

Growth Poles: Raising Competitiveness and Deepening Regional Integration

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Although some of Africa's improved economic performance in the past decade has already been driven by improvements in infrastructure, critical investment and policy coordination challenges remain. As the previous chapters have highlighted, the balance for growth and competitiveness is likely to come from structural changes such as (1) reducing costs for building infrastructure; (2) locking in investors from both public and private sectors as risk sharers; and (3) incentivizing the participation, particularly of the local private sector, in these projects.¹ Furthermore, Africa's competitive industries—such as agriculture, mining, and tourism—carry vast potential, and they require sustained support if they are to deliver on the promise of comprehensive competitiveness and economic diversification.

Despite the efforts of regional organizations to overcome barriers to trade in products and services, competitiveness continues to be constrained by infrastructure deficits, red tape and slow decision making, difficulty in securing and accessing serviced industrial land, and information failures that prevent the private sector from coordinating investment activity. Growth poles, typically multi-year, public-private investments, are emerging as a key instrument to overcome barriers to investment and to support the agglomeration of economic activity.

Growth poles are simultaneous, coordinated investments in many sectors to support self-sustaining industrialization in a country. They bear resemblance to, but are not the same as, *special economic zones* (SEZs), which are spatially delimited areas within an economy. Examples include *export processing zones*, *economic processing zones*, *free zones*, and *foreign trade zones*.² SEZs, as supply-side competitiveness measures, are aimed at overcoming barriers that hinder investment in the wider economy, including restrictive policies, poor governance, inadequate infrastructure, and problematic access to land. Growth poles, on the other hand, usually combine public and private investments and are specifically built around an already-existing resource at a specific location in an economy.

Central to the growth pole is a group of dynamic industries connected around a particular resource. These industries are, by virtue of their dimension or negotiation strength, anticipated to have the capacity to innovate and adapt to market conditions. The growth of dynamic industries is anticipated to generate further investment, employment, and distribution of factor payments, including profits that may be reinvested. The growth of dominant industries, in turn, generates external effects that stimulate the growth of other industries due to inter-industry linkages.

The contribution of Julien Szabla to the preparation of materials for this chapter is gratefully acknowledged.

This chapter will draw from the World Bank's quite significant experience in supporting the development of growth poles in Africa in recent decades. Good-practice lessons also emerge from Asia, where, for example, the growth poles in Malaysia and Indonesia benefited from investments made through ASEAN regional integration policies.³ This chapter explains the idea behind growth poles in more detail and outlines how they interact with infrastructure investments, trade, and regional integration. It also discusses particular examples of growth poles in Africa and the benefits, challenges, and potential pitfalls of making growth pole investments. The chapter then outlines the key policy challenges involved with growth poles and, finally, addresses growth pole financing.

As the first part of the chapter explains, the underlying assumption about the benefits of growth poles is that they increase market size so that it becomes profitable for firms to invest. Private-sector investments, in turn, lead to more jobs, higher wages, and economies of scale. Growth pole projects also often attract foreign direct investment (FDI), are built across borders, and have spillover effects beyond national economies. Thus they can also be a boon to regional integration.

A number of challenges characterize growth pole projects. To set a framework for policymakers to plot the course for growth poles to enhance competitiveness, the chapter next discusses three key policy challenges:

- *Growth pole coordination* challenges concern the setting up and sustaining of both the spatial and the political economy linkages that are required to make these poles happen. Tradeoffs and the strategic vision are both required in multi-stakeholder investments and projects such as infrastructure ones, and both need be focused on ensuring that participation is balanced and sustained throughout the process.
- *Accountability questions* concern the push and pull of rewards embedded in the contracts stakeholders make to design and deliver growth pole projects. The key accountability challenges regarding growth poles in Africa today concern the returns of these investments to landlocked countries and coastal countries, as well as to rural and urban populations. Accountability questions also concern the socioeconomic sustainability that growth pole investments can promote across the investment area and industries.
- *Risk management and risk sharing* concern the endeavors that are put in place to make risks and rewards commensurate with each other to drive good performance as the growth pole is built, managed, and maintained.⁴

Finally, the chapter discusses the specific type of investment arrangements that can significantly improve

benefits to be realized from growth poles. Experience in growth pole engagements shows that both public and private participation is required to realize results. For example, public-private partnerships (PPPs) for constructing and maintaining infrastructure will broaden the possibilities for private-sector job creation around growth pole projects. Although there is no fixed list of best-practice policies to realize private-sector development objectives from growth poles, and specific related reforms will vary by sector, growth poles show why effective investment and particularly policy-process coordination will make infrastructure projects more productive.

GROWTH POLES FOR SHARING PROSPERITY IN AFRICA'S MARKETS

The growth pole approach to economic development looks at how infrastructure that will be developed for an existing private investment in mining, agriculture, and so on can be used to encourage spillovers into other sectors. This could manifest itself through a development corridor or a special economic zone, or even an agglomeration economy in a booming city. A growth pole will have an existing resource that serves as an inherent revenue producer.

