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Infrastructure and Capacity Development as a Catalyst for Regionalism and Economic Integration in Africa

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Abstract

The development prospects of any country or region requires a complex interaction of internal and external factors, as well as the availability and optimum combination of necessary and sufficient conditions, specifically human and physical resources. One particular variable and the source of intense interest has been the state of infrastructure, its quality within and beyond the national context. This interest has assumed a particularly significant place in the face of the growing relevance of regionalism in the development prospects of Africa. Indeed, infrastructure is of immense significance to regionalism, especially in the environment of contemporary globalization.

Disciplines

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Comments

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Infrastructure and Capacity Development as a Catalyst for Regionalism and Economic Integration in Africa

By Kobena T. Hanson, Francis Owusu and Korbla P. Puplampu

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Introduction

The development prospects of any country or region requires a complex interaction of internal and external factors, as well as the availability and optimum combination of necessary and sufficient conditions, specifically human and physical resources. One particular variable and the source of intense interest has been the state of infrastructure, its quality within and beyond the national context. This interest has assumed a particularly significant place in the face of the growing relevance of regionalism in the development prospects of Africa. Indeed, infrastructure is of immense significance to regionalism, especially in the environment of contemporary globalization.

Infrastructure is the “capital that provides public goods” (Hirschman 1958, p. 63) or capital goods (Gramlich 1994) that, in principle, are non-exclusive and accessible to all. Infrastructure can also be classified as economic (e.g. transport, communications, power generation, water supply and sanitation facilities) or as social (e.g. educational and health-care facilities), although there are overlaps between these categories. The meaning of infrastructure has expanded to focus on physical fixed assets or “hard” infrastructure as well as regulatory or “soft” infrastructure (AfDB 2010). Aspects of the former include the state of the facilities and their interconnectedness, while the latter involve the policy framework and its practical implications, for example excessive red tape. Taken together, the hard and soft aspects of infrastructure are keys in any program on regionalism that seeks to promote trade in particular and economic development in general.

Regionalism is the desire by countries to seek the betterment of each other by working together. Such togetherness, which involves changing roles of the state, is consistent with attributes of globalization. Contemporary globalization calls for, among other things, a minimal role of the state in the

political and economic sectors; including opening up the productive space to the active participation by non-state actors and other private entities, some of whom could be non-profit or for-profit and located within and beyond the nation-state. Infrastructure occupies an essential place in regionalism and economic integration. Its major components, energy, telecommunications, and transport, serve as architecture connecting countries in the regional context and beyond. The essence of regionalism is to enlarge the development possibilities, and infrastructure is the anchor forging those possibilities.

There is growing literature on the state of infrastructure in Africa (Ranganathan and Foster 2011a, b, c, d; AfDB 2010; Schiere and Rugamba 2011; Kuroda, Kawai and Nangia 2007; Mbekeani 2010; Mafusire et al. 2011). The literature stresses what has become known as the infrastructure gap or deficit in Africa. This gap involves not only the state of the region's infrastructure, but also the financial commitments necessary and required to close the gap, if the goals of unleashing the productive potential and integration for human development are to be met. There seems to be a consensus in the extant literature that African governments have to adopt a different model in financing improvements in the infrastructure sector. Put differently, the historical role of the state in financing infrastructure is not, in view of its changing role in the political and economic spheres, sustainable. While some promising and tangible cases of infrastructure dot the continental landscape, the depth of the infrastructure deficit requires sustained attention in the region's development agenda.

This chapter examines the extent to which infrastructure can aid productivity growth, enable and deepen regionalism and economic integration. Specifically, the chapter identifies and discusses the state of infrastructure in Africa and reviews ongoing attempts to upgrade the infrastructure network in the region. The study is divided into three sections. The first section presents an overview of infrastructure, regionalism and economic integration in Africa. Section two addresses the state of infrastructure in Africa and focuses on some notable contemporary initiatives while section three draws attention to capacity development imperatives, opportunities, and possibilities for multi-sector and multi-actor participation. This section also presents the concluding remarks.

