

HRI Report

African Market Aiming to Achieve Growth through Cross-border Infrastructure

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Africa, particularly the sub-Saharan region, has garnered much attention in the past for its resource business. However, with the economic downturn and decline in oil prices at the sources of demand including China, will the days of "Hopeless Africa" (The Economist (U.K.), May 2000) be back again? There are signs that lead us to believe this will not happen. (This paper is a study on Africa's sub-Saharan region, and henceforth refers to this region unless otherwise stated.)

1. Changes in the African Market in Recent Years

First of all, it is necessary to grasp three changes in the African market in recent years. The first is a reduction in the number of countries facing civil wars. There have been repeated racial disputes and power struggles in the African nations, so much so that the history of Africa can be equated to the history of civil wars. However, the situation seems to have come under control recently. The number of countries with civil wars used to be 13 in 2000, but dropped to only three today including Somalia.

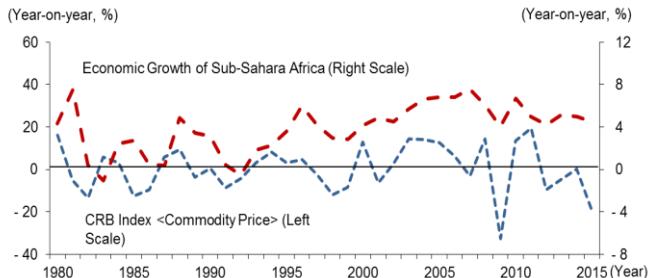
The second market change is economic growth. If we compare the economic growth of the 45 underdeveloped sub-Saharan nations with regions in other parts of the world, we can tell clearly that the trends in the sub-Saharan economy are robust despite the harsher global economic environment (Figure 1). Also, if we look at the growth in commodity prices including those of resources since 1980, the sub-Saharan economy has remained resilient in the face of a tough climate with resource prices declining after 2010 (Figure 2). The third change is the rise of the middle-income group. Per-capita income in the entire Africa was at a level that exceeded US\$2,000 in 2013.

Meanwhile, the number of African countries that falls under the category of middle-income nations as defined by the UN¹ increased from nine in 2000 to 17 in 2013.

| Region | Economic Growth (%) | |
|---------------------------|---------------------|-----------|
| | 2000⇒2005 | 2010⇒2015 |
| Sub-Sahara (45 Countries) | 5.4 | 5.1 |
| ASEAN-5 | 5.1 | 5.4 |
| EU | 2.4 | 1.1 |
| Global Average | 4.1 | 3.9 |

Prepared by the Hitachi Research Institute based on data from the IMF

Figure 1: Comparison of Economic Growth



Prepared by the Hitachi Research Institute based on data from Reuters and the IMF

Figure 2: Economic Growth and Commodity Prices of the Sub-Saharan Region

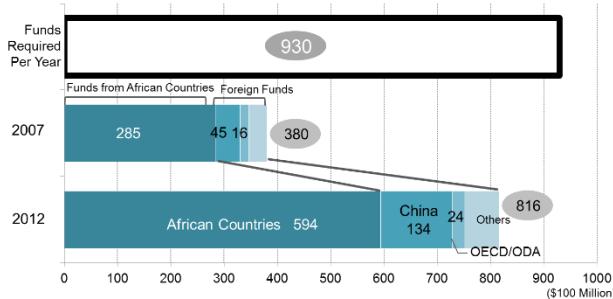
2. Challenge of Economic Growth Lies in Wide-area Infrastructure Development

While there are positive changes as described above, the most important issue to address in order to achieve sustainable economic growth is infrastructure development, which remains at a low level. One of the key challenges is the underdevelopment of energy infrastructure. Power consumption per capita is at a level that is even lower than India. However, due to the lack of natural resources and

¹ According to the definition of the UN, middle-income countries are those with a per-capita income of US\$1,916 and above.

hence unavailability of power-generation infrastructure, it is necessary for Africa to secure power and gas from surrounding countries through a large-scale power transmission and distribution system. Another challenge is the low level of trade within the region due to the lack of transport infrastructure. Moreover, access to ports from inland countries is a must in order for them to deal with countries outside the region. In other words, economic growth of the sub-Saharan region relies not only on the infrastructure within the individual countries. Development of cross-border and wide-area infrastructure is also necessary in the energy and transport sectors.