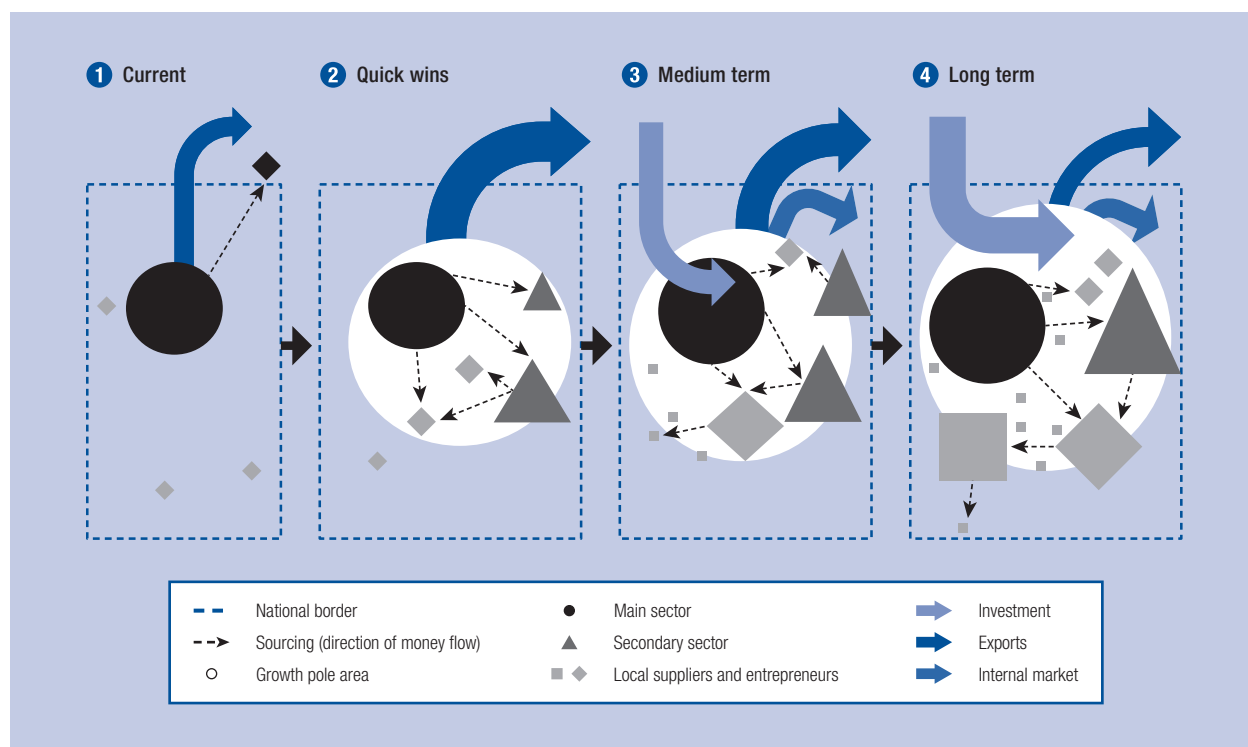
What are growth poles?

Growth poles, as noted earlier, are comprised of multiple simultaneous investments coordinated throughout many sectors with the purpose of supporting self-sustaining industrialization in a country. Growth pole projects are not oriented around addressing identified market failures, but around capitalizing on and augmenting opportunities that already exist in an economy, as Figure 1, illustrating the dynamics of building growth poles, suggests.

Figure 1 shows how growth poles enhance already-existing opportunities and can multiply them over time, delivering both quick wins and generating medium- and long-term investments. Indeed, the underlying assumption about the benefits of growth poles is that they increase market size so that it becomes profitable for firms to invest, with the resulting higher wages and economies of scale. If an investment in a project induces investment in the following stages of production, it is called *forward linkage* and has outcomes such as diversification in value chains. A *backward linkage* is a creation of investment in the stages of production leading up to the final product, such as investment into logistics or the storing of goods. Investment should be pushed into a project that maintains the highest number of total linkage investments.

Furthermore, growth poles, as economic initiatives, are spatially targeted investment instruments and sets of policy for accelerating economic growth in developing countries. As a concept, growth poles are based on Perroux's assumption that, for an economy to attain higher income levels, that economy should first develop within itself one or several regional centers for economic strength.⁵ Growth poles, as a spatial planning tool, draw

Figure 1: Characteristics of growth pole projects: Quick wins and medium-term investment for long-term development



Source: Authors.

Note: Levels of investment are nonexistent for current, low for quick wins, medium for medium term, and significant for long term.

on the following concepts: (1) economies of scale, (2) the nurturing of backward and forward economic supply linkages and also fiscal and final demand linkages, and (3) economies of agglomeration, which are associated with spatial clusters and the geographic concentration of economic activities.

Figure 2 illustrates how to identify potential growth poles and shows the specificity of this investment and project development process.

As the steps needed to identify growth poles illustrate, the growth pole model of economic development is distinct from the development corridor of SEZ investments. Growth poles, considered as investments, often consist of infrastructure projects, with associated investments and capacity-building efforts directed at the private sector. Indeed, although development corridors and SEZs can be component parts of growth poles, growth pole projects are built on the assumption that there is a need for simultaneous, coordinated investments in many sectors to get self-sustaining industrialization. As such, growth poles are broader than SEZs or development corridors.⁶

Central to the growth pole is a group of dynamic industries that are connected around a particular resource. These constellated industries are—by virtue of their dimension or negotiation strength—expected to have the capacity to innovate and adapt to market conditions. The growth of these dynamic industries is expected to generate further investment, employment, and distribution of factor payments, including profits that

may be reinvested. The growth of dominant industries generates external effects that stimulate the growth of other industries because of inter-industry linkages.

As developing countries advance from largely agriculture-based economies, the assumption is that it is most likely that investments into industry will create the most linkages. It follows that the focus in growth pole projects is on externalities and doing many things at the same time to achieve critical mass. Most growth pole projects that are focused on infrastructure, regulation, capacity-building, and finance for early investors are a mix of policies and investments, but the investment and policy mix varies depending on perceived constraints to private investment and growth (see Box 1 for an example).

Because of the “big push”-style simultaneous commitment of multiple investments for growth poles, the process of identifying key constraints, their relationships, and the underlying political economy of these constraints is critical for achieving outcomes. Growth poles typically bring about large changes in particular locations—they distinctly do not effect marginal changes. This fact has attracted quite an amount of academic critique of the growth pole and SEZ types of intervention as concepts for economic development (see Box 2).

Indeed, as other surrounding competitiveness challenges are addressed, the typical outcomes of growth pole and SEZ types of spatial investments can include increased output and/or exports; measurable

Figure 2: Growth pole development process elements



productivity gains in the enclave from combined components; and, possibly, spillovers to the rest of the economy. These must be considered in the context of the overall location-based development impact of embarking on such projects. Therefore, an emphasis on employment generation emerging out of growth pole projects is a significant focus.

