

**TRANSPORTATION AND ECONOMIC DEVELOPMENT IN NIGERIA:  
ISSUES AND PROSPECTS**

**By**

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**1.0 INTRODUCTION:**

Without transportation, economic and social systems would simply grind to a halt (Faulks, 1990).

The relationship between adequate and efficient transportation and the rate and level of economic development has been well established in the economic development literature. Infrastructure provides the environment for productive activities to take place and facilitates the generation of economic growth. In the absence of adequate transport facilities, production processes or locational advantages may not be optimized. The availability of an efficient transport network can stimulate new investment in other sectors. By efficiently moving goods and services to where they can be used most effectively, transport adds value and spurs growth. On the other hand, shortages or even over – expansion of transport facilities can raise costs and create disincentives to invest in some areas. Efficient transport development is a necessary condition in the equitable spread of national economic integration. The optimal provision of transport encourages investment in less industrialized areas, allows wider movement of goods and services, facilitates information flows and helps commercialize and diversify the economy.

At the macroeconomic level, the evidence shown that there is strong association between infrastructure spending and growth in real GDP, and that investment in transport facility has a very high return. One of the established linkages of this relationship is that as national income grows, the share of transport in GDP rises. However, beyond a certain level of GDP, the relative importance of transport declines. At higher income levels, it is power and telecommunications that tend to have higher shares in GDP than roads or water. But at lower income levels, water shows highest GDP share followed by transport.

It has been established that there exist causality between growth of GDP and transport facility provision. Growth of transport facility can result from demand of other sectors; industries need ports, road, and power supplies, for example. Conversely, the availability of improved facilities in these areas may stimulate industrial investment. The casual nature of the relationship can be highlighted through the conventional distinction between directly productive activity and social overhead capital. In the unbalanced growth hypothesis, the growth of infrastructure like transport ahead of productive activity, or the growth of productive activity ahead of

infrastructure, is essential to stimulate new investment. In the case of the latter, one major role of infrastructure is to provide inducements to additional investment in other sectors. Since the transport sector provides profit opportunities to other activities, these are externalities or benefits that accrue to others and generation of such external benefits is often seen as a key aspect of economic development.

In realization of this fact successive governments in Nigeria have invested heavily in the transport sector. In the first four development plans, the respective budgetary allocations for the transport sector were 19, 23, 22 and 15 per cent. In the decades of the 1990s, when the rolling plan concept succeeded development planning, about N11.3 billion was cumulatively set aside in the various rolling plans for the transport sector.

Despite the commitment of various regimes reflected in the level of financial outlay for the sector over the years, transport facilities are deteriorating and the quality of transport services is falling. Road conditions; bus fleets, rail services, air services, and river transport are all declining. This situation has hindered the flow of local products to domestic and international markets, increased final product prices, and thus reduced the competitiveness of Nigerian non-oil exports. In a similar manner, high transport costs also increased the cost of inputs such as fertilizer and pesticides. Lastly, public safety has also been put at risk, particularly in the case of road transport (World Bank, 1996). The issue that emerges from the above is clear; Nigeria may not make much progress on the economic front without adequate planning and development of the transport sector.

In the light of the above, this paper seeks to assess the transport sector in Nigeria and its relationship to economic development with a view to proffering workable solutions. Accordingly, the remaining part of the paper is arranged thus: part II examines the literature on the role of transport in economic development. In part III, the current state of transport infrastructure in the country is discussed. Part IV, assess the transport infrastructure in Nigeria, while part V dwells on impact of these on economic development, while part VI explores the options for transport development in Nigeria. The paper is summarized and concluded in part VII.