Next, let us take a look at the funds needed for infrastructure development (Figure 3). According to the World Bank, the amount of funds required for total infrastructure development in sub-Saharan² is estimated to be US\$93 billion (approximately 11 trillion yen) per year in the 10 years starting from 2010. Meanwhile, with economic growth and a more stable economic system, government funds of the respective countries within the region increased from US\$28.5 in 2007 to US\$59.4 billion in 2012. At the same time, funds from outside the region are also growing. China, in particular, has increased its investments significantly on infrastructure development in Africa in recent years, which amounted to US\$13.4 billion in 2012. African countries are also striving to improve the business environment with the larger inflow of foreign funds. Such improvements among five of the sub-Saharan countries between 2005 and 2015 are shown below (Table 1).



Prepared by the Hitachi Research Institute based on data from the World Bank and the IMF, etc.

Figure 3: Infrastructure Development Funds in Africa

² This includes infrastructure development and maintenance for power generation, energy transmission and distribution, ports, transportation, water and sewerage and communication.

Table 1: Comparison of the Business Environment

| Item | Construction Approval Acquired | | Investor Protection | | Tax Collection | | Contract Binding Power | |
|------------------|--------------------------------|------|---------------------|------|----------------|------|------------------------|------|
| | 2005 | 2015 | 2005 | 2015 | 2005 | 2015 | 2005 | 2015 |
| South Africa | 71 | 69 | 80 | 72 | 74 | 89 | 65 | 53 |
| Nigeria (Lagos) | 42 | 42 | 53 | 68 | 40 | 32 | 29 | 49 |
| Kenya | 83 | 59 | 50 | 47 | 50 | 72 | 58 | 56 |
| Mauritius | 59 | 77 | 77 | 65 | 91 | 92 | 60 | 71 |
| Angola | 65 | 67 | 53 | 57 | 61 | 62 | 33 | 26 |
| (Reference) | | | | | | | | |
| India (Mumbai) | 19 | 35 | 57 | 73 | 39 | 56 | 26 | 32 |
| China (Shanghai) | 10 | 46 | 43 | 43 | 16 | 65 | 71 | 80 |

Note: The total score for each item is 100. Shaded items are those that have seen an improvement compared to 2005.

Prepared by Hitachi Research Institute based on data from the World Bank

Despite the efforts by African countries and an increase in funds from outside the region, funds required for infrastructure development still remain insufficient.

3. Cross-border Infrastructure Development Accelerated through Regional Cooperation

The current scale of the individual economies in the sub-Saharan region is small, and thus there is a limit to securing funds for major infrastructure development projects. As such, many of the countries are placing high expectations on cross-border infrastructure development projects, which have a significant economic effect while costs are borne partially by each of the countries. However, in order to establish cross-border infrastructure that involves a multiple number of countries, it is necessary to address the differences in the systems and cultures unique to the respective countries, ranging from race, language, business practice to currency, skill level, legal system and unit of scale. Other challenges include securing of funds for infrastructure development, as well as cost and profit sharing after the development according to the interests and economic effect. These issues have to be addressed in order to develop infrastructure for sub-Saharan to achieve economic growth. To this end, it is necessary to establish a system to propel such activities, which includes a third-party coordinator since there is a limit to negotiations among the concerned parties. In recent years, many of the African countries have been putting in effort by leveraging

on regional cooperation or cooperation of the entire African Continent.

In the area of regional cooperation, RECs (Regional Economic Communities) are the central bodies for multilateral cooperation toward infrastructure development. Currently, there are six main RECs in the African Continent (Figure 4). Among them, EAC, SADC and COMESA have reached an agreement for further integration to create a larger economic bloc.

| REC | SACU | ECOWAS | EAC | SADC | COMESA | UEMOA |
|--------------------------|---|---|---|---|---|---|
| No. of Footprint States | 5 | 15 | 5 | 15 | 19 | 8 |
| Main Countries | South Africa Botswana | Ghana Nigeria | Kenya Tanzania | South Africa Angola | Egypt Kenya | Benin Senegal |
| GDP (\$100 Million) | 4,454 | 3,720 | 840 | 6,580 | 5,080 | 1,300 |
| Population (100 Million) | 0.6 | 3.0 | 1.4 | 2.7 | 4.4 | 1.0 |
| Location |  |  |  |  |  |  |

Note: SACU=Southern Africa Customs Union,
 ECOWAS=Economic Community Of West African States,
 EAC=East African Community,
 SADC=Southern African Development Community,
 COMESA=Common Market for Eastern and Southern Africa,
 UEMOA=West African Economic and Monetary Union

