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Accepted Version

Narula, R. ORCID: <https://orcid.org/0000-0002-4266-2681> and Zhan, J. (2019) Using special economic zones to facilitate development: policy implications. Transnational Corporations, 26 (2). pp. 1-25. ISSN 1014-9562 doi: 10.18356/d3e73f33-en Available at <https://centaur.reading.ac.uk/85997/>

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Published version at: https://unctad.org/en/PublicationChapters/diaeia2019d2a1_en.pdf

Identification Number/DOI: 10.18356/d3e73f33-en

<<https://doi.org/10.18356/d3e73f33-en>>

Publisher: UNCTAD

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Using special economic zones to facilitate development: policy implications

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This issue of the Transnational Corporations journal is dedicated to special economic zones (SEZs) and their potential as vehicles for development. In compiling this issue, we sought to contextualise the emergence of SEZs, their evolution, and the associated policy trajectories that underpin them. This introductory paper| amalgamates observations from the broader academic literature, the findings of the World Investment Report 2019, and its associated background papers. A common theme is that a well-designed zone will evolve with the changing comparative advantages and development level of the underlying economy, in what is described as the “SEZ development ladder”. As the location advantages change, the emphasis and the objectives of the SEZ must also change. Reliance on “generic” location advantages must necessarily diminish, and greater emphasis needs to be placed on developing “specialized” location advantages. Another key finding is that the benefits of an SEZ must intentionally “leak” beyond the perimeter of the zone. The pervasiveness of the direct, indirect, and induced extra-SEZ effects beyond the geographically bounded space of the SEZ determines its success or failure. Scope remains for future research on SEZs focusing on their sustainability, the impact of the digital economy and industry 4.0, and the involvement of new financing partners for SEZ development.

1. Introduction

The concept of special economic zones (SEZs) in their current form dates back to the 1950s, when they were popularly referred to as export processing zones (EPZs), and later as free zones. Despite a proliferation of terminologies (see Bost [*this issue*] for a summary and UNCTAD [2019] pp. 133-137), the principle of the SEZ remains essentially unchanged. An SEZ is a geographically defined and delimited space that has a series of location-specific advantages. Their characteristics are distinct from those available to economic actors located in the surrounding national or sub-national economy in which the SEZ is established. To varying degrees the difference in location-specific characteristics within the SEZ’s perimeter and outside it are of three types. First, they offer relief from customs duties and tax. Second, they offer superior infrastructure, and/or privileged access to scarce inputs. Third, they have historically offered reduced regulatory requirements, along with improved facilitation of compliance with these regulations through streamlined administrative procedures. There is considerable diversity in the quality of the locational characteristics of SEZs. Indeed, it is not uncommon for different forms of SEZs to coexist within the same country, each displaying a varying mix of incentive schemes, services and industries, and, in some instances, specific home countries or focus on a single multinational enterprise (MNE) (Frick et al., 2019).

SEZs (and their antecedents, the EPZ and the free zones) have been a useful tool for developing countries that have been unable to upgrade infrastructure, human capital and institutional frameworks across the entire economy, constrained by economic considerations and conflicting priorities. By upgrading these resources and capabilities within a limited space, policymakers can overcome bottlenecks in resource availability and attenuate the cost of larger-scale upgrading across the entire country or sub-national region. Apart from the “planned-for” economic benefits expected from an SEZ, a successful SEZ sends an important signal that the country is “open for business”, especially where it is able to provide first-world infrastructure and bureaucratic and administrative efficiency at globally-competitive prices. Prior to the widespread economic liberalization of the 1990s, export processing zones were more modest in intention, emphasizing exports from an enclave within a larger economy that otherwise followed import-substituting, inward-looking policies (Aggarwal, 2012). Much of the popular understanding of SEZs focuses on examples from this period (such as Ireland, India, Malaysia, South Korea and Mauritius). Many early movers in SEZs were established during an era when MNEs had a fairly short supply of secure, reliable locations that were export oriented (Farole, 2011). Developing countries in today’s global economy that seek to pursue a SEZ-driven approach to development are unlikely to see similar benefits as those countries that followed this approach prior to the 1980s.

One of the key observations in the early literature on EPZs was that the benefits of zones went beyond financial and economic effects, and that the indirect and longer-term benefits mattered more (Johansson and Nilsson, 1997). The consensus of policy advice by international organizations in relation to SEZs over the last two decades has been to pivot away from the pecuniary benefits, towards taking a longer term vision, as indeed UNCTAD (2019) does. SEZs are ideally a component for pursuing a MNE-assisted development strategy, or as a means to experiment with new policy interventions and industrial policy (Jeoung and Zeng, 2016; Aggarwal, *this issue*). A common theme between UNCTAD (2019) and several of the papers in this special issue is that a well-designed zone will evolve with the changing comparative advantages and development level of the underlying economy, in what is described as a the “SEZ development ladder” (UNCTAD, 2019: 141).

New SEZs look to examples from China and its neighbouring economies in Asia for inspiration, which are linked to, and integrated within global value chains (GVCs). The importance of the SEZ development ladder is critical to understanding their performance and evolution. Many of the successful early movers (such as China: see for instance, Meng and Zeng [*this issue*] and Chen [*this issue*]) developed SEZs as a complementary part of a broader development strategy¹. There are, in brief, different SEZ types appropriate for each stage of development.

¹ Chinese SEZs have evolved with the country’s economic upgrading. The experience of China may therefore have limited relevance to low-income economies that are peripherally integrated to the global economy, which is to say countries that have limited engagement with GVCs, and, owing to a variety of reasons, are poorly linked

The principles of economic and functional upgrading utilizing SEZs are similar to the principles of an MNE-assisted development strategy, the primary deviation being that the SEZ represents a microcosm of the host country operating at its most efficient. Indeed, SEZs are a tool in a country's policy arsenal to pursue an MNE-assisted development strategy, but still they are just a tool, and not a solution for the social and economic challenges faced by the economy as a whole.