## 2.0 THEORETICAL REVIEW OF LITERATURE:

The relationship between transport and economic growth and development is well established in the literature. However the exact role and influence of transport to economic growth and development have been subjected to several reviews (Gauthier, 1970). Several studies including Baxter (1866), Lugard (1922), Rostow (1960), Hunter (1965) and Owen (1964) argued that transport exerted strong positive influence on economic development and that increased production could be directly related to improved transport. Baxter (1866) maintained that railways have been the most powerful agent in the progress of commerce in improving the conditions of working classes, and in developing the agricultural and mineral resources of the country. On his part Lugard (1922) opined that the material development of Africa might be summed up in the one word – transport. Rostow (1960) in his landmark thesis of stages of economic growth noted that the introduction of

railroads has historically been the most powerful single indicator of take-offs. He noted this to have played remarkable role in the United States, Germany, Canada and other industrialized countries. Good transport offers low shipping costs, which have permitted wider markets to be serviced and thus, the exploitation of large-scale production in an extensive range of products. In linking the role of transport and economic development, Hunter (1965) observed that low cost of transport was instrumental to the Industrial Revolution. In the same vein, Owen (1964) maintains that opening up of domestic market as a result of improved transport services is a necessary, though not sufficient, condition for economic development. Furthermore, most developing countries, including Nigeria, for varied geographical, economic and historic reasons dependent on international trade and an expansion of this trade is an essential precondition for growth. Thus, the provision of efficient port facilities would positively impact on economic development.

Economic development is, thus seen as a complex process with transport permitting the exploitation of the natural resources and talents of a country. Transport can release working capital from one area which can be used more productively as forced capital elsewhere, however, a necessary prior condition is the existence of suitable productive opportunities in potential markets. In their summation on this issue, Ahmed et al (1976) observed that in many developing countries the inadequacy of transport facilities is one of the major bottlenecks to socio-economic development and a national integration. Often the lack of transport makes it difficult to introduce other social infrastructure such as education and medical services. The dissemination of the modern techniques and inputs of agricultural production and the linking of agriculture to other sectors of the economy through the market is hampered by the absence or inadequate transport facilities. As a result of these and other factors, the productivity of agriculture in most developing countries is dismal.

The towering role of transport in economic development outlined above, notwithstanding, some economists in recent times have opined that at any given point in economic development of any country, a certain level of transport provision is required to maximized growth potential. Thus, they emphasized on the optimum transport capacity for any development level. They maintained that sometimes economic forces tend to lead to an excess of transport provision (especially high cost infrastructure) at the detriment of more efficient and productive projects. Thus in a developing country like Nigeria, the emphasis should essentially be on how to ascertain the optimal level of transport facilities needed to harness the growth potentials. Wilson (1966) identified the lumpiness of transport capital coupled with its longevity as well as associated externalities as the main cause of the problems of estimating the cost benefit mix of transport provision. Moreover, resources allocations to transport are not easily reversible or readily corrected. The political acceptability of transport is underscored by Hirschman (1958) when he noted that the sector attracts resources quite simply because it is difficult for mistakes to be proved even after major projects have been completed.

Broadly, transport may be seen to have four functions in assisting economic development. First, it is an obvious factor input into the production process permitting goods and people to be transferred between and within

production and consumption centers (Fromm, 1965). Because most of this movement is between rural and urban areas it permits the extension of the money economy into the agricultural sector. Second, transport improvements can shift production possibilities frontiers by altering factor cost and, especially, it reduces the level of inventory tied up in the production process. Third, factor mobility is increased permitting factors of production, especially labour, to be transported to places where they may be employed most productively. Finally, transport increases the welfare of individuals, by extending the range of social facilities to them, and also provides superior public goods given as greater social cohesion and increased national defence.

At the macroeconomic level, economists have attained some level of consensus on the general influence that appropriate transport planning can have in assisting overall economic development. While it may be desirable to expand transport provision to evenly distribute the gains of development elsewhere in the economy, the constraints is always there. The balance growth approach maintains that if transport services are inadequate, then bottlenecks in the economy will hinder the growth process, but if the services are excessive this is both wasteful, in the sense that idle resources could be earning a positive return elsewhere in the economy, and can become demoralizing if the anticipated demand for transport does not grow at the rate of its expansion.

