

POLICY RESEARCH WORKING PAPER

5900

Cluster-Based Industrial Parks

A Practical Framework for Action

Célestin Monga

The World Bank
Africa Region
Structural Transformation Unit
&
Development Economics Vice Presidency
December 2011



Abstract

They are being hailed as the new Holy Grail of economic development. The success of special economic zones (SEZ) in general and specialized ones in particular (industrial and technology parks) in countries as diverse as Australia, Denmark, Sweden, Germany, Switzerland, Ireland, Japan, the United Kingdom, the United States, and more recently, China; Korea; Taiwan, China; or Mauritius, has led several African leaders to launch new similar initiatives. This paper establishes a common point

of reference for those who believe in the virtues of SEZs, explains why the many existing ones have not delivered the expected outcomes, and summarizes the key issues on the agenda. It then suggests cluster-based industrial parks as the most effective tool for developing competitive industries and generating employment, and provides some practical guidance to development practitioners and policymakers on the road ahead.

This paper is a product of the Structural Transformation Unit, Africa Region; and Development Economics Vice Presidency. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at cmonga@worldbank.org.

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

CLUSTER-BASED INDUSTRIAL PARKS
A Practical Framework for Action

Célestin Monga
Senior Advisor
Africa Region (AFRVP) and Development Economics (DECVP)

JEL: D23, L16, O23, P45

Key Words: Special economic zones, clusters, industrial parks, African industrialization
Sector Board: Economic Policy (EPOL)

I am grateful to Justin Lin, Shanta Devarajan, Janamitra Devan, and Ivan Rossignol for providing very useful comments on a previous draft.

1. PURPOSE

This note draws lessons learned during several trips to East Asia (mainly China, Vietnam, Indonesia, and Laos) and Latin America (mostly Brazil) in recent months and uses insights from discussions with a broad range of government officials at various levels of responsibility, private sector leaders, academics, and civil society activists to provide an overview of the issues, challenges, and opportunities for structural transformation in Africa. It also draws on recent work at the World Bank.

Its purpose is to contribute to a successful implementation of the World Bank Africa Regional Strategy whose first pillar is about “Competitiveness and Employment.” The paper is therefore intended to inform the debate over the design and management of industrial parks which are increasingly viewed as important vehicles for channeling foreign know-how and capital into African economies, bypassing all the many obstacles of domestic business environments, and fostering the continent’s industrialization. The success of special economic zones (SEZ) in general and specialized ones in particular (industrial and technology parks)¹ in countries as diverse as Australia, Denmark, Sweden, Germany, Switzerland, Ireland, Japan, the United Kingdom, the United States, and more recently, China; Korea; Taiwan, China; or Mauritius, has led several African leaders to launch new similar initiatives. The paper establishes a common point of reference for those who believe in the virtues of SEZs, explains why the many existing ones have not delivered the expected outcomes, and summarizes the key issues on the agenda. It then suggests cluster-based industrial parks (CBIP) as the most effective tool for developing competitive industries and generating employment,² and provides some practical guidance to development practitioners and policymakers on the road ahead.

2. JUSTIFICATION

Africa’s impressive growth performance of 5-6 percent over the past decade—despite the severe global economic downturn—still lacks credibility, for at least two reasons: first, beyond the stories of improved macroeconomic management and booming commodity prices, living standards for most people have not improved fast enough and while poverty has been reduced by 9 percentage points in ten years, 50 percent of the population was still considered poor in 2005; second, while large amounts of public spending have been devoted to education and primary enrolment has been quite rapid, learning outcomes have been disappointing, the pace of human capital accumulation slow, and some 90 percent of the labor force is still trapped in low-productivity activities (farm and household enterprises, informal sector). As a result, the 7-10 million young people entering the labor force every year generally have no prospect for enjoying

¹ The International Convention on the Harmonization and Simplification of Customs defines a free zone as a specific place in a country “where any goods introduced are generally regarded, insofar as import duties and taxes are concerned, as being outside the customs territory [...] and not subject to the usual customs control.” (Annex D). Free zones have existed in various parts of the world for centuries, most notably in Gibraltar (1704) and Hong Kong SAR, China (1848). Modern special economic zones (SEZs) typically are located in a geographically delimited area (often secured), and host firms that are eligible for benefits, a separate customs area (duty free benefits) with streamlined procedures, and single management structure. Industrial parks can be broadly defined as a category of SEZs that provide specialized services to specific industries.

² Cluster-based industrial zones largely explain the success of garment, footwear, motorcycle, consumer electronics and other labor-intensive sectors in China and other East Asian economies.

employment in the formal sector where they could make a decent living and hope to be part of the dynamics of industrial and technological upgrading that eventually brings prosperity. That is true even in countries that have recorded high growth rates but where the number of poor has not declined significantly.