Particularly where the host country has immediate and short-term political imperatives and lacks a longer-term development strategy (or the resources and capabilities to effectively pursue such a longer-term approach), SEZs are pursued for their most immediate (and visible) gains: providing employment and accruing capital flows. Nonetheless, by and large, the performance and impact of SEZs are increasingly measured by their capacity to be sustainable. Best practice today is increasingly cognisant of the importance of sustainability. Over the last decade, there is considerable pressure at the supranational, national and local levels to curb the negative impact of SEZs (and investment in general) on communities and the environment. Reputational risk factors prompt the private sector to adhere to ever-stricter environmental, social and corporate governance (ESG) standards (Zhan, 2018), and this is reflected in the growing interest in CSR activities by MNEs.

2. MNE-assisted development and SEZs as a microcosm

The logic of pursuing limited locational upgrading within an SEZ relies on attracting MNEs with specific mandates that are concatenated to the development goals and the comparative advantage of the host country (more specifically, to the comparative advantage of the SEZ, since there may be differences between the characteristics on either side of the SEZ boundaries). The immediate net benefits of an SEZ, such as employment, capital flows and technology flows are often modest, and when considering the costs of infrastructure upgrading, foregone customs revenues, subsidies and incentives, etc., the net benefits may even be negative (Jayanthakumaran, 2003; Cirera and Lakshman, 2017; Alkon, 2018). However, SEZs can act as an important catalyst to kickstart larger and more pervasive benefits to the wider economy, although the degree to which they do so effectively requires careful planning and implementation (Farole and Moberg, 2017). It is through these mechanisms that longer-term benefits of SEZs (and MNE activity in general) accrue.

The focus of much of the SEZ/EPZ literature has been on economic development, rather than a more holistic approach to development, which concerns itself with social and societal outcomes and effects, with a particular objective to reduce inequalities. Indeed, according to the United Nation's 2019 Human Development Report, reducing inequality is a *sine qua non* to most of the other UN Sustainable

with the "core" global economies, such as the European Union (EU), United States and Japan (Benito and Narula, 2007).

Development Goals, or SDGs (Narula and van der Straaten, 2019). As UNCTAD (2019) emphasizes, countries are increasingly paying attention to legislating ESG standards as part of investment policies in general, and SEZ establishment more specifically. MNEs are also inclined to greater engagement with ESG standards, especially where there are significant reputational costs to being socially irresponsible. However, there is considerable variation in the degree to which MNE CSR policies are implemented (Shapiro et al., 2015). There is simply insufficient evidence to comment on the degree to which host countries are able to effectively legislate and enforce ESG standards, or the efficacy of firms' CSR activities. Therefore, in this paper – as throughout this special issue – the focus is first and foremost on the economic impact of SEZ activity.

Whether increased MNE activity through SEZs can contribute to economic development in the host economy depends on various mechanisms. The most significant of these are arguably the diffusion of know-how and its transfer to local firms and skills acquisition by local workers through local training and strong inter-firm relationships between local entrepreneurs and foreign-owned enterprises. It is this non-capital aspect in the form of knowledge transfer, local training and high-quality employment that matters when the presence of foreign affiliates is sought. However, ultimately, to have a lasting impact on economic development in the host economy, knowledge transfer must reach beyond the SEZ perimeter. If foreign investment in an SEZ fails to create jobs more widely within the economy (and beyond the SEZ), enhance the competitiveness of local economic sectors and create business opportunities for local entrepreneurs outside the perimeter of the SEZ, it will contribute little to economic development.

The attraction of MNEs (through foreign direct investment – FDI – or other modes of engagement) has become a key component of development policy in most developing countries (Lall and Narula, 2004). MNEs are a mechanism to break the vicious circle of development, which is characterized by low savings and investment ratios, and inefficient production methods and technologies (Narula, 2014). MNEs are able to provide not only financial resources but also technology, managerial know-how and linkages to GVCs (UNCTAD, 2013; Narula and Pineli, 2017 and 2019). Governments tend to view MNEs as being better equipped than domestic firms with the attributes that can improve productivity, notably in the form of proprietary knowledge (often described as ownership advantages). The presence of foreign MNEs is also expected to create spillovers of various kinds to domestic actors. Hence, attracting FDI is a means to accelerate economic growth while contributing to the transformation of the employment and production structures of the economy. This set of beliefs leads governments to actively engage with foreign investors to influence the volumes and composition of FDI and to maximize positive effects on net employment, skills transfer and capital flows

MNEs can have a decisive influence on the development path of countries, although the effectiveness of an MNE-assisted development strategy depends on a variety of factors (Narula and Dunning, 2010).

Net benefits depend not only on quantity, but also on the quality of FDI. Quality has to do with the MNE's investment motivations, the affiliates' mandate and autonomy, which in turn determine the potential for linkages and spillovers. These effects also depend on the capacity of domestic firms to absorb, internalise and upgrade their knowledge assets (Criscuolo and Narula, 2008). A sound SEZ policy must not be exclusively concerned with attracting capital investment but ought to prioritize the increased local embeddedness of the MNEs.

The key contribution of the MNEs is expected to be their influence on domestic firms. Indeed, aside from the direct and more visible impacts on employment and income generation, government often justify the bundle of subsidies they offer to attract FDI on the basis of the potential indirect benefits, such as the transfer of managerial know-how and production techniques to indigenous firms.

Spillovers imply a process of learning by the recipient firm, but not all domestic firms have the ability to "internalize" the spillovers generated by the presence of MNEs. In reality, capturing spillovers is costly (Narula and Driffield, 2012) and usually requires specialized workers, often in short supply in developing countries. Indeed, most studies about spillovers have included some proxy to domestic firms' absorptive capacity² and the results suggest that this factor is relevant to both developed and developing countries. In general, firms with higher absorptive capacity are more likely to benefit from the presence of MNEs (Blalock and Simon, 2009; Narula and Marin, 2003; Castillo et al., 2014; Frick and Rodríguez-Pose, this issue). Therefore, policies aimed at improving the absorptive capacity of domestic firms are likely to increase the chances of positive FDI spillovers. These include not only investments in formal education and vocational training, but also incentives to engage in R&D, and the reduction of impediments to the free flow of knowledge, whether embodied in goods (such as imported capital goods) or otherwise.

