowledge spillovers between firms by clustering investors in specific areas. The evidence on horizontal spillovers is limited, however, so this is fertile ground for further research.

SEZs can also bring about important economic benefits through buyer-supplier relationships between foreign firms inside the zone and domestic companies outside of it: First, the presence of *FDI provides new market opportunities for local firms to increase their sales.* Second, these business interactions can generate *productivity gains for domestic suppliers.* Javorcik (2004) finds evidence of positive productivity spillovers from FDI to local upstream suppliers in Lithuania.

Kee (2015) identifies another, related productivity spillover channel: The shared supplier effect. As FDI firms typically require higher quality standards from their suppliers, other downstream domestic firms indirectly benefit from quality upgrading and productivity gains from these common suppliers.

Atkin, Khandelwal, and Osman (2017) document two channels through which "backward linkages" between local suppliers and foreign buyers create

productivity growth for domestic firms.¹ First, the increased volume of sales generates a learning curve that improves the efficiency of suppliers. Second, feedback from foreign buyers on the quality attributes of the products allows suppliers to learn about the specifications of higher quality goods.

Taken together, these studies provide strong evidence that business relationships established between domestic suppliers and foreign firms located in SEZs can generate important economic benefits for the economy. Bloom and van Reenen (2010) show that FDI firms are more productive and use better management practices than local businesses. A such, multinational enterprises in SEZs can also contribute to knowledge and technology transfers by upgrading the skills of the workers they employ.

An ongoing IGC project studying spillovers in Thilawa, Myanmar's first SEZ, has found that *acquiring new skills is the main benefit of the zone for domestic workers* (Khandelwal et al., 2018, see Figure 2). In turn, trained workers then carry this expertise into domestic firms or can even start new businesses when they leave the zone.

In South Korea, around half of workers trained in the Masan SEZ moved on to work in domestic electronics manufacturing firms (Jenkins et al., 1998). White (2011) notes that some workers from the Shenzhen SEZ in China used their skills to launch new companies outside the zone.

Promoting spillovers with policy

SEZ spillovers do not occur in a vacuum. A number of frictions and barriers can prevent spillovers from materialising. For example, information asymmetries between local and foreign firms combined with limited incentives for using local suppliers may inhibit the potential for backward linkages.

In the Thilawa SEZ, Khandelwal et al. (2018) document that less than 20% of material costs are sourced domestically. Similarly, high turnover of the labour force and language frictions can reduce knowledge transfers to domestic workers. These frictions create a rationale for government intervention.

There is no consensus on the type of policies that promote spillovers and no evidence on whether these policies are cost-effective. In theory, "hard" regulations on minimum local content or on domestic quotas among senior managers at the firm may increase spillovers. However, they are also likely to reduce FDI flows as they can increase the cost of an investment.

Sutton (2014) suggests that Latin America's local content regulations in the automobile industry were largely unsuccessful as they were easily circumvented and difficult to enforce. In an IGC publication, Spray (2017) argues that minimum content regulations reduce competitiveness of the export sector and overall productivity because they do not address the fundamental frictions that exist between investors and local suppliers. For this reason, "soft" policies to promote spillovers should be preferable to rigid requirements.

Policymakers can foster SEZ spillovers by addressing the two main channels through which they arise: Supplier linkages and on the job training. On the

¹Atkin, Khandelwal, and Osman (2017) focus on exporting to a high income destination rather than supplying an FDI firm in the same country. However, the same mechanisms embedded in "learning by exporting" are likely to apply to transacting with FDI firms. If anything, these effects may be stronger in the latter case given the proximity between buyers and sellers.

business relationship side, options include reducing red tape to ease domestic firms "exporting" to SEZs. An alternative strategy could be a Local Content Unit; a team which facilitates matches between foreign investors and suitable domestic suppliers or offers trainings for firms on how to meet the quality or technical standards that FDI firms require.

The IGC has been advising governments in Ethiopia, Tanzania, and Rwanda on appropriate structures and objectives for such units (Steenbergen and Sutton, 2017). CORFO, a supplier development organisation in Chile, is an example of how these policies can be implemented in practice (Arraiz et al., 2012). Similarly, Alfaro-Urena et al. (2019) document important increases in productivity, employment, and sales for local firms from a government programme linking domestic firms to global value chains in Costa Rica (see Figure 3).