The actual type of transport provision most suited to developing economies is usually as important as the aggregate level of provision. Most developing countries however tend to spend scarce development funds on prestige projects, such as international air-transport, to show their capacity to track the performance of more industrialized countries. Consequently, efficiency is usually sacrificed for flamboyancy. Furthermore, the way funds are spent on internal transport provision especially the concentration of limited capital resources in either the road or rail transportation.

The appropriateness of different modes often depends on the geographic – demographic nature of the country. Form (1965) categorized the developing countries into: densely populated tropical lands; Tropical land with low population density; Mountainous, temperate lands with a low overall density of population but a concentration on a coastal plain or anticline; or thinly populated desert areas with population concentrated along irrigated channels. The appropriateness of different transport modes changes according to the type of country under consideration, thinly populated, tropic land having different transport problems than area of high density.

Railways were important in the development of the nineteenth century economies. Then the colonial economic development paradigm favoured the development of rail transport. However, in the late 20<sup>th</sup> and early 21<sup>st</sup> centuries the emphasis shifted to the provision of adequate road infrastructure. This is particularly enticing in areas where skeletal road already exist such that resources can be deployed to improve and extend an established road network. This approach is very useful if it links isolated agricultural communities with each other as well as with a more advanced area of the economy.

The effect of road transport development has been found not to be purely on immediate output but also to stimulate a propensity for further development. Wilson (1966) in arguing for road development in the developing countries opined that investment options might usefully be analyzed in terms not only of their direct economic pay – off but also in terms of their influence on attitude, and that, the educational and other spill-over effects of road transport appear to be greater than those of other modes of transport. This he maintained is significant especially at low levels of development.

The above notwithstanding, it should be noted that there is a danger if integrated planning is not pursued so that while improved road facilities may stimulate the agricultural economy, the new links between rural and industrial – urban areas could lead to increased polarization in the spatial economy with an enhanced geographical, as well as regional dualism emerging.

On the external front, improved port and shipping facilities permit the developing countries to export their products to wider markets, while at the same time making products from foreign markets cheaper at home countries.

### **3.0 CURRENT STATE OF TRANSPORT INFRASTRUCTURE IN NIGERIA: NATIONAL POLICY ON TRANSPORTATION:**

The National Council on Transport ratified the National Transport Policy (NTP) for Nigeria in July, 1991. The general objectives of the transport policy are: adequacy, economic and financial efficiency, safety, reliability, and national self-reliance. There are very few measurable policy goals and deadlines despite the detailed analysis and recommendations contained in the document. Accordingly the NTP had not impacted heavily on the Government's actions. However, more concrete expenditure objectives and priorities are found in the annual rolling plans. These are summarized below.

The main emphasis of the 1994-96 national rolling plan is on the maintenance and rehabilitation of the existing infrastructure to consolidate the sector's huge investments. Priority is to be given to ongoing projects that have reached advanced stages of completion. Attention will be paid to the use of planning techniques and economic rationale in the selection and implementation of transport projects. The rolling plan also notes that the present rate of cost recovery needs to be improved. Some of the key elements of the rolling plan policies and objectives are summarized below:

In the area of road transport, emphasis is to be paid to maintenance and rehabilitation of existing roads. New roads are to be built only if they help in decongesting existing traffic. (Despite this, 66 new roads were included in the Plan.) Cost-benefit analysis is to be performed before new roads are built. Lastly, the Government is to

consider establishing a Highway Authority which will be responsible for harmonizing highways planning, construction, and maintenance in the country.

