Feature

Public–Private Participation to Rescue Railway Development in Nigeria

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Introduction

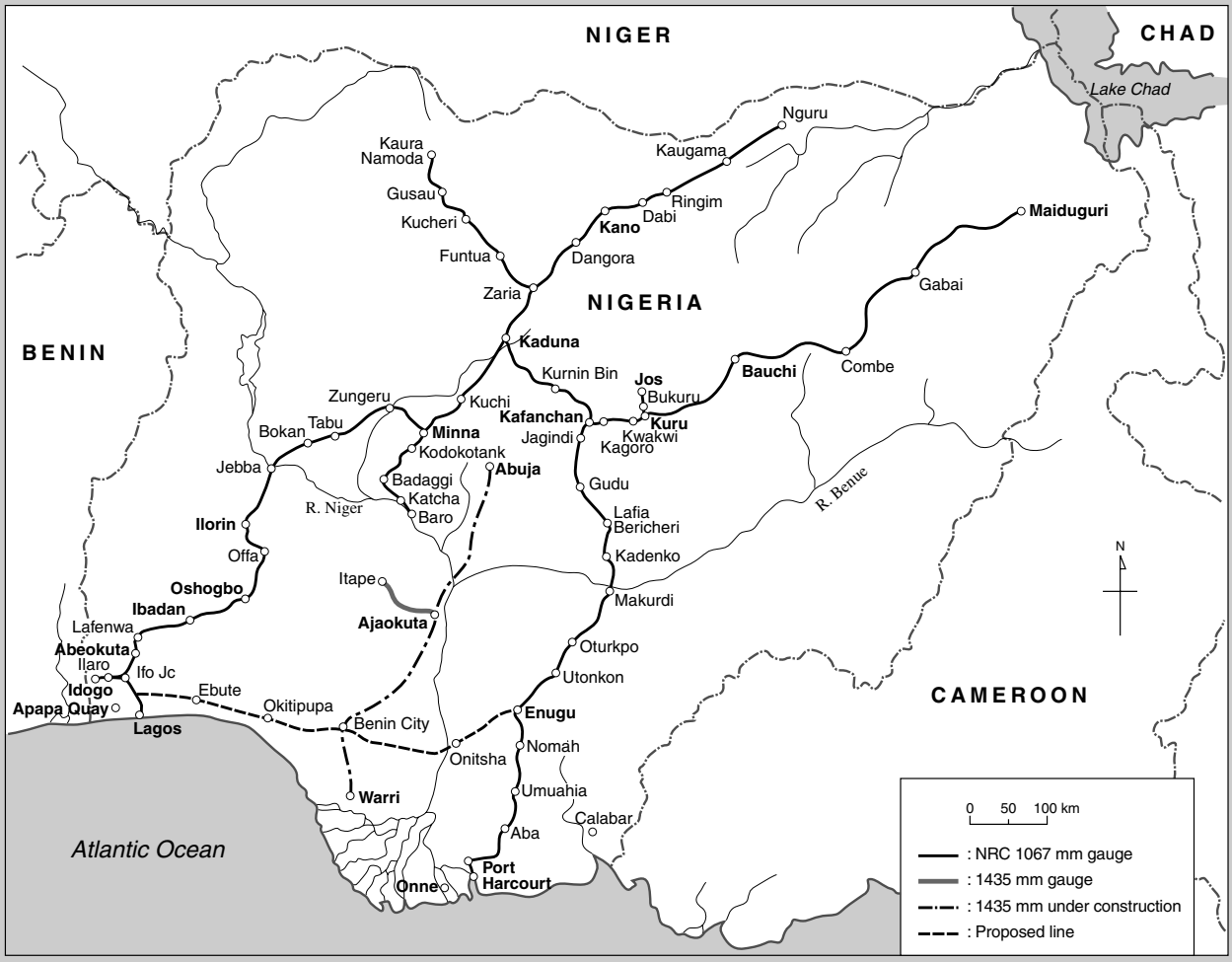
Railway transport in Nigeria is inefficient and has hardly developed at all over the past 100 years compared to railways in the developed world. This is due both to maladministration by successive governments and to the lack of a functional transport policy ensuring a constant pattern of railway development. The 100% ownership by the national government has contributed greatly to this neglect.