Regional integration and the need for the creation of growth pole linkages

Growth poles emerge as a policy response to the need to create better spatial and political economy linkages in the new African regional markets. As this *Report* has

discussed, the challenges to commerce and trade in these new markets no longer arise predominantly from high tariffs, but rather from barriers behind the borders (see Chapter 2.1). Indeed, to trade beyond their countries’ borders, African exporters will benefit not only from additional hard infrastructure and technical assistance from their governments and other actors, but also from equally ambitious policy reforms to support the agglomerations of competitive industries and to facilitate trade.

Successful reforms will result from the efforts of both the public and private sectors, and will take into account spatial constraints a country faces, targeting landlocked countries in Africa with specific insights.

Box 1: What is a growth pole? The case of Madagascar

The Madagascar Integrated Growth Poles Project aimed at stimulating the growth of three geographical regions of Madagascar centered around the growth poles of Nosy Be, Fort Dauphin, and Antananarivo-Antsirabe (Figure A). The objective of the poles was to address key constraints to investment, including infrastructure, business environment, institutional capacity, skills and access to finance. The poles are multi-sector projects with particular focus on tourism-led growth in Nosy Be, mining- and tourism-led growth in Fort Dauphin, and export-led growth in Antananarivo-Antsirabe.

In **Nosy Be**, the pole focuses on building support infrastructure (rehabilitating roads and improving water supply); strengthening municipal capacity for administration, fiscal management, and service delivery; and supporting business environment reforms. The project supports a new hotel training school in partnership with other donors and the private sector, and the establishment of a marine reserve to protect rare ecological resources vital to the sustainability of the tourism industry.

Figure A: Madagascar's growth pole sites



In **Fort Dauphin**, the pole is jointly invested in by the government and the mining company Rio Tinto to ensure that large mining investments benefit the local population. They co-financed the construction of a new public multiuser

port managed by a private consortium and in operation since 2009. Investments were also made in road construction to support tourism and to facilitate market access for local production.

In addition, the project is supporting innovative public-private partnerships (PPPs) with Rio Tinto in power generation and transmission—with a guarantee from the Multilateral Investment Guarantee Agency—and in improving access to water supply. A partnership with the United Nations Development Programme, Rio Tinto, and other private firms has led to the establishment of a vocational training center to bridge local skills gaps. The emphasis on ensuring that mining projects have a positive impact on local populations and on the economy more broadly serves as an example of what can be done for other mining investments.

In **Antananarivo-Antsirabe**, PPPs have been established in skills development for the garments, tourism, and information technology industries. For example, the growth pole includes a private university and firms in the garments industry, which have collaborated to offer the first textile engineering diploma program in Madagascar.

The growth poles in Madagascar are showing positive results, and the main objectives of these investments have not been revised. Until the onset of the political crisis of 2009, the poles were on track to achieve their development objectives and results in terms of private investments and job creation. Private investment increased from US\$84 million in 2005 to US\$1,045 million in 2007. In 2006–08, some 5,000 new businesses were registered in the three poles. During the same period, an estimated 10,000 formal jobs were created in the three poles, and the number of new hotel rooms in Fort Dauphin and Nosy Be increased by 40 percent and 27 percent, respectively. Regional development plans were adopted and most of the main infrastructure works were completed, leading to major improvements in local infrastructure. Since 2009, Fort Dauphin and Nosy Be continue to show progress, and by 2013, have added over 13,000 formal jobs.

The overall business environment in Madagascar has been improved: it is now easier to register a business, trade, pay taxes, and obtain a license. In Fort Dauphin, it now takes four days to register a new business; before the project was initiated, this took two months. The Economic Development Board of Madagascar regional offices in Nosy Be and Fort Dauphin can now register individually owned enterprises, which has significantly reduced the cost and time required for small business startups. By 2013, following results assessments on the poles, the Antananarivo-Antsirabe pole was deemed less successful and discontinued.

Overall, indicators from the poles suggest promising private-sector response to the investments made in infrastructure, the improvement in the business environment, and job creation.

Source: The World Bank's Integrated Growth Poles Project, available at <http://www.worldbank.org/projects/P083351/integrated-growth-poles?lang=en>.

Box 2: Debating the spatial approach to economic development

Although there is a long, challenged history around the world in using instruments such as SEZs to promote investment in remote regions, the evidence suggests they can be highly effective when targeting regions that already have natural or economic geography advantages.¹ And although SEZs are unlikely to trigger agglomeration in lagging regions with low population densities, in places such as China, where SEZs targeted coastal trade gateways, they have proven to be powerful catalysts for growth. Thus, while the World Bank's *World Development Report 2009* suggested SEZs be approached cautiously, it supported the use of such hard and soft infrastructure to reinforce existing geographical advantages.²

Concerns have also been raised that zones, by and large, have failed to extend benefits outside their enclaves or to contribute to the upgrading of skills and the production base.³ First, however, it is important to separate political support from political objectives in zone projects. Although strong commitment from the government is needed, projects must be designed carefully on the basis of clear strategic plans. The zones must be commercially viable, and the case for their construction must be based on sustainable sources of competitiveness, not solely on fiscal incentives. Second, despite the concept of zones as enclaves, in practice, their success is almost fully entwined with the competitiveness of the national economy and the national investment environment.

Source: Farole, 2011.

Notes

- 1 World Bank 2008.
- 2 World Bank 2008.
- 3 See Kaplinsky 1993.

Indeed, success cases—such as that of Mali's innovation in the mango production value chain (see Box 3)—show how a country can gain from intra-African trade and innovate in infrastructure and private-sector development policy to realize areas of comparative advantage and diversify its economy.

In addition to national measures, policies promoted and adopted by African regional organizations can also provide an enabling environment for the expansion of markets for African goods. Regional integration is a powerful tool that governments can use to spur growth and competitiveness through additional trade facilitation measures, such as the harmonization of safety and quality standards for products and the mutual recognition of educational degrees. The development of cross-border financial services is also important, especially for small- and medium-sized enterprises and traders, which often work in the informal sector and have limited access to credit, banking, and other financial services. Cross-border financial services might encourage trade expansion for producers and traders not already well connected to cross-border trading networks.