On the labour side, governments can set up vocational training centres for workers inside zones with inputs and contributions from firms located there. In multinational companies that gather senior expats and domestic managers, language barriers could reduce the potential for knowledge transfers. As such, language training could also help promote spillovers. An ongoing IGC project by Guillouet, Khandelwal, Macchiavello, and Teachout studies the effect of language training on skill acquisition inside foreign firms in Myanmar. It is worth remembering, however, the prevalence of communication frictions differs across countries.

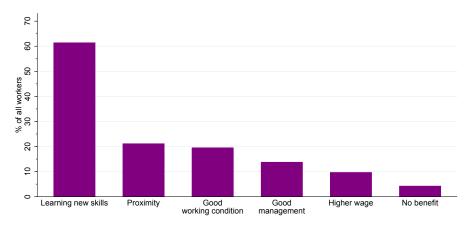
To facilitate labour movement, countries can impose rules on the maximum length of contracts for zone workers. This policy was implemented in Shenzhen SEZ, where workers were required to leave the zone after three years (White 2011). However, boosting mobility may dampen firms' incentives to train workers, so these two countervailing effects should be weighed against each other.

Although SEZs can provide indirect benefits through several channels, not all spillovers may be required or even possible in every context. One channel may be enough to catalyse the sort of economy-wide benefits that justify the cost of a zone, and it is typically unclear ex ante which channel is most likely to have tangible effects.

The relevance of each spillover effect likely depends on a number of context-specific factors, such as the origin of the investment, sectoral focus, and the structure of the wider economy. There is no one-size-fits-all approach – policymakers must take a zone-specific approach when considering promoting spillovers from SEZs.

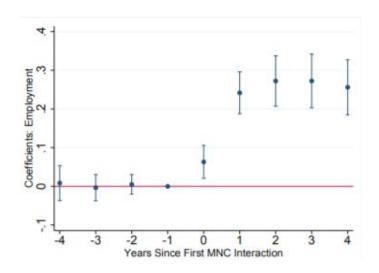
In short, effectively running an SEZ requires understanding and encouraging its indirect benefits. To do this, policymakers need to monitor key performance metrics of the zone and regularly evaluate these to determine which policies work best. Monitoring and evaluation is therefore a crucial aspect of SEZ success.

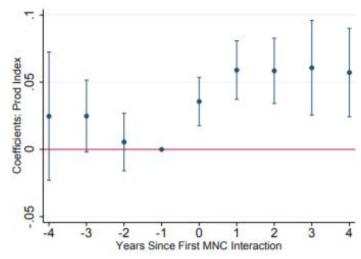
Figure 2: Most important benefits of working in Thilawa SEZ (Myanmar) for workers



Source: Labour survey, Khandelwal et al. (2018)

Figure 3: Increases in employment and productivity for local firms in Costa Rica after becoming suppliers to Multinational Corporations (MNC)





Source : Alfaro-Urena et al. (2019). Note : Event year 0 is the year when a given domestic firm first supplied an MNC in Costa Rica.

5. M&E and policy experimentation in SEZs

M&E

Rigorous M&E is needed to ensure that SEZs maximise their potential. An effective M&E unit plays several important roles in a zone: It measures the performance of the zone against its objectives, it informs policy decisions to improve on SEZ policy, and it supports policymakers to enforce regulations, such as environmental standards (Farole, 2011).

SEZ M&E units can draw on a number of tools to get a clear picture of the zone's activity. Administrative data, particularly tax and customs data, can be used to measure investment, exports, and the proportion of inputs being imported versus sourced from the domestic economy. In many instances, zones' management committees also ask firms to submit reports on employment and output. However, getting reliable data should not come at the expense of increasing red tape. Line ministries should coordinate to reduce duplicate reporting requirements.

Surveys can complement this effort by allowing the collection of more granular data and qualitative inputs, such as working conditions or investors' grievances. Administrations typically have limited capacity to set up these systems, but technology can significantly reduce costs. First, an online reporting platform allows firms to fulfil their reporting requirements more easily and facilitate data management for the M&E Unit. Second, some surveys can be done by text messaging or email, which allow respondents to fill in the questionnaire at convenient times.