Spillovers, however, are implicit in nature: An MNE-assisted development strategy relies greatly on the explicit effects associated with the establishment of linkages. The concept of linkages relies greatly on Hirschman's (1958) seminal contribution (as reinterpreted by Lall, 1978 and 1980) that framed linkages as direct relationships between MNEs and other economic agents in complementary activities that involve interactions that go beyond spot market transactions. Most markets for intermediate goods exhibit certain imperfections, and therefore firms engage in linkages that establish ongoing engagement between the parties concerned. Through linkages, the MNEs may (internationally or otherwise) provide technical, managerial and financial assistance to their suppliers, or their customers, and are a key pathway for "knowledge transfer". However, MNEs may also affect local suppliers and buyers through other channels. On the one hand, the increased demand enables domestic suppliers to benefit from scale

² Absorptive capacity can be defined as "ability to internalise knowledge created by others and modifying it to fit their own specific applications, processes and routines" (Narula and Marin, 2003, p. 23).

and specialization economies, while MNEs' production in itself increases supply for downstream sectors, with the potential to reduce prices.

MNEs are not all equal. The potential for linkages creation and spillovers depends on the nature of the investing MNE and the MNE's motives for investment, although empirical studies often ignore this. A firm that internationalizes to sell more will behave very differently from a firm that internationalizes to reduce costs, and the development outcomes in the host economies will differ accordingly. However, the empirical evidence on the relationship between MNE motives and spillovers is limited (Driffield and Love, 2007; Morrissey, 2012). Domestic-oriented affiliates tend to create more linkages than export-oriented affiliates, since they are less dependent on low-cost inputs (in international terms) to be competitive. Indeed, MNE activity aimed at extracting natural resources has different development effects, from, say, market-seeking investments. FDI in countries with low levels of human capital (but with comparative advantages in natural resources) is likely to be concentrated in the extractive or natural resource-intensive sectors, and this shapes the development outcome. MNE activity in the extractive industry tends to develop in enclaves, thus limiting the scope for linkages between MNEs and the domestic economy (Narula, 2018).

At the end of the day, the impact of FDI varies across sectors and industries. A dollar of FDI can offer quite varying benefits, depending on the sector in which it has been invested. Indeed, the development outcomes are contingent on both the sectoral characteristics and the recipient location's locational advantages (Narula and Dunning, 2000 and 2010). More generally, we have known for years that all FDI is not equal, in terms of development value. As ECLAC (2014) notes, a US\$1 million investment on average creates only one job in extractive activities, while the same amount creates two jobs in natural-resource-intensive manufacturing, and labour-intensive manufacturing activities create seven jobs per US\$ 1million invested.

3. Location advantages, the SEZ development ladder and domestic actor participation

Although the number of SEZs in developing countries has continued to increase, a large proportion of the associated new FDI has gone to that sub-group of developing countries referred to as "emerging", which are technologically more advanced, and have the "locational advantages" that make them more suited to integration within MNE supply chains and GVCs. Other, more peripheral developing economies seek to attract FDI suitable to their comparative advantage in labour-intensive and natural resource-intensive activities. Many of these countries engage in low-value, commodity-based activities and are often weakly linked to GVCs (Narula, 2018). Countries at different stages of development necessarily have specific locational characteristics that make them suitable for specific types of SEZs in what is described as the SEZ development ladder (UNCTAD, 2019: 141).

Location advantages are a set of characteristics associated with a location, and are in principle accessible and applicable to all firms equally that are physically or legally established in that physical space. Location advantages can be said to be “public” because they are not private goods, but not always in the sense of being “public goods” because they may not normally be used without (some) detriment to their value to subsequent users. Location advantages are about relevant complementary assets outside the boundaries of the MNE (or other firms) that are location-specific. MNEs have the ability to spatially organize their activities (and across borders), and select where to locate to take advantage of differences in the quality, availability and price of location-bound assets, both within countries and across countries. MNEs most often seek location advantages *that already exist* in the host location (and in this case, SEZ), and deepening of investment occurs generally in response to improvements in location advantages (Narula and Santangelo, 2012). This makes it difficult for low-income countries to attract higher, more knowledge-intensive activity in the first instance, because this type of FDI tends to go to places with the appropriate comparative advantage and infrastructure, typically associated with in emerging and advanced economies. Such location advantages are expensive to create, and take years to develop across an entire economy. Hence, the principle of a geographically delimited zone (such as an SEZ) with higher location advantage than the rest of the country. There are three types of location advantages that an SEZ can offer. Figure 1 integrates the concept of location advantages with the SEZ development ladder.