To fully realize benefits from efforts at regional integration, a number of spatial and political economy linkages need to be established, and need to operate well, to deliver competitiveness and sustainable growth in Africa. This *Report* has discussed the prospects of specific sectors of infrastructure, including energy and the ICT sectors, of doing so. The attempt to create regional and national spatial linkages by building infrastructure needs to be mindful of the unequal distribution of resources between the coastal and landlocked countries of the continent, and to consider the challenge of spurring equitable growth in both rural and urban areas. One recent example of such efforts is the Lamu Port–South Sudan–Ethiopia Transport (LAPSSET) economic and transport corridor, planned to connect the east and west coasts of Africa and to establish reliable access to the sea for northern and eastern parts of Kenya, South Sudan, and Ethiopia (see Box 4).

GROWTH POLE POLICY CHALLENGES

A number of lessons can be distilled from the growth poles that have been planned and built in Africa over the past decade. To start with, growth pole projects have revealed three kinds of challenges: coordination, accountability, and risk management and sharing issues.

Coordination

Infrastructure and competitiveness projects such as growth poles bring about a number of coordination challenges. First, not unlike other infrastructure and private-sector development initiatives, growth pole coordination challenges concern the setting up and sustaining of both the spatial and the political economy linkages that are required to make the poles happen. More specifically, policy coordination challenges include the question of strategy: how do growth poles get chosen, and how do specific transactions get chosen? Responding to these challenges requires both institutional (horizontal) coordination and effective (vertical) coordination of implementation arrangements.

Horizontal coordination of growth pole projects entails streamlining institutional arrangements to coordinate competitiveness diagnostics and planning, as well as investment issues, both between central and local government and between the public and private sectors. It is often the case that a council or a team in a ministry could play an important strategic role in horizontal coordination and strategic sequencing and timing of efforts, including the monitoring and evaluation of activities. These projects usually also benefit from an administrative unit dedicated to growth poles in government.

Vertical coordination requires that special attention be paid to the implementation arrangements. A common challenge is that, even when the right policies and regulations are in place, they may not be consistently implemented across individual cases (this situation is captured by the term *policy implementation uncertainty*).

Box 3. Mali's mangos: Linking farmers to markets through innovations in the value chain

Mali, a landlocked country of West Africa, has experienced a spectacular growth in its exports of fresh mangoes, which increased sixfold in volume between 1993 and 2008. As one of the poorest countries in the world, and with over 80 percent of the workforce engaged in agriculture, Mali had to overcome a number of very serious challenges to achieve such a result. Over a decade, Mali has been able to build on its comparative advantage and secure access to the fast-growing fresh fruit market in the European Union, generating increasing revenues for its producers and exporters.

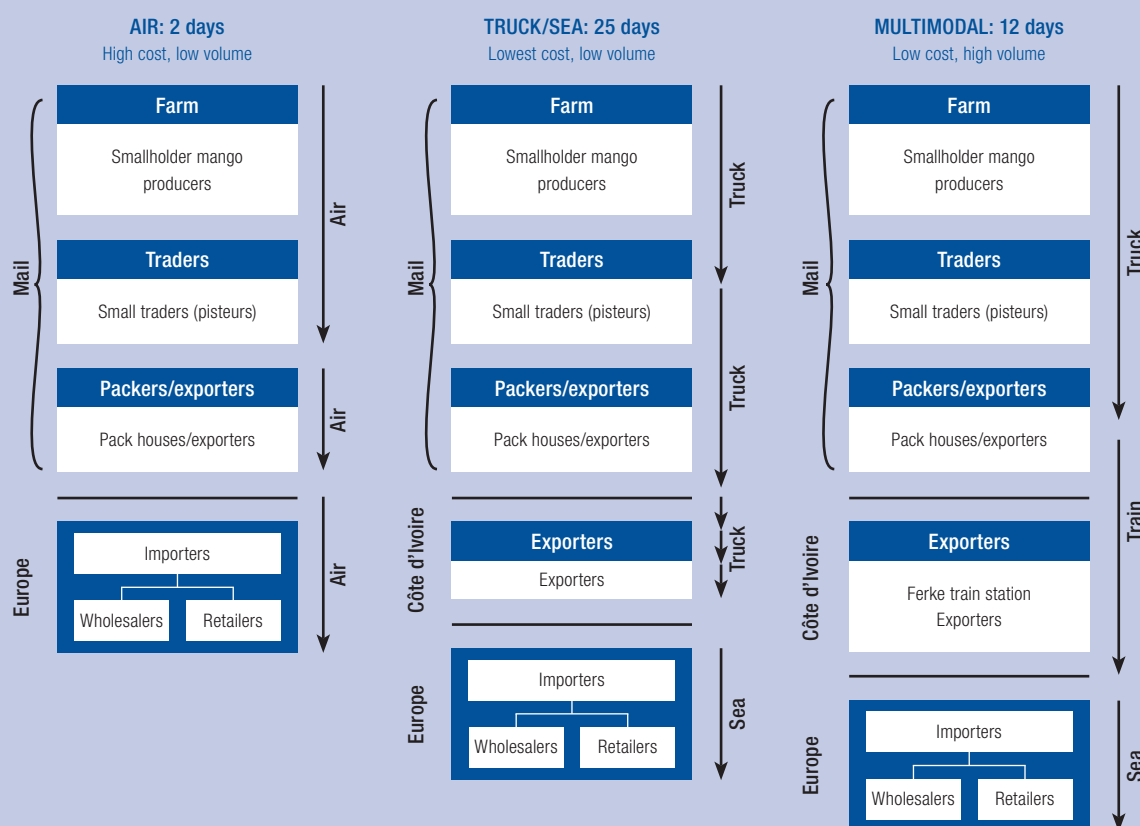
The key innovation that allowed Mali to overcome obstacles arising from its situation as a landlocked country and to secure access to this market was the testing and implementation—through a partnership with private operators—of a multimodal transportation system for the export of fresh produce that would provide an alternative to air freight. Thanks to an intervention, the feasibility and profitability of using refrigerated containers all the way to the destination market in Europe, using a combination of road, rail, and sea freight rather than shipping by air, was demonstrated (Figure A). This innovation basically opened the way to accessing the large and growing market of sea-freighted export of perishables. This new multimodal approach to transport is also good from an environmental point of view because it drastically reduces the carbon footprint of this trade.

