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53 Countries  
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The New Challenges

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## SESSION 2

DISCUSSION PAPER

# AFRICA'S INFRASTRUCTURE REGIONAL CHALLENGES AND OPPORTUNITIES

TANYA KONIDARIS AND CLARE ALLENSON  
JOHNS HOPKINS UNIVERSITY-SAIS

### Introduction

A binding constraint on African development is the continent's crippling infrastructure deficit. Infrastructure is a crucial stimulant for growth and development. Investment, production and trade cannot occur without adequate water and power sources, road, rail and air transport and communication systems. Well-functioning and effectively maintained infrastructure is essential to Africa's economic performance.

Studies show that improved infrastructure could add 2% to Africa's GDP growth rate and improve productivity by 40%.<sup>1</sup> According to the World Bank, infrastructure has been responsible for more than half of Africa's recent improved growth performance and has the potential to contribute even more in the future.<sup>2</sup> Yet Africa's infrastructure services in some countries are twice as expensive as elsewhere, reflecting both diseconomies of scale in production and high profit margins caused by lack of competition. Apart from new investment to meet the large unmet demand, there is also a need for the rehabilitation, upgrading and modernization of existing infrastructure systems in Africa.

The existing funding gap for infrastructure is \$31 billion annually, mainly in power. Meeting this gap would help the region achieve its development goals. The infrastructure deficit is starting to be addressed at the national level, but the regional component is receiving less attention. Major regional bodies have begun to take the initiative and substantial movements have occurred in SADC, ECOWAS, and EAC. International organizations that are contributing include the World Bank, IFC, European Investment Bank, PIDA, and the Infrastructure Consortium for Africa.

<sup>1</sup> <http://www.icafrica.org/en/news/ica-news/article1/view/press-release-investing-in-regional-infrastructure-vital-for-africas-economic-development-1/>

<sup>2</sup> [http://siteresources.worldbank.org/INTAFRICA/Resources/aicd\\_overview\\_english\\_no-embargo.pdf](http://siteresources.worldbank.org/INTAFRICA/Resources/aicd_overview_english_no-embargo.pdf)

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The Role for Regionalism

Africa's 53 countries continue to function as small, fragmented, and uncoordinated markets. The limited economic size of many countries means that governments have difficulty funding the large fixed costs associated with infrastructure. African countries vary in the condition of their infrastructure systems, policies, legal frameworks, rules and regulations, standards, documentation requirements and procedures, skills and administrative capacity. Regional integration is likely the only way to overcome this. Regional infrastructure is an effective first step on the path to broader regional integration.

Regional infrastructure sharing builds institutions that promote deeper economic integration, political stability and understanding. António Pedro, a director at the United Nations Economic Commission for Africa, notes that "the fragmentation of the energy market [in Africa] is impeding industrial development. Regional integration is thus crucial for Africa because many of its countries face numerous common challenges that can best be dealt with collectively."

Regional infrastructure will create scale economies, harness regional public goods, increase intra-regional trade and global trade, and improve competitiveness. Infrastructure sharing addresses the problems of small scale and adverse location by increasing the scale of construction, operation, maintenance and revenue. It reduces costs, pools scarce technical and managerial capacity and creates a larger market, increasing the attractiveness for private investors.

Sectors

For information and communications technology (ICT) and power, regional infrastructure provides scale economies that significantly reduce the costs of production. In Africa, ICT networks are poorly integrated between countries and the wider world. Large, coordinated initial investments are required, but marginal transmission costs are low. Access to the global network of submarine cables is limited in Africa, especially for landlocked countries which rely on expensive satellites with low transmission capacities.

Power is by far Africa's largest infrastructure challenge. Africa's firms report losing 5% of sales due to frequent power outages. For informal firms that cannot afford backup generation, this rises to 20%. Africa is well endowed with hydropower and thermal energy resources, but has developed little of this potential. Sources of power are often far from major centers of demand in poor countries that cannot raise the money to develop them. As the scale of production is small in many countries, costs are high. Energy resources need to be pooled and scale economies leveraged through regional integration.

Cross border trade in power accounts for only 16% of the region's power consumption but has great potential, as shown by the Southern African Power Pool between South Africa and its neighbors, where the great majority of consumption is met through cross border trade. The World Bank estimates that with reduced physical or regulatory impediments, cross border trade in power could rise to 40% of needs in eastern and southern Africa and save \$2 billion a year in

2<sup>nd</sup> Conference

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costs.<sup>3</sup> As the costs for the top three producing countries are more than \$700 million each per year for the next ten years, cross border financing arrangements that allow importing beneficiary countries to meet initial capital contributions are essential.

For transport and water, infrastructure integration allows for the best management and development of cross-border public goods. Transport infrastructure is a critical tool for linking Africa to the global economy and promoting economic integration within Africa, facilitating trade. The region's fifteen landlocked countries rely on corridors to the sea through other countries, making transport a public good. Regionalism is crucial in addressing the missing links in transport infrastructure, i.e. sections of road that have an earth surface or no formed road at all. These may not be viable or attractive from the perspective of any single country.