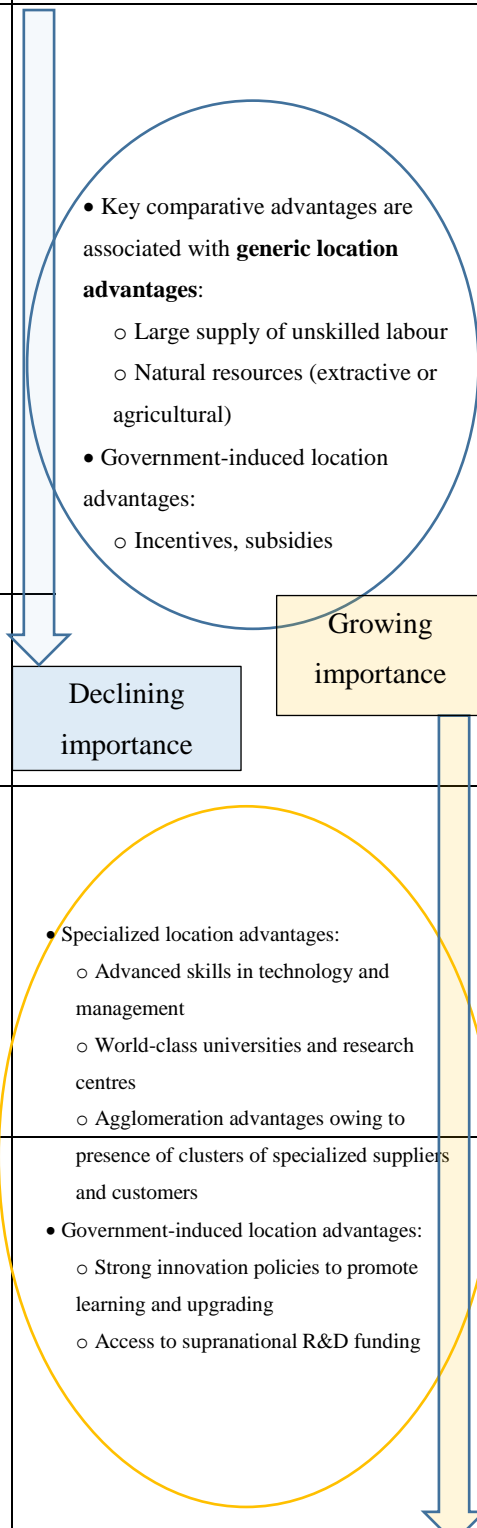
| | Kinds of location advantages associated with SEZs | Zone policy objectives | Types of SEZs |
|-------------------------------|--|---|---|
| Low-income countries |  <ul style="list-style-type: none"> • Key comparative advantages are associated with generic location advantages: <ul style="list-style-type: none"> ◦ Large supply of unskilled labour ◦ Natural resources (extractive or agricultural) • Government-induced location advantages: <ul style="list-style-type: none"> ◦ Incentives, subsidies | <ul style="list-style-type: none"> • Improve direct employment and export benefits • Attract GVCs in resource-intensive and labour-intensive sectors • Promote industrial development and diversification • Offset weaknesses in investment climate in limited area. • Pilot business reforms in limited area • Provision of basic infrastructure in limited area | <ul style="list-style-type: none"> • Multi-activity zones, often with a focus on labour-intensive activities • Resource-based zones aimed at attracting processing industries |
| Middle-income countries | <p>Declining importance</p> <p>Growing importance</p> | <ul style="list-style-type: none"> • Industrial upgrading • GVC integration and upgrading • Focus on technology dissemination, linkages and spillovers | <ul style="list-style-type: none"> • Specialized zones focused on GVC-intense industries (e.g. automotive, electronics) • Services zones (e.g. BPO, call centres) |
| Upper-middle-income countries | <ul style="list-style-type: none"> • Specialized location advantages: <ul style="list-style-type: none"> ◦ Advanced skills in technology and management ◦ World-class universities and research centres ◦ Agglomeration advantages owing to presence of clusters of specialized suppliers and customers • Government-induced location advantages: <ul style="list-style-type: none"> ◦ Strong innovation policies to promote learning and upgrading ◦ Access to supranational R&D funding | <ul style="list-style-type: none"> • Supporting transition to services economy • Attracting new hi-tech industries • Focus on upgrading innovation capabilities | <ul style="list-style-type: none"> • Technology-based zones (including R&D, hi-tech, bio-tech zones, etc.) • Specialized zones aimed at high value-added industries or value chain segments • Services zones |
| High-income countries | <ul style="list-style-type: none"> • Government-induced location advantages: <ul style="list-style-type: none"> ◦ Strong innovation policies to promote learning and upgrading ◦ Access to supranational R&D funding | <ul style="list-style-type: none"> • Providing an efficient platform for complex cross-border supply chains • Focus on avoiding distortions in the economy | <ul style="list-style-type: none"> • Logistics hubs free zones only (not industrial free zones) • Innovation and NIR objectives pursued through science parks without separate regulatory framework, or though incentives not linked to zones |

Figure 1 SEZ development ladder and the evolution of location advantages

Source: Authors, based on UNCTAD (2019): Table IV.5, p 141

“Generic” location advantages. Most of the SEZs in Low-income countries continue to offer what is best described as “generic” location advantages, which are easily replicable (McIntyre et al, 1996), such as basic infrastructure, land, and unskilled labour. The kinds of MNE activity attracted by such location advantages are low value adding activities and imply mostly low capital expenditure on plant and equipment (extractive industries being the exception). Such FDI is less “sticky”, i.e., more footloose. The location of labour-intensive production becomes steadily less attractive to an MNE as the costs of labour rises, particularly where productivity improvements fail to match wage cost increases, however modest these might be. Buyer-dominated GVCs (and their associated MNEs) often have multiple operations in several countries and are able to shift production to wherever the suppliers are able to be most price competitive and labour costs are lowest.

The widespread adoption of export-oriented, MNE-assisted development strategies have seen a large number of SEZs, many of which offer other facilitated regulatory regimes and simplified institutional regimes for SEZ actors, but these are also becoming fairly “generic” as almost all countries offer fairly similar setups. For instance, almost all countries and SEZs offer facilitated and streamlined “fast track” FDI approval and facilitation procedures and offices, such as efficient regulatory environments, basic infrastructure (water, electricity, roads), bonded workshops, and efficient transport links, so much so that these can no longer be described as “advantages” (Frick and Rodríguez-Pose, *this issue*).

Government-induced location advantages. An “intermediate” type of locational advantage are those that are government-induced, mainly associated with subsidies and incentives that the host country may offer, more generally, or in specific SEZs. These include one-stop and facilitated fast-tracking of investments, tax breaks, low-cost financing, modified labour standards and workers’ rights. Unfortunately, these are also imitable, with growing competition between regions, countries and SEZs which has also made them fairly generic. From the perspective of economic benefits, offering such incentives can lead to “immiserizing growth” (Kaplinsky and Morris, 2001: 21) where an increase in overall economic activity with more output and more employment still leads to falling economic returns.