Moreover, agriculture is a major pillar of Mali's economy. It accounts for 45 percent of the country's GDP and employs 80 percent of its workforce. Industry represents 17 percent of the country's GDP, with food processing, construction, and phosphate and gold mining as the principal industrial activities. Mali's main exports, since the 1970s, have been gold, cotton, and livestock. However, as a landlocked country, Mali was—and still is—highly dependent on the transport infrastructure and other logistical arrangements of its neighbors for market access and trade.

The mango fruit was traditionally collected and sold mainly for the domestic market. During the 1970s, Mali was the first country in West Africa to focus on opportunities to export fresh mangoes. However, these exports were exclusively via air freight, reaching a volume of between 1,000 and 1,500 tons per year and targeting the niche market of the expensive retail shops selling tropical fruits in France. In the early 1990s, the government of Mali recognized the need to design policies to diversify exports and foreign exchange earnings, which had been heavily concentrated for years on only three export products: gold, cotton, and livestock.

The lack of direct access to a port meant that Mali had to rely on its neighbors' surface infrastructure as well as its own. Until the 1990s, the only rail line with international linkages was run inefficiently, leading to uncompetitive prices and chronically severe delays: the development

Figure A: Transport modes for fresh mangoes from Mali to Europe



Source: Adapted from Sangho et al., 2010.

(Cont'd)

Box 3. Mali's mangos: Linking farmers to markets through innovations in the value chain (cont'd)

of an alternative supply chain was of critical importance. However, such development faced three crucial challenges: infrastructure, management, and finance. The paucity of market information for growers and exporters was exacerbated by poor harvesting practices and post-harvest handling techniques, little or no investment at production level, and an extremely challenged domestic finance market.

Mali's mango export value chain improvement (resulting in the transport innovation) was achieved through a combination of innovation, in-time deployment of the right financing mechanisms, private-sector leadership, and

high-quality technical and economic work in areas such as market research, value chain cost analysis, benchmarking, and assessment of constraints. Even if, as in the case of the mango sector of Mali, the private sector is weak in the beginning, it is necessary to start working with existing private operators and eventually bring in new ones, such as the company from Côte d'Ivoire that ran the pilot export test for the mangos. There was also a unique public-private partnership sharing of risks for all partners involved.

Source: Sangho et al., 2010.

In order to avoid the costs that delays or unpredictable policy environment can cause to growth pole projects, policymakers will do well to pay attention to the formulation of results-based monitoring and evaluation frameworks for growth poles.⁷

Accountability

Accountability questions concern the push and pull of rewards embedded in the contracts that stakeholders make to design and deliver the infrastructure of growth poles. Indeed, the political economy of a growth pole project is complex because, if the projects are successful, they will induce large local (or regional) changes, and local effects may vary among different sites.

Growth pole projects, and other infrastructure investments, can be at once national and regional, public and private. They are by definition large and risky, and entail a large number of players. In this context, the *accountability* of the set of institutional tools that reward organizations that consistently perform well for their stakeholders and penalize those that do not is significant. Infrastructure projects often not only connect rural regions with urban ones, but regional infrastructure projects also often connect more naturally advantaged countries (e.g., those with a coastline and ports) with less-advantaged countries (landlocked ones). How then, for example, are spillover benefits to local farmers in rural-urban road projects balanced with benefits accrued from a road built to retailers in the city?

In the case of a road connecting rural and urban areas, land will become much more valuable, which will attract outside investors and job seekers. For this reason, an entire ecosystem of checks and balances is needed, including competition commissions, infrastructure sector regulators, and concession regulators. Furthermore, when infrastructure is developed to facilitate trade and productive sectors, accountabilities to the key stakeholders are also produced. Communities that are affected want to participate in the economic benefits that flow from the project. The local private sector wants to participate in the relevant markets created by the trade of the underlying resource. When

intra-regional corridors are developed, fair sharing of benefits is needed.

Accountability issues then also pertain to possibilities for the local private sector entailed in a situation where large, private-sector anchor investors internalize the coordination costs of rebuilding value chains that include smaller industry players. The development of export horticulture production in Northern Senegal provides a good example of competitiveness enhancement through trade and standardization that have also raised the incomes of the rural poor.⁸

Risk management and risk sharing

The challenge of risk management and risk sharing concerns attempts to make risks and rewards commensurate with each other to drive the needed private-sector participation. These risks include contingent risks—the risk to income when the income is largely dependent on others), political predictability risks (the risk that contracts will not be violated), and the whole raft of technical and market risks that exist in any PPP.

Of particular importance in Africa is how PPPs can help in managing life cycle risks. Often governments do not account for life cycle costs, including regular maintenance and replacement of assets. These costs can be higher than the initial capital costs of the investments. PPPs are designed to provide services to the users over a longer-term period than the traditional procurement methods presented by a construction contract. Consequently, it becomes critical to plan and allocate resources appropriately to ensure inclusive and shared growth over 20–30 years.

Indeed, the question of *financing* growth poles needs special attention in Africa, as access to finance is a particular challenge on the continent. This area is discussed in detail in the next section of this chapter.

FINANCING GROWTH POLES

Growth pole projects are usually large-scale investments that require considerable upfront expenditure. As such, growth poles present a vast financing challenge.

