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INFRASTRUCTURE DEVELOPMENTS STRATEGY IN AFRICA UNDER NEPAD: IMPERATIVE FOR SUCCESS

BY

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1. INTRODUCTION

Infrastructure is the basic structure on which an organization or system is built and which makes it able to operate. Typically, infrastructure is a large scale system of services and facility of a country or region that are necessary for economic activities. Infrastructure can be decomposed into two parts, namely, social and physical infrastructure. Social infrastructure encompasses health and education while physical infrastructure covers power, telecommunication, transport (roads, railways, seaports, airports and pipelines) and water supply. Often social infrastructure is viewed as the driving as the driving force while physical infrastructure is seen as the wheel of economic activity (ADB, 1999). In this paper, attention is focused on physical infrastructure.

The infrastructure development strategy is normally predicated on an underlying development paradigm. Arguable, infrastructure development strategy predicated on a specific development paradigm may accompanied by changes in outcome variables which may not be socially acceptable or, indeed, fail to meet development aspirations of the people. Therefore, in this paper, the shift in the infrastructure development strategy in Africa under the New Partnership for African's Development (NEPAD) is identified some of the imperatives for success are proposed.

At this juncture, it should be appropriate to summarise the goals of NEPAD. NEPPAD is pledge for Africans leaders based on common vision and a firm conviction that they have a pressing duty to eradicate poverty and to place their countries on the part of sustainable growth and development and at the same time, participate actively in world economy

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(NEPAD, 2001). The long-term objective of NEPAD is to eradicate poverty in Africa and place African countries on the part of sustainable growth and development and thus halt the marginalization of Africa in the globalisation process.

The goals of NEPAD are as follows:

- To achieve and sustain an average GDP growth rate of above 7 percent per annum for the next 15 years; and
- To ensure the achievement of the agreed International Development Goals (IDGs), which are:
- To reduce the proportion of people living in extreme poverty by half between 1990 and 2015:
- To enroll all children of school age in primary schools by 2015;
- To make progress towards gender equality and powering women by eliminating gender disparities in the enrollment in primary and secondary education by 2005;
- To reduce infant and child mutality ratios by three-quarters between 1990 and 2015;
- To reduce maternal mortality ratios by three three-quarters between 1990 and 2015;
- To provide access for all who need reproductive health service by 2015; and,
- To implement national strategies for sustainable development by 2005; so as to reverse the loss of environmental resources by 2015.

The rest of the paper is organized as follows. In the next section, salient future of the physical infrastructure resource endowments of Africa are briefly presented with a view to appreciating the fact that Africa is not lacking in resources. Rather, the problem is with the harnessing of these resources for the purposes of enhancing the well-being of the people's of Africa. This is followed by an articulation of broad alternative development paradigms and their associated infrastructure development strategies. In section IV, the infrastructure development strategy under NEPAD is identified along with the likely consequences. The paper is concluded with proposals on the imperatives for success.

II Features Of Major African Physical Infrastructure Resource Endowments

It has been mentioned that attention will be focused on physical infrastructure encompassing energy, telecommunications, water supply, transport (road, rail, ocean, air and pipeline). Beginning with energy, Africa has the following endowments.

- 10.5 billion metric tones of crude oil reserves, which is about 8 percent of world crude oil reserves;
- 10.2 trillion cubic meters of natural gas reserves, which is 7.2 percent of world reserves;
- 432, 000 metric tones of uranium deposit, which is about 28 percent of world uranium deposits;
- 62 billion tons of coal reserves, which is about 6 percent of world reserves;
- 1,600 gigawatts of exploitable hydro resources, which is about 33 percent of world hydro resources; and
- a plethora of renewable energy resources from bio-energy and solar energy resources.

A key feature of these resource endowments is the fact that they are unevenly distributed and prevalence of wars and conflicts in the region as well as the lack of sustained political support for sub-regional and regional planning in the energy sector are among the major factors constraining the harnessing of these resources for African development.

With respect to water resources, the endowments are as follows:

- 4000 cubic meters of renewable water resources, which is over

10 percent of world endowments;

- over 40 million hectare of irrigation potentials;
- over 60 shared international water basins; and
- a variety of temporal and special climatic zones.

Owing to poor water infrastructure development, the region could not effectively harness these resources.

Telecommunication potential is difficult to establish but it is clear that Africa is the least served by information technology and Internet services.
As at 2000, there were about 2.48 main lines per 100 persons in Africa compared to 55 in Japan. In 2001, the number of mobile telephones in Africa was 5o percent more than the number of fixed lines, but this is still not enough the huge demand.

In Africa, the most widely used mode of transport is road and there are varying degrees of road development. A general problem is that the kilometer of roads is generally low and the high proportion of the is not usable due to poor maintenance. In very low density of about 2.7 kilometer/1000 square kilometer compared to 400 kilometer/1000 square km in Europe. Another problem of African railway system is that of heterogeneous gauges. The main problem of maritime transport are poor state of infrastructure due to lack of maintenance and inadequate cargo handling and storage facilities at terminals as well as lack of intermodal connection. Finally, African airlines are providing less than 2 percent of the world's scheduled airline traffic and less than 15 percent traffic to and from Africa.

