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The effects of poor infrastructure on poverty reduction in post conflict Liberia

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Abstract

This essay argues that poor infrastructure inhibits economic growth, hinders access to basic social services, and undermines government efforts to reduce poverty in post-conflict Liberia. It indicates that before the Liberian Civil War (1989-2003), the country experienced economic growth, but that growth did not come with equivalent economic development. Although some Liberian residents had increased access to basic services, those services were only concentrated in urban centers. Therefore, the essay posits that Liberia needs to restore key infrastructural projects in the transport, electricity, and water systems. This could engender sustainable economic growth that would provide the needed resources for economic development. Improved infrastructure might increase access to social services and ultimately reduce poverty. To achieve this, the Liberian government needs to either use one or a combination of three options to address its infrastructural deficit. First, it could utilize the unbalanced growth concept by investing its limited resources in the infrastructural sector as a driver to spur economic growth and economic development; engage in a joint government, private sector, and donor partnership to address the infrastructure challenge and restore basic social services through a 'big push' option or borrow interest free or low interest rate loans under the China Africa Partnership loan facility, and from the TICAD arrangement to fund some of the country's infrastructural projects. To better coordinate this process and ensure implementation success, the government needs to constitute an inter-ministerial or inter-agency coordinating task force that will adopt the appropriate methodology, and coordinate stake holders in addressing the country's protracted infrastructure dearth.

Introduction

This case study is on the Republic of Liberia, Africa's first and oldest independent republic, located on the west coast of Africa. The country maintained an aristocratic republican democracy for 133 unbroken years (Sawyer, 1991), but later slipped into a devastating 14-years civil war, which ended in August 2003 (Accra Comprehensive Peace Agreement, 200). The war killed about 250,000 people of the country's four million population, and damaged key infrastructure as well as basic social services including homes, electricity, education, health and water facilities, bridges, roads, air and seaports, and telecommunication (UN in Liberia, 2013). Peace and security have been restored to Liberia, following a transitional government instituted by the Comprehensive Peace Accord, and the holding of free, fair, and transparent elections in 2005 (CPA, 2003). The first post war elections brought Madam Ellen Johnson Sirleaf, first African female head of state and government, to power (UNSG Report, 2006). After serving 12 years, President Sirleaf turned over to Mr. George M. Weah who won the 2017 Presidential elections and is now serving as the Head of State and Government of Liberia.

Although, with the support of the international community and bilateral partners, the government endeavours to restore Liberia to its pre-war status, efforts to reconstruct the country, create access to basic services, and reduce poverty are challenged by the huge infrastructure deficit caused by the civil war (UN in

Liberia, 2013). Liberia's current poverty rate is 74.6 per cent in rural areas, 47.7 per cent in urban sectors, and 61.5 per cent average at the national level (LISGIS 2008). The estimated cost of reviving the country's damaged transport, water and energy infrastructure is about 2.5b USD, at a time the country's current national budget is 557m (MOF 2014).

This case study argues that Liberian government's strive to reduce poverty is stagnated by poor infrastructure, which creates limited access to basic social services, and impedes economic growth and development. It is assumed that if the country's damaged infrastructure-transport, electricity and water systems-is restored, it will increase access to basic services like water, health, and education, spur economic growth and might ultimately reduce poverty. The Problem-Oriented Method (Monash University Library nd.) is used to identify and analyse existing infrastructural problems and suggests plausible solutions to resolve them. This case study is limited to the impact of poor transportation, and the lack of electricity and pipe born water on poverty reduction in Liberia. It concludes that the government needs to either use one or a combination of three options: the unbalanced growth and big push concepts or borrow low interest rate loans to address its infrastructural deficit.

Problem definition

Moteff et al. (2004) define infrastructure as 'basic facilities, services, and installations needed for the functioning of a society' (p. 1). Without the basic infrastructure, a given society will not function properly. All developed countries have basic infrastructure in place. Most developing countries that have made significant gains in growth and development have also invested in basic infrastructure as a fulcrum for growth and development. Prior to the civil war, Liberia experienced economic growth. Majority of the population had access to good transport system, electricity, pipe born water, and quality health and education systems. These facilities and services were destroyed by the war. Therefore, Liberia is amongst the 104 states categorized under the Multidimensional Poverty Index (MPI), where about 1.56b people live in multidimensional poverty (HDR 2013). It is part of the states with the highest percentages of MPI, ranking 84 per cent behind Ethiopia with 87 per cent, and leading Mozambique and Sierra Leone with 79 per cent, and 77 per cent respectively (HDI 2013). Despite this alarming poverty picture, the HDI (2013) labels Liberia as one of fourteen countries that have recorded human development gains of more than two per cent annually since 2000. Most of the low HDI states fall in Africa, where many are emerging from long periods of civil conflicts. Despite this steady progress towards recovery, poverty is widespread, and majority of the citizens lack access to basic services in these countries.