This article suggests public–private partnership as a remedy for the ailing railway system in Nigeria with a view to developing the nation's railway system to international standards for the next millennium.

Comparing Railway Developments

Railway administration in developed nations like Japan, France, and Canada, has become more rational with time. New strategies, such as public–private partnerships, and build–operate–transfer (BOT) arrangements, as well as old strategies such as privatization, are being adopted in an attempt to enhance railway safety, punctuality, and reliability. Furthermore, there is increasing interest worldwide in development of transport by expanding high-speed rail networks such as the shinkansen in Japan and the TGV in France. New non-rail technologies like the Japanese MAGLEV are being investigated. The priority for these changes has

Figure 1 Nigeria Railway Network



Source: NRC 1999

environmental undertones, and railways are increasingly being seen as environment-friendly.

In developed countries, transport policy is dynamic and changes responsively according to technological trends in the transport sector. Government policy in respect of rail transport innovation and development are fairly consistent and largely limited to policymaking and execution. Meanwhile, the railway infrastructure and provision of services are largely left in the hands of private enterprises. This approach has generally enhanced efficiency, punctuality, and reliability.

Novel management approaches such as BOT and design–build–operate–transfer (DBOT) have made it easier to fund railway rehabilitation from various sources (both local and international). Good examples are Bangkok's *Skytrain* elevated rail system, the Great Belt Fixed Link in Denmark and the joint Øresund Strait project between Denmark and Sweden.

By comparison, governments in developing countries like Nigeria are still grappling with the old concepts of government as the sole railway operator and owner supplying all rail infrastructure and services. This approach is in strong contradiction to the fact that all governments, especially those in developing countries, have rarely excelled in business ventures, due to an overburdening bureaucratic approach to most issues.

This background explains the poor state of railway transport in Nigeria. Despite a history of 100 years, government support has never been adequate and has led directly over the years to high levels of worn-out railway infrastructure and poor services. For example, the last kilometres of rail were laid in 1958–64 between Kuru and Maiduguri in north-east Nigeria, bringing the total track length to 3505 km. However, most of the network is old narrow-gauge single track running diagonally across the country—there is no east–west network, no operating standard gauge, and almost no double track in the existing system. Furthermore, the urban rail network across the urban sprawl, and newly emerged industrial and commercial zones as well as Abuja, the new Federal capital territory of Nigeria, are yet to be linked by rail.

Poor state of tracks before rehabilitation (Author)

Expansion of the rail network with new technology could usher in monorails, automated guided trains, light railways, etc. These systems would be more energy efficient and environment-friendly than the rickety mini-buses, cars, tricycles, motorcycles, etc., that pass for urban mass transit in most cities in Nigeria.

Clearly, development of rail transport in Nigeria into a more dependable, regular, safe and efficient system must be supported and given priority by the government through introduction of private initiatives. The very low average speed of just 20 km/h caused by worn-out infrastructure, high gradients, sharp curves and other track problems are one of the first candidates for improvement. Likewise, problems of poor management, underfunding, inconsistent policy, political interference and instability, and inflexible bureaucracy must become things of the past.

Nigeria Railway

Railway construction was started by the British colonial government in Nigeria in 1898 from Lagos in the Southern Protectorate. Railways were seen by the administration as a better way of consolidating power in the newly acquired territory. Also, railways were developed to gain access to the rich agricultural and mineral resources in the hinterland, explaining the diagonal orientation of the network running inland from the two major seaports of Lagos and Port Harcourt (Figure 1).

The Nigerian Railway Corporation (NRC) was established by an Act of Parliament in 1955 for the main purpose of carriage of passengers and freight in a cost-effective manner.

