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FINANCING SPECIAL ECONOMIC ZONES

Different models of financing and public policy support

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ACRONYMS

AfDB	African Development Bank
AVCA	African Venture Capital Association
CIIP	Competitive Industries and Innovation Program
DFI	development finance institute
DFID	UK Department for International Development
EIB	European Investment Bank
EPZ	export processing zone
EU	European Union
FDI	foreign direct investment
FDN	Financiera de Desarrollo Nacional (Colombia)
IDA	International Development Association
IFC	International Finance Corporation
IFI	international financial institution
IMF	International Monetary Fund
IPDC	Industrial Parks Development Corporation (Ethiopia)
MDB	multilateral development bank
PPP	public–private partnership
PSW	Private Sector Window (IDA)
SBMA	Subic Bay Metropolitan Authority (Philippines)
SEZ	special economic zone
UK	United Kingdom

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EXECUTIVE SUMMARY

Special economic zones (SEZs) require financing for on-site infrastructure, including power and other utilities, internal roads, common facilities and buildings, and for off-site infrastructure, including access roads and utility connections. They also require financing for private firms investing in the SEZ and for management and operations.

Infrastructure is typically financed either entirely from public sources or through public–private partnerships. This generates the long-term, substantial and concessional financing needed but can increase the public debt burden and requires public sector competency in constructing and managing infrastructure.

There are several sources of public financing for SEZs. Multilateral development banks have provided technical advice and financing for SEZs of up to \$100 million. Development finance institutions (DFIs) have financed early-stage projects. China has established SEZs with finance from Chinese state-owned banks for infrastructure and with private Chinese firms managing and establishing operations in the SEZs. The latter have been successful, but in some SEZs disputes have resulted in host countries transferring assets to Chinese ownership or granting long leaseholds.

Private investors also can finance SEZs. This has been most successful in Asia and in small-scale SEZs. Such finance has been obtained from private capital, bank lending and capital markets. The key advantage is that the private investor is taking the risk – as well as the return – without there being any effect on public debt levels. However, this approach is often relatively high cost, and it is important that investments are scrutinised to ensure a fair sharing of risks and rewards and that dispute resolution is well managed.

Overall, SEZ successes are dependent on the country context and predominantly on non-financial factors. This means that the financing and ownership structure of SEZs is more a matter of pragmatic issues – most notably access to and the cost of finance and the appetite of the public sector for financing SEZ debt – than one related to the core elements of an SEZ's success.

In relation to policy recommendations, there is a need to expand DFI financing and blended finance for private sector development of SEZs, especially in terms of early-stage financing. Both would enable an expansion of private financing of SEZs and enable demonstration projects and innovation led by DFIs. There is also a need to increase technical support from the international financial institutions to support host governments to develop methodologies and expertise in project assessment and contracting.

SEZs represent a potential opportunity to accelerate early-stage industrialisation in developing countries, including through employment-intensive sectors. Seeking innovation and policy support is important to assist developing countries in achieving this policy goal.

1 INTRODUCTION

A special economic zone (SEZ) is a piece of serviced land, typically industrial, that provides infrastructure and connectivity for private firms investing in the SEZ. Physical infrastructure includes electricity, buildings and transport. SEZs may also be accompanied by special laws and regulations to induce investment, including tax incentives and export–import frameworks.

SEZs have a mixed history of success. Differentiating factors between successful and unsuccessful SEZs are multiple and interacting. In addition, infrastructure projects that accompany SEZs carry significant risks in relation to project development, construction and operation. These risks are greater in developing countries, where the institutional environment is weaker, including in relation to government capacity, legal and regulatory frameworks and construction capabilities (te Velde et al., 2015; CIIP, 2017; Tyson, 2018).

This paper focuses on one aspect of SEZ execution – their financing. The purpose is to provide guidance on financing options and their advantages and disadvantages. The paper includes Case studies on existing SEZ financing and examines in detail the possibilities for private financing of SEZs.

1.1 What needs to be financed and the options for finance

SEZs require financing for on-site infrastructure, including power and other utilities, internal roads, common facilities and buildings, and for off-site infrastructure, including access roads and utility connections. They also require financing for private firms investing in the SEZ and for management and operations.

There are different models for SEZs. The government sets the broad framework, including legislation, regulation and taxation, with individual private firms operating in the SEZ. Where the models differ is in the responsibility – public or private – for financing infrastructure for the SEZ and for its operation and management.

Financing of external off-site infrastructure is a major investment, and also involves coordination with public policy and broad national infrastructure planning. Because of this, it is typically financed either entirely by public sources or through public–private partnerships (PPPs).

By contrast, financing of on-site infrastructure and the ongoing management and operation within the SEZ has more mixed financing models. These include the full range of entirely public financing, PPPs of various types and purely private financing.

A common model of financing PPPs is through separate companies being formed, with both the public and the private partners being shareholders and board members. The division of shareholdings and board members typically reflects the balance of assets being put into joint venture (such as equity, debt and non-financial assets such as land), the risk each party is taking in relation to the business operations and the division of rewards, including the receipt of dividends or other income streams from the SEZ.

Public financing of the constructing and operations of on- and off-site infrastructure can have significant advantages. These include the ability of the public sector to raise substantial and concessional financing and to sustain the long periods required to bring infrastructure to an operational phase. However, this can also increase the debt burden in the public sector and can require competency in constructing and managing infrastructure that may be difficult to establish within public institutions.

By contrast, private financing of on- and off-site infrastructure can leverage private sector expertise in the construction and operation of infrastructure and avoids adding to the national debt. However,

such arrangements typically transfer the rewards and often the ownership (on either a temporary or a permanent basis) of the infrastructure to the private sector.

Public management of SEZs has advantages, including that it enables closer coordination with public policy goals and allows for the easier establishment of SEZs, as the public sector is not deterred by the likelihood of operational losses in early-stage SEZs. However, where there are operational difficulties in SEZs, the responsibility for resolving them lies with the government, and this can entail unpalatable political choices.