The need for sustained, inclusive growth has never been more urgent. The growth dividends have not materialized for many people, who are getting impatient. Fortunately, new opportunities for rapidly achieving more broadly shared economic success are on the horizon. Globalization and the continued progress of large emerging economies such as China, India, Brazil, and a few others, are freeing up unprecedented possibilities for industrialization for low-income economies in Africa and elsewhere. The popular belief that economic progress in these large developing countries (China in particular) is hurting industrialization in lower-income regions such as Sub-Saharan Africa is wrong. In a global economy of 7 billion consumers and counting, trade of manufacturing goods is not a zero-sum game. In fact, with the constantly enlarging global market for manufacturing goods, the “pie” keeps growing bigger and any developing country could find its niche—provided that it specializes in the production of goods that are consistent with its comparative advantage and implement policies that ensure the rapid development of competitive domestic firms. The upcoming “graduation” of large emerging economies into high middle-income status actually opens up new opportunities for Africa. Confronted with the challenge of rising wages, even for unskilled workers, these successful middle-income countries will soon become uncompetitive in low-skilled, labor-intensive industries that have driven their good economic performance and will be forced to either relocate such activities in lower-wage countries, move up the value chain, or switch to more complex and capital intensive industries where they still have comparative advantage. It is estimated for instance that China alone may have to relinquish most of its current 85 million manufacturing jobs (Lin 2011a).

African countries are well placed to seize the benefits of such a once-in-a-generation opportunity. In order to do so, they must organize themselves to fill at least some of the industrial void that China, India, Brazil and others will leave behind as they move up the industrial and technological ladder. It is therefore important to identify the policy and institutional constraints that must be removed for their industrialization strategy to be implemented.

3. RATIONALE FOR CLUSTER-BASED INDUSTRIAL PARKS

The traditional policy advice given to African countries by the World Bank and most development institutions is to get their macroeconomic policies right and improve their business environment through microeconomic, sectoral and institutional reforms. The pertinence of such advice is undisputable. But evaluation studies often show that many countries have not followed that advice, often because it would have required engaging some politically difficult reforms. Even some of those that have followed it have not been able to accelerate and sustain inclusive growth of the type observed in the truly successful countries identified in the 2008 *Growth Report*.³ While growth rates of 5-6 percent are certainly remarkable, they are insufficient to bring

³ The report identified some of the distinctive characteristics of 13 high-growth economies that have been able to grow at more than 7 percent for periods of more than 25 years since World War II. The list includes: Botswana;

poverty levels to tolerable levels given Africa's current high inequality and elasticity rates. Moreover, they have not created enough decent jobs—meaning formal sector jobs with the potential for increased productivity. Some countries such as Uganda, Tanzania, Rwanda or Ghana have managed to create formal sector jobs at a rate greater than GDP growth but they started from such a small base that these efforts are still not quite visible. Most people there and elsewhere on the continent are working in the informal sector, in farms and household enterprises, often with less than subsistence earnings—defined as \$2/day. This is hardly surprising: growth is often driven by consumption and public investment, not by private sector investment, which makes it neither sustainable nor inclusive (increases in consumption benefits the richest quintiles disproportionately). The problem is compounded by the fact that most workers also lack skills: in low-income African countries half the existing labor force and one-third of the new entrants have not finished primary school. In addition, investment climate reforms by themselves do not necessarily translate into higher investment that provides opportunities for growth and poverty reduction.

The big question on Africa's economic agenda is therefore how to foster the type of private sector development that will result in the creation of viable, competitive firms, in which workers (unskilled or educated) also get the skills that help them prepare for the constantly changing demands of the global economy. Recent reassessment of the effectiveness of various development strategies suggests that economic development is a process of continuous industrial and technological upgrading in which any country, regardless of its level of development, can succeed if it develops industries that are consistent with its comparative advantage (Lin 2011b).

Shifting a poor economy's resources out of traditional agriculture and other low-productivity primary activities, and expanding the "modern" sectors (including non-traditional agriculture), have always been at the core of the sustained productivity gains that characterize economic development. Besides the generally much higher levels of productivity in manufacturing than in traditional agriculture, the main reason for the growth in industrialization is the fact that its potential is virtually unlimited, especially in an increasingly globalized world. As agricultural or purely extractive activities expand, they usually face shortages of land, water, or other resources. By contrast, manufacturing easily benefits from economies of scale: thanks to new inventions and technological development, and to changes in global trade rules, transport and unit costs of production have declined substantially during the past decades. Today, almost any small African country can access the world market, find a particular niche, and establish itself as a global manufacturing place. For example, Qiaotou and Yiwu, two once small remote Chinese villages, have become powerhouses, producing more than two-thirds of the world's buttons and zippers, respectively.

Only in rare circumstances such as extraordinary abundance of land or resources have countries succeeded in developing without industrializing. In fact, even big resource-rich countries such as Canada, Australia, Russia, or the United States have all performed well because of the development of substantial and dynamic manufacturing sectors. While employment in manufacturing as a share of total employment has fallen sharply in most advanced economies in the past decades, in real terms, the share of domestic expenditure on manufactured goods has

remained stable. In other words, that phenomenon of deindustrialization is essentially the result of higher productivity in manufacturing than in services—and therefore a sign of successful economies.