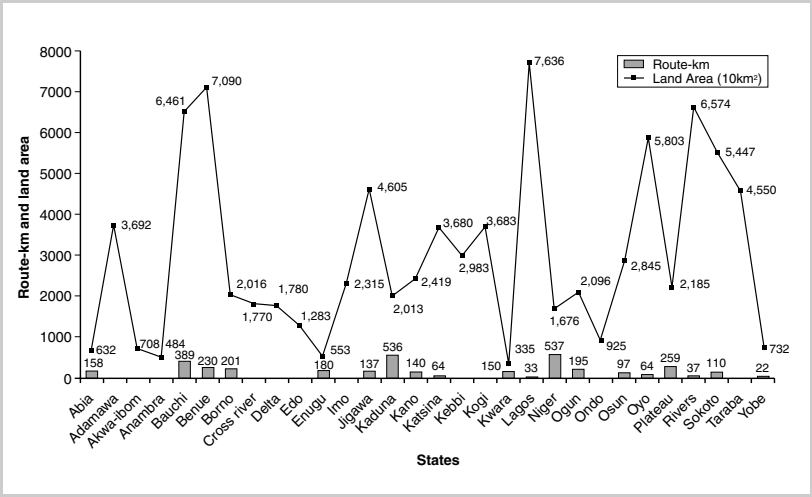
The development of railways in Nigeria in the early 20th century contributed to the growth of many towns that ultimately became large industrial commercial cities, such as Kaduna, Bauchi, Kano, Oshogbo, Ibadan, Lagos, Enugu, Kafanchan, and Port Harcourt (Table 1). The railway also helped develop the early potential of tourism.

Table 1 Development of Nigeria Railway Network

Construction	Location	Length (km)	Geographic axis
1898–1901	Lagos–Ibadan	193	South–West
1901–1909	Ibadan–Jebba	295	
1907–1911	Kano–Baro	562	North
1909–1915	Jebba–Minna	255	
1914–1916	Port Harcourt–Enugu	243	East and Central
1922–1927	Kafanchan–Jos	179	
1927–1958	None	0	
1958–1961	Kafanchan–Bauchi	238	North–East
1961–1964	Bauchi–Maiduguri	302	

1999 Field survey—not including branch lines

Figure 2 Route-km and Land Area of Nigerian States



Sources: *Railnews,* 1996 and *Annual Abstract of Statistics,* 1997 Edition (FOS)

Railway and Road Networks

Nigeria covers 923,768 km^2 but there are still only 3505 route-km of railways, of which 1788 km are sharp curves. They are all single-track 1067-mm gauge with either steel or timber sleepers. A short 75-km standard-gauge section is under construction between Ajaokuta and Warri and there are plans to extend this line to the new capital of Abuja. By comparison, in 1992, there were 32,180 km of all-weather federal roads not including state and rural roads.

Priority for Expansion of Railway Network

Concurrent with the progressive increase in the total length of all roads from about 72,000 km in 1962 to about 150,000 km in the mid 1980s, the number of airports increased from 2 in 1970 to 16 in 1990. By contrast, the length of railway network stayed constant at 3505 route-km over the last 100 years. For comparison, the Japanese railway network expanded progressively from 0 to about 27,000 km between 1872 and 1998.

These shocking statistics point out the urgent need to redesign, expand and renovate the Nigerian railway into an efficient nationwide network serving both industrial and agricultural zones and facilitating development of the cash-crop economy in the hinterlands as well. A similar far-sighted approach is needed for dealing with the traffic snarls and urban sprawl in the new industrial and commercial zones across Nigeria.