Box 4: The Lamu Port–South Sudan–Ethiopia Transport (LAPSSET) Corridor Project

The aim of the LAPSSET corridor is to facilitate trade, regional economic integration, and interconnectivity among a number of African countries by easing movement from Ethiopia, South Sudan, Rwanda, and the Democratic Republic of the Congo up to Douala in Cameroon (Figure A). Foreseen combined investments from the governments of Kenya, South Sudan, and Ethiopia, along with private investment, are intended to allow the construction of a port, a railway line, an oil refinery, an oil pipeline, airports, a highway, and resort cities. In addition to benefits for the economy in particular locations, the LAPSSET project is expected to spur economic growth in participating countries by increasing annual growth rate from around 6 percent to around 10 percent and to fuel sustained

competitiveness by creating tens of thousands of jobs over an investment period of up to 40 years.

The LAPSSET project is indicative of ways regional integration can fuel economic growth. The project design required to meet the competitiveness challenge for African countries specifically boils down to focusing infrastructure investments spatially on comparative advantages, together with appropriate governance. For projects such as LAPSSET, such a required combined strategy is often described as the development of growth poles.

Source: Government of Kenya, 2011.

Figure A: The Lamu Port–South Sudan–Ethiopia Transport (LAPSSET) corridor



Source: Government of Kenya, 2011.

Moreover, ensuring the availability of private financing for the longer term, which is needed to match the life of the assets at a reasonable cost, is a formidable task in today's market conditions. Most investors and lenders are receding from new and untested investments because they are too risky to ensure a reasonable return on their investment. In the case of many growth pole-related investments, the composite projects may not be individually creditworthy and may need additional enhancements, such as government guarantees, extra reserves, and liquidity support, especially during construction. This is why high-quality PPPs play an integral role in growth pole projects.

Growth pole finance differs somewhat from finance models specific to infrastructure and to SEZs. The latter, as indicated at the outset, have commonly been supply-side competitiveness measures. Their finance models have largely been public. See Table 1, which describes revenues for building these zones.

Infrastructure finance includes both public and PPP models. Public finance models can include accruing user fees, property value capture (such as the acquisition and later sale or lease of excess land), tax incremental financing, and so on. Still, growth poles, like infrastructure projects, increasingly see PPPs as their key financing model.

Table 1: Funding SEZs: Revenue streams in typical SEZ arrangements

| Revenue stream | Description | Typical recipient in SEZ regimes |
|---------------------------------|--|---|
| Customs revenue | Revenues received from charging duties on imports/exports | National government; note in the case of existing regional agreements (such as the East African Community) there may already be a revenue sharing model |
| Corporate tax | Taxes of firm profits | National and sometimes state/provincial governments (often waived or reduced as fiscal incentive) |
| Municipal taxes | Taxes charged on profits, assets, and so on from local governments | Local government (often waived or reduced as fiscal incentive and to simplify tax administration for investors) |
| VAT/sales taxes | Taxes on production and sales | National government and sometimes state/provincial government (often zero-rated or reduced as fiscal incentive) |
| Personal income taxes | Taxes on incomes of individuals living in the zone | National government |
| Service fees | Fees for provision of licenses for operating or carrying out specific activities | SEZ developers; SEZ Authority; individual government agencies |
| Land/facilities sales and lease | Leases for land plots or rents for prebuilt facilities in the zone | SEZ developers |

Source: Dobronogov and Farole, 2012.

A number of questions need to be answered during the course of planning any PPP project. In infrastructure projects, for example, the specific challenge concerns whether development for the infrastructure to be built should be bid out competitively or should be sole sourced. What measures should be taken for proactive investment generation? Can regional deals for infrastructure investments and development be made, and are local investment banks involved? How can funding be scaled up to engage a more diverse group of actors? To what extent can the regulatory capacity of infrastructure investments be harmonized regionally, to attract and sustain investment and political will? World Bank-supported PPPs, especially on the west coast of Africa, have had success in balancing the coordination of public-private participation and risk sharing in the projects (see Box 5). An example of such a successful PPP from the telecommunication sector accounts for approximately 90 percent of the value of PPPs set up in sub-Saharan Africa.⁹

In PPPs such as those on the west coast of Africa, public investment through the PPP mechanism undoubtedly helped to unlock the projects that were held in fragile states or those that were too large or risky to have the private sector involved on its own. To ensure private-sector involvement, governments created enabling legal and regulatory frameworks and built pro-competition policies. Overall, to ensure the success of the PPPs, deeper reforms are needed to eradicate monopolies, and regulations have to be adjusted to meet rapid technological changes.

Growth pole PPPs

The risk profile of growth poles will be different from that of other types of PPP projects. Indeed, certain areas would be better suited for public funding and

some would be better suited for private development. Therefore, the final set of challenges and opportunities to be discussed in this chapter pertains to risk management and risk sharing around growth pole and infrastructure projects.

Risk management concerns the question of how growth pole projects can be made commercially viable. *Risk sharing* questions concern how infrastructure projects and their construction and maintenance risks can be distributed and leveraged for shared gain.

Risk management and risk sharing are ongoing and continuous parts of growth pole investments. Once the main economic drivers of growth poles are identified—whether these are agglomerations of economic activity, such as cities, or the discovery of a new natural resource, for example—the types of risks involved must be identified. The types of risks that usually need managing in growth pole projects have to do with *payment and demand risks*, *market risks*, and *construction risks*. The recent guarantee and credit support in Nigeria for the gas sector provides a good example of innovative solutions to these problems (Box 6).