- For urban mass transit, the government would focus on the procurement of ferries, the construction of bus terminals, and research studies.
- With regard to the NRC, a rehabilitation programme is to be pursued. The Bureau of Public Enterprises (BPE) is to provide funds for rolling stock, track maintenance, spare parts and facilities. A proposal for privatization and restructuring is to be reviewed.
- There is to be increased funding for water transportation infrastructure facilities. Private sector participation in shipping is to be encouraged but the government will also consider continued support for the beleaguered NNSL. Nigerdock is to acquire a shipyard. The Inland Waterways Department is to acquire river-dredging equipment.
- No new airports are to be started during 1994 – 96. Existing airports are to be provided the needed equipment to maintain international standards. Nigerian Airways Ltd. is to be reorganized.

### **HIGHWAYS AND ROADS:**

Nigeria currently has a road network of about 195,000 kilometre made up of 32,000 kilometre of Federal Roads; 31,000 kilometre of state roads and 132,000 kilometres of local Government roads. There is a total of 20 kilometre bridges nationwide.

Of the 195,000km roads, only 36,900km is paved consisting of 26,500 km federal, and 12,000km states road. Rural roads currently Span 72,800 km mainly from community efforts while village access roads Span 35, 900 km. Although the conditions of these roads are very poor, they are useful in the opening up of the rural areas dominated by agriculture. Road construction is basically dominated mostly in the hands of foreign companies while all responsibilities for road financing and maintenance are in the hands of government at Federal, State and Local Government levels.

### **RAILWAYS**

The Nigerian rail system is 3,505 km long and consist of 3 feet 6 inches narrow gauge single threat lines running from South – East to North – West. There is no East – West link, or connections to major economic infrastructure locations. The Federal Capital City and 14 States of the Federation are not linked to the railway network.

## **AIRPORT AND AVIATION**

There are 20 airports in the country today equipped with somewhat modern navigational instruments. In addition airstrips and aerodromes are spread widely all over the country. Of the 20 airports, 7 have international status, while 13 are mainly for domestic operations. The active airports in the country are: Lagos, Abuja, Kano, Port Harcourt and Enugu. However, none of these airports have facilities for aircraft maintenance.

### **4.0 TRANSPORT INFRASTRUCTURE IN NIGERIA: AN ASSESSMENT**

#### **ROAD TRANSPORT**

The current condition of road in Nigeria is deplorable. This is attributed to poor response to road repairs, rehabilitation and deferred services. This has put a lot of strain on the distribution and delivery of agricultural inputs such as seedlings, pesticides, fertilizer, farm equipment and access to other social infrastructure (school, primary health care, etc) (Adesanya, 1998). The current poor condition of roads results in annual loss of value due to lack of maintenance of N80 billion, and vehicle operating costs of N53 billion, and a total estimated loss to the country is 5.5% of the GPP (world Bank, 1999).

#### **RAIL TRANSPORT**

The poor track structure and steep gradients, in places, along the track system limit the maximum speed to about 65 km/h. Several sections of the rail have not been replaced for a very long time. The major problems that the rail is facing include among others; depleted rolling stock, obsolete and thoroughly vandalised communication lines and signaling systems, and the existence of plural masters. Despite the rehabilitation work on some of the major tracks by the China Engineering construction corporation that was commissioned in 1995. There are still enormous problems for instance; the Eastern and the Western part of the country are not linked by rail till date.

#### **AIR TRANSPORT**

The problems affecting this sector include non-viability of about half of the existing 20 airports; many of them remain under-utilized thereby creating cash flow problems for airport management and maintenance. In addition, most airports have extremely poor and/or obsolete safety, navigational and communication equipment. There is also preponderant of security problem at many airports, and inadequate Search and Rescue (SAR) operations facilities.

#### **WATER TRANSPORTATION**

The most critical problems affecting this mode of transport include insufficiency and frequent breakdown of government owned ferryboats, poor physical conditions of passenger boats and canoes, inadequate safety precautions (such as non-availability of safety jackets or leaflets to guide passengers on what to do in case of accidents) and, poorly equipped terminals as well as inadequate landing facilities. Many providers of ferry services are reeling under the high cost of repairing and procuring vessels and associated spare part. Other

problems include occasional clogging of waterways by water hyacinth and the occurrence of rapids and falls along several potentially navigable inland waterways.