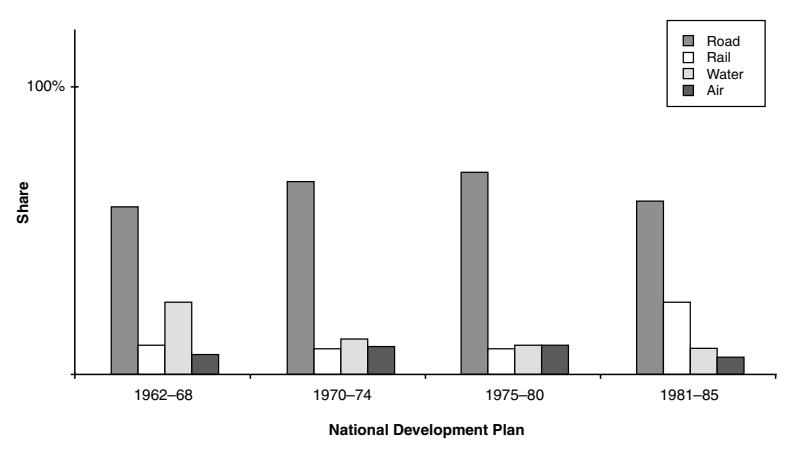
Figure 2 clearly shows the high disparity in rail coverage in each state and is another justification for private involvement in railway development.

Railways and Politics

At independence in 1960, Nigerians inherited a vibrant, buoyant, flourishing and efficient railway system from the colonial administration. Although the single-track narrow-gauge network ran diagonally across the country, it was well able to haul all the agricultural products grown in the far north to the seaports at Lagos and Port Harcourt. The contribution of groundnuts from northern Nigeria, palm oil from eastern Nigeria and cacao from western Nigeria to the flourishing Nigerian economy at the time are reminders of the good old railway era.

However, further development of the railways was abandoned in favour of road transport by successive governments. Roads were expanded without any consideration of the attendant effects such as road traffic accidents, pollution, congestion, parking, etc. Some highways were constructed parallel to railway lines,

Figure 3 Modal Share of National Transport Allocation



Source: Federal Ministry of Planning

resulting in competition rather than a complementary role between road and rail transport. The differences in allocation of funds for railway and road transport by the government are shown in Figure 3, and this trend still haunts railway development today. Similarly, at independence in 1960, NRC had 257 locomotives, 339 carriages and 3885 freight wagons to serve an estimated population of about 21 million people over 3505 route-km. However, by 1995, the rolling stock levels had dropped to 70 locomotives (with 50% daily availability from 1995–96), 150 carriages and 1500 freight wagons to serve an estimated population of about 88.5 million people.

Major Operations Problems facing Railway Development

The problems are a multitude, but the most important ones are listed below:

- Technical problems such as tight curves, steep gradients, rail buckling with associated track/speed limits
- Poor communications
- Government interference with management structure
- Lack of freedom to set tariffs
- Underfunding
- Falling rolling stock levels
- Plummeting traffic levels (freight and passenger)
- Inflexible bureaucracy
- Volatile and militant labour union

Large numbers of wagons abandoned in unmaintained yard at Ebute Metta Junction, Lagos (Author)

Table 2 NRC Passenger and Freight Traffic, 1991–95

Year Ending 31 December	Number of passengers (1000)	Passenger-km (1000)	Average journey length (km)	Tonnes hauled (1000)	Net tonne-km (1000)	Average journey length (km)	Train-km passenger (1000)
1991	3,443	517,183	612	330	208,890	633	9,005
1992	2,872	433,966	616	615	119,912	633	3,746
1993	580	54,717	94	157	141,813	903	n.a
1994	1,438	2,198,817	1,529	142	1,283	903	n.a
1995	1,702	340,400	200	108	68,472	n.a	n.a

Source: Nigeria Railway Corporation

Editor's Note: Some figures in this table do not correspond with those in international statistics published by UIC or the World Bank. They are in accordance with the NRC source.

- Irregular staff training
- Worn-out infrastructure
- Lack of maintenance

Downward Trend in Railway Traffic in Nigeria

Table 2 shows the plummeting trend in passengers and freight on NRC resulting from operational problems. In 1983, NRC carried 15.11 million passengers, generating more than N29 million (80 naira = US$1), but the levels had nose-dived by 1993 to about 1.50 million passengers, generating less than N15 million. In 1993, NRC hauled only 106,000 tonnes of freight to earn N25. 84 million.

