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Infrastructure and Industrialisation: Ensuring Sustainable and Inclusive Growth in Africa

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Key Issues:

- **Africa's economy** is on a growth curve where development and investment plans must focus on the expansion of infrastructure, capacities, and institutions.
- **As investment in Africa rises,** investing economies and companies must target the higher end of value chains in their respective industries, especially for mineral resources and agriculture - the tradtional strengths of most African economies.
- **African industries can develop** around the growth poles and nodes of infrastructure projects and industrtial corridors, resulting in increased trade.

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Africa's economy is on a growth curve where development and investment plans must focus on the expansion of infrastructure, capacities, and institutions. Infrastructure development, which allows investing economies and companies to target the higher end of industrial value chains, will help to diversify the African economy and trade patterns, promote value-added production of goods and services, and boost consumption. Infrastructure planning and investment must be responsive to the development priorities of a country or subregion if infrastructure is to be an agent for growth and the narrowing of development gaps.

Introduction

Infrastructure development and industrialisation are recognised pathways for narrowing development gaps amongst regions. They are also the basis for the participation of a country or region in international production networks and for infusing innovation into different sectors of the economy.

Industrial agglomeration and urban amenities are key to stimulating and upgrading innovation. Infrastructure development for industrial agglomeration and urban amenities is expensive, but essential for an innovative society.

The concept of connectivity is also at the centre of infrastructure development in Africa. Not only is it one of the drivers of sustainable and inclusive development, it also underpins the economic integration of Africa.

Infrastructure for Reducing Development Gaps

Africa is urbanising faster than any other region; its cities are expected to gain 24 million people each year until 2045. Africa has a young population and a growing labor force – a highly valuable asset in an ageing world. By 2034, the working-age population is expected to be 1.1 billion, larger than that of China or India (MGI, 2016).

To meet these growing needs, the African Development Bank has estimated that Africa needs at least $130 billion for infrastructure development each year. The policy challenge will be to ensure inclusive growth and minimise development gaps in the region.

Africa faces development gaps at two main levels: geographical and industrial. Geographical development gaps are the differences in income levels and development stages amongst countries or regions within a country. Industrial development gaps refer to differences in productivity and development stages between multinational and local firms, large firms and small and medium enterprises (SMEs), and manufacturing and non-manufacturing sectors (Kimura, 2010). Planned infrastructure development and connectivity improvements can positively exploit the diversity amongst countries and sub-regions to narrow these development gaps in Africa. Geographical development gaps can be reduced through participation in production networks. Infrastructure enhancements enable countries or subregions to attract manufacturing industries. They also allow people to move from rural to urban areas. The smooth movement of people from agricultural, informal occupations in rural areas to formal, nonagricultural occupations in urban areas is an effective way to raise incomes and supply competitively priced labour to the manufacturing and modern services sectors.

Furthermore, 15 Africa countries and more than 400 million people are landlocked. Infrastructure and connectivity can unlock the economic potential of these countries and connect their people to the rest of the world

Investing in Hard and Soft Infrastructure

As Africa catches up with growth trends in diverse fields, development and investment plans must focus on the creation of infrastructure, capacities, and institutions, as well as trade facilitation measures. To produce sustainable growth, infrastructure development must be accompanied by enhanced institutional and human resource capacities to sustain and improve the growth results.

A quick assessment of capital expenditure in Africa shows that several countries such as the United States, France, Italy, the United Kingdom, United Arab Emirates, China, Germany, Bahrain, Finland, and Japan have invested in projects mainly related to infrastructure, minerals, and energy.

Table 1: Top Investing Countries in Africa, by Capital Investment, in 2015

Country	**Capital Expenditure ($ billion)**
Italy	7.4
United States	6.8
France	5.7
United Kingdom	4.9
United Arab Emirates	4.2
Bahrain	3.7
Morocco	3.4
Germany	2.6
China	2.3
Finland	2.2
Japan	1.4
Other	23.1
Total	**67.7**

Source: fDi Markets: The Financial Times Africa Investment Report, 2016.

There is a wide opportunity to create the conditions and capacities in Africa to attract investment for industries and infrastructure that can ensure upstream and downstream participation and movement in production value chains, whether in agriculture, commodities, manufacturing, or services.

Infrastructure planning, however, must be dovetailed with the needs of the country and/or region, and must include concrete details of projects to enable economies and markets of Africa to link with each other, and with markets outside. It is expected that the outcomes of early planning and partnerships for infrastructure will encourage further investments in production and development projects. As investment in Africa rises, it will also be important to ensure that investing economies and companies feel encouraged to target the higher end of value chains in respective industry. This will be especially important for investments in mineral resources and agriculture, which are traditional strengths of most African economies. Manufacturing and services could be targeted at a more grassroots level, eventually moving up the value chain once capacities and markets for the goods and services become mature, both within and outside Africa.