The use of incentives and subsidies is no substitute for the presence of specialized (as opposed to generic) advantages, because in locational tournaments involving richer countries, the least developed countries are bound to lose (Mytelka 1996; Jauch 2002). As the World Investment Report 2019 has illustrated, the number of SEZs has continued to multiply, even within individual countries. However, most have few unique features beyond generic location advantages and government-induced incentives, and have become less unique, and consequently tend to generate few long-term positive development effects. (Moberg 2015; McIntyre et al., 1996).

The dependence on incentives and subsidies as a means of attracting MNEs is fraught with difficulty and is necessarily a short-term solution. From an economic viewpoint, FDI incentives can only be

justified if they are not larger than the overall expected benefits from the foreign investment.³ Indeed, these incentives are so commonplace that they are also generic (Figure 1). Countries, in fact, end up offering so many of these types of incentives that it leads to the SEZ generating a net negative outcome, owing to what is known as a “race to the bottom” (Jauch, 2002). The evidence would suggest that such incentives are less important for long-term achievements than developing and upgrading the quality and extent of a country’s absorptive capacity through improvements in its knowledge infrastructure.

In an era of GVCs, SEZ investments are not normally tightly integrated into the investing firm’s organizational structure: MNE-led GVCs exercise control through a variety of operational modes that do not involve ownership. GVCs are cross-border chains that engage a rich network of actors that are linked through a variety of equity and non-equity means within specific sectors (Beugelsdijk et al., 2009; McDermott et al., 2013; Srai and Alinaghian, 2013, UNCTAD, 2011 and 2013). This quasi-internalization has the *potential* to create opportunities for firms in developing countries to participate in MNE-dominated GVCs (Giuliani et al., 2005; McDermott and Corredoira, 2010). However, such potential depends greatly on the health of domestic and foreign lower-tier suppliers with whom to link with. SEZs that emphasize a preference for flagship foreign MNEs to build their SEZ around are less likely to become embedded within the local economy (Frick and Rodríguez-Pose, *this issue*). Small movements in relative prices of key inputs or a reduction in government-induced location advantages (relative to other countries or SEZs) are likely to see an exit of MNEs, or a gradual immiserization of benefits (Kaplinsky 1993), and a subsequent attenuation of linkages and longer-term benefits.

The creation of viable agglomerations around SEZs is fairly challenging to achieve. An early study by Head et al. (1994) showed that agglomeration is determined less by differences in natural resources, labour and infrastructure, but by the presence of other firms. Nonetheless, the presence of a certain minimum level of location-specific advantages (infrastructure and skilled labour) must be necessary as a catalyst to attract both MNEs and domestic firms to establish themselves in a given spatial area. The presence of domestic firms with the technological capabilities (and the capacity of the state to stimulate entrepreneurs to thrive) to engage with MNEs is crucial if an SEZ is to thrive (Aggarwal, 2011).

Domestic firms benefit greatly from backward linkages not only because this raises employment and output of the domestic suppliers, but also because domestic firms are powerful channels for diffusing knowledge and skills. Strong linkages can improve the managerial and marketing capabilities of the domestic firm and promote production efficiency. In most cases, the foreign affiliate will also transfer proprietary technological assets such as designs and patents to the supplier firm. This often results in the creation of a globally competitive supplier, and the supply arrangement may eventually result in the domestic firm being used as a supplier for the MNE’s global production in other countries as well.

³ See Blomstrom and Kokko (2003) for a number of convincing arguments against FDI incentives.

There are a variety of indirect economic effects to the host economy that come from the establishment of a viable domestic supplier, because of mobility of trained labour, spin-off firms, and improved technical capabilities of the economy in general. Additionally, these domestic suppliers will also seek to promote sub-suppliers.

Specialized location advantages. The third group of are “specialised” location advantages, and the more unique these specialized advantages are, the greater the likelihood that the SEZ will thrive. It is only in those sectors where “specialized” location advantages associated with higher value addition exist that host countries can benefit significantly from MNE activity in the long run. This requires a considerable amount of government interaction and investment in knowledge infrastructure, associated with tertiary education, research institutions and other key scientific resources. Governments need to provide more active support through macro-organizational policies, particularly science and innovation policy. This implies developing and fostering specific industries and technological trajectories, such that the location advantages they offer are less “generic” and more specific, highly immobile and such that they encourage mobile investments to be locked into these assets.

As figure 1 illustrates, the SEZ development ladder is concatenated with the changing location advantages available. The *raison d’être* of the SEZ needs to evolve with the host country’s comparative and locational advantages. Regardless of the stage of the development ladder, the most successful examples of SEZ policies have sought to attract MNEs, while, in tandem, building domestic absorptive capacities and a strong local sector. One of the main points that Figure 1 makes is that as the country’s advantages change with development, the emphasis and the objectives of the SEZ must also change. The most successful SEZ policies have sought to link with industrial and investment policies (UNCTAD, 2018), and over time greater emphasis needs to be placed in developing specialized location advantages. The paper by Chen (*this issue*) discusses how Chinese SEZs, for example, have actively sought to upgrade location advantages within their respective regions to encourage MNEs to both deepen and broaden their local value addition activities. It is not merely the presence of locational advantages, but their *stability* that shapes the success or failure of an SEZ in development terms. Supplier networks and GVC linkages evolve over time and embedding the MNE in the domestic economy is a gradual and slow process (Narula and Dunning, 2010).

Another benefit of establishing or promoting domestic suppliers to foreign affiliates is that they increase the “stickiness” of the foreign affiliate, making them less footloose, and more likely to deepen their investment by upgrading. Indeed, this is perhaps one of the most significant weaknesses of Russia’s SEZs (Kuznetsov and Kuznetsova, *this issue*). Furthermore, there is a learning effect, because as the foreign affiliate becomes more familiar with the key aspects of the host economy’s knowledge infrastructure and other specialized location advantages, the more likely they are to invest in other

unrelated industries and sectors. They are therefore less likely to divest as a result of rising wages, and other weakening generic location advantages due to changing factor endowments.