Regionalism, Infrastructure and Development: An Overview

A sufficient and quality infrastructure foundation, such as development of ports, logistics systems, and road conditions and maintenance of transit corridors in collaboration, are vital to fostering regional integration and sustainable economic development. According to the ECLAC (2009, p. 1) “Regional integration is the process by which diverse national economies seek mutual gains by complementing one another more”. Regional integration can help countries to overcome their locational constraints and facilitate their participation in regional and global economies. For the purpose of this discussion, it is helpful to breakdown the regional integration process into the following three dimensions: economic and trade integration, which includes different degrees or stages of integration (preferential trade agreements; free trade area; customs union; common market and economic and monetary union); political integration, which implies greater depth, coordination and harmonization of actions among members in the governmental and institutional sphere; and physical integration, featuring infrastructure and its services as the protagonists (ECLAC 2009, p. 1). We focus on physical integration as a way of actualizing/facilitating economic/trade integration and political integration. Regional infrastructure development is a critical component of physical integration (Mbekeani 2010; Kessides and Benjamin 2012).

While this chapter is not about the definitional debate over the term “infrastructure,” it is still important to note that physical infrastructure takes on multiple forms in regional and economic integration (Fourie 2006; Torrisi 2009). With the exception of bridges and tunnels that connect two countries, or power lines, pipelines, and fiber optic cables that may span several countries, most infrastructure are national in nature. Kessides and Benjamin (2012:10), define regional or cross-border infrastructure as “projects that involve physical construction works and/or coordinated policies and procedures spanning two or more neighboring countries; and national infrastructure projects that have a significant cross-border impact.” The potential benefits of regional infrastructure for developing countries are therefore enormous and significant, hence the strong reciprocal relationship between regional integration and infrastructure (Kessides and Benjamin 2012). This is the basis of the argument that “integrating physical

infrastructure is both a precursor to and enabler for deeper economic integration” (World Bank 2009, p. 143).

Infrastructure development promotes regional integration and globalization. Cross-border infrastructure, such as improvements in transportation and the application of modern information and communication technologies, improve the physical connectivity between countries, facilitate geographic division of production processes, and provide opportunities for individual economies to participate in international production networks. Increased regional integration also creates demand for infrastructure. Transportation and communication infrastructure, for instance, are the glue that hold regional integration together. The former facilitates trade and factor mobility and the latter is necessary for increasing trade, facilitating transboundary transactions, and linking the region with the rest of the world. Other benefits of regional integration include harmonization of legal, regulatory, and institutional frameworks among the countries involved, a reduction in cross-border transaction costs and a rational use of resources due to coordinated development of infrastructure (Kessides and Benjamin 2012).

Given the poor state of infrastructure in many developing countries, it is obvious that they cannot achieve their development goals, including poverty alleviation, without significant improvement in the physical infrastructure (Kessides 1996; Kessides and Benjamin 2012; Calderòn and Servèn 2004). The availability and quality of a country's physical infrastructure significantly influences its international competitiveness, regional trade, investment, poverty reduction and development potential (SELA 2011). As argued by Mbekeani (2010, pp. i88–i89), “whether each country’s priorities are defined as enhancing international trade, stimulating private investment or diversifying the industrial base, the ability to meet these objectives depends on the performance of an interrelated set of infrastructure services such as transport, energy, [and] telecommunications.” Specifically, investments in infrastructure contribute to GDP growth through transport services, telecommunications, potable water, power supply, and sanitation services; create externalities on production and investment leading to long-term growth; and influence the overall productivity level of the economy. Regional integration also allows for coordinated investments

for development of infrastructure which, in turn, sustains economic, social and political integration, including the establishment of common development areas through border integration (SELA 2011).

Infrastructure is primarily important given the low intra-African trade. Over 80 percent of Africa's exports are destined for, and over 90 percent of imports originate from, markets outside Africa (Hartzenberg 2011). Meanwhile, the trade flows (both imports and exports) within the various regional economic communities (RECs) have recently increased significantly. ECA analysis also showed that between 2000 and 2007, exports between the RECs saw an average growth rate of 15 percent, with imports also recording 18 percent growth rate within the same period (Hartzenberg 2011). These growth rates are impressive and point to the benefit of RECs and the need for effective regional integration efforts.

Infrastructure does not contribute to improvements in macroeconomic situation of countries alone. There are qualitative improvements in the living standards of the people as well. For instance, as Willoughby (2004) argued, infrastructure investments at the national level underpin virtually all the millennium development goals (MDGs), including halving income poverty. It also affects the non-income aspects of poverty, contributing to improvements in health, nutrition, education and social cohesion. In sum, regional infrastructural development efforts are critical for achieving the development and poverty eradication objectives of developing countries.