By contrast, private management of SEZs can be more dynamic and can leverage private sector expertise, including in establishing self-funding of SEZs and in attracting private sector firms to operate in the zones. These are also typically managed through specially created legal entities or private firms entering the sector.

Finally, private firms within the SEZ are normally entirely financed by private means. This is because firms are expected to be self-financing and commercially viable as part of the fundamental design of an SEZ.

Table 1 summarises these different financing models for different stages and components of SEZs. The next sections discuss in more detail these different financing models and their advantages and disadvantages, as well as presenting Case study examples to illustrate these points.

Table 1: SEZ financing options

Requirement	Public or private	Common structures	Example financiers
External off-site infrastructure	Public or private	Outright public ownership; PPPs	International Development Association; African Development Bank; Chinese government; commercial banks
SEZ on-site infrastructure	Public or private	Outright public ownership; PPPs; private companies with public and/or private shareholders	International Finance Corporation; venture capital; Chinese government
SEZ management	Public or private	Private companies with public and/or private shareholders	International Finance Corporation; venture capital; Chinese government
Firms operating in SEZs	Private	Private corporations	Self-financing including foreign direct investment and venture capital

Source: Author

2 PUBLIC FINANCING FOR SEZS

This section discusses the different types of financiers that are either active or potentially active in the sector. It aims to give a brief overview of their activities to date, their policies and the potential for SEZ financing.

2.1 Multilateral development bank and development finance institution financing

Multilateral development banks (MDBs) have provided significant support for SEZs, including technical advice and financing. The World Bank financed \$2.4 billion for 35 SEZ projects between 1973 and 2015. These include export processing zones (EPZs), industrial estates/parks/free zones, commercial free zones, enterprise zones, agricultural zones and investment zones. DFI financing has been found to be correlated with effective results in SEZs (CIIP, 2017).

Financing has covered a broad range of needs, including land acquisition and site development, infrastructure, factory shells and technical assistance. The financing provided has varied widely but has included projects over \$100 million and financing with long tenure (CIIP, 2017). Case study 1 below presents an example of World Bank financing of large-scale infrastructure development and technical assistance to support SEZ development in relation to the Philippines Subic Bay Freeport Zone.

In Africa specifically, the World Bank has financed several ‘start-up’ SEZs, including in Ghana, Madagascar, The Gambia and Uganda. The Bank’s financing here has been predominantly for infrastructure and land, as well as broader technical support (Xubei et al., 2013).

The African Development Bank (AfDB) has also provided significant finance and technical advice for SEZs in Africa (although a consolidated figure of total financing for the sector is not available). Its focus has been on providing financing for infrastructure, including supportive infrastructure external to the zone.

For example, in Mozambique, AfDB co-financed development of the SEZ and infrastructure along the trade corridor at Nacala Port. It has also financed agricultural processing zones, including in Cameroon and Malawi, and a ‘science park’ in Angola. In addition, it has provided technical advice in relation to PPPs. For example, it acted as adviser for the PPP in the Kenyan SEZ at Lamu (AfDB, n.d.).

However, it is worth noting that AfDB has commented that the performance of SEZs has been mixed and job creation has been limited, and it is likely that any additional financing will require confidence in relation to these deliverables (AfDB, 2014).

Development finance institutions (DFIs) are public institutions that specialise in private sector development. As such, they have a mandate to provide financing for projects such as SEZs, including for private firms locating operations within them. To date, DFIs have provided limited finance to SEZs.

Both MDBs and the international financial institutions (IFIs) are expanding co-financing with the private sector (known as ‘blended finance’) to de-risk private investment. IFIs have financed early-stage projects, for example, or provided equity or subordinated debt, with private investors taking the senior debt. This has been common in infrastructure – although more so for large-scale national projects than for SEZs – with nearly 170 such funds being set up in the past five years (Blended Finance Taskforce, 2018).

One recent DFI initiative of note for SEZs is the 2017 replenishment of the Private Sector Window (PSW) at the International Development Association (IDA), the World Bank’s fund for the poorest

75 countries. The \$2.5 billion commitment aims to support private investment in low-income countries at the project level. In addition to technical assistance, the PSW offers project-level de-risking for private investment, including the provision of project preparation facilities, blended finance, risk mitigation instruments and local currency instruments, as well liquidity support for take-off agreements and local currency instruments.

Such innovation in blended finance could be extended to SEZ support, including in infrastructure, operations and management of SEZs, and for the private firms investing in them, including in coordinated programmes of support for SEZ financing across all these aspects of their development. Case study 2 on Ghana presents an example of well-coordinated policy and financing.

2.1.1 Case study 1: The Philippines Subic Bay Freeport Zone

The Subic Bay Freeport Zone is an SEZ created in the Philippines around a deep water natural harbour that was previously a military base. Its establishment was financed by the World Bank, which provided a 20-year \$40 million loan directly to the management company, the Subic Bay Metropolitan Authority (SBMA). The SMBA is wholly owned by the government of the Philippines and was provided with concessionary land acquisition and equipment by the government (World Bank, 1994).

The World Bank's loan was provided for infrastructure. It was on a concessional basis and for long maturity, to provide support to the establishment of the zone. In addition, the World Bank's view was that private finance was more appropriately allocated to commercial ventures within the SEZ (World Bank, 1994).

This arrangement, whereby public funding was provided to an autonomous management company, provided several advantages. First, the debt was not part of the national debt, but instead was ring-fenced as a liability of the SMBA. In addition, the structure gave the SMBA flexibility and management autonomy and was accompanied by capacity-building for Authority (World Bank, 1994).