## **MARITIME TRANSPORT**

This sub-sector suffered a severe setback, especially in the 1980s, largely because of the ailing economy of Nigeria and the global recession. Between 1993 and 1995, the number of ships entering the Nigerian ports fell from 2,776 to 1,846 respectively (Central Bank, 1995) while the number of imported vehicles handled at the ro-ro ports in Lagos declined from 229,439 units in 1993 to 87,100 units in 1995.

With respect of sea borne trade, the carrying capacity of indigenous ship owners has drastically reduced in recent years, thereby making it almost impossible for Nigeria to benefit, under the prevailing condition, from UNCTAD's code of conduct for Liner Conferences (i.e. the cargo sharing formula of 40:40:20). The eventual liquidation of the Nigerian National Shipping Line (NNSL) in 1995 has created a devastating effect on sea borne trade, and compounded the capability of domestic shipping lines or national carriers to participate effectively in the movement of cargoes. Gross mismanagement of funds and operations of the NNSL resulted in a situation wherein virtually all the 20 vessels - including 19 multipurpose Combo vessels in virtually 'new' condition in (1986) were run aground, seized or sold. The National Unity Line (NUL) has replaced the NNSL.

Despite recent reforms, the procedure for clearing cargoes still remains cumbersome, while incentives are still lacking in some ports due to large-scale breakdown of cargo handling equipment (Adesanya, 1999).

### **5.0 IMPACT OF TRANSPORT COST ON ECONOMIC DEVELOPMENT IN NIGERIA:**

The importance of transport and export-servicing facilities such as ports and airports, lies in providing faster, safer and more reliable movement of goods in order to make it possible for more trade to take place and specialization to occur. Furthermore, increases in specialization and efficiency gains realized through economies of scale can be constrained by the size of the market. In this regard, transport plays the leading role in enlarging the market. Thus, transport facilitates large-scale trade, thereby stimulating increased specialization and improved productivity.

On the external front, transport costs of moving goods from the production point to the foreign market reduce the profitability of export, where world prices are given for the export good. On the other hand, transport cost tends to reduce the price competitiveness of the exporter, where they are passed on to the buyers in the foreign market. The latter case is more applicable to Nigeria since basically, the country is a price-taker in the international market.



Transport costs, along with import tariffs on imported inputs used in export production impose significant costs on exporters, which are not paid by domestic producers of import – competing goods. This anti-export bias can remain even after trade reform has taken place.

The anti-export bias emanating from transportation costs is evident in many African countries, including Nigeria, where transport costs are essentially higher than those in other competing regions constituting a large proportion of import (cif) or export (fob) prices. This is mainly due to the slow and high cost nature of the transport network. High transport costs in moving Goods between countries means that there are significant natural barriers to trade within the region, thus there can be significant differences between regions in prices for similar goods, even after the tariffs on intra-regional trade have been lowered.

The average effective protection against African exports in the US market resulting from transport costs is around 25 percent. The problem is particularly acute for processed primary goods with freight rates that escalate with the degree of processing (ADB, 1999). This high freight element is attributed to lack of competition in cargo reservation in polices of most African countries including Nigeria, where it has been common to introduce a 40-40-20 division of trade between national fleets. This means that 40 percent of cargo is reserved for carriers of the exporter country, 40 percent for those of the importer and only 20 percent is subject to open competition. There has been suggestion that the freight costs of most African trade may fall as much as 50 percent if all such trade is subject to open competition (ADB, 1999).

The impact of high transport costs on competitiveness of non-oil export in Nigeria is considerably more significant than the costs imposed by the system of import tariffs. On the whole, the aggregate effective protection on exports due to import duties alone is – 17.5 percent (that is value-added in exporting is 17.5 percent less than it would be if there were no tariffs). By contrast, effective protection due to transport costs alone is 43 percent (value added in exporting is 43 percent less than it would be if there were no transport costs). Thus, transport costs rather than tariffs, are the main deduction from value added.