The State of Infrastructure in Africa: Historical and Contemporary Survey

Discussions on infrastructure in African development require a historical context. First, in the colonial era, the nature of the infrastructure was, not unexpectedly, tied to the movement of primary commodities (agricultural produce and minerals) to the ports for export. Hence, of the major forms of infrastructure, there was an intense interest on transport, while others, such as energy and telecommunications did not receive the desired attention. Second, the colonial state was at the helm of establishing the transport infrastructure (railways, roads, ports and harbors) to enable mostly expatriate trading companies to profit from the export and import trade. Take the case of the railway systems in colonial Africa. Given the bulky

nature of primary produce, it was not surprising that railways and, to some extent, roads were from production sites in the interior to ports and harbors on the coast and thus the focus of budgetary considerations and priority (Prior 2013; Kay 1972). Another remarkable aspect of the colonial development trajectory was the recognition that the transport network was one way to integrate the colonies, especially the hinterlands and the urban areas and therefore significant in the urbanization process (Prior 2013; Havinden and Meredith 1993).

The postcolonial African state continued with the role of financing infrastructure development and became a dominant player in the overall development process. However, the efforts of the postcolonial state at regional integration predate the independence struggle. The South African Customs Union (SACU) and the East African Community (EAC) were established in 1910 and 1919, respectively. During the struggle for independence, the pan-African leaders aggressively pushed the idea of a unified Africa as way of counteracting the effects of colonialism and promoting economic and political cooperation in the region. The establishment of the Economic Commission for Africa (ECA) in 1958 and creation of the Organization of African Unity (OAU) in 1963 laid the initial blue print for contemporary discussions on regionalism and also reiterated the significance of infrastructure in economic integration and regional development.

Specifically, the 1991 Abuja Treaty and the subsequent establishment of the African Economic Community (AEC) were watershed moments in terms of how African countries would “coordinate and harmonize policies among existing and future regional economic communities” (Kessides and Benjamin 2012, p. 4) with the ultimate goal of enhancing free trade and the free mobility of relevant factors of production. The AEC has legitimized eight regional economic communities: *Union de Maghreb Arabe* (Arab Maghreb Union, AMU); the Economic Community of West African States (ECOWAS); East African Community (EAC); Common Market for Eastern and Southern Africa (COMESA); Economic Community for Central African States (ECCAS); Intergovernmental Authority on Development (IGAD); the Community of Sahel-Saharan States (CEN-SAD); and Southern African Development Community (SADC) (Thonke and Spliid 2012).

In 2002, African leaders officially established the African Union (AU) as a way of expediting the process of economic and political integration on the continent. By converting the OAU and the AEC into one unified institution, the AU envisions the RECs as the building blocks for the AEC in a process to be completed by 2028 (Kessides and Benjamin 2012). The African Union-sponsored New Partnership for African Development (NEPAD) launched in 2002 gave further impetus to a continental approach to regionalism and economic integration. It is important to note that while political motivations prompted early regional integration attempts, current initiatives are driven more by the forces of globalization as African countries respond to global competitive pressures and strive to attract foreign direct investment. The key question is how the state of infrastructure across Africa underpin the continental and regional approaches to economic integration

There are significant variations among most African countries and their respective regional economic communities (RECs) on the state of their energy, telecommunications and transport infrastructure (NEPAD 2013; Kabele-Camara 2012; AfDB 2010; Ranganathan and Foster 2011a, b, c, d). As Foster and Briceno-Garmendia (2010) point out, in terms of energy, more than 30 African countries continue to experience power shortages and irregular service delivery in addition to a significantly high cost of generating electricity. The unavoidable outcome of this state of affairs is the lack of reliable and steady electricity systems to power industries and households.

In comparative terms, although the power transmission network in SADC is relatively advanced and has the highest generation, it has poor outcomes in terms of access to power (Ranganathan and Foster 2011d). While the EAC has the smallest generation capacity and the lowest access to power in Africa, the performance of its utility system is encouraging with the lowest system losses after SADC (Ranganathan and Foster 2011a). On one hand, ECOWAS performs relatively well when it comes to electrification, but on the other hand, it experiences shortfalls in generation capacity, service reliability, and the overall performance of the electricity system (Ranganathan and Foster 2011c).