This disheartening downward trend, which reached an all-time low in 1993, was the result of government neglect—almost no government funds were released to the railways during this period. Operations were paralysed and NRC was forced to prune its workforce from 40,000 staff in 1984 to 23,800 in December 1992, but even this smaller number of staff was owed 9 months salary! The system was on the verge of total collapse, NRC properties depreciated greatly in value and some were vandalized beyond repair. This marked the beginning of the end of an effective railway network. Presently, NRC has a staff strength of about 14,000.

Local and International Development Initiatives

There had been some local and international development initiatives to revitalize the railway system. These included:

- A contractual agreement between Nigeria and Rail India Technical and Economic Services, 1978–82
- The 1989–92 'Ogbemudia Revolution' that turned around local rail transport
- The rehabilitation project with China Civil Engineering Construction Corporation, 1995–99

Rail India Technical and Economic Services (RITES) 1978–82

The contract mission was to:

- Rehabilitate the rail network using advice from Rail India engineers
- Recover and maintain obsolete and disabled rolling stock
- Give foreign experts authority over highest decision-making body of NRC

All these mission objectives were achieved and NRC was given a new lease of life. Staff were well paid and motivated, services became more regular, suitable and safer. However, the abrupt termination of this joint venture made the results short-lived.

Ogbemudia Revolution 1989–92

No sooner had the Indian experts left than railway traffic plummeted. Gross operation inefficiency set in, the railway infrastructure decayed rapidly and the finances were deplorable.

To bring normality back to the railway system, Dr Samuel Ogbemudia was appointed Sole Administrator of the NRC by the federal government. Although his tenure was short, it was eventful and remarkable. Ogbemudia was a visionary and highly influential in Nigerian society; he single-handedly turned around NRC between 1989–92 as follows:

- Divided NRC into nine departments each headed by director
- Checked union militancy by briefing staff regularly on all management decisions
- Motivated staff by paying salaries and all other entitlements promptly
- Reactivated workshops as bee-hives of activity
- Upgraded research unit to directorate level able to develop local DMUs, EMUs, carriages, wagons, concrete sleepers, rails, etc.
- Introduced mass transit trains
- Persuaded Nigerian president to show support for trains by taking presidential train ride (a very rare event)
- Organized Conference on Wheels, unique seminar on morning train between Lagos and Ilorin to publicize railway activities

Table 3 Increase in Freight Traffic

	Tonnes Hauled
1996	137,000
1997	566,000
1998	1,510,000

Source: *Railmart* 1999

• Increased NRC financial resources

For example, the total revenue generated in 1989 was N73.0 million compared to N52.81million in 1988. There was even an increase in government funding in 1989 with NRC receiving N224.504 million, compared to N131.645 million in 1988. However, the Ogbemudia Revolution was aborted prematurely by politics. As soon as Ogbemudia left the corporation, his future action programmes, including revitalization, modernization and development of railway facilities and infrastructure, improved services, self-supporting railway with new marketing strategy, etc., were thrown overboard by successive administrations.

CCECC and NRC Rehabilitation Project 1995–99

The agreement signed by the government of Nigeria with the China Civil Engineering Construction Corporation (CCECC) removed the 9-year vacuum created by the exit of Ogbemudia. The $6-million contract was like a ray of light in a dark tunnel.

The Chinese experts were expected to rehabilitate the existing rail network, supply 50 locomotives, 150 coaches, 400 wagons and 20 rail buses, and provide technical training for the NRC staff. Communication equipment (microwave) is to be supplied by an Israeli company.

In an appraisal of this project, General Gumel, the Minister of Transport at the time, said that before the commencement of the programme, NRC had only 19 locomotives available on a daily basis, but it had increased to 41. He also said that this increase has enabled NRC to resume Jos–Port Harcourt, Abeokuta–Kano, Lagos–Idogo services, as well as Lagos mass transit and other suburban commuter services that had been abandoned for the past 15 years.