One measure of the relative attractiveness of the domestic vis-à-vis the export market is to compare effective protection in the two markets. For Nigeria, it was found that the gap between positive incentives for exporting clearly widens once transport costs are introduced. Positive incentives for domestic sales widen from 46 percent before allowing for transport costs to 76 percent after allowing for it (Egbon, 1995). Thus, transport costs tend to exacerbate the anti-export bias already present in the tariff system. This result clearly demonstrates the impact that inefficiency in transport costs can have on production incentives and export.

#### **OPTIONS FOR TRANSPORT DEVELOPMENT IN NIGERIA:**

To provide a reliable and efficient transport service in Nigeria, the government will need to incorporate the private sector in the provision of these services through the policy thrust of privatization and private sector

participation. In this direction government policy on user charges may need to be increased, however, the rate of increase should take cognizance of the global developments. The specific options are discussed below:

Due to the uncertainty of cost recovery, the government should provide guarantee for cost recovery with respect to socially motivated road projects. The key determinant is user willingness to pay. Where the cost recovery toll is high, a toll-road operator could charge a lower toll with the government providing a per-vehicle subsidy on a declining basis based on expected increases in usage over time. On the other hand, a low user willingness to pay is likely to result in the government bearing a greater proportion of the risk in the form of subsidies representing the social benefit costs. In the case of the latter, care should be taken to ensure that the incentives for performance by the private operator are not lowered. The project must be evaluated in terms of its opportunity cost vis-a-vis the social benefits of other programmes requiring government funding. Besides private participation in investment, road maintenance, road and culvert construction, and other road works such as cleaning also provide opportunities for private participation on a competitive basis.

Contracting out road maintenance should be adopted so that certain companies will be held responsible for road destruction. The current practice of waiting for the roads to be completely impassible before it is rehabilitated should be discontinued. Retainancy policy should be adopted. In the railways sector, restructuring through unbundling and divestment of non-core services, concessions, and divestiture as reform modalities should be adopted. The concession agreement will allow the company to set competitive cost-recovering tariffs for both freight and passenger services. The exception is some passenger services on a few lines, which the government should continue to subsidize so as to maintain tariffs at current levels. Other forms of private participation included the unbundling of service functions, locomotive repairs and maintenance, which can be contracted out to the private sector.

The scope for competition in the toll-road infrastructure sector is one of competition for the market, which can be effected by bidding for construction of toll roads on a BOT basis. Competition for the operation and management of the existing road networks is also possible. Beyond competition for the infrastructure (toll-roads), competition in the transportation market is both inter-modal and intra-modal. Inter-modal competition depends largely on the development of alternatives and will impact the economics of toll roads and road transportation. Private participation in seaports and airport infrastructure is an emerging process even in the industrialized countries. However, where new facilities are being constructed as in Hong Kong's new airport, BOT is one of the approaches being pursued to involve the private sector. There is need to incorporate all ports as separate entities as a first step to attract private participation. In addition to creating a new port authority, the functions of dredging, handling, and others, should be privatized as separate functions on the basis of specific concession agreements.

The scope for competition in the sea port and airport sector is mainly one of competition for the market. The unbundling of services allows for private providers to compete for the supply of handling services or for operating specialist port facilities such as dredging, piloting, towage, and other similar services. On the other hand, storage, stevedoring, and container handling should be opened up to competition. The maintenance of facilities should also be contracted out as a separate service.

#### 7.0 CONCLUDING REMARKS:

A rapid deterioration in transport infrastructure in Nigeria highlighted in this paper is bound to continue except the government adopt a more pragmatic strategy to the funding of transport infrastructure. In the face of dwindling government revenue, the option of incorporating the private sector in the provision and management of these infrastructure becomes paramount. Given the link between transport and economic development, it is clear that Nigeria may not make economic progress in the years ahead if these facilities are not provided optimally.

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