Poor infrastructure as a challenge to poverty reduction

Poor transport system

Good transport system is the lynchpin in all developed countries. Developing countries need to therefore improve their transport systems to increase access to basic services, and spur economic growth and development, thereby reducing poverty (Moteff et al. 2004). However, Liberia's transport system is poor. Major roads linking rural parts of the country are in a deplorable state. About 51.3 per cent of rural inhabitants are gravely affected by the lack of roads (MPW 2013). According to the Liberia Prioritized Infrastructure Development Programme (2012), about USD 1.2b is required to connect Liberia's 15 counties capitals (p. 14). The poor transport system hinders access to basic services like schools and health.

For instance, health indicators show that mortality rate in rural areas is 84 per every 1000 births compared to urban areas where mortality stands at 68 per every 1000 births. Also, maternal mortality is estimated at 994 per 100,000, and under age five mortality is 110 per 1000 births (LDHS 2007; UN One Programme 2013). Most of these maternal and under five mortality rates occur in the rural communities where health facilities

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and personnel are scarce due to limited access.

Like the health sector, access to quality education is hampered by poor transport system. For example, the Liberia Education Sector Plan (2009) calls for compulsory nine-year basic education, comprising six years of government funded free primary, and three years of junior secondary education completion. Despite this laudable education initiative, majority of rural residents and the urban poor cannot send their children to school due to limited public schools, and the lack of adequately trained teachers in the few existing facilities (UNICEF Liberia 2013). Most Liberian schools are operated by religious institutions or private individuals whose objective is to maximize profit. The current net enrolment in primary school stands at 34 per cent, and grade six completion rate in the entire country is 35 per cent (UN in Liberia 2013). This implies that about 65 per cent of the children in the country are out of school. Amongst these are children who enrol, but dropout due to lack of uniforms, fees, tuition, and other basic education materials.

Besides road transport, sea transport is also affected by the war. The Liberian port industry is administered and operated by the National Port Authority (NPA) in keeping with its statutory responsibilities to plan, manage and develop public seaports in Liberia. The Authority manages four ports, namely, the Freeport of Monrovia, the Port of Buchanan, the Port of Greenville, and the Port of Harper (NPA Master Plan 2014). All these ports were destroyed during the civil conflict. The Freeport of Monrovia is the largest and most important of Liberia's four ports. It currently services more than 65 per cent of international trade, followed by the Port of Buchanan, which presently handles 30 per cent of trade (NPA Annual Report 2013). The ports' infrastructure is being rehabilitated, but this requires significant capital investment. A total of USD 99m is required to rehabilitate all four ports (NPA 2013). Limited operation of these seaports undermines sea transport and international trade.

Poor transport system does not only impeded access to health and education services. It also undermines economic recovery, growth, and development in post conflict Liberia by placing constraints on the movement of goods and services (Ministry of Commerce and Industry 2014). The rural residents in the country live mostly on subsistence farming, and some produce cash crops for trade and commerce. Farmers, 75 per cent of the total population, produce goods for consumption and trade their surplus to get necessities unavailable locally (Ministry of Agriculture 2013). Due to the absence of farm to market roads, these rural farmers cannot easily transport goods and services from villages and towns to markets. Most of the goods therefore get spoilt due to the lack of preservation facilities. This hinders increased productivity. The urban poor, for their part, live in slum communities where they are entrapped in hunger, poverty and disease as cheaper food products cannot be found on the local markets. Presently, Liberians living below one USD a day are about 63 per cent, and the population living in extreme poverty stands at 47.9 per cent (LISGIS 2007). Rice, Liberia's staple food, is mainly imported from Asia, and costs USD 50 for 50kg on the local market. Majority of the poor therefore cannot afford to feed themselves and families.

Lack of safe drinking water

The limited access to safe drinking water is the second problem faced by residents in Liberia (LWSC 2014). Access to piped water fell from 15 per cent of the population in 1986 to less than three per cent in 2008 (LISGIS 2008). Project Liberia (2013) indicates that one in four Liberians has access to safe drinking water. Despite the low record of water and sanitation deliverables under Liberia's reconstruction process, there are some positive outcomes showing improvement. The Ministry of Health and Social Welfare (MOHSW 2011, p. 6-7 citied in IMF 2012 Liberia Country Report) indicates that the share of households with access to clean water increased from 67 to 75 per cent between 2007 and 2009. However, wide disparities exist between urban and rural households. Clean and safe drinking water is mostly obtained from hand pumps and bold holds. Access to sanitary toilet facilities rose from 39 per cent to 50 per cent nationwide, with improvement in rural as well as urban areas (CWIQ 2010, p.120-1 cited in IMF 2012 Country Report). Despite these improvements, the WHO Country Office in Liberia (2013) reports that half of all Liberians lack access to toilet facilities; hence they either defecate up streams and in open areas. It further informs that outbreak of water borne diseases, like cholera, occur regularly, and that as many as one in five deaths in Liberia are blamed on water and sanitation problems.