There has been growing interest in the extent to which the breakthroughs in information and communication technologies (ICTs) can contribute to Africa's development (NEPAD 2013; Akpan-

Obong 2006). Beyond the traditional radio and television, the contemporary telecommunications envelope includes phone services, both fixed-landlines and mobile facilities and broader changes in line with the advances in computerization. SADC has made significant strides in ICTs in Africa by way of access, but prices are still very high in the region (Ranganathan and Foster 2011d). ECOWAS is closely behind SADC in the relative performance of ICTs in Africa and like SADC has to contend with high prices for services, but boasts of better broadband prices compared to SADC (Ranganathan and Foster 2011c, p. 55). A noteworthy aspect of ICTs in ECOWAS is the high cost within member countries compared to calls to distant locales such as the United States of America. Perhaps, another feature of ICTs in ECOWAS is the widespread nature of regional roaming arrangements, compared to the SADC region.

ICT features in EAC mirror those in SADC and ECOWAS, but at different levels of efficiency (Ranganathan and Foster 2011a). First, the cost of services are high, penetration of internet services, for example, is low, even though there is a strong global system of mobile communication (GSM) coverage around Lake Victoria, engulfing countries such as Burundi, Rwanda, Uganda and Kenya. While ICT coverage is not extensive in Tanzania, and is limited in Ethiopia, Sudan has high mobile signal coverage. The NEPAD (2013) portfolio on ICT infrastructure is spearheading the East Africa Submarine Cable System (EASSy) to connect East African countries, eventually tapping into the optical fibre submarine network running from South Africa to Sudan.

Transport infrastructure involves roads, railways, ports as well as airports. It is imperative to stress that the interdependence that all forms of infrastructure manifest is better demonstrated by transport infrastructure. Seaports and airports, as points of exit to and entry from external regional and global markets, cannot adequately function without a commensurate efficiency in roads and railways in the first place. By and large, roads are ubiquitous in the movement of freight and passengers in Africa. The relevant features of African roads include the following: toll roads are not widespread with all such roads (about 0.1 percent based in South Africa); and there are significant differences in road quality between

rural and urban areas (AfDB 2010). The continental picture is further reflected differently across the RECs in Africa.

SADC has about 75 percent of its road regional network in relatively good condition compared to only 57 percent of such roads in EAC (Ranganathan and Foster 2011d). In the ECOWAS subregion, national governments have given significant attention to the state of the regional road network and thus, 93 percent of the network has been paved (Ranganathan and Foster 2011c). In view of the pivotal role of the road network, there has been a growing interest in linking African trade and transport corridors. The result is the nine interlinked sections as part of the Trans-African Highway Network: the Cairo-Dakar Highway; Algiers-Lagos Highway; Tripoli-Windhoek-Cape Town Highway; Cairo-Gaborone-Pretoria-Cape Town Highway; Dakar-Ndjamena Highway; Ndjamena-Djibouti Highway; Dakar-Lagos Highway; Lagos-Mombasa Highway; and Beira-Lobito Highway (AfDB 2010). These interlinked highways crisscross the various RECs in Africa and demonstrate the potential that a holistic approach to road transport on the continent can bring to regional integration and economic development.

Railways, if properly aligned, can help facilitate the movement of freight and passenger traffic and introduce a degree of competition with the road network (Bullock 2009). The railway system in the SADC region is not only the most connected across the region, but also the most extensive and well developed in Africa (Ranganathan and Foster 2011d). The railway systems in both ECOWAS and EAC do not constitute a regional network (Ranganathan and Foster 2011a; 2011c). Ports and waterways are indispensable in linking global markets, and that places serious barriers on the development prospects for landlocked African countries such as Burkina Faso, Zimbabwe and Ethiopia. African ports and waterways have experienced significant increases in volume within the last decade, however inadequate physical infrastructure resulting in congestion and delays as well as different institutional capacities relative to the goods they handle continue to pose challenges (AfDB 2010).