The crucial role of structural transformation as the fundamental driver/and result of sustained economic growth has been intensively studied. Using a three-sector model, Kuznets (1966) documented some important aspects of structural transformation and the emergence of “modern economic growth”. He also highlighted the dynamics of institutions and infrastructures—an idea that can be traced back to Marx. Kuznets observed in his Nobel Lecture that “advancing technology is the permissive source of economic growth, but it is only a potential, a necessary condition, in itself not sufficient. If technology is to be employed efficiently and widely, and, indeed, if its own progress is to be stimulated by such use, institutional and ideological adjustments must be made to effect the proper use of innovations generated by the advancing stock of human knowledge.”

Technological upgrading and innovation are indispensable ingredients for long-run productivity growth. They generally involve externalities and coordination issues that, if unaddressed, often lead to too low a rate of technological upgrading and require some form of government intervention. But sometimes the government intervention itself leads to low technological upgrading, especially in countries where institutions are weak. Globalization has enhanced developing countries' access of to the flow of new ideas and new technologies yet many African countries have not exploited the benefits of backwardness. They have failed to do so not simply because of structural barriers such as poor education and infrastructure but because governments either attempted to too much, as under the old structuralist policies, or too little under Washington Consensus policies that recommended total reliance in the market system. Had government played their facilitating role judiciously to foster structural transformation, African economies would have performed well—even with poor education and infrastructure.

However, these broad insights do not provide answers to some major policy questions still on the intellectual agenda (Monga 2011 and forthcoming): What determines the dynamics of sector contributions to growth? How does the capital intensity of sectors evolve over time – within and across countries? Do changes in capital intensity reflect differences across cohorts of firms (e.g. new firms are more capital intensive), the adjustment of incumbent firms, or the exit of less productive and less capital intensive firms? What factors help and hinder the reallocation of resources, and how do they reflect the policy environment? How to organize the adaptation and adoption of known technologies in African countries? What should be the respective roles of the government and the private sector? What institutional arrangements are necessary to support structural transformation, especially in the African context where long-term financing is scarce? How to ignite industrialization and promote backward linkages and structural transformation?

Economic development is a continuous process of structural transformation involving industrial and technological upgrading and diversification. It requires continuous and coordinated upgrading of soft (or intangible) and hard (or tangible) infrastructures. For African countries—and all developing countries in general—it is therefore essential that economic policies be geared towards the changing patterns of industrial structure and technology diffusion, and the consequences of alternative methods of industry selection, choice of production bundles and

modernization and innovation strategies, as well as the existing distortions and other aspects of governance in the country. For all of the world's poorest countries, the challenge of sustained economic growth and development basically boils down to whether they are able to break into global industrial markets and find their own niche, or organize their economies to take advantage of the opportunities being vacated by middle-income countries that are forced out of their niche because of rising wages, rising productivity levels, and the need for industrial upgrading.

From that perspective, it appears that by following carefully selected lead countries in the so-called "flying-geese" pattern, some latecomers in that process can exploit the advantage of backwardness and build up industries that are growing dynamically in more advanced countries with endowment structures similar to theirs. The flying-geese pattern has served well all successfully catching up economies since the 18th century. As noted in Lin and Monga (2011), historical evidence shows that all countries that have successfully transformed from agrarian to modern advanced economies – both the old industrial powers of Western Europe and North America, and the newly industrialized economies of East Asia – have had governments that played a pro-active role in assisting individual firms in overcoming the inevitable co-ordination and externality problems. In fact, the governments in high-income countries today continue to do so. However, it must be acknowledged that almost every government in the developing world has attempted, at some point, to play that facilitating role, but most have failed. These pervasive failures are mostly due to government inability to come up with good criteria for identifying industries appropriate for a given country's endowment structure and level of development. In fact, government propensity to target industries that are too ambitious and not aligned with a country's comparative advantage largely explains why their attempts to 'pick winners' have resulted in 'picking losers.'

There is not a single successful economy in the world that does not rely on industrial policy. Developed-country governments continue to adopt various measures to support industrial upgrading and diversification, even though these policies may not be announced under the formal label of 'industrial policy'. Besides patent systems, which are industry-neutral, other such measures typically include support for basic research, mandates, allocation of defense contracts and large public procurements. Local governments also often provide all kinds of incentives to private firms to attract them to particular geographic areas and induce new investments. The application of all these measures needs to identify specific industries or products and amounts to 'picking winners'.

SEZs have often been used effectively by some latecomers such as Ireland; Korea; Mauritius; Taiwan, China; or China, to emulate leader countries and even catch up with them in the race to economic prosperity. The well-known rationale for SEZs in developing countries is to provide special policy incentives and infrastructure in a circumscribed geographic location to firms that can attract foreign direct investment, create jobs, develop and diversify exports (even when economy-wide business environment problems and protective barriers are not yet resolved) and foreign exchange earnings, and serve as "experimental laboratories" for new pricing, labor, financial or labor policies. The ultimate expectation is that the knowledge spillovers of these experiments eventually translate into private sector development, sustained growth, productivity increases, and other financial and economic benefits for the entire economy. Policy incentives in SEZs typically include import and export duty exemptions, streamlined customs and

administrative controls and procedures, facilitated access to foreign exchange and relatively low income tax rates. Export-oriented SEZs are generally intended to “convey ‘free trade status’ to export manufacturers, enabling them to compete in global markets and counterbalance the anti-export bias of trade policies.” (FIAS 2008: 12)

Unfortunately, most countries that have created SEZs have not gained the expected benefits. African countries in particular have faced two main constraints that have prevented private sector development to take place through SEZs: high factor costs and high transaction costs (often compounded by political capture and rent seeking). The good news is that careful analysis of previous SEZs experiences and lessons from economic history and economic theory can shed light on the reasons for failure. Taking these lessons into account, African policymakers can rethink the way they design and operate SEZs and derive big gains from them.