Today, the Subic Bay Freeport Zone hosts the world's fourth largest shipbuilding facility (owned by Hanjin Heavy Industries and Construction) as well as more than 700 other investment projects, and provides employment for 7,000 people. Further, the SMBA is self-funded through using income from private investors to finance management operations.¹

2.1.2 Case study 2: Ghana's mixed industrial and export zone development

The development of industrial zones in Ghana is of interest because it has been led by both the public and the private sectors.

From 2005, the government adopted a holistic approach to SEZ development. It established the Ghana Trade and Investment Gateway Project and the Ghana Free Zones Board to lead development. The Gateway Project was jointly financed through \$50.5 million from the IDA and \$3.4 billion from the Government of Ghana.

This was used to develop physical infrastructure (water, sewage, solid waste treatment, electricity and access roads) to link export processing and industrial zones.

¹ <http://www.sbma.com>

It was accompanied by the reform of ‘soft infrastructure’, including legal and regulatory reform and the creation of the Ghana Investment Promotion Council to attract private firms (Ackah et al., 2012; Xubei et al., 2013).

These initiatives have supported the development of EPZs in Ghana. The most successful is the Tema EPZ, which hosts manufacturing, service and commercial export activities. It hosts a ‘one-stop-shop’ for processed exports, including a free trade zone and links to the air and sea ports, and offers factory shells, office space and land parcels. These are serviced with off-site facilities, including a reliable electrical power grid, a large water reservoir, a central sewerage system, telecommunication services and securitised enclosures. Tema EPZ has attracted more than 3,000 private investment projects valued at \$16 billion and including many export-oriented firms. However, the zones continue to face challenges in relation to water and electricity supplies (Ackah et al., 2012; Xubei et al., 2013).

Other parks include the zones in Ghana’s central and western regions. As for Tema, these have been developed using a holistic strategy. For example, the Sekondi EPZ is close to the country’s second largest seaport with a direct road link, making it ideal for heavy industrial activities and industrial mineral processing. Similarly, the Shama EPZ targets the petroleum-petrochemical sector, with 3,200 acres of seafront. These advantages have led to significant private investment in the zones, with approximately 1,000 firms operating, including a wide variety of light manufacturing firms, which offer the key advantage of being labour-intensive. They have also been a factor in recent success in Ghana in developing its oil and gas industries (Ackah et al., 2012).

Ghana has also had a broader policy environment, which has created what has been described as a ‘nationwide free trade zone’. This is of interest because it has induced private investment in industrial clusters – which are analogous to SEZs – without zone-specific policy initiatives. For example, Kumasi, the second largest city in Ghana, hosts the largest light manufacturing cluster in Africa. This cluster has arisen because of broad policy support in relation to exports – but without government investment – as well as non-policy-related cluster benefits. It currently has more than 10,000 firms in car repair and manufacturing and furniture manufacturing. It employs over 100,000 workers (Ackah et al., 2012).

2.2 Chinese-led partnerships

China has been a global leader in developing its own SEZs. In recent years, it has sought to build on its expertise to establish SEZs – known as economic and trade cooperation zones – in Asia and Africa in partnership with Chinese public finance and Chinese private investors.

The partnerships typically involve finance from Chinese state-owned banks for infrastructure and private Chinese firms managing and establishing operations in the SEZs. Zones are developed through specially created companies. These can be subsidiaries of Chinese firms or co-owned with host governments as minority partners (although not typically domestic private investors). The private Chinese firms also receive support from the Chinese government, including subsidies, long-term loans and grants and guarantees from various Chinese state-led banks. In addition, they receive logistics support such as in negotiating with the host government over land, tax incentives and work permits. Host governments typically provide land and external infrastructure for the zone (Xiaoyang, 2015).

Many such partnerships with the Chinese government have been successful. They have lent expertise and important political and economic relationships in relation to SEZs, as well as providing financing and leveraging in private firms to operate in SEZs. Case study 3 discusses the example of Ethiopia, which has partnered with the Chinese government and Chinese private firms successfully to develop SEZs.

However, there have been problems with some Chinese-led programmes. For example, zone development has been delayed or restructured because of financial problems in Chinese

companies, and, where Chinese-financed infrastructure has not been serviced, host governments have agreed to debt rescheduling and repaid loans by transferring assets to Chinese ownership or granted long leaseholds. In addition, some projects have suffered from political and civil discontent in relation to Chinese partnerships in SEZs. Case studies 3 and 4 discuss examples of these issues in Ethiopia and Sri Lanka.

2.2.1 Case study 3: Ethiopia's SEZs

The Ethiopian government has successfully led the development of SEZs as part of its strategic economic plan for industrialisation. The government has adopted a two-pronged approach to zone development, involving both government-led industrial parks and private-led SEZs. The latter are financed through foreign (primarily Chinese) investment.

The government-led parks are managed through a dedicated public company – the Industrial Parks Development Corporation (IPDC) – which provides services and infrastructure to private firms locating into the zones. This has included dedicated electricity generation to ensure power supplies for firms in the zones and a 'one-stop shop' for firms' banking, import-export licences and customs procedures.

The IPDC also manages investment promotion to private firms, with firms screened by the Ethiopian Investment Commission. Today, firms in the SEZs are from Bangladesh, China, Hong Kong, India, Indonesia, Spain and the US, and more than 60,000 jobs have been created (Hoque, 2017).

The government has provided financing for zone development, with complementary investments by private Chinese firms. For the government-led industrial parks, the Ethiopian government raised finance by issuing a sovereign bond on the international capital market, becoming the first least developed country to do so. A total of \$1 billion was raised through the sale of Eurobonds in December 2014, with the goal of constructing industrial zones, building sugar factories and boosting power production (Mashoo, 2014). As much as \$750 million of this total was earmarked for industrial park projects (Addis Fortune, 2016). The Ethiopian government has spent \$650 million so far on four industrial parks, in Bole Lemi, Hawassa, Kombolcha and Mekelle (Giannecchini and Taylor, 2018).