The types of ports and waterways in Africa range from general cargo ports (Port Elizabeth in South Africa), hub ports (Port Said in Egypt and Durban in South Africa), feeder ports (most of the ports on the West African coast), bulk ports (Buchanan, Liberia and Sort Saco, Angola), transshipment ports or

terminals (Algiers, Algeria; Mombasa, Kenya; Durban, South Africa; and Djibouti, Djibouti); dedicated oil terminals (Durban and Cape Town, South Africa); to river ports (Matadi, DRC). To place the above in a regional framework, the ports and waterways within SADC are the most actively utilized; and Durban, is the second busiest African port, given its various roles (hub, transshipment, dedicated oil terminal) (AfDB 2010). The ports in the ECA, although behind those in SADC and ECOWAS, have been undergoing substantial increases in growth of container traffic within the last two decades (Ranganathan and Foster 2011a). Ports in the ECOWAS sub-region, when compared to others regions, are behind those in the SADC region, but ahead of their counterparts in the EAC. While the ports in ECOWAS generally continue to experience significant infrastructure deficit, their performance, like their other regional counterparts, varies.

Air transport, like the other forms of infrastructure, has been the focus of growing pains and structural changes in all the RECs across Africa. However, SADC has “the largest and most advanced air transport market in Africa, with South Africa ... [as] the most important international gateway” (Ranganathan and Foster 2011d, p. 31). Johannesburg, has emerged as a strong hub-and-spoke center, with Nairobi and Addis Ababa playing a similar role, but at a lesser level of intensity. The EAC’s air transport system mainly revolves around Kenya Airways, a reflection of Kenya’s dominant role in the economic affairs of the sub-region (Ranganathan and Foster 2011a).

Notwithstanding the foregoing, below are three notable illustrations of regional infrastructure in Africa: West African Gas Pipeline (WAGP); Dakar-Ndjamena-Djibouti (DND) Road and Rail Project; and the Maputo Development Corridor (MDC).

Infrastructure, Regionalism and Development: Selected Case Studies

West African Gas Pipeline (WAGP)

The Governments of Benin, Ghana, Nigeria and Togo, within the setting of the ECOWAS, conceived the West African Gas Pipeline (WAGP) in the early 1980s as a vehicle for facilitating clean, natural gas and supply security, as well as a tool to advance regional integration (World Bank 2006). However, following

recent oil and gas discoveries in Ghana, it is projected that the WAGP could in the future be extended beyond Ghana, further strengthening opportunities for improved sub-regional integration, and shaping new regionalism in the ECOWAS sub-region (Shaw and Fanta 2013). The US\$690 million offshore pipeline project, covering 681 km, is designed to carry 474 MMscf/d of gas from Nigeria to Benin, Togo and Ghana and should complement the existing hydro power systems in these countries. Current market forecast suggests an expansion schedule to increase from the presently installed capacity of 170 MMscf/d to 474 MMscf/d by 2026. The WAGP also serves as a “feeder” into the West Africa Gas Pool which involves the four countries but also benefits the entire Gulf of Guinea sub-region. Aside from the four governments, other key stakeholders in the project are private sector oil companies such as Chevron Texaco, Shell.

This micro-regional project is driving an open, unified economic space through the integration of markets for goods as well as financial and other services (World Bank 2006). The project is also spurring the essential building blocks of a sustainable energy infrastructure network and more. Particularly, when Ghana’s Volta River Authority (VRA) in April 2009 generated its first electricity using natural gas from WAGP, it ushered in a new era with vast opportunities and possibilities.

To further enhance cooperation, participating nations and private sector stakeholders set up the West African Gas Pipeline Company limited (WAPCo), a limited liability company, to manage and operate WAGP. WAPCo is a joint venture between public and private sector companies from Nigeria, Benin, Togo and Ghana. Jointly owned by Chevron West African Gas Pipeline Ltd (36.9 percent); Nigerian National Petroleum Corporation (24.9 percent); Shell Overseas Holdings Limited (17.9 percent); Takoradi Power Company Limited (16.3 percent); Societe Togolaise de Gaz (2 percent); and Societe BenGaz S.A. (2 percent), the company's main mandate is to transport natural gas from Nigeria to customers in Benin, Togo and Ghana in a safe, responsible and reliable manner, at prices competitive with other fuel alternatives (WAPCo 2014). The project is reflective of contemporary regionalism in its “fluid, multi-dimensional, multi-level” nature (Söderbaum 2003; Söderbaum and Taylor 2008); with its headquarters in Accra, Ghana; an office in Badagry, Nigeria; and field offices in Cotonou, Benin; Lome,

Togo; as well as Tema and Takoradi, both in Ghana. To further drive regionalism, participating countries have set up commercial and regulatory terms; and a comprehensive and harmonized investment regime to enable WAPCo operate as a single business entity across all four countries (WAPCo 2014).