From the foregoing, it is clear that the potential for infrastructure development in Africa is simply huge. What is required, therefore, is for African leaders to resolve to the vigorous and effective harnessing of the resources for the benefit of African development.

III Alternative Development Paradigms And Associated Infrastructure Development Strategy

Theoretically, there are three types of economic systems, namely:

- capitalist or market economic system;
- command or socialist economic system; and
- mixed economic system.

Basically, the capitalist or market economy is one where government direct participation in economic matter is limited to the provision of law and order and defense .In such an economy, government participation in infrastructure development is resisted or purely ideological grounds. This type of economic system is usually referred to as neo-liberal economic system where government direct participation in economic activities is not acceptable (Ajakaiye, 2003).

A command or socialist economy is one where government direct participation in economic activities is not only welcome but actively encouraged. In such an economic system, commitment to government direct participation in the infrastructure development is ideological.

In between these two extremes is the mixed economy where both public and private organization coexist and they operate in concert to achieve the shared vision of maximizing the welfare of the people. It is important to point out that empirically, there are no functioning examples of a capitalist or a socialist economy. What we have are different degrees of mixed economies.

Accordingly, there should be a mixed economy, which tolerate government direct participation in infrastructure development, while there could be another mixed economy that abhors it. There could also be a mixed economy that is more pragmatic when it comes to the role of government in direct participation in infrastructure development. Needless to say, the dominant paradigm can change in the same economy a different times, in which case, there will be a corresponding shift in the infrastructure development strategy in order to avoid inconsistencies. See NISER (2000) for further elaboration.

In a mixed economy where the dominant paradigm is the development and operation of a **socialist command economic system**, government direct participation in economic activities will be seen as a strategy for achieving more equitable relations among people (Ajakaiye, 1988). Accordingly, government direct participation in infrastructure development will be more permanent and there will be no question of rolling back government participation through privatization, for example. Indeed, the tendency will be for public sector participation to dwarf and if possible eliminate private participation, in such a system, there is not real opportunity for comparing outcomes in terms of costs, prices, outputs, employment and income. This tends to induce indolence and corruption, which is injurious to the system. It is reasonable to suppose that this attribute to a socialist economic system most have contributed significantly to the demise of the former Soviet Union.

In a mixed economy where the dominant paradigm is the development of a basically ***capitalist economic system,*** government direct participation in infrastructure development will be tolerated and at the earliest opportunity, the role of government should be minimized through privatization, for example, and limited to the provision and enforcement of the rules of the game, in essence, the ideal situation in a capitalist system is for the government to serve as regulators, while private organizations will develop, own, operate and manage infrastructure. The resulting outcomes in terms of costs, prices, outputs, employment and income are of secondary concern. The ideological disposition is that the market forces will produce a socially acceptable set of outcomes in respects of these variables at least eventually, i.e. in the long run, which may be longer than the life Span of several members of the society.

Finally, the dominant paradigm could be ***structuralist*** in nature, in which case, the challenge will be to constantly seek optimum combination of the participation of public and private organizations in infrastructure development for the purposes of maximizing welfare of the people effectively, efficiently and equitably. In such a system, assignment of roles between public and private organizations is more pragmatic rather than ideological. Also in such a system, the decision is opt for public organization, private organization or a combination of both will depend crucially on the likely impact on at least four key variables, viz:

- Cost of production (the lower the better as it promotes efficiency);
- Price of output (the lower the better as it promotes affordability and equality);
- Output (the larger the better as it promotes efficiency and effectiveness); and
- Employment and Income (the larger the better the promotes effectiveness, equity and dignity of all stake holders in the production process).

IV. Infrastructure Development Strategy Under NEPAD

Against this background, the shift infrastructure development strategy in Africa under NEPAD can be identified. Towards this end, the objectives and action plan in infrastructure development in NEPAD should be incisive. Accordingly, in the rest of this section, these aspects of the NEPAD document are examined (NEPAD, 2001).

The aim of NEPAD with respect to infrastructure development is to ensure that Africa catches up with the developed countries in the area of infrastructural facilities so as to be in a position to focus on production and improving productivity and international competition. Therefore, the basis objective of infrastructure development in NEPAD is to bridge the infrastructure gap. This is imperative because of the consequences of lagging infrastructure development for the achievement of the other development goals of NEPAD summarize above. Specifically, lagging infrastructure results in low competitiveness, weak market development and market integration, slow economic growth and, consequently, increased poverty and inequality.