Infrastructure and Innovation Can Increase Africa's Trade with the Rest of the World

Africa's economy is at the lower end of global value chains, whether in agriculture, manufacturing, or services. The continent's current economic activities and pattern of trade hold a wealth of opportunity that lies ahead. When aligned with the needs of a country or subregion, infrastructure and related capacities for growth can change the pattern of Africa's participation in value chains of manufacturing, agriculture, and services.

Infrastructure projects and industrial corridors create growth poles and nodes along their length. African industries, both large and medium scale, can develop around the growth poles and nodes. This will impel its trade to grow, both in quantity and quality. For example, Africa's trade with the rest of the world is dominated by the export of resources and commodities (Table 2). Intra-Africa trade is very low. The African Export–Import Bank estimates that intra-African trade was only 19% of the continent's $930 billion total trade in 2016. The equivalent figure for the European Union is over 60%.

Table 2: Africa's Trade with the Rest of the World, 2016

HS Code	Product Label	Exports		Imports		
		($ billion)				
		Value	% of Total	Value	% of Total	Trade Balance
01-05	Animal & animal products	7	2	13	3	
06-15	Vegetable products	23	7	36	8	
16-24	Foodstuffs	22	7	23	5	
25-27	Mineral products	137	41	61	13	
28-38	Chemicals & allied industries	16	5	42	9	
39-40	Plastics / rubbers	5	1	23	5	
41-43	Red hides, skins, leather, and furs	1	0	1	0	
44-49	Wood & wood products	6	2	13	3	
50-63	Textiles	15	4	21	5	
64-67	Footwear / headgear	1	0	4	1	
68-71	Stone / glass	38	11	10	2	
72-83	Metals	24	7	39	8	
84-85	Machinery / electrical	19	6	96	21	
86-89	Transportaion	16	5	53	11	
Others	Miscellaneous	5	1	25	6	
Total	**All products**	**335**	**100**	**460**	**100**	**(125)**

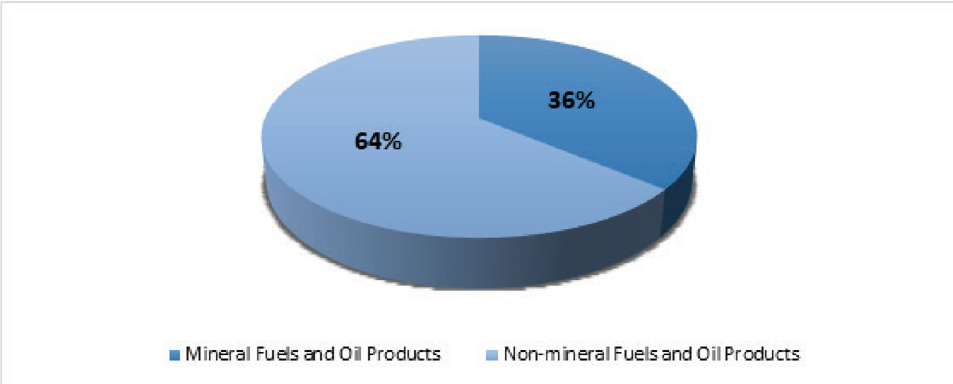
Note: ( ) = negative.
Source: International Trade Center, 2017.

Despite being a resource-rich and geographically and demographically diverse continent, Africa has a negative balance of trade. Machinery and transportation equipment make up one-third of its imports (Table 2). Agriculture suffers from a lack of investment, innovative agriculture production, and high-value agro-trade.

Mineral fuels and oil products take up more than one-third of Africa's exports to the rest of the world (Figure 1). However, unstable prices of these products, especially oil, have caused regular fluctuations in the growth rate.

The prospect of a declining growth trend for resource-dependent African economies underlines (i) the need to transform their economic policy frameworks and structural conditions; (ii) the value of infrastructure; (iii) links with internal and external markets; and (iv) the importance of participation in production networks across Africa, Asia, and Europe.

Figure 1: Share of Oil and Mineral Fuels in Africa's Exports, 2016



Source: International Trade Center, 2017.