The above notwithstanding, and as with all regional initiatives, the WAGP also has its vulnerabilities, the primary one being the illegal maritime navigation activities along the project route and the perennial issues around institutions, their capacity and leadership. Accordingly, while the rise of this, and other, regional projects hold much potential and promise (Draper and Ismail 2014; Besada et al. 2013), attention needs to be paid to the sequencing of implementation, and the capabilities of all stakeholders (Tavares and Tang 2013), to ensure successful regionalism.

Dakar-Ndjamena-Djibouti Road and Rail Project

The Dakar-Ndjamena-Djibouti (DND) project is another initiative with distinctive features and a number of commonalities with micro-regional strategies and transport corridors (national and transboundary SDI). The 8715 km project, as part of the larger proposed Trans-Africa Highway, connects Dakar (Senegal in the west) to Djibouti (Djibouti in the east) will traverse 10 African countries (i.e., Burkina Faso, Cameroon, Chad, Djibouti, Ethiopia, Mali, Niger, Nigeria, Senegal and Sudan). Connecting African countries in the west, central and the east, the project is consistent with the seven regional infrastructure projects within the framework of the Presidential Infrastructure Promotion Initiative (IPPI) launched by the AU and NEPAD (NEPAD 2013). The project is also in line with the African Development Bank's Program for Infrastructure Development for Africa (PIDA), a series of initiatives aimed at addressing infrastructure needs in key sectors (transport, energy, ICT and transboundary water) by 2040 (AfDB 2011).

The DND transportation corridor is expected to bolster cross-border regionalisms and the road network will facilitate the free movement of people, improve imports and exports across land-locked countries such as Burkina Faso, Chad, Ethiopia, and Niger while strengthening intra-Africa trade and encouraging complementarity between the road and rail sectors (African Manager 2014). As a cross-border and domestic transportation infrastructure, DND is expected to reduce trade costs, resulting in

increased trade, heightened “foreign direct investment (FDI) in the form of intra-firm vertical integration across borders” (Fujimura 2004, p. 3). As Bach (2008, p.179) also points out, “trans-state networks mobilize ... bonds ... [and] promote regionalization through their exploitation of the opportunities offered by the customs, fiscal, normative or monetary disparities that are found along boundary line.”

The flurry of cross and transboundary regional schemes is not entirely new. However, such cross-border initiatives “offer privileged insights into the dynamics of micro-region-building” and reflect situations where “opportunities for survival and accumulation associated with cross-border interactions are vital to large section of the population and sometimes the state itself” (Bach 2008, p.180). Yet, to do so meaningfully, the quest for an efficient provisioning of such a regional public good must ensure a degree of non-excludability and non-rivalry. After all, aside from the international, regional and national players involved in the DND project, a second tier of varied actors notably from civil society as well as the private and non-governmental sectors, to criminal gangs concerned about the potential to make money, are all in their own dynamic ways helping to give life to the DND, “albeit mostly as part of micro-regionalization processes than as promoters of [the] micro-regionalist project (Breslin and Hook 2002, p. 226).

Once finalized, the DND initiative will form a seamless east-west crossing of the continent giving rise to myriad micro and cross-border relationships both formal and informal which, individually and collectively, will advance intra-African trade and regionalism. The DND project highlights “the complex dynamics” of transboundary regionalism, “primarily in the economic realm, but also considering [the] political, security and social dimensions” (Breslin and Hook 2002, p. 218). Also worth paying attention to are the complex entanglements of different channels of rules and regulation and mirroring the “Bhagwati Spaghetti Bowl” (Bhagwati and Panagariya 1996).

Maputo Development Corridor

The Maputo Development Corridor (MDC) is part of the broader Spatial Development Initiative (SDI) established by South Africa in 1995 as a way of expanding global reach and interconnectedness following the end of apartheid (Söderbaum and Taylor 2008). SADC has been supportive of the MDC, which is

regarded as a key strategy for ensuring that the necessary transportation infrastructure was in place to implement SADC's economic policies, particularly concerning the trade and investment requirement for the movement of goods. The MDC is the "flagship of the SDI program" (Söderbaum and Taylor 2008, p. 38), and illustrates the interplay between "South Africa driven multi-scalar regionalization and lean institutionalization" (Bach 2008, p. 177).