The following are the objective of NEPAD with respect to infrastructure development:

- To improve access to and affordability and reliability of infrastructure services for both firms and households;
- To enhance regional co-operation and trade through expanded cross border and development of infrastructure;
- To increase financial investments in infrastructure by lowering risks facing private investors, especially in the area of policy and regulatory frameworks; and
- To build adequate knowledge and skills in technology and engineering with a view to installing, operating and maintaining hard infrastructure networks in Africa;

To achieve these objectives, the following action plans have been articulated:

- Installation of policy and legislative frameworks to encourage competition;
- Introduction of new regulatory frameworks and capacity building for regulators so as to promote policy and regulatory harmonization in order to facilitate cross border interaction and market enlargement;
- Increasing investment in infrastructure, especially refurbishment and improvement of system maintenance practices that will sustain infrastructure;
- Promotion of community and user involvement in infrastructure construction, maintenance and management, especially in poor urban and rural areas; working with African Development Bank and other development finance institutions on the continent to mobilize sustainable financing especially through multilateral processes, institutions and donor;
- Governments with a view to securing grant and concessional

finance to mitigate medium term risks; and

- Promotion of public-private partnerships as a promising vehicle for attracting private investors and focus public funding on pressing needs of the poor by building capacity to implement and monitor such agreements.

On the basis of objectives, it can be deduced that the disarable outcomes of infrastructural development under NEPAD are basically to improve access to affordability and reliability of infrastructure services.

Obviously, in order to achieve these, the outcomes variables of costs, prices, output, employment and income should move in a particular direction. Specifically, costs and prices should not only be stable but they should eventually decline in order to improve access and affordability the quantity and quality of output of all infrastructure services should be high in order to assure access and reliability. Large output of these services will also generate direct employment. If, eventually, infrastructure development is also characterized by backward integration, the multiplier effect of the ancillary industries will be more robust. In the process, but wage and profit earners will earn decent returns to their efforts and investment. In the final analysis, all major stakeholders will be quite satisfied.

Turning to the action plans, it seems clear that the basic strategy of NEPAD is to rely on donors and private sector for direct production, while government will limit its roles to regulatory functions. This activity set is clearly consistent with the neo-liberal posture of NEPAD with its commitment to the development of African economy where the private sector will be the engine of growth. See Adedeji (2002) and Ekpo (2002) for a critical review of the NEPAD economic development paradigm. It is Significant to point out that giving the level of development of most African countries, there may be no option than to rely on foreign investment inflow supplemented by donor funding. However, the challenge is to ensure that in the process, the realization of desirable outcome variables discussed earlier is not compromised.

Already, several donor organizations are ready to provide support. For instance, the Public Private Infrastructure Advisory Facility (PPIAF) has already be set up jointly by the government of Japan and United Kingdom working closely with World Bank. The main aim of PPIAF is which was set up in July 1999 is to help developing countries improve the quality of their infrastructure through private sector involvement. The PPIAF assistance can facilitate private involvement in financing, ownership, operation, rehabilitation, maintenance or management of eligible infrastructure. Eligible infrastructures are basically physical infrastructure. PPIAF makes extensive use of consultant under the World Bank procurement processes. Obviously, the PPIAF is an initiative that unlikely to create direct employment opportunities for Africans. It may create enabling environment for efficient and possibly reliable infrastructure services but it is not clear that such services would be affordable, especially by the households, majority of whom are poor.

Another initiative that is in direct response to the needs of NEPAD is the Sustainable African Public Private Partnership for Infrastructure Development (SAPID). There are so many initiative under SAPID. One that is particularly interesting is the establishment of an African Energy Fund sponsor by ESKOM, South Africa's National Electricity Utility. ESKOM will be the main sponsor of the fund with supplementary support from various international development finance agencies including South Africa's Industrial Development Corporation and the Development Bank of Southern Africa.

A third initiative is the Emerging Africa Infrastructure Fund, which was initiated by DFID. The fund will be managed by European Banks and it is essentially a long- term loan granting organization, albeit, on competitive terms, to significant Africans infrastructure companies. It is envisage that the fund will grow from the initial level of $350million to around $450million

V. Imperatives For Success

What is clear from the excessive dependence on donors is virtually all of these assistance come with strings that will ensure that the benefits of the assistance accrue more to the donors. The insistence by the donors for certain policy reforms is another issue that may castrate the process. Specifically, care should be taken to ensure that the outcome variable mentioned earlier are not compromise. Therefore, the regulatory framework should aim at ensuring the realization of the desired levels of the outcome variables on a sustainable basis. It follows that African governments individually and collectively should take a close hard look at the various assistance offered and accept those are compatible with stable and eventually falling costs and prices, high and rising quantity and quality of service as well as the generation remunerative jobs and decent profits.

In order to further internalize large and increase proportion of the wage and profit income, Africa government individually and collectively should encourage the employment of Africans in remunerative senior positions, while ownership should be diluted in favour of African investors. Towards this end, human resource development that will produce competent Africans to man the facilities, especially in technical and managerial areas and also shrewd and astute African investors should be given great emphasis. The tendency to create numerous unremunerative jobs for Africans should be avoided while the tendency to have token African investors as partners should be resisted. The reliance on PPIAF is a good idea but it should be organized in such a way as to benefit Africans.

Finally, African governments individual and collectively should encourage investment in ancillary activities to sustain these infrastructure facilities in the long term. It is in this connection that the logic of operating a mix economy under the structuralist paradigm should be more helpful. Specifically, where private Africans are not ready or able, government should feel obligated to partner with a private foreign investor. However, there should be monitorable and enforceable exit condition should not be left to government alone. Rather, it should be a jointly responsibility of all stakeholders, especially the host community based organizations, in a transparent manner.

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