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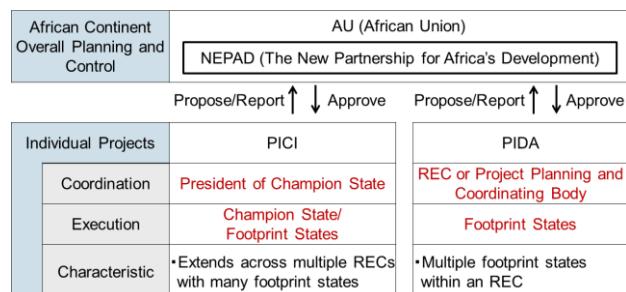
Figure 4: Major Regional Economic Blocs

The RECs and countries taking part in the project are promoting the development of cross-border infrastructure by building a promotion framework under the leadership of the AU (African Union), and defining the respective roles such as proposal and approval, execution and coordination.

4. System for Promoting Cross-border Infrastructure Development Projects

In this section, I will summarize the system for advancing cross-border infrastructure development based on regional cooperation (Figure 5).

Cross-border infrastructure development projects are proposed by NEPAD (New Partnership for Africa's Development) and subject to approval as a priority project at the AU Summit. After acknowledgement and advancing to the implementation phase, the party responsible for the respective projects will make periodic reports to NEPAD.



Prepared by the Hitachi Research Institute based on data from the AU, PICI and PIDA

Figure 5: System for Promoting Cross-border Infrastructure Projects

These cross-border infrastructure development projects can largely be divided into two different types, namely (1) PICI (Presidential Infrastructure Champion Initiative) projects, which are major and wide-area projects that extend across multiple RECs and are led by one of the presidents of the countries within the region; and (2) PIDA (Programme for Infrastructure Development in Africa), which are projects that extend across multiple countries within an REC with the REC or a project planning and coordinating body playing the coordinator's role.

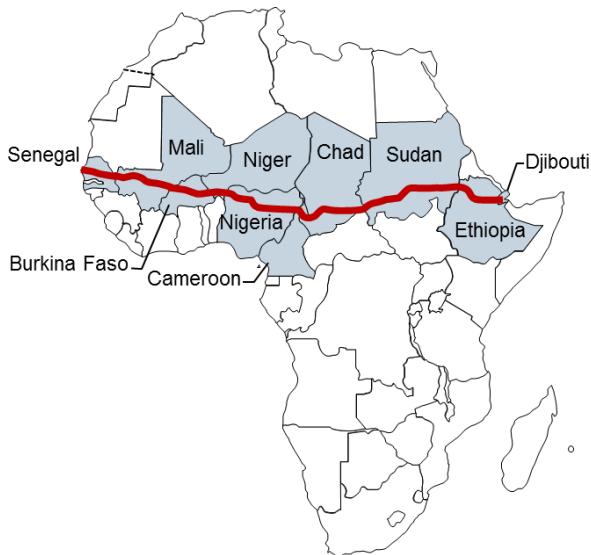
There are currently nine major PICI projects, which are led by the respective presidents (Table 2). For these projects, NEPAD plays the central role to draw up individual project plans, while the president plays the role of a coordinator. The projects are executed under the leadership of the champion state and the responsibility of the footprint states. Progress of the project is reported periodically to NEPAD through the president of the champion state. In this way, the projects are promoted with the roles of each party clearly defined. While the footprint states are basically responsible for promoting the projects, coordination and progress are managed strictly by NEPAD and the champion state's president.

Table 2: PICI Projects in the Planning and Implementation Phases

| # | Champion State | Project | Planning | Execution |
|---|-------------------|---|----------|-----------|
| 1 | Algeria | Trans-Sahara Highway | | ○ |
| 2 | Algeria | Trans-Sahara Optic Fiber Network | | ○ |
| 3 | Nigeria | Gas Pipelines | | ○ |
| 4 | Senegal | Dakar-Djibouti Road and Rail | ○ | |
| 5 | South Africa | North-South Corridor | | ○ |
| 6 | Republic of Congo | Kinshasa-Brazzaville Corridor | ○ | |
| 7 | Rwanda | Optic Fiber Network Linking Neighboring States/ICT Connection | | ○ |
| 8 | Egypt | Mediterranean-Lake Victoria Corridor | | ○ |
| 9 | Kenya | Lamu Port Development (LAPSSET) | | ○ |

Prepared by the Hitachi Research Institute based on data from the PICI

The Dakar-Djibouti Road and Rail Project, for example, is a transcontinental transport infrastructure development project that connects Senegal in West Africa to Djibouti in East Africa with a total distance of about 9000km (Figure 6). It is a major project that extends across four RECs (ECOWAS, ECCAS, COMESA, IGAD) and 10 countries. The president of Senegal is appointed as the champion state president, who bears responsibilities including funding plans and coordination.