High factor costs can be addressed only if economic development strategies are fully consistent with a country’s comparative advantage so that the factor which is in relative abundance is used extensively. This requires that the industries selected and attracted into SEZs are primarily those that make good use of low-skill labor, are competitive, and quickly establish effective backwards linkages with the rest of the domestic economy.⁴ The removal of the second constraint—high transaction costs—necessitates the development of large numbers of firms in industries where economies of scale, intra-industry knowledge spillovers, “forward and backward” linkages,⁵ good supply chain/ logistics, and other agglomeration effects can be achieved. In other words, the development of cluster-based industrial parks (CBIPs) in particular can yield big economic and social payoffs to African and other developing countries, assuming all the other constraints, such as those that led to high factor costs, have been removed.

The reasons for that can be found in both economic theory and empirical analyses. Clusters or industrial agglomeration arise in situations where there are industry-specific and local externalities (the so-called Marshallian externalities), which may justify policy interventions (Rodriguez-Clare 2005; Harrison and Rodriguez-Clare 2010). Empirical studies of economic diversification also provide important insights for the development of CBIPs. Recent research has shown that poor economies with more diversified economies tend to have higher levels of income per capita. Sectoral *diversification* in early stages of development is generally accompanied by geographic *agglomeration*. In the words of Imbs and Wacziarg (2003), the range of industries expands and factors are allocated increasingly equally across sectors. At the same time, new sectors tend to localize in specific regions. Regions become increasingly different. Such trends typically hold until countries reach an income level of approximately US\$9,000 per capita, after which higher levels of income per capita are then associated with increased specialization. In fact, sectoral concentration in later stages of development is accompanied by geographic *de-agglomeration*. The range of activities produced across all regions is reduced and the location of economic activities seems to matter much less.

⁴ That did not happen in the previous rounds of industrial and SEZs policies for several reasons discussed in Section 4 below.

⁵ Backward linkages can be defined as the various channels through which money, goods, services, and information flow between a firm and its suppliers and create a network of interdependence and mutually beneficial business opportunities. Forward linkages are similar connections between a firm and its customers.

The location of production is of particular importance as it allows for (or impedes) agglomeration externalities, a key element for improving productivity and exploiting economies of scale (World Bank 2009). Manufacturing in particular can reap economies of scale through geographic concentration. “This is most obvious at the plant level: the very idea of a plant is to bring machinery and workers together in a single location. However, it also applies to the location of firms engaged in the same activity. By clustering together, similar firms reduce each other’s costs.” (Unido 2009: xv). Clustering also helps firms lower their transaction costs and expand.

4. WHY MOST AFRICAN SPECIAL ECONOMIC ZONES FAILED

The renewed enthusiasm about SEZs and the potential of cluster-based industrial parks should not preclude the need to understand why most attempts in Sub-Saharan Africa have failed to deliver their promises. In fact, several African countries such as Senegal and Liberia launched free zones in the early 1970s, with little success. In 2008, it was estimated that the region had a total of 114 zones, of which 65 were private (FIAS 2008:18). At the same time, there were already about 3,000 zones in 135 countries worldwide, accounting for some 68 million direct jobs and over \$500 billion of direct trade-related value added. The direct benefits expected from export growth and export diversification, employment and income generation, foreign direct investment, foreign exchange and government earnings generally appear to have been negligible. The indirect benefits (indirect job creation, technology transfer, knowledge spillovers, managerial know-how, skills upgrading, etc.), which are more difficult to assess because of their dynamic nature, have generally also been rather limited (Farole 2011).

In most countries, the benefit-cost ratio for setting up and running SEZs has been disappointing: personal income tax on employment, permit fees and services charges, sale and rental fees on public land to developers, import duties and taxes on products from the zones sold to the domestic customs territories, concession fees for facilities such as ports or power plants, and corporate income tax (when assessed) totaled only negligible amounts. In the meantime, import duties and charges lost from the smuggling opportunities created by SEZs, tax revenue forgone from firms relocating from the domestic customs territory into the zones, public investment for (often untargeted) infrastructure and recurrent expenditures (mainly the wage bill of public sector workers needed to run and regulate the zones) often represented substantial costs to governments.

Looking in retrospect at the reasons for their generally weak performance, one can point to a variety of factors ranging from poor institutional design and management of the initial concept to ineffective macro and microeconomic policies, which often created major distortions and led to failure. The objectives of these zones were often not clearly articulated or unrealistic, and the policy tools for achieving them inconsistent.