Case studies on SEZ M&E

China (from the World Investment Report 2019, p. 193)

China has established regular evaluations of their SEZs; both Hi-Tech Development Zones (HTDZs) and Economic and Technological Development Zones (ETDZs). The government tracks zone performance in both static (standalone) and dynamic dimensions. It includes a number of measures on the zones' transformation into higher-skilled and higher value-added industries over time. This is to ensure that zones are catalysing structural transformation rather than stagnating as centres for inexpensive and/or labour-intensive industries.

A selected set of metrics includes:

- Indicators tracking "static" zone performance
 - yearly amount of new investment
 - number of companies
 - tax revenues
- Indicators measuring zone spillovers
 - education level of employees
 - ratio of employees who received higher education overseas
 - ratio of foreign personnel
- Indicators tracking zone transformation
 - ratio of employees with masters and doctoral degrees
 - R&D expenditure
 - number of R&D institutions and incubators
 - number of high-tech enterprises
 - intellectual property registration

The Ministry of Commerce conducts an annual assessment of ETDZs based on certain pre-defined metrics. It also publishes the list of the top 30 zones in the categories of industrial capacity, innovation, FDI, and foreign trade to foster competition across zones.

South Africa (from the Department of Trade and Industry's "SEZ Performance M&E Framework")

In South Africa, a central SEZ Advisory Board is responsible for overseeing the M&E of SEZs and feeding these metrics back to the Ministry of Trade and Industry to inform future policy decisions. This oversight, and the transparency of the performance information gathered, helps put pressure on individual SEZ management boards to deliver on targets. The M&E framework established by the SEZ Act sets out a large list of indicators to be tracked, including costs – a rarely considered element among SEZs worldwide. The indicators tracked for each zone are the following:

| Organisational indicators | | |
|---------------------------|--|--|
| SEZ management indicators | | |
| • | Business plan and financial statements | |
| | Progress report on key performance targets | |
| • | Progress reports on specific SEZ programmes (e.g., setting up a one-stop shop) | |
| | Infrastructure report | |

| Economic output indicators | | | |
|---|---|--|--|
| Output indicators | Input indicators | | |
| Investment brought in the zone | Operating staff costs against target | | |
| Jobs created | Infrastructure capital costs and timeframes against | | |
| Land allocated | targets | | |
| Revenues raised from land sales and rental income | ■ Top structures/factories′ costs and timings | | |
| ■ Exports | Operational costs against target | | |

Performance reports are to be submitted to Parliament through the Minister of Trade and Industry, and made public on the website of the Department of Trade and Industry.

Policy experimentation

As discussed previously, rolling out a reform is easier and less costly in case of failure if done in a limited geographical area. As such, SEZs can act as a laboratory for policy experimentation. The optimal policies for a country's context may be unknown *ex ante*, so a successful policy trial inside a zone can trigger change for the rest of the economy. These can go beyond tax policy and business climate regulations, which are the basic tenets of zone policy.

For example, SEZs in China pioneered several key reforms in the country's transition to a market economy, including flexible labour markets, incentive-based pay, and opening up capital markets. Though the success of the Chinese model is partly down to its context at the time, the experience suggests that SEZs can be a powerful tool to generate wider reforms in highly distortive economic landscapes.

SEZ policy can also act as a smooth transition in settings where rent-seeking incentives cause political and economic elites to block reform. Auty (2011) argues that zones can play a central role in a dual-track reform strategy that recognises the political economy constraints of development.

In this model, policymakers first focus their reform efforts in a small subset of the economy, for example, in one or more industrial zones. Over time, the reformed economic sectors expand and can even generate benefits for the rest of the economy. The coalition of reform supporters then outweighs rent-seeking interests, which facilitates the implementation of these policies at a larger scale.

Malaysia's pivot towards high-skilled electronics manufacturing provides an example of how SEZs can spur industrial transformation in the face of opposition from rent-seeking groups, in this case, in natural resource and heavy industries. An even more salient example is Mauritius, which is arguably the only SEZ success story in Africa. SEZ policies there in the 1970s and 1980s helped policymakers gradually overcome opposition from entrenched interests, especially from the sugar industry. The island economy transitioned rapidly from a one-crop agricultural producer into a textile manufacturing powerhouse growing at around 6-7% per year for two decades (Auty, 2011).