Among these, Hawassa Industrial Park is a flagship initiative. Construction of the park, which cost \$250 million, was financed by the Ethiopian government through the funds generated from the Eurobond sale as well as other public money (DAI, 2017; Mihretu and Llobet, 2017; Donahue, 2018). The park is Ethiopia's largest textile and garment industrial park and has attracted investment from major multinationals in the garment sector, including PVH as an anchor tenant. In addition to funding the construction of the park, the Ethiopian government has financed the development of specific services, including through investment in a state-of-the-art zero-liquid-discharge common effluent treatment facility (Zhang et al., 2018). This facility is operated privately by Arvind Envisol Private Limited, an Indian sewerage treatment company. Some funding has been provided through loans from development banks for connecting infrastructure to the park. These include loans from AfDB, the World Bank and Chinese Exim Bank to finance various legs of the construction of a Hawassa–Modjo Expressway.

An alternative source of financing for zones is provided by Ethiopia's development partners under the Ethiopia Jobs Compact. This funding has been earmarked to support the creation of jobs for refugees in Ethiopia. To this end, a financing package totalling \$500 million, with contributions from the European Investment Bank (EIB), the World Bank, the UK Department for International Development (DFID) and other EU member states, will fund the construction of three industrial parks and associated infrastructure as well as training, housing and support to help refugees settle into new communities (EIB, 2016; Humanitarian Logistics Association, 2017). These funds are being provided on the condition that one third of the 90,000 jobs expected to be created in the new industrial parks will be allocated to refugees (Davison, 2017).

In addition to the government-led industrial parks and the funding for parks under the Ethiopia Jobs Compact, the Ethiopian government has adopted an alternative model of externally financed, private sector-led zones. Many of these have benefited from Chinese funding as part of the Chinese government's strategy to develop SEZs overseas. This model involves using Chinese contractors to develop zones, with the Chinese government providing financial support to private zone developers to reduce their commercial risks. The Chinese contractor firms are chosen via competitive bidding led by the Chinese Ministry of Commerce. They are then provided with long-term loans, subsidies and grants. For example, financial support from the Chinese government is provided to cover up to 30% of pre-construction and implementation costs. Their investments are typically guaranteed by parent companies and Chinese public export banks (Farole and Akinci, 2011).

The Chinese-owned Eastern Industrial Zone in Ethiopia is a good example of this approach. The privately run zone required an investment of \$146 million and is entirely owned and managed by Jiangsu Quiyuan Group, a private Chinese investor. The developer was officially approved by the Chinese Ministry of Commerce and entitled to financial subsidies of up to 40% of the total investment. Additional backing was provided through financial guarantees from two Chinese municipalities. The developer also received a long-term loan of \$36 million from the Exim Bank of China. The Ethiopian government supported the development of the zone by providing land on favourable lease terms as well as off-site infrastructure (and reimbursed some costs for on-site infrastructure).

However, the investment programmes for these private-led SEZs have often been disrupted because private firms have revised these following financial problems in their parent companies. This has resulted in capital restructuring, including transferring shareholder ownership to new private partners and a renegotiation of loan finance with China's Exim Bank. These issues have resulted in sharp reductions in the investment programmes for these SEZs despite their contractual obligations to maintain investment levels (Farole and Akinci, 2011).

In addition, the Ethiopian SEZs programme has been affected by conflict relating to land used for SEZ development (and other industrialisation programmes). By 2017, this had escalated into civil unrest and a state of emergency.

2.2.2 Case study 4: Sri Lanka 'Port City Colombo'

The Sri Lankan government has sought to develop SEZs, financed by loans totalling an estimated \$25 billion from Chinese state-owned banks and with construction and operation contracts agreed with private Chinese firms. These include a \$15 billion project to build 'Port City Colombo', a financial zone in the capital. The financing includes a \$1.4 billion investment and tax breaks for the China Communication Construction Company.

However, the project has been plagued by delays and the port has suffered from significant losses because of underutilisation, leading to the government being unable to service the related debts. Because of these difficulties, the port has been subject to the granting of 99-year leases and debt for equity swaps with the Chinese firms in exchange for debt forgiveness. This transference of assets to Chinese firms has proved politically controversial and has led to civil unrest (Lim and Mukherjee, 2018).

2.3 Public–private partnerships

Prior to the 2000s, the majority of SEZs were publicly financed, with less than 25% privately owned. However, in the past two decades, there has been a notable trend towards private financing of SEZs. This is because it alleviates the burden on the public sector and because there

is some evidence that private SEZs can be more effective in relation to their performance and competitiveness (FCIA, 2008; Farole and Akinci, 2011).

PPPs have been the most common form of private financing of infrastructure for SEZs. They typically involve private financing of the infrastructure and facilities within the SEZ combined with public financing of off-site infrastructure such as utilities and transport connections. This is sometimes accompanied by land ownership or concessions to secure development rights, or by either 'build-operate-transfer' or other management agreements.

Partnerships with the private sector can add dynamism to zone development and be an important source of expertise. They also transfer risk from the public to the private sector. However, PPPs require the host government to develop an appropriate legal, regulatory and institutional framework, and achieving this can be difficult in countries with weak public institutional capacity. Case study 5 presents an example of this being done successfully in Panama.

As noted earlier, MDBs have been active in providing technical advice to host governments in relation to PPPs (CIIP, 2017).

2.3.1 Case study 5: Panama Pacifico Project

Panama has created several SEZs, which have attracted foreign direct investment (FDI) and created employment. One of the most successful examples is the Panama Pacifico Project, which has created 4,800 jobs and attracted international corporations including 3M, Dell, Cable & Wireless and Singapore Airlines.

The SEZ was financed through a PPP that was developed by the government, with support from the International Finance Corporation (IFC) to create a special regulatory framework to manage the PPP.