The industries attracted to the zone sometimes defied the country’s comparative advantage and were therefore not viable without a strong set of protection policies. In most instances, policymakers either identified those industries that they wanted to favor for personal reasons, or they did not actively attempt to identify which particular industries may be most suited to their country’s endowment structure (i.e., labor-intensive industries). They assumed that any foreign

firm that would be willing to join the zone would create some jobs, which would be better than nothing... One consequence of the absence of identification strategies was the random mushrooming of small single firms from very different types of industries. Naturally, governments could not provide them with the industry-specific infrastructure support they needed.

Many zones were exclusively developed, regulated and operated by governments or public entities. Beyond the obvious issues of expertise and capacity, that type of institutional arrangement often led to conflict of interest situations, with regulatory agencies also engaged in zone development activity, especially when public zones compete with private firms outside the zone.

Policies and privileges in the zone were severely restricted, at least in theory. Access to a generous set of privileges was often controlled by a small group of civil servants. The criteria for selecting qualifying firms were not always transparent. And when it was, it seemed too restrictive, as firms typically had to export at least 80 percent of their production. Merchandises that could be introduced duty- and tax-free by registered enterprises or individuals were restricted to direct inputs for manufacturing. Such regulations were often the source of rents.

The choice of the location was not always optimal. While some zones were built in port cities that were already growth poles or near transport hubs, others were created as isolated geographic enclaves or in remote areas, not on the basis of an economic rationale but as a way of appeasing political constituencies. This increased production and transaction costs for the few firms willing to build factories there. Such problems are likely to arise again if appropriate precautions discussed below are not taken in the design of new zones.

Reducing transaction costs was not part of the strategic focus. Because of the randomness in industry selection and the limited government financial resources, even basic infrastructure was not made available in many of these zones. Governments did not proactively play their indispensable facilitating role: they did not provide some basic industry-specific infrastructure and often waited (in vain) for qualifying firms to finance investment in electricity, water, or telecommunication within the zone. They did not coordinate the design and implementation of the investment needed and used collectively by firms in their industries (storage facilities for example). Again in retrospect, it may have been beneficial to public finance that governments did not spend even more money financing sub-optimal and unprofitable infrastructure.

As shown in investment climate surveys carried out in Africa, government officials running SEZs also did not realize that successful integration into the world economy increasingly requires the realization of behind-border measures that fall under the heading of trade facilitation. They failed to alleviate the burden of red tape and provide the type of efficient services such as customs and port efficiency. In countries such as Senegal (where an SEZ was established as early as 1974) or Cameroon, it often took more than a year for a foreign firm to obtain necessary permits to operate. They also had to deal with heavy and complex bureaucratic rules and procedures, a very high cost of infrastructure (communications, energy, water), and constraining labor regulations. In addition, they had to agree to unrealistic job creation goals and high requirements for initial investment. In many other African countries, qualifying firms that

managed to join SEZs still had serious difficulties accessing foreign exchange and to other financial services.

Because of their poor design, ineffective management and misguided policies, most SEZs did not attract enough firms in competitive industries. Moreover, their firms did not generate enough backward linkages with local suppliers and sub-contracting business relationships with other local enterprises. Too often, local firms either had no interest in supplying SEZs-based firms or they failed to meet world market standards for quality, price, and delivery times. SEZs-based firms themselves tended to use domestic factors and inputs only in limited extent and condemned themselves to remain small enclaves in African economies. Given the often inappropriate strategic focus of these zones (where a few firms often benefited from lucrative special deals with influential politicians and could afford to produce the wrong goods in otherwise uncompetitive factories), the fact that they remained enclaves limited exacerbation of the economy-wide distortions. However, disconnect with the domestic private sector worsened their perception by local business people. In some cases, the poor logistics and weak supply chain (both a reflection of limited clustering) led these firms to rely heavily on imports (with industries such as electronics or even apparel often showing imports ratios well over 60 percent); in such situations, currency devaluations compounded the distortion of net exports. As a result, transaction costs remained too high. Even with distortive protection by governments, they failed to yield enough business volume to be credible entities.

5. MOVING FORWARD: GUIDANCE FOR POLICYMAKING

CBIPs can only be successful in Sub-Saharan Africa if the issues discussed above, which led to the failure of most SEZs, are addressed effectively. In addition, specific concerns from foreign investors (Chinese, Brazilians and others) as well as from various domestic constituencies in each country (mainly small businesses and trade unions) should be dealt with in a manner that does not perpetuate the failures of the past.

Key Issues to be Addressed

Investors in East Asia and Latin America who have potential interest in participating in CBIPs in Africa also have good reasons to consider such a move: they understand the need to upgrade their business models and processes, move up the value chain, and relocate their labor-intensive activities either in their own country's provinces where wages are 30 percent lower (but likely to rise), or preferably in lower-income countries where the challenge of rising wages is not yet daunting.

According to these investors, five big issues stand in the way and African policymakers must work to remove them:

- The frequency and intensity of economic policy reversals in some African countries is still perceived to be high, which makes long-term business decisions and commitment difficult and particularly risky.