SEZ growth is difficult to sustain over time, and this makes the SEZ development ladder of crucial importance. Economic growth leads to structural change, and the kinds of MNE engagement necessarily also changes (Narula 1996; Pineli et al., 2019). Generally, the economic dynamism of the most successful zones happens in their early years and decelerates over time, leading to the slowing of zones' economic performance to that of their surrounding areas. Far from being a sign of SEZ failure, this is an indication of SEZ success (UNCTAD, 2019).

4. The SEZ as a tool to overcome specific development challenges

4.1 Tackling spatial inequalities using SEZs

States often regard SEZs as a key tool to modify the spatial distribution of economic activity (Kuznetsov and Kuznetsova, *this issue*). That is, governments seek to create formal economic activity in regions or locations where little (or none) may have previously existed. The success of an SEZ approach to upgrade a laggard region lies not just in the ability of the state to overcome weaknesses in locational characteristics in such an SEZ, but their ability to create a significant cost advantage for MNEs that agree to establish in such a location. This may be through subsidized, high-quality infrastructure that overcomes the cost disadvantages of being situated far from key customers and suppliers (i.e., the provision of government-induced and specialised location advantages). At an earlier stage of the SEZ development ladder (Figure 1), such remotely located SEZs can also rely on more generic location advantages. These cannot simply be low-cost labour, but would include intervening in markets by providing SEZ participants with privileged access to specific (possibly rare) location-bound inputs (such as exclusive property rights in extractive industries); or privileged access to local markets. In short, governments need to distort the market, and this can be very expensive, and is rarely sustainable in the longer run. Foreign MNEs are rarely concerned with the political imperatives of development; dislodging entrenched spatial disparities (whatever the root of the disparity) is outside the remit of MNEs, and there needs to be an economic return from any investment.

The key challenge to optimizing an SEZ policy is that while immediate employment opportunities within the remotely-located SEZ may increase, the longer-term, wider benefits from FDI depend crucially on the presence of other economic actors with whom the MNE might engage. A peripheral, economically-backward location will typically also suffer from the absence of strong formal actors with whom linkages might develop, and to whom spillovers might accrue. There is a very real danger that the SEZ remains an enclave, dominated by MNEs that internalize all aspects of their value-adding activity. Such zones may end up as enclaves for foreign investors, with few or no local firms linked to

them. Frick and Rodríguez-Pose (*this issue*) observe that promoting SEZs in relatively remote rural and isolated regions is unlikely to add much economic value. Indeed, far the biggest bottleneck to SEZs that are located in an underdeveloped location is inadequate local participation (Frick et al. 2019). Brautigam and Xiaoyang (2011) observe in the case of Chinese SEZs in Africa that they, in general, do not employ Africans or employ them only at the lowest levels; and fail to transfer or diffuse technology and know-how.

It should be said that this absence of linkages with, and embeddedness in, the local economy reflects a fundamental weakness in the domestic sector, and in the case of African countries, reflects not only an internal spatial disparity (i.e., a strong bias towards a dominant cluster of industrial activity around a single city), but a more general problem as well. African domestic industrial activity has significant weaknesses, notably poor infrastructure, weak linkages to modern sources of innovation and technology, and inconsistent or poor government support (Brautigam and Xiaoyang, 2011).

Having said this, utilizing SEZs to reduce spatial inequalities is not an impossible task: China has proven to be highly successful in overcoming regional disparities (Chen, *this issue*), although it is very unlikely that peripheral economies can afford to follow the Chinese example, given that one of the key location advantages that China has to offer is access to its very large domestic market. Other countries have been less successful, as Kuznetsov and Kuznetsova (*this issue*) illustrate for certain Russian SEZs. Spatial and industrial policies exist in many countries, yet they are rarely coordinated or aligned (Farole and Sharp, 2017).

4.2 Upgrading and linking to the informal economy

One of the largest development challenges for less-developed countries is their large informal sector. Estimates of the share of the population in the informal economy are as high as 88 per cent in South Asia, with 83.4 per cent of employers and 64.5 per cent of employees classified as informal (ILO, 2018). Indeed, the low productivity of such large shares of the population in the informal sector drives the large inequalities within less-developed countries (Narula and van der Straaten, 2019). The informal sector is predominantly populated by small enterprises or individual actors performing labour-intensive activities. Organizational skills, technological or managerial expertise play a limited role, and few informal actors have access to financial capital that allows them to expand their activities. The informal sector is often associated with rural populations, but also with the urban poor (Godfrey 2011; Narula 2019). Informal actors are individuals and enterprises that are unregistered and unregulated and pay no taxes. As a consequence, they tend to engage in low productivity activities with limited growth opportunities. Individuals trapped in the informal sector tend to be undernourished, less educated with shorter lifespans, and fewer opportunities to escape poverty (La Porta and Shleifer, 2008).

By definition, most economic actors located within an SEZ are in the formal sector, with the possible exception of casual labour employment. Nonetheless, the cost competitiveness of many less developed

countries within GVCs greatly depends on the ability to utilize suppliers and employees that are informal. Formal sector firms (within SEZs as well outside them) are intricately linked to suppliers in the informal sector (who are invariably located outside the SEZ) and rely on low-cost unskilled labour that are informally employed (within the SEZ). However, the mechanisms by which formal and informal suppliers interact are complex and opaque, in part because the actors themselves are in a constant state of flux. Government failure (and regulatory capture) means that, in practice, informal actors within GVCs are disadvantaged and unprotected by labour standards, and are exploited through poor working conditions and subsistence wages (Narula, 2019). The problems of informality and moving these actors towards the formal economy lie at the heart of the development policy of many low-income countries, and is a key source of underdevelopment. Most policy initiatives in the developing world have proven to be ineffective in addressing informality (Chen and Doane, 2008).