Prepared by the Hitachi Research Institute based on data from the PICI

Figure 6: Dakar-Djibouti Rail and Road Project

PIDA, which is another type of cross-border infrastructure development project managed by AU and NEPAD, refers to cross-border projects implemented by multiple countries within a specific REC. There are currently 51 approved projects with priority given to 16 of them (Table 3).

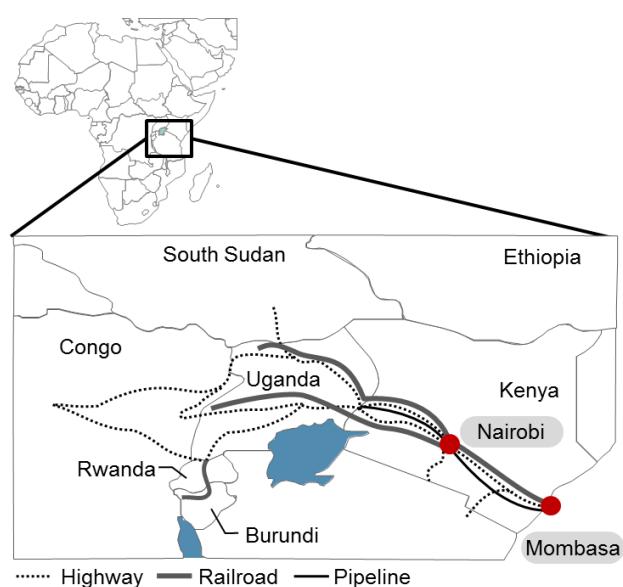
Table 3: Priority PIDA Projects

| Sector | Project | Project Promotion REC | | | |
|-----------|---------------------------------|-----------------------|---------|------|-------|
| | | Northeast | Central | West | South |
| Energy | Mphamda-Nkuwa | | | | ○ |
| | Lesotho Hydropower II | | | | ○ |
| | Inga Hydropower III | | ○ | | |
| | Sambagalu Hydropower | | | ○ | |
| | Batoka Hydropower | ○ | | | |
| | Ruzizilli | ○ | | | |
| | Uganda-Kenya Pipeline | ○ | | | |
| Transport | Northern Multimodal Corridor | ○ | | | |
| | North-South Multimodal Corridor | ○ | | | ○ |
| | Central Corridor | ○ | | | |
| | Beira-Nacala Corridor | ○ | | | ○ |
| | Southern Africa Hub Port/Rail | | | | ○ |
| | Abidjan-Lagos Corridor | | | ○ | |
| | West Africa Hub Port/Rail | | | ○ | |
| Water | Fomi Irrigation Water | | | ○ | |
| ICT | Broadband | ○ | ○ | ○ | ○ |

Prepared by Hitachi Research Institute based on data from PIDA

For PIDA, the REC or the project planning and coordinating body established for each project plays an important role. A prerequisite of such projects is that each participating country is responsible for procuring their own funds and promoting the project, while the REC or the project planning and coordinating body functions as a coordinator to balance the interests of the different countries. As with PICI, progress of the projects is reported periodically to and managed by NEPAD.

For example, PIDA's multimodal transportation corridor is a cross-border infrastructure project for developing railroads, highways and pipelines through cooperation among members of COMESA, an REC in eastern Africa. This is an important infrastructure route for connecting countries without a coastline to the sea, which include Rwanda, Burundi, Uganda and South Sudan. The six participating countries of this project gathered the necessary manpower and funds, and established the NCTTCA (Northern Corridor Transit and Transport Coordination Authority) to share infrastructure development issues faced by the respective countries, supply funds and distribute profits, as well as coordinate the interests in aspects such as establishing legal systems.



Prepared by the Hitachi Research Institute based on data from the NCTTCA and surveys

Figure 7: Northern Multimodal Corridor Project

5. Conclusion

While the economy is growing, the economic foundation of many of the sub-Saharan countries is still fragile. Country risk remains high for some of the regions due to terrorism and civil wars. Despite such a background, the African countries have chosen to cooperate with their neighboring states in order to achieve the common goal of economic development. This clearly shows their strong determination not to backslide into the previous state. This year, the Sixth Tokyo International Conference on African Development (TICAD VI) will be held in Kenya. This is a timely opportunity for Japanese corporations to expand their business in Africa while enhancing their level of risk management. Hitachi Research Institute will continue to conduct market analysis and studies on the same region to identify the growing infrastructure business opportunities in Africa.