- The poor state of infrastructure, which increases input and transaction costs to non-competitive levels; and the poor logistics and supply chain for intermediate inputs, which are essential ingredients for firm competitiveness.
- The difficulty of securing land for mass production activities.
- The often poor quality of public service delivery, which reflects a poor business environment; the rigidity of labor laws in some countries and inefficiency of business practices/culture.
- Political economy and governance issues in many African countries: the misuse of SEZs by a few well-connected business people to circumvent tax laws; this often led to opposition by small business owners.
- Critics of SEZs in developing countries have also often argued that they tend to only attract polluting industries and import-dependent activities that perpetuate low-skill assembly activities with low value-added. It is also often said that firms within these zones are generally granted permission to suppress basic labor rights, pay low wages and to escape from regulations on workplace health and safety conditions. Lessons from successful SEZs show that once they attract a large cluster of firms in assembly, it becomes possible to localize the production of intermediate inputs, which in general are more capital-intensive and have larger economies of scale. Successful SEZs have also moved to make their policies and business practices consistent with ILO and WTO rules.

Generating Win-Win Opportunities: A Basic Checklist

In order to address all these issues and embark successfully on the path to the industrial and technological upgrading that leads to sustainable growth and create jobs, African countries should expand the scope of privileges of their zones, and remove the distortions and inefficiencies that have characterized them. They should consider building SEZs with specialized facilities that are configured to the needs of specific industries and sectors. Such cluster-based industrial parks (CBIP) could be of various sorts depending on the particular industries to be promoted, which should be consistent with the country's revealed or latent comparative advantage.⁶ With their specialized facilities customized to the unique needs of target industries, they may be airport-based zones to support air-based activities (fruits and vegetables or cut-flower exports for instance), agro-processing, or even simply financial services zones aiming at promoting off-shore activities.

⁶ CBIPs should not try to promote static comparative advantage. They should support for the upgrading and diversification into new industries. However, their goals should not be too ambitious as it is often the case in countries where policymakers advocate the promotion of *dynamic* comparative advantage. The nuance here is important. Theories of dynamic comparative advantage typically attempt to help firms to enter industries that are a country's *future* comparative advantage. Because of endowment constraints in the African context, firms in those industries would not yet be viable in a competitive market even if the government helped them with the co-ordination and externality compensation. By contrast, CBIPs should aim at helping firms enter industries with *latent* comparative advantage. Under that scenario, firms would be *immediately* viable and require no subsidies or protection once the government provides co-ordination and externality compensation.

Good general principles

The industries undertaken in CBIPs should be carefully selected and consistent with each country's revealed or latent comparative advantage to ensure that they make the best possible use of the abundant factor (typically low-skilled labor) and can become competitive in international markets without excessive forms of government protection.⁷ At least in their initial phase, they should host in labor-intensive, assembly-oriented activities such as textiles, apparel, footwear, electrical and electronic goods. Within such industries, the scope of activities should be expanded to include not only manufacturing and processing but also commercial and professional services such as warehousing or transshipment.

All investors (foreign and local) should be treated equally. New legislation, rules and regulation should therefore be adopted to reduce the probability of distortions in incentives. Moreover, there should be a unique set of fiscal incentives for all promoted industries, regardless of their location (within the zone or outside). Never before have African political leaders been confronted with the difficult sociopolitical challenges posed by increasingly large, demanding, and (often) educated crowds. In fact, it has become very costly to remain in power without delivering tangible results, especially on the employment front. With the emergence of a new, more pragmatic leadership across the continent, policymakers are much more likely to pay more attention to electoral cycles and be more accountable for their economic policy choices.

Deliberate efforts should be made to integrate CBIPs into national economies. In order to preempt the inevitable domestic criticism, social fears and political economy issues, the strategic focus of CBIPs should be on generating manufacturing jobs and absorbing large segments of the low-skill labor force; promoting skill, industrial, and technological upgrading⁸; improving the economy's endowment structure and moving towards higher-value activities but at a realistic pace; encouraging linkages between CBIPs-based firms and local firms so that the zones provide demonstration effects for success and serve as catalysts to broader reforms; and compliance with ILO labor standards. It is indeed important to communicate the message that for most people in the labor force across the continent of Africa, the alternative to employment in such CBIPs would be low-productivity, low-income informal activities, underemployment in urban areas, unprofitable and highly risky agricultural work in rural areas, unemployment, and the perpetual trap of poverty. Even with low levels of formal education, many unskilled workers could still be employed in CBIPs that specialize in basic assembly operations.

Effective institutional arrangements

CBIPs that are privately-owned, managed, and operated should be encouraged. But they could start as public-private partnerships, with public provision of off-site infrastructure such as roads and public-private funding of on-site facilities. Governments can provide direct financial support

⁷ In setting the strategic focus of the old SEZs, most African governments clearly did not follow the rigorous prescription suggested here and there is guarantee they will do so now. Moreover, in a second-best world, it is easy to argue that almost any industry needs a subsidy. A good indication of whether policymakers are serious about creating CBIPs with competitive potential will be their choice of industries.