The PPP contract was awarded to London & Regional Properties, a global private real estate developer, which was given a 40-year concession in return for a commitment to invest a minimum of \$405 million. The committed investments include the building of business and industrial parks and residential and service infrastructure, including a residential neighbourhood and hotels. The master agreement specified the party's obligations and risks. These included issues such as categories of use, penalties for non-compliance and detail of the obligations for infrastructure development and development rights. It also included an exclusive development right for 15 years for the master developer.

However, Panama's SEZs, despite their viability, have not had major spillover effects and have not been a major driver of FDI. Other factors – including political and economic stability, trade liberalisation and a business-friendly environment with low taxes – have been more important (Hausmann et al., 2016).

3 PRIVATE FINANCING FOR SEZs

3.1 Private-sector led SEZs

Aside from public finance, private financial sources can finance SEZs. Such private finance offers the key advantage that the private investor is taking the risk – as well as the return – without any effect on public debt levels. Case studies 6 and 7 discuss two successful examples – in Vietnam and Cambodia.

Key sources of private finance include domestic and international commercial banks and capital markets and venture capital (including FDI). Instruments include loans and equity, including project financing. Each offers different advantages and disadvantages.

The key sources of private finance are domestic and foreign direct investment. This includes investment from commercial firms and from venture capital funds. Such sources have the key advantages of combining liquidity and risk appetite as well as significant expertise. However, they are often relatively high-cost.

Commercial banks are active in project financing and are potentially important sources for infrastructure in SEZs. Financing from such commercial banks is typically provided as loans. They have the advantage of having lower conditionality than public finance and can also be accompanied by advice on key issues such as structuring and yield. However, such loans are typically higher-cost than non-commercial loans and, since the global financial crisis of 2008, there has been limited cross-border bank lending.

Another alternative source is capital markets. To date, there has been little issuance of either equity or bonds to finance SEZ development in either domestic or international capital markets. However, both are possible sources of finance; case study 6 discusses an example in relation to Vietnam.

In relation to domestic capital markets, liquidity is often limited by a shallow investor base. However, smaller issuances – such as those below \$10 million – of bonds or shares may be attractive for domestic investors. Such issuances would also be more likely to be made in local currency, avoiding the issues of hard currency risk, and at a lower yield than that expected by international investors.

These possibilities could be explored for SEZs. For example, it would be possible to create and list a private company on a local stock exchange to own or manage infrastructure and SEZ operations. Such a listing would raise finance through a primary issuance on the stock exchange with supplemental leverage through bank loans or local bond issuances. Success in such a project would depend on the development of a credible business plan, appropriate levels of return and adequate liquidity in local markets.

International capital markets have deep investor bases, which include ‘frontier market’ investors with relatively high-risk appetite. Vehicles include venture capital funds, such as private equity funds and sovereign wealth funds, private placements and specialist markets for equity and bonds, such as London’s Alternative Investment Market and real estate developers. As noted, the key advantage of seeking finance from international markets is the high level of liquidity they potentially offer. They also may offer, depending on the deal structure, access to management expertise and technology transfer. However, a key disadvantage for both sources is that expected returns to investors are high.

3.1.1 Case study 6: Vietnam's private sector SEZs

As at 2017, Vietnam had about 800 industrial zones and EPZs, with more than 5,000 foreign firms and investment capital of \$100 billion located in them. The industrial zones offer a wide range of activities, including manufacturing for export as well as higher-value activities such as microelectronics and biotechnology.

Vietnam is of interest because its SEZs have been developed predominantly by the private sector, with government limited to providing broad-based policy incentives, including tax and export incentives and leasing of land as well as regional licensing and regulation (PricewaterhouseCoopers, 2017).

The SEZs have attracted investment from major international corporations because of these government incentives, including tax breaks, the good location of Vietnam for exports and the country's relatively low labour costs (Ernst & Young, 2017; PricewaterhouseCoopers, 2017).

The zones are owned and managed exclusively by private firms. These take responsibility for providing infrastructure and for marketing and managing relationships with private firms.

Many are relatively small, with only 20–50 firms, financed predominantly through FDI and bank lending. Others are relatively large and have access to more sophisticated financing. For example, Vietnam Manufacturing and Export Processing Holdings Ltd is listed on the Hong Kong Stock Exchange.

Overall, the zone development in Vietnam is an interesting mix of private firms seeking to build on Vietnam's competitive advantages for manufacturing and export with only limited and broad-based policy support from the public sector.

3.1.2 Case study 7: Cambodia's private sector SEZs

Cambodia has attracted significant foreign investment into its SEZ and has created approximately 30 zones with an estimated 100,000 jobs. Government support has been limited to broad-based legislation and tax incentives.

The establishment and management of the zones has been led exclusively by private investors. The SEZs are often quite small. As part of their licensing, they are required to establish roads, electricity and water for the private firms locating in the zone as well as administration services for firms in relation to exports and imports, employment and regulation.

The SEZ operators have been successful in attracting significant foreign investment because of low labour costs in Cambodia, because of its favourable position in relation to global value chains and because of relocation of manufacturing from China.

Some problems have arisen. For example, firms in the zone are contractually required to purchase electricity from SEZ operators, and there have been disputes because the electricity is more expensive than that outside of the zone. There has also been some criticism of SEZs because workers have been paid below the minimum wages set in Cambodia.

However, overall, the SEZ have been a success. As well as providing significant employment, SEZs have helped diversify the Cambodian economy away from the garment sector into higher-value production in electronics and household furnishings and helped build exports for the country (Warr and Menon, 2015).

3.2 Attracting private investment

When seeking to attract private investors, it is important to understand their concerns and requirements. Some of these relate to the commercial considerations of the project. Others relate to the investment mandates, regulatory requirements or fiduciary responsibilities of different types of investor classes.

In developed countries, one of the fundamental requirements for investors is a credible government commitment to respect investors' fundamental property rights (McMillan et al., 2017).