The autonomy of an SEZ can determine its effectiveness as a policy laboratory. Zone management committees that are granted significant authority to experiment with laws and regulations can quickly design and deploy new policies to tackle diagnosed issues. Granting decision-making power to individual SEZs, as China did in the 1990s, also encourages competition across zones, making it easier for central government policymakers to identify key learnings for the wider economy.

Finally, giving government agents within SEZs some freedom to operate autonomously from their line ministries may trigger a mindset shift from the bottom up. With sufficient interaction with investors, bureaucrats may come to understand their role as supporting economic activity rather than simply granting permits and signing documents. In turn, this model can inspire SEZ authorities to be more proactive and creative in their reforms.

6. Policy recommendations

This brief has laid out some basic guidelines for the establishment of successful SEZs in developing countries. SEZs are not a silver bullet for investment attraction or job creation, as demonstrated by their mixed record around the world. Nevertheless, policymakers can take concrete steps to make sure they achieve their objectives. These include:

- A country specific approach should be adopted for SEZ policy. SEZs should be aimed at removing particular economic distortions that cannot be addressed otherwise. These barriers to growth typically depend on a country's regulatory environment, current level of development, and other factors that determine the economy's comparative advantage. As such, the decision to establish a zone should be backed by a framework that demonstrates why SEZs constitute an appropriate form of policy intervention.
- Zone planners should assess the viability of their project with cost benefit analysis. The analysis should include both the direct (e.g. job creation) and indirect (e.g. potential for spillovers) benefits against both the direct (e.g. infrastructure costs) and indirect (e.g. revenue forgone from tax incentives) costs of the project. The choice of location is likely to be particularly important for a zone's success.
- Authorities should actively promote spillovers from zones. Positive externalities can increase the benefits of SEZs beyond the direct effects that governments typically focus on. They can come from business interactions between firms inside and outside zones or from movement of trained labour across zone borders. As these spillovers may not happen on their own, governments can use "soft" policies, such as investor-supplier matching and worker training programmes to encourage these spillovers.
- Monitoring and evaluation (M&E) is crucial for SEZ success. Effective tracking of zone performance across a wide range of relevant metrics including direct and indirect benefits, costs, and regulatory compliance helps ensure that zones are effective. Collecting reliable data, through administrative systems and targeted surveys, is a crucial component of a strong M&E system. Monitoring can also help policymakers use SEZs as "policy labs" to test new ideas in a flexible environment shielded from the distortions and rent-seeking incentives that may be rampant in the wider economy.

7. References

Aggarwal, A. (2012). SEZ-led Growth in Taiwan, Korea, and India: Implementing a Successful Strategy, Asian Survey, 52(5), 872-899.

Alfaro-Urena, A., Manelici, I. & Vasquez. J. P. (2019). The Effects of Joining Multinational Supply Chains: New Evidence from Firm-to-Firm Linkages, Working Paper.

Arraiz, I., Henriquez, F. & Stucchi, R. (2012). "Supplier Development Programs and Firm Performance: Evidence from Chile", Small Business Economics, 41(1).

Atkin, D., Khandelwal, A. K. & Osman, A. (2017). "Exporting and Firm Performance: Evidence from a Randomized Experiment", The Quarterly Journal of Economics, 132 (2): 551–615.

Auty, R. (2011). "Early Reform Zones: Catalysts for Dynamic Market Economies in Africa", Special Economic Zones: Progress, Emerging Challenges, and Future Directions, Farole and Akinci, 207-226.

Besley, T. & Ghatak, M. (2010). Property Rights and Economic Development, CEPR Discussion Paper Series No.7243.

Bloom, N. & Van Reenen, J. (2010). "Why Do Management Practices Differ across Firms and Countries?", Journal of Economic Perspectives, 24 (1): 203-24.

COMCEC (2017). Special economic zones in the OIC member countries. Comptroller and Auditor General of India (2014). Performance of Special Economic Zones, An optional note.

Donaldson, D. (2010). "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure", NBER Working Papers 16487, National Bureau of Economic Research, Inc.