Lack of Electricity

The lack of electricity is the third challenge that undermines government's effort to reduce poverty (GOL 2013). Liberia has limited energy output. For example, the pre-war 170-megawatt power generation capacity and national grid were destroyed during the civil war; hence a little over 0.1 per cent of households has access to public electricity (LISGIS 2008). This power generation capacity is obtained from diesel generators that produce a little more than two megawatts per million people. It costs USD 0.77 to generate one per kilowatt hour electricity (LEC 2012). This cost is exceptionally high (AICD Diagnostic Report 2010). Power tariff of 0.63 per kilowatt hour is about three times the average for Africa, which is very high by global standards (MLME 2013). Rehabilitation of the country's singular dam, the Mount Coffee Hydro Plant, is estimated at USD 207m (MOF 2012). However, due to the lack of resources, government has been unable to refurbish the dam since the cessation of the civil conflict. Notwithstanding, the European Central Bank (ECB), Germany and Norway have provided grants of USD 65m, 32m and 75m respectively in 2013. The government has committed USD 45m to compliment the grants, and carry out the reconstruction of the dam, which is expected to be completed by December 2015 (MOF 2014).

The lack of electricity affects the operation of concessionaires and the overall national productive capacity of Liberia. The country has attracted over 16 billion USD in foreign direct investment (Liberia NIC 2014). The FDI is intended to restore Liberia's economy to its pre-war status and set the stage for economic growth and development. The investment attempts to also increase employment directly and indirectly. The anticipated employment will boost households' income and foster other economic opportunities through private sector development. Unfortunately, due to the lack of electricity, majority of the concessionaires have not begun full scale operations to yield the needed resources and employment envisaged in the concession agreements. Concessions that are currently operational in the country face enormous transaction costs due to lack of electricity. Delayed operation retard anticipated employment of some part of the labour force (see annex 1 for expected employment), and the resulting unemployment, mainly amongst the country's growing young population, increases socio-political tensions (UNSRSG Report 2013). These tensions have become a key security concern because demonstrations, riots and political agitation amongst young people could undermine the fragile peace and relapse the country into another round of civil conflict (President Sirleaf State of Nation Address 2014).

The way forward

Even though the challenges discussed above persist, the government is committed to rebuilding the country, grow its economy and ultimately reduce poverty. It has implemented poverty reduction strategy (PRS) one and two between 2006 and 2012 (IMF Country Report 2013) and aspires to make Liberia a middle-income country by 2030 (Liberia Rising Vision 2030 2013). This vision was set to be achieved in the 1980s, when the country was one of the highest income countries in Africa. In the 1960s, Liberia was on par with Japan's GDP, though the country grew without development (Clower 1966). The country is presently one of 35 low-income countries (LICs) in the world, and one of 26 Sub-Saharan African poor countries (World Bank Report 2010). One key factor challenging this ambitious aspiration of becoming a middle-income country is the huge infrastructure deficit. Hence, the government needs to use either the unbalanced growth concept, the big push philosophy (Hirschman 1958, Kirschna et al. 2005, & Rosenstein-Roden 1943) or low interest loan option to invest in infrastructural development. This might salvage the poor infrastructural challenge, restore basic services, and eventually reduce poverty.

a. The unbalanced growth concept

Due to the lack of resources in the less developed countries, there is need for the government of Liberia to use the unbalanced growth theory, whereby it could create imbalances in the system as the best strategy for growth (Hirschman 1958). This means that the little available funding should be used efficiently in strategic sectors (transport, electricity, and water) that might lead to a rippling effect in the economy. Investment should be made in these projects because they have the greatest total number of linkages to induce growth and industrialisation, and lead to poverty reduction (Krishna et al 2005). Although the strategic investment of resources in infrastructure seems the best model, substantive investment in this sector is difficult to achieve due to the lack of financial resources. For instance, Liberia's real GDP is USD 1233; its GDP per capital is USD 328, and the present growth rate is 8.5 per cent (MOF 2014). Despite this impressive growth rate, the country has consecutively experienced budget deficits in three years. Therefore, reliance on this option as the singular approach to addressing the infrastructural deficit might not yield the desired results.