Indeed, many SEZs, especially those in South Asia, rely considerably on the informal sector as a source of cost competitiveness. For example, the majority of workers employed by lower tiers of Bangladesh's apparel GVCs are informally employed, a large percentage of whom are female (Narula, 2019), and they are the key source of labour in Bangladesh's apparel-focused SEZs. In the case of India, which has over 300 SEZs, Hyun and Ravi (2018) find that SEZs help to structurally transform the economy away from informality towards greater formality. They find evidence that every additional operational SEZ instigates a 1 per cent increase in the proportion of new firm formation, the presence of an additional SEZ stimulates the formation of new firms that are 18.6 per cent more productive and pay 5 per cent higher wages. However, Hyun and Ravi also find that an operational SEZ affects informal manufacturers negatively (compared to districts with no SEZ), by severely reducing value added and total production, and decreases their employment, labour productivity and wages.

As pointed out in UNCTAD (2019), the increasing importance of CSR standards, and their adoption by MNEs can play an important role in helping with "social upgrading" within SEZs. However, CSR policies are necessarily focused on narrower goals than social upgrading. Firms' immediate goals from CSR are primarily to improve the working conditions in their factories, and to a lesser extent those of their suppliers (Gereffi and Lee, 2016). CSR policies and the extent to which firms take these policies seriously reflects a variety of factors, around which a large literature has evolved (for a review, see Kolk, 2016). Suffice it to say that there is a great desire by MNEs to be seen by their stakeholders to be "doing good": it is no longer sufficient to be "doing no harm", although the degree to which CSR policies are implemented varies quite considerably depending on issues such as the degree of control the MNE parent exerts over its affiliated firms and the nature, variety and influence of the stakeholders in question (Yang and Rivers, 2009).

CSR standards can help bring the MNE's supply chain informal actors into the formal sector and push them to have similar work conditions as formal firms. However, it can also isolate small-scale

producers, informal enterprises and informal sub-contractors from the supply chains of MNEs, and effectively reduce opportunities for entrepreneurs, start-ups and informal workers to benefit from the positive outcomes of SEZs.

5. SEZs and dynamic effects

A question that several papers in our special issue (Aggarwal, *this issue*, Chen, *this issue*) and elsewhere (Madani, 1999; Schrank 2001; Farole and Akinci 2011; Frick et al., 2019) address is: What happens to an SEZ in a dynamic scenario, when the original source of comparative advantage diminishes? That is, where a host country establishes an SEZ to take advantage of, say, low-cost labour, what should be done when labour is no longer its locational advantage (relative to other countries or SEZs)? China has proven adept in moving along the SEZ development ladder (figure 1), towards progressively more complex and knowledge-intensive activities as its advantages have changed (Chen, *this issue*), but few less-developed countries have the organizational and financial resources to emulate the China model.

It is not always the case that comparative advantages change: the SEZ may be over-specialized around a single or narrow industry (e.g., business process outsourcing or textiles), or where it is built around a key MNE. This is especially problematic where the infrastructure is not easily repurposed for a different industry or firm.

Aggarwal (*this issue*) echoes Lin and Monga (2010) who suggests that the government should act to identify new industries in which the country may have a latent comparative advantage and remove the constraints that impede the emergence of industries related to that advantage. The largest bottleneck, however, in SEZs evolving dynamically towards a new or different specialization are the resources needed to upgrade the human capital available to firms within the SEZ. Structural mismatches exist between the kinds of investments that host countries seek to attract, and the location advantages that are needed for the MNEs to make a longer-term commitment to that location. It must be underlined, however, that the absorptive capacity of domestic firms does not depend entirely on the efforts of the domestic sector. Their success or failure occurs in consort with an entire “system”, as learning and innovation that involves interactions not only with their competitors, customers and suppliers, but also with the macro environment. Factors such as culture, institutions and infrastructure mould the mechanisms of knowledge creation and distribution within a country (Lorentzen, 2005; Barnes and Lorentzen, 2006; Criscuolo and Narula, 2008). If the “right” institutions are absent in this environment, it is much harder for domestic firms to absorb and efficiently deploy external knowledge.

6. Benefits beyond the SEZs

One of the indisputable findings in both the academic research and UNCTAD (2019) is that the benefits of an SEZ must intentionally “leak” beyond the perimeter of the zone. The immediate benefits of the SEZ to the broader economy are generally modest, and once the costs are considered, an SEZ may even have net negative outcomes. Their effect beyond their immediate vicinity is limited, as Frick and Rodríguez-Pose (*this issue*) note: while SEZs contribute to the growth of surrounding areas, this effect suffers from strong distance decay. Indeed, the success of an SEZ should not only be measured by the intra-SEZ effects or its influence on its immediate surroundings, but also its contribution as a catalyst to the upgrading and economic health of the larger economy, either at a regional (subnational) or national level.

Establishing effective SEZs – and by this we mean SEZs that further the MNE-assisted development agenda – requires more than waiving restrictions on FDI in SEZs. They cannot substitute for a congruent set of policies towards FDI more generally in the larger economy, as the case of Russia illustrates (Kuznetsov and Kuznetsova, *this issue*). Low-income countries must create a conducive environment to enable them to fully exploit the potential benefits resulting from the presence of foreign MNEs. Moreover, a sound SEZ policy must also not be exclusively concerned with attracting capital investment but must give the same importance to enhancing the local embeddedness of the MNEs. It is important to underline that all SEZ investments are not equal. The *quality* of the investment received is at least as important as the quantity. Quality has to do with the MNE’s investment motivations, the affiliates’ remit and autonomy, and these will have a direct impact on the potential for linkages and spillovers.

It is important that SEZ policy be intricately linked to industrial policy and trade policy. Indeed, 21st century industrial policy is crucial to create internationally-competitive industries (UNCTAD 2018). “Modern” industrial policies should dovetail with SEZ policy, focusing on deepening and widening the country’s locational advantages to the same (higher) level of SEZ locational advantages, to encourage the expansion of MNE activities beyond the perimeter of the SEZ. Central to this is the strengthening of domestic firms’ capacity to absorb the knowledge spillovers and connecting to the value chains set up by MNEs. This may be done through a variety of interventions, from investment in human capital and technological capabilities to the promotion of industrial clusters to facilitate knowledge flows.