⁸ It is estimated that SEZs in Sub-Saharan Africa generally contribute nearly 50 percent of exports. It can be inferred from their impact on the diversification of the region's export base that they also contribute to skill upgrading.

or guarantees to build infrastructure and facilities in the zone. Private sector participation can take many different forms: basic partnership with shared risks and rewards with governments; concession agreements; “build-own-operate,” “build-operate-transfer,” or “build-own-operate-transfer” arrangements (see FIAS 2008). Successful models of CBIPs include a variety of contract types, often with public-private partnerships that evolve over time. A model that has been popular recently involves “equity-shifting” arrangements, with a private contract manager of a government zone being allowed to exercise a purchase option once pre-defined levels of performance have been reached.

Even well-designed CBIPs can only succeed if they are backed by strong political commitment from the highest levels of governments to improve the business environment and remove all quickly remove all the obstacles that may stand in the way of implementation. A good institutional framework for preparation could be an inter-ministerial committee headed by a political “champion” who has the credibility and power to make things happen. That “champion” should also be the main interface between CBIPs developers and firms and all government entities. He/she should be able to respond quickly and effectively to the requests from the business community. But he/she should be insulated from political pressures to please any domestic political constituency.

Facilities and services

African policymakers should work closely with private sector operators to fully equip and service CBIPs with purpose-build facilities, which can then be put up for sale or lease. The provision of industry-specific on-site infrastructure is an important determinant of transaction costs and competitiveness. It helps attract firms and facilitate the clustering and the development of sub-contracting relationships among them. Private zone developers should be allowed to supply utilities services (water, power, sewerage, and telecommunications) to CBIP firms. As governments across Africa continue to need substantial private sector financing for infrastructure projects, attention should turn to the region's still underdeveloped capital markets as a potential channel for fund-raising. The creation of an effective municipal bond market in the region and other innovative public-private solutions to fund and implement key infrastructure projects should be the focus of discussion. International financial organizations such as the IFC and MIGA should also be involved.

The development of CBIPs will be made easier if African governments are willing to find land parcels and secure titles for lease to private zone developers. In many African countries, the legal framework allows for an enduring influence of the state bureaucracy on land distribution and land rights. Governments are reluctant to hand over the power resource of land distribution and state control is legitimized as historically and socially fair. Such control offers potential spaces for rents and bureaucratic arbitrariness. State ownership, and especially the power to redistribute land plots, makes citizens and business people vulnerable to arbitrary actions of local bureaucrats who decide about which individual is granted access to land. CBIPs represent a good opportunity for implementing land reforms gradually, in a way that can generate quick wins to all stakeholders and improve collective welfare. The fact that countries such as Ethiopia, with a long history of strong resistance to the privatization of land property rights to individual plot holders,

are willing to consider changes in their land tenure policy, may be the sign of progress—and the recognition that there is no other viable alternative.

In expanding the range of facilities and amenities available within CBIPs, public and private partners should consider not only industry-specific factories and infrastructure but also a wide array of services such as high-speed telecommunications and Internet services, common bonded warehouse facilities, training facilities, maintenance and repair centers, product exhibition areas, on-site customs clearance and trade logistics facilities, on-site housing, on-site banking, medical clinics, shopping centers, childcare facilities, etc. Developing a zone not as on stand-alone but rather as an integrated industrial, commercial, residential, and recreational entity allows developers to diversify their potential sources of revenue and offset the potential low profitability of certain activities with higher margins in others. In many well managed private zones in East Asia, as much as half of total annual revenue is derived from business support services and other sources of income.

Political economy issues

Political economy concerns are legitimate but only for the traditional type of SEZs which host firms in industries that defy comparative advantage. Firms in these industries are not viable in an open, competitive market. Their existence and continuous operation often depend on large subsidies and protection, which create opportunities for rent-seeking and corruption, and make it difficult for the government to abandon interventions and exit from distortions. CBIPs are meant to promote a completely different development model: the promotion of industries that are consistent with the economy's latent comparative advantage. Firms are viable once the constraints to their entry and operation are removed. The incentives provided by the government to the first movers are to be temporary and small, solely for the purpose of compensating for their information externality. In that context, the issues of pervasive rent-seeking and the persistence of government intervention beyond its initial timetable can be mitigated. Selecting labor-intensive industries with economies of scale (so that there are incentives for foreign investors to localize in Africa) and potential for upgrading (to open up future possibilities for domestic value-added creation) would generate the kind of quick wins that policymakers need to build their own domestic political capital and pursue reforms.

It must also be noted that African countries are not all confronted with the most complex internal political economy problems that require the adoption of second- or third-best economic policies. In some countries, minimum wage and other labor laws are actually much less binding than they appear in the books. In such countries, especially those where basic transportation, energy, and telecommunication infrastructure could be improved quickly, CBIPs should be much bolder in their design and implementation to become “freeports”. Instead of being mainly export drivers, they could be large platforms for private investment and catalysts for knowledge spillovers throughout the entire national economy and beyond, and even serve as a basis for regional hubs in specific industries. In such countries, CBIPs—selected on the basis of their economic rationale and not for political considerations—could:

- Cover much larger areas, therefore allowing greater flexibility to firms in their choice of plant location and opportunities for inter-firm linkages.