Transport inefficiencies are frequently cited by firms as a major obstacle to doing business. Non-physical barriers to transit such as regulatory and administrative hurdles inflate costs and delay freight movements. For instance, in many countries there are delays of 10 – 30 hours at border crossings and ports. These impediments must be addressed in tandem with efforts to improve physical linkages and thoroughfares.

Many watersheds in Africa are also trans-boundary. Conflicting uses, seasonal water level variability and limited storage facilities leaves countries vulnerable to dry periods and droughts. Regional coordination in water management is important as what happens in an upstream country can affect its downstream neighbor. Trans-national water resource management requires strong institutional commitment.

### Barriers and Bottlenecks

A number of key impediments and challenges have been evident in previous efforts to advance regional coordination in the development of infrastructure:

- 1. Insufficient political commitment and consensus:** National political concerns often supersede the economic benefits of developing regional infrastructure. These include reluctance to depend on neighbors for key resources, thus foregoing self-sufficiency; concerns about relinquishing decision-making power to regional bodies; and diverging national agendas or recent histories of conflict. ]
- 2. Weakness of regional institutions and frameworks:** There is a general lack of consultative structures, policy frameworks, operational coordination, effective monitoring, conflict resolution mechanisms and clear criteria for prioritization. Numerous regional bodies overlap, most lack technical and administrative capacity, and they typically have limited enforcement powers.
- 3. Limited analysis of impediments:** There has been limited analysis, on a country or regional basis, regarding bottlenecks in regulation or conflicting interests that have impeded cooperation on regional projects.
- 4. A high degree of complexity in existing regional and sub regional bodies:** Unclear functional responsibility and uncertain financing strategies – from more than 30 executive continental bodies, regional economic communities with overlapping

<sup>3</sup> <https://www.infrastructureafrica.org/aicd/flagship-report>

2<sup>nd</sup> Conference

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53 Countries  
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memberships, and national planning bodies – has slowed progress on coherent regional strategies.

5. **Lack of harmonized regulatory frameworks and administrative procedures:** Non-physical barriers to trade across national borders, such as customs duties and tariffs, increase costs and introduce delays. Differences in regulations, standards and pricing policies hinder private sector participation across neighboring countries
6. **Problems in regulatory change:** Africa's institutional, regulatory and administrative reforms, particularly in the area of infrastructure management, are only halfway along. Limited reforms have already proved effective in increasing operational efficiency, but considerable regulatory change will be needed to facilitate regional investment and coordination.
7. **Financial constraints:** Regional projects often lack a clear legal and financial framework, and risk mitigation instruments such as guarantees and insurance are difficult to secure. In consequence, it is difficult to attract needed private capital. The private sector prefers clearer legal and financial concessional frameworks embodied in national Public-Private Partnerships (PPPs). They have thus far not been much involved in regional projects.
8. **Lack of management capacity and technical skills:** Lawyers, engineers, project finance specialists and industry experts are needed to develop multi-country projects. The lack of expertise in regional coordination often results in poorer quality and higher costs for host governments.
9. **Limited coordination of operation and maintenance:** Past infrastructure projects have not fully taken into account the ability to pay for the operation and maintenance of projects.
10. **Managing common pool resources:** Up- and downstream countries have competing interests regarding a commonly-used resource, and will have differing levels of impact depending on location. For instance, upstream water users are in a stronger position than downstream users. There are often competing uses for resources.
11. **Unequal distribution of benefits:** Regional infrastructure may benefit one country more than another, and this may lead to a lack of agreement on the prioritization of projects.

Proposals

1. **Build political consensus** through high level buy-ins at government and sub-regional levels, and make infrastructure development part of the national policy debate. Shift the infrastructure debate from country-specific topics to the wider theme of regional cooperation.
2. **Strengthen regional institutions** by clarifying roles and responsibilities, increasing legal authority, boosting technical capacity, strengthening links to national development plans, and improving delivery mechanisms. Facilitate cooperation through Regional Cooperation Frameworks to establish agreements, MOUs and protocols addressing obligations and responsibilities, timeframes, and resource mobilization.
3. **Develop regional regulatory frameworks** including legal, administrative and regulatory reform to harmonize such issues as access to services, pricing, and non-physical barriers to trade.
4. **Develop more diverse and robust risk-mitigating instruments** such as guarantees and co-financing facilities that can help to attract private sector investment. For example,

2<sup>nd</sup> Conference

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improve World Bank guarantees and bring them in line with market-based products to help mitigate the increased risks associated with regional projects.

5. **Develop regional Public-Private Partnerships (PPPs)**, in which there is a blending of private sector money and donor funding. Policy development of PPPs must ensure legal and financial clarity and responsibility. Support or 'showcase' private commercial projects to encourage private sector participation.
6. **Focus on the fair sharing of costs and benefits of trans-boundary projects.** Agree on who is responsible for mobilizing resources, since regional infrastructure improvements may not be attractive from the perspective of any single country. Facilitate cross-border finance and project preparation that includes social, environmental, economic and administrative feasibility. These costs are higher than for national projects.
7. **Match infrastructure projects with specific economic development goals** in order to generate revenues for newly built infrastructure. Concentrate investments in high-potential areas through developmental corridors. Primary production centers, which promise the greatest economic return, should become regional infrastructure hubs with efficient ports and airports to maximize scale.