For SEZs, such credible commitments include honouring ownership or leaseholds in relation to land and buildings and allowing business to operate within legal and regulatory requirements on an unfettered basis. Whether involving SEZ investment in infrastructure or through PPPs it is also important that agreements with the public sector are honoured, including in relation to issues such as 'take-off' agreements and taxation (Tyson, 2018).

Private investors are also attracted by stable macroeconomic and political environments. An absence of such stability discourages investors because risks are difficult to hedge or otherwise manage (McMillan et al., 2017; Tyson, 2018).

Private investors are also concerned that individual projects should be 'bankable'. Bankability has several dimensions. One is simply commercial attractiveness in relation to risk and return. Certain investor classes also require projects to match their fiduciary and regulatory requirements. For example, institutional investors have fiduciary responsibilities and are subject to regulatory requirements that restrict investments to assets that meet minimum credit-rating and liquidity levels (Tyson, 2018).

Projects can also be considered unsuitable by investors because they are in the early stages of development. Early-stage projects present significant planning, governance and construction risks and often have undetermined timelines. For SEZs, and especially for their infrastructure, a possible approach for the public sector to overcome this barrier is to take responsibility for early-stage development and then to seek to refinance when a project reaches maturity (Tyson, 2018).

As discussed in the prior section, there is also the potential for domestic investors, including institutional investors, to finance SEZs. However, regulatory frameworks for local pension funds and insurance companies need to allow investments in infrastructure for SEZs. Reforming regulatory frameworks to facilitate such investment while simultaneously maintaining appropriate fiduciary standards has enabled the financing of infrastructure elsewhere and could be considered for SEZs. Case studies 8 and 9 discuss examples of such balancing of these issues in relation to Colombia and Tanzania.

3.2.1 Case study 8: Regulatory reform to allow financing by domestic pension funds in Colombia

Colombia's Financiera de Desarrollo Nacional (FDN) is a financial development institution mandated to catalyse private investment in domestic infrastructure. It was structured with the national regulatory environment in mind, with seed capital provided through equity investments from the IFC and the Development Bank of Latin America. Thus, FDN is not subject to regulations governing state institutions. Its task is being complemented by a reform of domestic pension-fund regulations to lift restrictions on investment in infrastructure.

These regulatory changes have allowed FDN to coordinate the financing of major national infrastructure projects, including \$300 million in upgrading national roads, bridges and tunnels. The funding has come from FDN subordinated finance, as well as the issuance of domestic syndicated loans and bonds. Some 41% of the latter has come from domestic pension funds and 59% from international institutions (Tyson, 2018).

3.2.2 Case study 9: Tanzania and pension fund investments in infrastructure

Tanzania has seen growth in pension and insurance funds of 12% annually over the past decade. As of 2017, there were 29 insurance and pension companies active in the sector, with estimated assets of \$5 billion. The sector is regulated by the Tanzania Insurance Regulatory Authority, with oversight by the Bank of Tanzania. Regulations require capital and liquidity buffers, upper limits on investments in certain asset classes and matching requirements on long-term assets and liabilities.

Pension funds have been invested predominantly in government bonds, real estate and listed equities. However, in 2017, Tanzania announced pension reforms. These included merging multiple public pension funds into a single fund and broadening allowable investment classes to include infrastructure.

Investments have been made by both public and private pension funds in the sector. They include a joint investment to build the Kigamboni Bridge, with pension funds taking a 60% stake and the government, 49%. Infrastructure assets are primarily in the road, rail and energy sectors, including co-financing with the government and Chinese investors.

Concerns have been raised about the quality of some assets, however. Managing these risks will be an important factor in ensuring the reforms both deliver good returns for pension customers and make a significant contribution to financing national infrastructure development (IMF, 2018; Tyson, 2018).

3.3 Assessing private finance returns

In looking at private investment, it is necessary to assess the economic rate of return and appraisal of projects. This is of importance because poor appraisal of projects can undermine the effectiveness of SEZs. Indeed, the World Bank has found that expected returns are often overestimated and lower than expected at project close (CIIP, 2017).

In assessing projects, the most common methodology is to develop a discounted cash flow valuation. This requires the establishment of a benchmark yield curve and a cash flow forecast for a given project, including capital expenditure and expected income and costs.

Because of the nature of SEZs, such a cash flow forecast is difficult, particularly over the long period in which investment returns need to be assessed – typically up to 20 years. However, such a forecast should be produced as part of business planning. One approach that can be adopted to overcome the difficulty in doing this is to produce multiple forecasts – such as a best case, a worst case and medium case – and to examine the discounted cash forecast valuation against these possible outcomes.

A yield curve can be constructed by extrapolating between benchmark yields across a range of maturity dates. The yield curve can then be used to discount the cash flow to give a valuation for a given project.

Benchmarks are typically assessed in relation to yields, and, in particular, for emerging markets, yields as a spread over US dollar government yields as represented by US Treasuries (often quoted as 'basis points', with 1 basis point being equivalent to 0.0001) for a given maturity.

One of the most important such benchmarks is the yield on sovereign Eurobonds. Since 2013, there has been significant sovereign bond issuance in sub-Saharan Africa, including \$7.5 billion in 2017 and a forecast \$11 billion in 2018. As at the time of writing, sub-Saharan African frontier market spreads averaged 450 basis points over Treasuries, down from a peak of 900 basis points in 2016 (IMF, 2018).

Similar benchmarks can also be taken from domestic government bond markets. In sub-Saharan Africa today, such bond markets are typically underdeveloped. However, they have also been developing rapidly, with the current stock of local currency government bonds now averaging 8.5% of gross domestic product. Maturities in such bonds have also been extended, with them rising to an average of 6.4 years for the region, with some countries – such as Tanzania – issuing local currency bonds with maturities of 15 years or more.

When assessing a benchmark, such government bond markets offer a baseline on which additional yield should be added to account for the risk associated with the specific project. In relation to this, it is useful to refer to other non-yield benchmarks. This might include, for example, examining comparative projects or listed companies in a comparative sector and country and using their realised returns as a benchmark. However, in many emerging markets, there are relatively few such projects, and returns are often not publicly disclosed.