Department of Trade and Industry, Republic of South Africa (2016). SEZ Performance Monitoring and Evaluation Framework.

Farole, T. (2011). Special economic zones in Africa: comparing performance and learning from global experience, Washington, DC: World Bank.

Farole, T. & Akinci, G. (2011). Special Economic Zones: Progress Emerging Challenges and Future Directions, Washington, DC: World Bank.

Farole, T. & Moberg, L. (2014). It worked in China, so why not in Africa? The political economy challenge of Special Economic Zones, WIDER Working Paper Series 152, World Institute for Development Economic Research (UNU-WIDER).

Hyun, Y. & Ravi, S. S. (2018). Place-based Development: Evidence from Special Economic Zones in India, Boston University.

IFC (2016). The World Bank Group's Experiences with SEZ and Way Forward: Operational Note, World Bank Group.

ILO (2017). Promoting Decent Work and Protecting Fundamental Principles and Rights at Work in Export Processing Zones, Geneva: International Labour Organization.

Javorcik, B. (2004). "Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers Through Backward Linkages", American Economic Review, 94 (3): 605-627.

Jenkins, M., Larrain, F. & Esquivel, G. (1998). Export Processing Zones in Central America, Harvard Institute for International Development Working Paper No. 646. Kee, H. L. (2015). "Local intermediate inputs and the shared supplier spillovers of foreign direct investment", Journal of Development Economics, 112, issue C, p. 56-71.

Khandelwal, A. K., Macchiavello, R., Teachout, M., Park, S. & Anonymous Author (2018). Learning from Thilawa Special Economic Zone, International Growth Centre. Accessible: https://www.theigc.org/publication/learning-thilawa-special-economic-zone/

Khandelwal, A. K. & Teachout, M. (2016) "Special Economic Zones for Myanmar", IGC Policy note, https://www.theigc.org/wp-content/uploads/2016/03/SEZs-in-Myanmar.pdf

Madani, D. (1999). Place-based Development: Evidence from Special Economic Zones in India Place-based Development: Evidence from Special Economic Zones in I Place-based Development: Evidence from Special Economic Zones in India, World Bank Policy Research, Washington DC.

Sarif, S. M. & Ismail, Y. (2006). "Technology Parks, Knowledge Transfer and Innovation: The Case of Malaysia's Information and Communication Technology (ICT) Small and Medium Enterprises", International Journal of the Information Systems for Logistics and Management, 1 (2): 133–42.

Rodriguez-Pose, A. & Arbix, G. (2001). "Strategies of Waste: Bidding Wars in the Brazilian Automobile Sector", International Journal of Urban and Regional Research, 25 (1): 134–54.

Spray, J. (2017). Exports and Promoting Backward Linkages: Ideas and lessons for the Made in Rwanda Policy, the International Growth Centre. Accessible: https://www.theigc.org/publication/exports-promoting-backward-linkages-ideas-lessons-made-rwanda-policy/

Steenbergen, V. & Sutton, J. (2017). Establishing a Local Content Unit for

Rwanda, the International Growth Centre. Accessible: https://www.theigc.org/publication/establishing-local-content-unit-rwanda/

Sutton, J. (2014). Local Content Policy, In Focus Interview, Uongozi Institute. The Economist (1998). "The Trouble with Singapore's Clone", The Economist. UNCTAD (2019). World Investment Report 2019: Special Economic Zones, New York: United Nations Conference on Trade and Development. UNIDO (2011), Africa Investor Report: Towards evidence-based investment promotion strategies.

Wang, J. (2013). "The Economic Impact of Special Economic Zones: Evidence from Chinese Municipalities", Journal of Development Economics, 101: 133–47.

White, J. (2011). "Fostering Innovation in Developing Economies through SEZs", in Special Economic Zones: Progress, Emerging Challenges, and Future Directions, Farole and Akinci, 183–206.

Wong, M. D. & Buba, J. (2017). Special economic zones: an operational review of their impacts, (English), Washington, D.C.: World Bank Group.

Zeng, D. Z. ed. (2010). Building Engines for Growth and Competitiveness in China: Experience with Special Economic Zones & Industrial Clusters, Washington DC: World Bank.

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