Although the Corridor is an agreement between the governments of South Africa and Mozambique, it is a worthwhile case of regionalism in Africa, as it is largely dependent on public-private partnerships and networks (Lewis and Bloch 1998, p. 730). Since its inception, the project's focus has been on generating skills and jobs with the support of private sector investors. The MDC has "given rise to an impressive array of trans-frontier projects, most of [which were] funded through private sector initiatives" (Bach 2008, p. 178). To this end, the MDC "... contains a very comprehensive investment portfolio, and with regard to the rehabilitation of primary infrastructure ... a total estimated value of 661.5 million USD" (Söderbaum and Taylor 2008, p. 38). The variety of private sector investments involved in the project include the US\$1.3 billion Mozambique Aluminium Smelter (MoZAL), the US\$1.4 billion Maputo Iron and Steel project, the Beluluane Industrial Park (BIP), as well as Pande/Temane Gas. Private investors are involved in all aspects of the project, from mining to forestry to energy to eco-tourism (Söderbaum and Taylor 2008).

The MDC sets institutional parameters around a "generalized SDI methodology" premised on cross-border relationships. Any infrastructure development along the borders within the MDC's jurisdiction is discussed by the MDC prior to implementation. Thus, matters relating to research, capacity building, trade, infrastructure projects, and investment must pass through a discussion phase with the MDC. There are several phases of implementation, and the degree to which civil society and public-private partnership voices are engaged throughout these phases presents a positive example for environmental and natural resource governance throughout the continent. The slower process of the phases prior to implementation ensures that a variety of actor voices can be heard. The MDC builds upon

the decentralization already evident within the region, utilizing local, provincial, and national authorities alongside the private sector.

The Corridor seeks to expand trade and open access to the Mozambican port, in essence linking the Atlantic and Indian Oceans and providing ocean access to landlocked areas. The Maputo Corridor Logistics Initiative demonstrates the importance of public-private partnerships in creating effective cross-border initiatives. The involvement of the private sector in the decision-making process has extended the perceived importance of regionalism beyond the creation of borders. To be sure, because the private sector invested in the Corridor, they have a recognized interest in ensuring that the border continues to operate efficiently. Thus, the border continues to be viewed as one of the largest and most successful example of regional cooperation continentally and an excellent example of regional cooperation among countries and between the private and public sectors (World Bank 1999). This point warrants particular attention, as the MDC has ignited a shift toward a networked system of governments, whereby decision-making and implementation processes transcend the state (Castells 2005). While this was at first thought perhaps too “ad hoc” to ensure effective implementation, this networked approach is now seen as an important case study that can be mirrored by other countries. Maintaining roads is difficult, especially in cross-border contexts where no one government wants to take ownership of the maintenance investment.

Throughout Africa, transport authorities have been met with conflict, as countries neglect their road maintenance, which, in turn, undermine the road network within the border of member countries. When two countries share a road, it is paramount for each country to maintain their road, to ensure that the road can continue to provide for its functions. In the case of MDC, the transport authorities are not the sole proprietors involved. Rather, road maintenance is handled largely by the private sector, which operates in both South Africa and Mozambique. Consequently, the Maputo Corridor road remains well-maintained and, therefore, well-travelled.

Lessons, Challenges and Concluding Remarks

The above discussion offers critical lessons in and challenges to infrastructure development, regionalism and integration in Africa. These lessons and challenges revolve around three related themes: a) capacity development imperatives; b) coherence, coordination and complementarity; and finally c) the role of state and non-state actors both within and beyond the African continent. At the heart of capacity development is the allocation of resources and the utilization of resources for maximum impact and outcomes. A common theme about the state of infrastructure in Africa and the three specific case studies reviewed is the dependence on external resources to push the frontiers of infrastructure development. While that by itself is not a problem, the issue has been the inability of several African institutions to be able to timely disburse and utilize available resources for infrastructure development (NEPAD 2013, p.18). The result is delays or cancellations of proposed projects.