7. Looking to the future: implications for research and policy

The review above shows that the success of SEZs is not guaranteed and the development benefits not automatic. Policy and strategy matter. More importantly, in recent years the operating environment has toughened, and zones are confronted with new challenges that pose a series of research and policy questions (Zhan, 2018; Zhan et al., 2019).

7.1. Three challenges

The first challenge is global policy uncertainty and fiercer competition for investment. More than a decade after the global financial crisis global FDI remains below its peak level in 2007, and the road to its recovery will continue to be bumpy. The proliferation of SEZs is generating fiercer competition for a shrinking pool of internationally mobile investment. Trade policy factors are also changing patterns of international production as MNEs shift GVCs in response to new trade barriers or changes in preferential market access. The return of protectionist tendencies, slow progress in international trade policymaking, and the proliferation of bilateral and regional trade and investment agreements can thus significantly affect SEZ competitiveness (Zhan, 2019).

The second challenge is changes in traditional comparative advantages. For SEZs, the slow growth in global trade and investment is compounded by technology-driven erosion of location-based advantages from which SEZs traditionally profited. “Generic” locational advantages such as cheap labour and abundant land are no longer enough to ensure investors will sign up, as enhanced digitalization and the proliferation of automation have become important drivers of competitiveness and thus determinants of investment. The new industrial revolution is changing manufacturing industries. MNE overseas operations are increasingly intangible and asset-light, making the traditional physical production advantages offered by SEZs less relevant. This trend is likely to result in increasing numbers of zones specializing in services, on the one hand, and smaller-scale manufacturing (e.g. digital twins, see UNCTAD, 2017), on the other. Both developments can potentially lead to higher technology and intellectual property content in SEZ production, requiring SEZ incentives to foster contributions to industrial upgrading and skills development.

The third challenge is the sustainable development imperative. Sustainable development and inclusive growth have moved high up on the global agenda with the announcement of the SDGs in 2015. The SDGs will determine the development objectives of the international community over the remaining eleven years of the envisaged 2015-2030 timeframe of the development agenda. MNEs and SEZs alike are under considerable pressure to curb their negative impact on communities and the environment and to pursue business activities that will help advance the SDGs (Narula and van der Straaten, 2019; UNCTAD, 2014). This shift in corporate behaviour and business models is already under way, directed largely from within corporate ranks, spurred also by reputational risk factors that have prompted the private sector to adhere to ever-stricter ESG (environment, social and governance) standards. The power of larger firms is driving this change not only within industries, but across entire value chains, with

smaller competitors and suppliers being actively induced to change their behaviours. This has put SEZs – that are an integral part of global and regional value chains – at the centre of pressure to comply with elevated ESG standards and to explore sustainable development business models.

7.2. A research agenda for future generations of SEZs

These new challenges also present opportunities for SEZs to reinvigorate their competitiveness and enhance their sustainability. The search for the ways and means to revitalize the thousands of existing SEZs and build a new generation of zones presents ample scope for a forward-looking research agenda on SEZs. The following are some research questions that merit attention.

7.2.1. How to integrate sustainable development into SEZ business models?

The sustainable development agenda increasingly drives MNEs' strategic decisions and operations. Lax social and environmental rules or controls are no longer a viable long-term competitive advantage to attract investment in zones. On the contrary, they can lead to zone failure when the SEZ becomes associated with labour or human rights abuses, projecting a negative image that discourages investment. More research is needed to help point the way towards more effective mechanisms to promote or enforce high ESG standards in SEZs; to indicate the types of shared services in SEZs that can best support sustainability, such as common health and safety services, environmentally-friendly waste management and renewable energy sources; and to explore whether and how incentives conditional on social and environmental indicators can become a more effective tool to drive SEZs' sustainable development impact.

7.2.2. How to factor the digital economy into SEZs' operational models?

The incorporation of digital technologies in global supply chains across most industries has had profound effects on international production. Digitalization presents challenges but also opportunities within these international production networks. The very lifeblood of an SEZ is the provision of value chain linkage opportunities to firms located in the zone. It is therefore essential that they advance digital adoption and connectivity if they are to remain competitive and relevant players within these networks. Research could explore how to target digital investors in SEZs and orient the strategic strengths of SEZs in the logistics facilitation e-commerce firms' distribution activities. It could look at how national digital policies (e.g. privacy legislation, data storage and security) affect SEZ success. And, more generally, it could identify the best ways to adapt SEZ value propositions to the digital age.

7.2.3. How to tap into new forms of investment and foster new partnership?

Numerous new forms of private finance have sprung up in recent years, which broaden the scope and diversity of investor bases that can be sought out. SEZs could stand to benefit if they explore and form partnerships with these alternative investors. They include venture capital funds, fintech, impact investment funds and crowdfunding ventures. Although only in their infancy in many developing

countries, such investors nevertheless provide viable funding streams to smaller firms (that often set up shop in SEZs) that might otherwise be overlooked by risk-averse finance institutions, such as banks.

A partnership approach could also revitalize stagnant, uncompetitive economic zones. Some experienced public and private developers from countries such as China, India, Japan, France and Singapore offer to build and/or manage modern SEZs outside their home countries. Some can provide funds and expertise in this respect. Regional development zones and cross-border zones spanning two or three countries can also be an option through international cooperation.

New insights are needed on how to encourage venture capital into SEZs to boost start-ups in sectors with high growth potential, and on how to foster international cooperation on zone development, especially for low-income countries, including building new zones through partnerships or as part of development cooperation programmes.

In sum, to survive in the challenging current environment, the strategic approach of SEZs must innovate – orienting away from the provision of low-cost export hubs with weaker standards – toward establishing centres of excellence on sustainable development. Through novel competitive advantages, high-quality infrastructure, and robust environmental and social standards, SEZs can be restructured to increase their effectiveness in attracting investment from MNEs seeking increased sustainability in their value chains.

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