New locomotive supplied under CCECC agreement (Author)

However, the impact of this project on train speeds is yet to be noticed.

Need for Private Participation in Nigerian Railway Business

Because railways are very capital intensive, the Nigerian government should encourage competition by allowing private sector participation in ownership, funding and operations. This will help intensify the effort to modernize railway infrastructure and services as we start the next millennium.

It is much easier for private businesses than government to raise funds via the stock market, especially in developing economies. Permitting private corporations and individuals to fund railway operations will usher in modern technologies in specialized areas like information technology, rolling stock and locomotive manufacturing, rail network design, etc.

Moreover, it will encourage healthy competition between various companies, thereby offering the populace the best services along with options. Creation of an environment for developed countries such as Japan, the USA, and Canada, etc., to invest in railway development in Nigeria will enhance both railway development and the economic growth of Nigeria.

Railway Investment Opportunities in Nigeria

The government should encourage private participation in railway network development and expansion in the following areas:

- Opening access from Onne to Port Harcourt. Only two seaports (Apapa Quay and Port Harcourt) out of seven are linked to the railway network at present.
- Solving Abuja–Kaduna gridlock
- Linking Minna–Abuja–Lagos
- Serving emerging industrial/commercial zones in suburban areas and urban centres by rail

- Building air–rail links; none of the 20 airports are served by railways.

Creating Favourable Environment through National Transport Policy

The existing national transport policy was signed into law in 1993 but has since remained almost a secret document that is poorly circulated. This dysfunctional policy framework has gravely incapacitated development in the transport sector of the Nigerian economy. The *ad hoc* approach to addressing vital and urgent transport issues has not contributed to positive railway development.

In view of the foregoing, Nigeria needs a functional national transport policy to guide investment and involvement of public and private entrepreneurs.

Concept of Public–Private Participation

According to Mabogunje (1998) 'there are few available avenues in most African countries for raising sufficient revenue to fund urban infrastructure ... they are, however, restricted by their national governments to a narrow range of revenue'. This has been the true state of railway funding in Nigeria since 1898. Railways have been funded by only government. The government has never encouraged 'partnering' whereby multinational corporations could participate and invest in development of the rail transport system. The logic of Mabogunje's proposal for 'municipal bonds which allow people to invest their savings—particularly through institutional investors such as banks, pension funds and insurance companies to build public infrastructure'[1] becomes clear. In view of this, private transport companies with a strong financial base should be allowed to invest and participate in Nigeria's rail transport business, alongside NRC. They should be encouraged to invest in the railway through the stock market to increase efficiency, regularity, adequacy and reliability of railway services in Nigeria. However, this idea contravenes the 1955

Passengers milling around train at Ebute Metta Junction, Lagos with no waiting rooms or other facilities (Author)

Lagos Terminus at Iddo Settlement (Author)

Act incorporating NRC as the only body allowed to operate rail services in Nigeria, meaning that the 1955 Act will need to be revised.

Another African Example

The recent Abidjan (Ivory Coast)–Ouagadougou (Burkina Faso) Railway concession is a typical example of where public–private participation in railways has functioned perfectly in Africa. A World Bank report stated, 'In the first full year of operation (October 1, 1995 to September 30, 1996), freight traffic almost doubled in comparison to 1994–95, the last full year of operation by SICF and SCFB (428 million tonne-km vs. 230 million tonne-km). Quality of service to freight customers improved substantially….'[2]

Conclusion

One of the limiting factors on economic activity is a functional and cost effective transportation system. Injection of private funds into the Nigerian railway system will boost the Nigerian economy. Applied and sustained investment in a Nigerian railway network could pave the way for development of a sub-regional international railway corridor in West Africa early in the 21st century. ■

Notes

1. A.L. Mabogunje, 'Preparing African Cities for the Bond Market', *Urban Age*, p. 2023 (1998).
2. World Bank, 'The Abidjan–Ouagadougou Railway Concession', *Findings*, No. 140 (1999).

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