- Allow full access to the domestic markets on a duty-paid basis—that is, lift the traditional requirement of exporting 80 percent or more of the production, and allow instead unrestricted sale to domestic consumers as long as all applicable import taxes and other duties are fully paid.
- Allow firms to engage into any legal economic activity they deem profitable, including manufacturing, warehousing, transshipment, etc. Registered firms or individuals could also be offered duty-free privileges to permit the introduction of all types of merchandise, which can then be sold at the retail or wholesale level, or even consumed within the zone area.
- Alternatively, African policymakers may consider best practices from Ireland; Taiwan, China; and Korea, and allow duty-free access to inputs for local firms just as it is the case for CBIPs-based firms. Domestic producers, especially small and medium-sized enterprises, could then benefit from tax credit and rebates on duties paid on imported goods and services used in products sold to CBIPs-based firms. Local suppliers could then import intermediary products and components on the basis of letters of credit initiated by CBIPs-based firms. The latter could also provide domestic firms with technical assistance or financing arrangements as part of sub-contracting arrangements. Such policy measures aiming at fostering backward linkages would eventually help diffuse political opposition to CBIPs.
- Governments could work closely with firms in competitive industries to support training and apprenticeship for workers, promote study tours and personnel exchanges, and implement programs tailored for purchasing and technical managers of export-oriented firms based in CBIPs to help their local suppliers achieve high-quality standards and meet the required delivery times. By bringing local business leaders into the picture and creating the conditions for them to fully share the success of CBIPs, governments would foster job generation and weaken domestic sociopolitical resistance to the new policy (including from trade unions).
- Finally, political commitment at the highest levels of government should be clearly signaled to potential foreign investors, who must be convinced all constraints on businesses in CBIPs will be removed quickly. Personal engagement by Presidents, Prime Ministers, and other high-level government officials in Africa will be needed to convey the message that once the policy is adopted, there will be no reversal. Well-prepared, well-targeted (to specific industries) and well-advertized visits to countries where potential investors are (China, India, Brazil, etc.) would help overcome skepticism and give credibility to the new policy. In preparation of such trips, African political leaders should anticipate on the main reasons for skepticism on the part of potential foreign investors; they should identify the big barriers to entry and be prepared to make a convincing case about their support to CBIPs.

Economic development and sustained growth are the result of continual industrial and technological upgrading, a process that requires public-private collaboration. Industrial policy

defined broadly as any government decision, regulation or law that encourages ongoing activity or investment in a particular industry, is an integral feature of any successful strategy. By facilitating co-ordination and addressing externality issues, industrial policy can help many domestic and foreign firms to enter sectors that are consistent with the country's latent comparative advantage and turn them into overt comparative advantages, and thereby intensifies competition within the industries and enhances the economy's competitiveness internationally. It certainly entails many risks of failure. But CBIPs provide a good framework for mitigating such risks. The adoption and implementation of the principles discussed above would allow African governments to address most of the concerns expressed by potential foreign investors and by local business leaders. Reliance on rigorous and transparent selection criteria for the location of CBIPs and their strategic focus, together with a more proactive engagement on the part of the political authorities at the highest level of responsibility, would increase their confidence and interest in making investments in the country.

REFERENCES

Farole, T., 2011. *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences*, Washington D.C., World Bank.

FIAS, 2008. *Special Economic zones: Performance, Lessons Learned, and Implications for zone Development*, Washington D.C., IFC-World Bank.

Harrison, A. and Rodríguez-Clare, A., 2010, “Trade, Foreign Investment, and Industrial Policy for Developing Countries”, in D. Rodrik ed. *Handbook of Economic Growth*, Vol. 5. pp. 4039-4213.

Imbs, J., and R. Wacziarg, 2003., “Stages of Diversification,” *American Economic Review*, 93(1), 63-86.

Kuznets, S., 1966. *Modern Economic Growth: Rate, Structure and Spread*, New Haven, CT and London: Yale University Press.

Lin, J.Y., 2011a. From Flying Geese to Leading Dragons: *New Opportunities and Strategies for Structural Transformation in developing countries*, WIDER Lecture, Maputo, UNU, May 4.

Lin, J. Y., 2011b. “New Structural Economics: A Framework for Rethinking Development.” *World Bank Research Observer*.

Lin, J. Y., and C. Monga. 2011. “Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change.” *Development Policy Review* 29 (3): 264–90.

Monga, C. (2011) “Post-Macroeconomics: Reflections on the Crisis and Strategic Directions Ahead”, *Journal of International Commerce, Economics and Policy*, 2: 277–304.

Monga, C., forthcoming. “Shifting Gears: Igniting Structural Transformation in Africa,” *Journal of African Economies*, vol. 21 (2012).

Rodriguez-Clare, A., 2005. *Clusters and Comparative Advantage: Implications for Industrial Policy*, Working Paper no. 523, Washington D.C., Inter-American Development Bank.

World Bank, 2009. *World Development Report: Reshaping Economic Geography*, Washington D.C.