b. The big push concept

Giving the lack of adequate national resources to mitigate Liberia's infrastructural deficit, the government should consider the 'big push' option (Rosenstein-Roden's 1957). The idea behind the big push theory is that a country cannot do anything until it can do everything. Outlined by Paul Rosenstein-Rodan (1957), this theory argues that even the simplest activity requires a network of other activities and that individual firms cannot organise such a large network, so the state or some other giant agency must step in. With this background, it might be impossible for the government alone, given its current financial status, to restore the country's damaged infrastructure. Also, private investors will not maximize the desired profits amidst the infrastructure challenge, yet they do not want to risk their capital in public infrastructural. That infrastructure and social services are considered public goods (Gans et al. 2013), private consider investment in such public facilities a government's responsibility. However, as some ground speed is required for the aircraft to airborne, certain critical number of resources need to be allocated for development activities in Liberia. Therefore, the government, private investor and donors' need to invest in the restoration of transportation, water, and energy resources. Concessions could invest some of part of their expected royalties to government in the infrastructural sector. Because no piecemeal allocation in an economy can move on the path of economic development, investment in social overhead capitol is necessary for economic development. With economic growth and development, government can allocate more resources to basic social services, and reduce poverty (Haynes 2008).

c. Low interest loans

Borrowing of loans is the third option available to the government to mitigate its infrastructural shortfall. Loans could be taken from the World Bank and IMF, and friendly governments to undertake the needed infrastructural projects in the transport, water, and electricity sectors. However, the WB and IMF may not be disposed to giving loans to Liberia because they and other partners waived USD 4b debt in 2010 (IMF 2010) and placed a moratorium on the country's borrowing. However, other bilateral partners could lend Liberia interest free loan that might enable the government to develop its national infrastructure, which is very critical to the overall economic growth and the improvement of the people's lives. One of such avenues for interest free or low interest loans is the China-Africa loan facility (FOCAC 2012).

In 2006, China's grant assistance, interest free and preferential loans to Africa increased astronomically. In addition, since 2009, China has remained Africa's largest trading partner. In 2013, trade between China and Africa reached USD 210b, unmatched by previous times (Xinhua Global Times 2014). China has expanded cooperation in investment and financing by providing USD 20b of credit line to African countries (FOCAC 2012). Specifically, the China Union has invested USD 2.6b in the Iron Ore mining sector in Liberia (NIC

2012). Liberia supports the 'One China Policy'. The government should therefore take advantage of the cordial bilateral relationship and get Chinese low interest rate loan to fund part of its infrastructural projects.

Additionally, the Liberian government could utilize the Tokyo International Conference on Africa Development (TICAD) process to fund part of its infrastructural projects. The TICAD underscores South-South cooperation and promotes the development of trade and investment between Asia and Africa (TICAD V Report 2013). It recognizes that infrastructure development, including road networks, energy, and access to safe drinking water, is critical to economic integration, trade and investment promotion, and poverty reduction in Africa. Therefore, the Medium to Long Term Strategic Framework (MLTSF) of the TICAD process forms the basis for a coherent strategic approach to the development of infrastructure in Africa. Giving the strong bilateral relationship between Liberia and Japan, the government could also lobby for more funding to complement other funding modalities and address its infrastructural challenges.

Conclusion

This paper argues that poor infrastructure inhibits economic growth, hinders access to basic social services, and undermines government efforts to reduce poverty in post-conflict Liberia. It points out that prior to the 14 years civil war, Liberia experienced economic growth, and the residents had increased access to basic services. It is therefore plausible that if the country restores good infrastructure (transport, electricity, and water systems), it might experience economic growth and development as was in the pre-war status. This might increase access to social services and ultimately reduce poverty.

To achieve this, the Liberian government needs to either use one or a combination of three options to address its infrastructural deficit. First, it could utilize the unbalanced growth concept by investing its limited resources in the infrastructural sector as a driver to spur economic growth and development. Second, the government could engage in a joint government, private sector, and donor partnership to address the infrastructure challenge and restore basic social services through a 'big push' option. Last, it could borrow interest free or low interest rate loans under the China Africa Partnership loan facility, and from the TICAD arrangement to fund some of the country's infrastructural projects. Alternatively, the government could explore similar international cooperation partnerships with the European Union the US Government and other potential areas of support in the Middle East. To better coordinate this process and ensure implementation success, the government needs to constitute an inter-ministerial or inter-agency coordinating task force that will adopt the appropriate methodology, and coordinate stake holders in addressing the country's protracted infrastructure dearth.

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