Risk-sharing and risk management challenges of growth poles

Whether the economic driver of a growth pole is a natural resource or a particularly buoyant agglomeration of industrial activity, this economic driver could translate, first and foremost, into a commercial risk to be managed. Such a commercial risk will include both the *payment* and the *demand risks* involved in setting up the project. Such risks determine a project's ability to produce enough cash to be able to cover the project's daily expenses (incurred in providing the services), pay back its debt, and achieve a reasonable profit. The

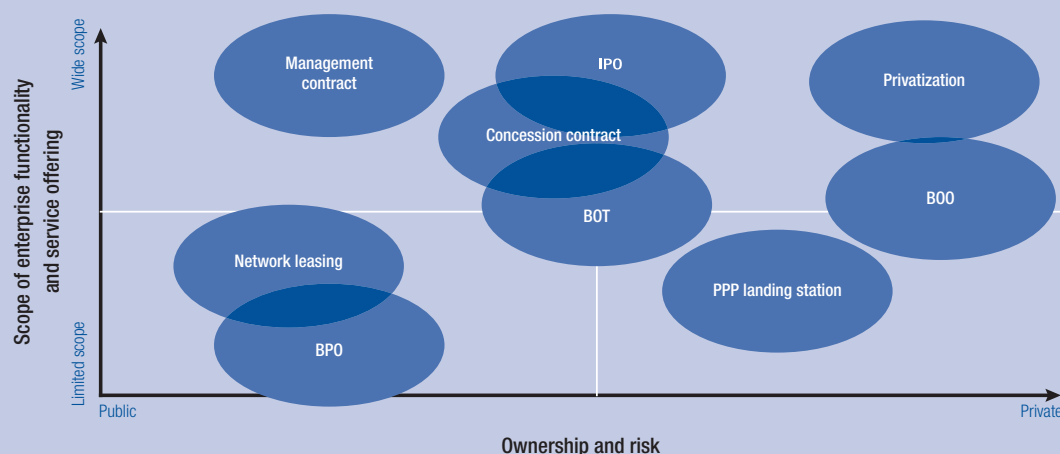
Box 5: Success in PPP coordination

Since 2007, the World Bank has provided technical assistance and financial support to more than 30 developing countries to connect them to international networks through optic fiber. Many of these projects were public-private partnerships (PPPs) on the west coast of Africa that linked national networks to Europe through submarine cables. The PPP structure has been tailored to each project's level of public ownership, risk, and scope of service offered, ranging from business processing outsourcing to privatization (Figure A).

Each recent submarine cable project supported by the World Bank has resulted in a unique model according to the level of involvement of private partners and the objectives of policy makers (Table A).

The models for PPP developed in the telecommunication sector provide important lessons for emerging services sectors such as infrastructure and construction in Africa.

Figure A: Matrix of selected PPP approaches and models



Source: Gallegos, 2012.

Note: B00 = build-own-operate; BOT = build-operate-transfer; BPO = business processing outsourcing; IPO = initial public offering; PPP = public-private partnership.

(Cont'd on next page)

investments in the growth pole, for example, might be technically and economically sound, but not necessarily financially viable. Additionally, managing *construction risk* is particularly important because the risk precludes many sources of patient long-term capital, such as pension funds and sovereign wealth funds, from investing in PPPs.

Another set of risk management questions concerns cost recovery from the growth poles. If the investment generates revenues, are these enough to cover the costs? If the revenues are not sufficient, is there potential for increasing these revenues, or can the public entity involved complement the revenues generated directly by either driving down the capital costs or providing supplementary revenues during implementation? This is a big decision for the governments involved because it becomes an affordability issue both for the users and for the public budget. How much of the costs would (or should) the government pass on to the users?

Finally, governments often do not pay enough attention to the overall costing and the cost-benefit analysis of the whole project cycle at the outset. This is

an important point because life cycle costs, including regular maintenance and replacements of the assets, are at stake. These life cycle costs can be higher than the initial capital costs of the investments.

One way to address overall costing issues is to set up high-quality PPPs that are designed to provide services to the users over a longer-term period rather than using the traditional procurement method of a construction contract. Therefore, planning and allocating resources appropriately is vital to ensure that access is inclusive and that growth is shared over 20–30 years.

To achieve shared growth, risk-sharing instruments must be thought through. Cost recovery concerns how well the public partner is able estimate its investment costs and price them into a periodic payment plan, either via users or another source. In this process, risk will be shared. On the other hand, the private sector would not enter into a transaction unless there is a certainty for cost recovery during the operation period.

In the current markets, the potentially shared risk concerning cost recovery is translated into *construction risk*, which would mean cost overruns and time delays

Box 5: Success in PPP coordination (cont'd)

Table A: Recent World Bank–supported PPPs, approaches, and models

| Model | Description | Examples |
|------------------------|---|--|
| Cooperative | All sector operators (MNOs, ISPs) unite to form a private company (special-purpose vehicle) for the purpose of building, owning, and operating the national backbone as a wholesale operator. The government contributes a subsidy with no related ownership to ensure national coverage, including rural access points, open access, nondiscrimination, and low-cost pricing. | Burundi national backbone project, 2007 |
| Equity | The equity model is similar to the cooperative model except that the government obtains equity and shareholding ownership rights in exchange for its contribution. Generally, government divestiture mechanisms are built in. | The Gambia, Guinea, Liberia, São Tomé and Príncipe, Sierra Leone |
| Concession | This is a traditional build-operate-transfer approach, whereby the government issues a public tender to select a private-sector operator to build and operate the national backbone or specific national and cross-border links. The agreement is in the form of a long-term concession (15–25 years) that requires the transfer of the networks back to the government at the end of the concession. | Republic of Congo, in process |
| Bulk capacity purchase | The government, acting as an “anchor client,” issues a public tender for the long-term (10–15 years) supply of bulk capacity (+ 1 gigabit) bandwidth. This model stimulates investment by the private sector through the aggregation of demand. In this case, the partnership is governed by a PPP agreement or supplier contract that establishes the rights and obligation of each party. | Rwanda, 2011; Malawi, in process |
| Management contract | This is a standard management contract agreement whereby the government issues a public tender to select a private operator to build, operate, and commercialize the national backbone (or specific national or cross-border links) for a fee during a short-term period (3–5 years). Core assets remain the property of the government. | Gabon, in process* |

Source: World Bank, ICT Unit analysis.

Notes: ISP = Internet service provider; MNO = mobile network operator.

* The initial PPP structure allows for conversion to an equity approach at a later stage.