Perhaps, the synergies of involving multi-actors might jolt African countries into action with a new sense of mission. The problem, however, is the role of regional economic commissions (RECs) in the push to close the infrastructure gap in Africa. There are significant variations in the relative capacity of RECs in Africa (see other chapters in the volume, notably Puplampu; Arthur; and Hanson and Tang). In cases of relatively strong capacity-infused institutions, the outcomes are obvious. The networked approach to the MDC presents a valuable lesson for African regional integration. Indeed, a networked institutional structure allows for a more fluid approach to cross-border relationships. This is particularly central in cases of environmental and natural resource management, where a variety of actors have vested interests in the outcome of a regional decision-making body. Thus, the MDC is non-bureaucratic in the classical Weberian sense. This has facilitated nuanced planning, especially with the inclusion of a variety of actors in institutional decisions through numerous subcommittees, technical teams, and decision-making processes. The inclusive nature of the institutional framework has enabled more public-private partnerships and civil society actors to be involved in the process.

The MDC also offers valuable lessons on how to address coherence, coordination and complementarity in infrastructure development. MDC validates how private-public dynamics across

countries in the sub-region are helping to not only create regional energy trade, but also cross border exchanges between national utility service providers. The involvement of these international, transnational and regional actors, as Breslin and Hook (2002, p. 225) point out “goes hand in hand with that of national and subnational actors. As far as states are concerned, although same in a very basic sense of being sovereign and equal, they differ in terms of political system, power distributions, degrees of integration into the global political economy.” The WAGP, for example, also clearly shows that for coherence and coordination to become assets and part of the parcel of these projects, will require attention to the leadership and institutional capacities of member states (Tavares and Tang 2013, p. 230; see also ACBF 2013).

In line with the changing role of the state, it is not surprising that infrastructure developments have taken on the public-private partnership model. The regionalism of the MDC is driven by multi-actors notably “state elites, who have their own agenda, but also by communities and peoples who utilize the micro-region for a heterogeneous set of reasons and motives ... and alternative regional strategies” (Soderbaum and Taylor 2008, p. 52). The dynamic entanglements of multi actors is an effective way to ensure diverse ownership. This model underscores the continuing relevance of the state and how smart states are able to liaise with the private sector. For such a liaison to yield the expected results however, institutional capacity will be both a necessary and sufficient condition. While the leadership role of the AU through NEPAD and the respective RECs are commendable, the absorptive capacity of institutions, as stated earlier, remains a concern.

There is no question that regional integration and infrastructure development are fundamental to Africa’s economic and trade performance as well as poverty reduction and quality of life improvement efforts. One reason for promoting regional integration in Africa is the continent’s record of regional trade. Thus, the expectation is that the various regional integration arrangements would help facilitate intra-regional trade and thereby promote growth. One way to promote trade is overcoming Africa’s regional infrastructure networks gaps. This can be illustrated with ICT connections in the continent. According to a World Bank (2009) report, African countries, especially landlocked ones, have low access to the global

network of submarine cables and intraregional connectivity by fiber-optic cables is also limited. As a result, most countries rely on satellites for international telecommunications, including internet access, leading to high prices for dial-up and broadband Internet. Thus, projects underway to ensure connectivity will also reduce prices and provide better international voice and internet connectivity services.

As part of and flowing from the discussions, it is obvious that private sector institutions are involved in the financing and operationalization of infrastructure projects in the region. Given that private sector involvement is premised on a profit motive, it is essential to have enabling conditions for private sector participation in improving the state of infrastructure in Africa. For example, African countries will have to endeavor to enshrine or have investment processes based on the rule of law, transparency and accountability. Along the same lines, private sector investment entities should be held accountable in paying the appropriate taxes. Then again, the ability to levy the appropriate taxes assumes the existence of an effective tax system. There have been significant changes in the global aid architecture, for example, the increasing role of Chinese investments in infrastructure development in Africa (Schiere and Rugamba 2011). Thus, the need for capable and effective African institutions in policy formation and the regulatory framework cannot be overemphasized.

It is necessary to approach infrastructure development and its capacity dimensions as both a means and an end. As a means, the state of the continental infrastructure network is integral to the objectives of promoting trade as a route to reducing poverty. Infrastructure development entails significant capital overlay. The investment should be contextualized in terms of the long term development prospects of countries. Then again, any long-term development program will depend on capable institutions, institutions that have the required and sufficient human and physical capital to discharge and ensure compliance to the regulatory framework. The bane of African development continues to be that of both political calculations in the development agenda and the dearth of political leaders who are genuinely interested in the development prospects of their citizens beyond the usual platitudes and election cycles. The growing significance of a veritable civil society that could hold

governments accountable for the welfare of their citizens is one hopeful sign that needs to be nurtured and enhanced in twenty-first century African societies.

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