Table 3: Real Gross Domestic Product Growth Rates for Africa Overall and its 15 Fastest-Growing Economies, 2009–2018

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 (P)
Côte d'Ivoire	3.8	2.4	(4.7)	10.7	8.7	8.8	8.9	8.4	7.3	8.1
Ethiopia	8.8	12.4	11.2	8.6	10.3	10.2	10.4	8.0	8.1	8.1
Tanzania	5.4	6.4	7.9	5.1	7.3	7.0	7.0	7.2	7.2	6.8
Senegal	2.4	4.2	1.8	4.4	3.5	4.3	6.5	6.7	6.8	7.0
Djibouti	1.6	4.1	7.3	4.8	5.0	6.0	6.5	6.3	6.7	6.8
Kenya	3.3	8.4	6.1	4.6	5.7	5.3	5.6	6.0	6.1	6.5
Rwanda	6.3	7.3	7.8	8.8	4.7	7.0	6.9	6.0	6.2	6.8
Burkina Faso	2.9	8.4	6.6	9.0	6.6	5.0	4.0	5.4	8.4	8.1
Mali	4.7	5.4	3.2	(0.8)	2.3	7.0	6.0	5.3	5.4	5.0
Niger	(0.7)	8.4	2.3	11.8	5.3	7.0	3.5	5.2	5.6	6.7
Central African Republic	1.7	3.0	3.3	4.1	(36.7)	1.0	4.8	5.1	5.4	5.6
Togo	3.4	4.0	4.8	4.8	4.0	5.9	5.3	5.0	5.1	5.3
Sao Tome and Principe	4.0	4.5	4.9	4.6	4.2	4.1	4.0	5.0	5.6	5.4
Guinea	(0.3)	1.9	3.9	2.9	2.3	1.1	0.1	4.9	4.6	5.5
Guinea-Bissau	3.3	4.4	(1.8)	(1.8)	0.8	2.7	5.8	4.9	4.8	5.0
AFRICA	**3.4**	**5.7**	**6.2**	**6.2**	**3.9**	**3.7**	**3.4**	**2.2**	**3.4**	**4.2**

( ) = negative, P = projection.
Source: African Development Bank Statistics Department, domestic authorities, and African Development Bank projections.

Focus on Sustainable Development, Agriculture, and Quality Infrastructure

Sustainable development. The development lessons from Asia and Europe indicate that development and growth are sustainable when they are understood by the people. A greater emphasis on livelihoods, capacities to sustain development projects, and deeper integration into regional value chains of production would touch people's life directly and positively, creating growth that is scalable and sustainable.

Agriculture. Given the population's high degree of dependence on agriculture, the sector will remain the foundation for development in Africa and will continue to be important in the foreseeable future. The agriculture sector must be able to achieve sustainable growth and continue to serve as the foundation of development in all aspects. An emphasis on creating an 'agriculture-plus' model, in which capacities for innovation and productivity in agriculture are improved and the sector is linked directly with and participates more fully in global and regional value chains, will be important. Given the large dependence of populations on agriculture, it must be nurtured to act as growth engine. The reciprocal relationship between agriculture and industry through their backward and forward links could strengthen the growth of each sector.

Infrastructure. Quality infrastructure should

- (i) mobilise financial resources effectively;
- (ii) align with socioeconomic development and the development strategies of countries and regions;
- (iii) comply with international standards established to mitigate environmental and social impact;
- (iv) be economically efficient, durable, inclusive, safe, disaster-resilient, and sustainable; and
- (v) contribute to the local society and economy.

Therefore, quality infrastructure would be in harmony with the local environment, community, and people's livelihoods. This would enable better growth and development within Africa, with greater integration into global peripheries of growth.

Advantage Africa: Infrastructure for Digital Economy

Unlike the regions and countries of Asia, Europe, and Latin America, whose growth phases occurred in the 1980s and 1990s, Africa has the opportunity to include dense and rich digital connectivity and digital innovation in its development plans. Digital infrastructure, knowledge, and devices will bring about a digital transformation, which will spawn innovative businesses and market processes and drive innovative, inclusive, and sustainable growth. By reducing development gaps along multiple dimensions, including income, age, geography, and gender, digital infrastructure can also contribute to reducing inequality and achieving the goals of the 2030 Agenda for Sustainable Development. To this end, infrastructure development in Africa must include capacities for digital connectivity and innovative business processes to reap the digital bonus of development.

Policy Recommendations

This policy brief recommends a comprehensive planning for infrastructure development that propels and strengthens connectivity and economic growth in Africa and its subregions. The infrastructure development will require planning and investments from development partners and private and public participants. Infrastructure planning must create both hard and soft capacities, the latter being important for supporting and sustaining the growth results.

Enhanced participation in production networks should be a policy impetus for countries to diversify their economy and trade patterns. The landlocked countries of Africa will have a greater choice of growth strategies.

Planning and investments in digital infrastructure and capacities can leapfrog Africa's growth, allowing greater participation in the digital economy.

The infrastructure and industrialisation strategy for Africa must elaborate the cooperation and implementation aspects of development and cooperation programmes, the activities of the multilateral banks, the private sector, and the development cooperation programmes of inter-governmental organisations and forums such as the G20.

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