There are possible alternatives. For example, the African Venture Capital Association (AVCA) publishes average returns on its members' investments in the sub-Saharan African region. For 2017, these show that, for the average project investment of 6.5 years, in East Africa the average return is 49%, in West Africa it is 52% and in Southern Africa (excluding South Africa) it is 88%. Such publicly available information on non-listed investment in the private sector is a good source of benchmarked expected returns for investments in SEZs (Ernst & Young and AVCA, 2018).

Overall, assessing the value of projects is difficult, and subject to multiple uncertainties, and a given valuation has an element of subjectivity. Given this, it is often best to consider evaluation as a range rather than a given value.

The World Bank also recommends that technical support be increased to help planning authorities with this problem, including developing a standardised methodology (CIIP, 2017).

This paper would reiterate this need for greater technical support and for further study into establishing standard methodologies.

3.4 Managing private finance

A further important consideration in attracting private finance is to consider deal terms, including those that are related to ongoing management of investments and projects in SEZs.

Such contracting is technical and requires specialist legal and financial advice. Such advice can be provided as part of technical assistance from IFIs. Grants can also be obtained to provide advice and execution assistance.

In relation to SEZs, unfortunately, disputes with private investors are not uncommon. The Case studies in this paper illustrate the multiple difficulties that can arise.

In relation to managing this, formal contractual terms ideally would include specification of how disputes will be resolved. For example, contractual terms often include the determination of jurisdictions for dispute resolution, obligations to mediate through formal processes and detailed contract terms to bind the parties.

Private investors will also often require such deals to be conducted through international financial centres to provide a legal framework for jurisdictions and dispute resolution. For example, for these reasons, in sub-Saharan Africa, Mauritius is often used as a conduit for private investment (Tyson, forthcoming).

As can be observed from the Case studies, on occasions the previously agreed contractual dispute resolution processes have not been adhered to, or host governments have sought to renegotiate them. As noted, such renegotiation is damaging to the investment climate, as it undermines the

fundamental property rights of investors. Where such situations have arisen, investor appetite for the countries has often been damaged for a prolonged period.

Such issues can be avoided if initial contract terms are examined in detail, expert advice is sought and host governments honour their commitments to the agreed terms.

4 CONCLUSION

The paper has given an overview of possible sources of financing for SEZs in developing countries.

SEZs have most commonly used public financing of infrastructure and of management firms. Financing for these has been provided predominantly by host governments and MDBs.

However, there have also been successful SEZ initiatives established and managed exclusively by private firms. These have been most successful in Asia and in small-scale cases. Finance has been obtained from private capital, bank lending and capital markets.

Overall, it should also be remembered that SEZ successes are dependent on the country context and predominantly on non-financial factors.²

This means that the financing and ownership structure of an SEZ is more a matter of pragmatic issues – most notably access to and cost of finance and the appetite of the public sector for financing an SEZ debt – than a core element of an SEZ's success.

Nevertheless, in today's policy environment, concessional financing and the willingness to take on incremental public debt are constrained. As such, there is a need to develop more varied and greater-scale private finance models for SEZ development.

This will require more innovation in financing models for SEZs, including accessing capital markets and venture capital, and for further technical capacity-building to support host governments in developing and assessing such financing models.

In relation to policy recommendations, there is a need to expand DFI financing and blended finance for private sector development of SEZs. Both would enable the expansion of private financing of SEZs and enable demonstration projects and innovation led by DFIs.

Further, there is a need for an expansion of technical support from IFIs to assist host governments in partnering with private finance to develop SEZs. In particular, there is a need for early-stage financing and technical support to develop methodologies and expertise in project assessment and contracting.

SEZs offer a potential opportunity to accelerate early-stage industrialisation in developing countries, including through employment-intensive sectors. These opportunities are being increased by Chinese and other Asian firms migrating to low-cost labour markets in poor countries in Asia and in Africa. Seeking innovation and policy support for this is an important initiative to assist developing countries in their economic development.

² See CIIP (2017) for a fuller discussion of non-financial factors relating to SEZs, which are outside of the scope of this paper.