Source: Gallegos, 2012.

in the construction aspects of a project. The longer the construction period, the longer it takes the project to begin operation and therefore the longer it takes to begin generating revenues. Traditionally, this risk was covered by monoliners,¹⁰ but after their demise in the aftermath of the 2008 financial markets problems, very few financiers are able to accept this risk. The other big risk comes from the government itself as a co-financier of the project. In the case where the government is providing financing either with a capital grant toward investment costs or an availability payment during the operational phase, the availability of public budget funds over the life of the concession remains risky. This risk, in turn, is one of the reasons why there are such vast benefits to be gained from policymakers addressing the above-outlined coordination, accountability, and risk challenges associated with growth poles.

CONCLUSIONS

The present time is fortuitous for Africa. The continent is enjoying solid growth, and much international attention

is focused on Africa as an investment destination, with a specific emphasis on the continent’s infrastructure. Unfortunately, this growth is uneven and highly reliant on natural resources, with a number of resource-rich countries enjoying very strong growth—in some cases over 10 percent—and other countries not doing very well. These competitiveness figures bring to the fore the important question of how, while enjoying a high rate of growth, African countries can make the types of investments and policies that can put their economies on sustainable growth paths and create jobs for the long term.

This chapter has argued that, for Africa to maintain and accelerate its growth performance, it needs to find ways to develop its areas of key comparative advantages in its competitive industries (for example, agriculture, mining, and tourism). This means improving productivity and connections to and among markets and reaping the benefits of recent trends toward regional integration. The key ingredients to this success are governance and infrastructure, and the deployment of a combined

Box 6: The Nigeria electricity and gas improvement project

Poor infrastructure in the energy sector has been a key constraint to economic growth in Nigeria. Shortfalls in the availability of energy have meant that around 60 million people continue to live in the dark, and average annual per capita energy consumption is among the lowest in the world. Poor access to energy has forced companies to invest in self-generation, diverting substantial resources away from other, more productive uses.

Furthermore, power generation has been constrained by inadequate gas supplies to power plants. So far, low gas prices have inhibited domestic and international oil companies from investing in gas-gathering and gas-processing equipment to supply the domestic market.

To address this problem, Nigeria has announced a phased price increase to domestic gas suppliers. At the same time, it has introduced a domestic supply obligation and bilateral contracting between gas suppliers and consumers. These steps are expected to bring commercial discipline to the gas sector. Additionally, through extensive multi-stakeholder consultations and communication activities, the Nigerian government established the Nigeria Electricity and Gas Improvement Project, with World Bank guarantee assistance, to mobilize gas supplies for power generation. The Power Holding Company of Nigeria's gas supply payment obligations to international and domestic oil companies (Shell, Chevron, Exxon-Mobil, Total, Addax, Agip, and Pan-Ocean) will help mobilize gas supplies for power generation and, moreover, will support the private sector-led development of the gas sector.

These risk-sharing actions are expected to boost domestic gas supply for power generation, thus helping to create an enabling environment for private investment in the energy, gas, and industrial sectors. Moreover, this innovative risk-sharing credit aims to strengthen the value chain for power generation by eliminating the bottlenecks in the supply chain for power generation—previously a fundamental constraint to economic growth in the country.

Source: World Bank, 2009.

strategy of spatial and economic development called growth poles.

Because huge infrastructure needs remain and because capacity in both financial and implementation terms is limited, the question of how to use these scarce resources best is a crucial one. The development of a more sustainable policy process around infrastructure investments will enable African countries to enhance the competitiveness of their private sectors. This chapter has highlighted this message in the context of growth pole projects on the continent, focusing on paths forward regarding coordination, accountability, and risk challenges.

Because infrastructure provides the basic services in a country, it both offers great opportunities for business, employment, and the general competitiveness of an economy, and also presents intensely political

challenges. Decision makers will want to ask themselves a selection of important questions when seeking to resolve the economically and technically complex challenges of infrastructure and growth pole investments. Among these questions are those regarding coordination: how can infrastructure services best be provided competitively? And what instruments—financial, regulatory, and participatory—can governments deploy to involve the private sector and the broader society most effectively and efficiently in the construction and maintenance of this backbone of growth? Accountability issues must simultaneously be addressed from this angle. An ecosystem of checks and balances—including competition commissions, infrastructure sector regulators, and concession regulators—is required to deliver on accountabilities to the key stakeholders. As growth poles in Madagascar and elsewhere have shown, supporting the growth of competitive industries and jobs to make most of the infrastructure built requires both a large and a long-term investment for a government.

Governments must continuously probe best-practice financial and regulatory mechanisms to attract private financing and servicing for growth pole projects that will advance a country's export industries to Africa's regional and global markets. Taking a strategic approach to handling the coordination, accountability, and risk challenges involved in growth poles presents a promising way forward.

NOTES

- 1 World Bank 2009.
- 2 SEZs are usually designed as supply-side competitiveness measures, and are meant to establish an agglomeration of firms through the provision of superior infrastructure and operating conditions. Another often-used concept is *development corridors*. These are usually feeder infrastructures, achieving outcomes by deepening project linkages and by encouraging densification.
- 3 For comparable experiences and successes in Asia, see World Bank 2005.
- 4 World Bank 2005.
- 5 Perroux 1955.
- 6 SEZs can be high-tech parks, science parks, industrial zones, and export processing zones. Morocco's SEZ has been an African success case—see <http://specialeconomiczone.org/category/africa-sez/morocco/>.
- 7 Hallward-Driemeier et al. 2010.
- 8 See the World Bank's Senegal Sustainable and Inclusive Agribusiness Project, available at <http://www.worldbank.org/projects/P124018/senegal-agribusiness-development-project?lang=en>.
- 9 See the World Bank's *Private Participation in Infrastructure Database*, available at <http://ppi.worldbank.org/>.
- 10 A *monoliner* is an insurance company that provides guarantees to issuers, often in the form of credit wraps, that enhance the credit of the issuer.

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