REFERENCES

- Ackah, C., Adjasi, C. and Turkson, F. (2012) *Scoping study on the evolution of industry in Ghana*. Working Paper 18. Washington, DC: The Brookings Institution
- Addis Fortune (2016) 'Hawassa Industrial Park'. 13 September (<https://addisfortune.net/articles/hawassa-industrial-park/>)
- AfDB – African Development Bank (2014) 'Special economic zones – learning from experience architecture building'. AfDB Annual Meeting, 19–23 May, Kigali
- AfDB – African Development Bank (n.d.) 'Request for expressions of interest (consulting services) [Kenya] Lamu Port Project Transaction Advisory Services'. Infrastructure Financing Agreement Reference: Grant 5150155002451 Project Id p-z1-dd0-010 (https://www.afdb.org/fileadmin/uploads/afdb/Documents/Procurement/Project-related-Procurement/EOI_%E2%80%93_Kenya_-_Consulting_Services_for_Transaction_Advisory_Services_-_Lamu_port_project_transaction_advisory_services_.pdf)
- Blended Finance Taskforce (2018) *Better finance better world: consultation paper of the Blended Finance Taskforce*. London: Blended Finance Taskforce (http://s3.amazonaws.com/aws-bsdc/BFT_BetterFinance_final_01192018.pdf)
- CIIP – Competitive Industries and Innovation Program (2017) *Special economic zones: an operational review of their impacts*. Washington, DC: World Bank Group
- DAI (2017) 'Development Secretary Priti Patel stresses economic growth in visit to Ethiopia industrial park'. 1 February (<https://www.dai.com/news/development-secretary-priti-patel-stresses-economic-growth-in-visit-to-ethiopia-industrial-park>)
- Davison, W. (2017) 'Park life: workers struggle to make ends meet at Ethiopia's \$250m industrial zone'. *The Guardian*, 5 December (<https://www.theguardian.com/global-development/2017/dec/05/ethiopia-industrial-park-government-investment-boost-economy-low-wages>)
- Donahue, B. (2018) 'China is turning Ethiopia into a giant fast-fashion factory'. Bloomberg Businessweek, 2 March (<https://www.bloomberg.com/news/features/2018-03-02/china-is-turning-ethiopia-into-a-giant-fast-fashion-factory>)
- EIB – European Investment Bank (2016) 'EIB president pledges support for “Jobs Compact” in Ethiopia tackling migration and refugee challenge'. 21 September (<http://www.eib.org/en/infocentre/press/releases/all/2016/2016-212-european-investment-bank-president-pledges-support-for-jobs-compact-in-ethiopia-tackling-migration-and-refugee-challenge.htm>)
- Ernst & Young (2016) *Doing business in Vietnam*. Ho Chi Minh City: Ernst & Young Vietnam Ltd (https://www.ey.com/publication/vwluassets/doing_business_in_vietnam/%24file/doing_business_in_vietnam_16000319.pdf)
- Ernst & Young and AVCA – African Venture Capital Association (2018) *From origination to exit, how much value can your capital create?* London: AVCA ([https://www.ey.com/Publication/vwLUAssets/ey-private-equity-survey-2018-final/\\$FILE/ey-from-origination-to-exit-how-much-value-can-your-capital-create.pdf](https://www.ey.com/Publication/vwLUAssets/ey-private-equity-survey-2018-final/$FILE/ey-from-origination-to-exit-how-much-value-can-your-capital-create.pdf))
- Farole, T. and Akinci, G. (2011) 'Special economic zones: progress, emerging challenges, and future directions'. Directions in Development – Trade. Washington, DC: World Bank
- Giannecchini, P. and Taylor, P. (2018) 'The eastern industrial zone in Ethiopia: catalyst for development?' *Geoforum* 88: 28–35
- Hausmann, R., Obach, J. and Santos, M.A. (2016) *Special economic zones in Panama: technology spillovers from a labor market perspective*. Working Paper 326. Cambridge, MA: Center for International Development at Harvard University

Hoque, S. (2017) 'Ethiopia's economic transformation and job creation: the role of Hawassa Industrial Park'. SET blog, 18 August (<https://set.odi.org/sonia-hoque-odi-ethiopias-economic-transformation-job-creation-role-hawassa-industrial-park/>)

Humanitarian Logistics Association (2017) '30,000 refugees to benefit from employment opportunities under the "Ethiopian Jobs Compact"'. 12 December (https://www.humanitarianlogistics.org/reliefweb_posts/30000-refugees-to-benefit-from-employment-opportunities-under-the-ethiopian-jobs-compact/)

IMF – International Monetary Fund (2018) 'Regional Economic Outlook: Sub-Saharan Africa: Domestic Revenue Mobilization and Private Investment', April. Washington, DC: IMF.

Lim, D.J. and Mukherjee, R. (2018) 'Does debt pay? China and the politics of investment in Sri Lanka'. *The Diplomat*, 20 January (<https://thediplomat.com/2018/01/does-debt-pay-china-and-the-politics-of-investment-in-sri-lanka/>)

Luo, X. and Parish, D. (2013) 'Ghana – Trade and Investment Gateway Project (GHATIG)'. Independent Evaluation Group. Washington, DC: World Bank

Mashoo, A. (2014) 'Ethiopia to expand energy, industry with Eurobond funds'. Reuters, 16 December (<https://www.reuters.com/article/ethiopia-economy-idUSL6N0U049W20141216>)

McMillan, M., Page, J., Booth, D. and te Velde, D. (2017) 'Supporting economic transformation: an approach paper'. SET report. London: Overseas Development Institute

Mihretu, M. and Lobet, G. (2017) *Looking beyond the horizon: a Case study of PVH's commitment to Ethiopia's Hawassa Industrial Park*. Working Paper 117302. Washington, DC: World Bank

PricewaterhouseCoopers (2017) *Doing business in Vietnam*. (<https://www.pwc.com/vn/en/publications/2017/dbq-2017.pdf>)

te Velde, D.W., Tyson, J. and Steele, A. (2015) 'Regional infrastructure in Sub-Saharan Africa and South Asia: unblocking constraints and enabling effective policy intervention'. Topic Guide. London: Evidence on Demand

Tyson, J. (2018) 'Private financing of infrastructure in developing countries: five challenges, five solutions'. London: Overseas Development Institute (<https://www.odi.org/sites/odi.org.uk/files/resource-documents/12365.pdf>)

Tyson, J. (forthcoming) *The role of international financial centres in development finance*. London: Overseas Development Institute

Warr, P. and Menon, J. (2015) *Cambodia's special economic zones*. Economic Working Paper 459. Manila: Asian Development Bank

World Bank (1994) 'Philippines Subic Bay Freeport Project'. Staff Appraisal Report No. 12773-PH. Washington, DC: World Bank

World Bank (2011) 'Development of a Ghana multipurpose industrial park for improvement of the quality and standards of services delivered to investors and exporters'. Project Briefing. Washington DC: World Bank

World Bank (2013) 'Panama: Panama Pacifico SEZ'. Public-Private Partnerships Briefs 99024. Washington, DC: World Bank

Xiaoyang, T. (2015) 'How Chinese SEZs support economic transformation in Africa'. PowerPoint presentation (<https://set.odi.org/15-june-2015-chinas-special-economic-zones-in-africa-and-how-they-support-economic-transformation/>)

Zhang, X., Tezera, D., Zou, C., Wang, Z., Zhao, J., Gebremefas, E.A. and Dhavle, J. (2018) *Industrial park development in Ethiopia: case study report*. Working Paper 21/2018. Vienna: UNIDO