# ESSENTIALS/FUNDAMENTALS OF THE TRANSPORTATION PLANNING PROCESS AND – Socioeconomic Implications of Each of These Fundamentals in Relation to National Development.

## INTRODUCTION

Planning for effective development in the various sectors of Nigeria is an enormous task. Especially in the aspect of transportation which forms a vital part of living. Transportation systems in Nigeria over the years and since independence has continued on a relatively slow pace and experienced a lot of problems. Inadequacies in this sector has grossly affected urban centers across the nation and as such greatly influenced the country’s economic and social growth. It is imperative to note that transportation is a key element and major driver of development – economically and socially among other benefits. This view held by transportation engineers, scholars and professionals is clearly illustrated in the growth of developed countries. The economic status of advanced countries such as the United States of America, Germany and other African countries such South Africa is being examined to show the impact of effective transportation planning to economic and social development.



## STRUCTURE AND FORM OF TRANSPORTATION INFRASTRUCTURE IN NIGERIAN CITIES

The major road transport infrastructure in Nigeria consists of 32,000 km of Federal highways including seven major bridges across the Niger and Benue Rivers, the Lagos ring road, the third mainland axial bridge; 30,500 km of state roads; and 130,000 km of local roads (Buhari, 2000). As at June 1996, only 50% of the Federal roads and 20% of the State roads were in reasonably good condition and an estimated 5% of local rural roads freely motor able. The rehabilitation programme carried out by the Petroleum Trust Fund (PTF) in the years 1996 to 1999 covered selected portions of the Federal roads totaling about 12,000 km, along with township roads in about 18 selected cities. Even this programme however has now lost its steam. Meanwhile overuse and lack of maintenance are further eroding the quality of the rest of the Federal highway network.

Faulty designs, lack of drainage and very thin coatings that are easily washed away, excessive use of the road network, given the underdeveloped nature of waterways and railways which could serve as alternative means of transport, absence of an articulated road programme, and inadequate funding for road maintenance are reasons for the poor state of Nigerian roads. The effects of the inadequate maintenance and renewal of equipment and facilities is visible in all subsectors: inadequate condition of the roads and the need for their subsequent reconstruction; inadequate replacement and maintenance of vehicles, contributing to high social costs of atmospheric pollution, resulting in high operating costs. In turn, such excessive operating costs, by decreasing net operating revenues, make timely replacement of vehicles difficult. Railways on the other hand, suffered lack of necessary resources to keep track, rolling stock and maintenance facility in reasonable conditions has led to a very serious deterioration of the railway system. Similar problems affect inland waterways affecting their ability to perform useful functions.

## STRATEGIES FOR ADDRESSING URBAN TRANSPORT SYSTEMS IN NIGERIA

Transport systems world over – in developed or developing countries face a variety of problems which many studies have failed to take cognizance of. Some studies are rather particular instead of holistic and as such neglect of wider range of problems in relationship with other suffice. But urban transport problems are not best solved in a piecemeal fashion. Intimate and inseparable interrelationships exist between transport and geographic locations. Thus, any realistic solution to urban transport problems must take into consideration the interdependence between the form of a city and its transport system. Innovative solutions must be implored to effectively handle matters involving transportation.

In order to reduce urban transportation problems in Nigerian cities, effective traffic management measures and other remedial measures to improve traffic circulation in the cities must be adopted. This can be achieved through an understanding of the structure of the cities, their route forms and transport needs. The following specific measures are also suggested where necessary:

* Adequate drainage facilities should be provided in areas lacking. Inadequacy in this aspect results in occasional flooding of roads during the rainy season thus affecting traffic flow and reduces road life span pot-holes develop on the roads.
* Off-street parking facilities should be provided in designated areas of our cities. When off-street parking facilities are lacking, results are on street parking in-turn reducing the width of roads leading to obstruction of traffic flow. Off-street parking is necessary especially along those roads with a high concentration of activities.
* Provision of traffic lights at major road junctions in the cities because of large volumes of traffic especially at peak periods. Other road junctions should be provided with “STOP” signs at appropriate arms of the junctions.
* To reduce pedestrian-vehicular conflicts in the cities. This could be achieved by creating barriers, overhead footbridges or under passes. Zebra crossings should be provided on major roads in our cities.
* Provision of enabling factors to Road Maintenance Agencies to carry out their duties. Roads that need rehabilitation should receive government attention.
* There has not been any comprehensive transportation study for many urban centres in Nigeria. Thus the volumes of traffic along many of the urban routes in our cities are not known. A time-series data on the various components of urban traffic is of great importance to city planners interested in future transport planning. Traffic flows along major roads in our cities need to be monitored regularly so that the design capacities of those roads are not exceeded.

## TRANSPORTATION AND ECONOMIC OPPORTUNITIES

Since the inception of the industrial revolution notable transportation developments have been linked to growing economic opportunities. Transport modes have been developed or adapted at each stage of human societal development. The first trade routes established a basic system of distribution and transactions that would eventually be expanded by long distance maritime shipping networks and the setting of the first multinational corporations thus showing that economic growth comes as a result of the composition of a variety of transport systems working in sync. Major flows of international migration that occurred since the 18th century were linked with the expansion of international and continental transport systems that radically shaped emerging economies such as in North America and Australia.

Transport has played a catalytic role in these migrations, transforming the economic and social geography of many nations. Concomitantly, transportation has been a tool of territorial control and exploitation, particularly during the colonial era where resource-based transport systems supported the extraction of commodities in the developing world and forwarded them to the industrializing nations of the time. More recently, port development, particularly container ports, has been of strategic interest as a tool of integration to the global economy as illustrated in the case of China. While some regions benefit from the development of transport systems, marginalization sets in for others through a set of conditions in which inadequate transportation plays a role.

It is pertinent to note that transportation in itself is not development but, the lack of transport infrastructures is a constraint on development. As is the case in developing countries, lack of transportation infrastructures and regulatory impediments jointly affect economic development by conferring higher transport costs, among other issues. A poor transport service level can also negatively affect the competition between regions and corporations and thus have a negative impact on the regional added value and employment. Investment in transport infrastructures is therefore a tool of regional development, particularly in developing countries and for the road sector. The standard assumption is that transportation investments tend to be more wealth producing as opposed to wealth consuming investments such as services. Still, several transportation investments can be wealth consuming if they merely provide convenience, such as parking and sidewalks, or service a market size well below any possible economic return, with for instance projects labelled "bridges to nowhere". In such a context, transport investment projects can be counterproductive by draining the resources of an economy instead creating wealth and additional opportunities.

Efficient and sustainable transport markets and systems play a key role in regional development although the direction of causality between transport and wealth generation is not always clear. In a number of regions around the world, transport markets and related transport infrastructure networks are seen as key drivers in the promotion of a more balanced and sustainable development of the region or even the entire continent, particularly by improving accessibility and the situation of weaker regions and disadvantaged social groups. There is also a tendency for transport investments to have declining marginal returns. While initial infrastructure investments tend to have a high return since they provide an entirely new range of mobility options, the more the system is developed the more likely additional investment would result in lower returns. At some point, the marginal returns can be close to zero or even negative, implying a shift of transport investments from wealth producing to wealth consuming. A common fallacy is assuming that additional transport investments will have a similar multiplying effect than the initial investments had, which can lead to capital misallocation. This means quite understandably that the economic impacts of transport investments tend to be significant when infrastructures were previously inexistent or deficient and marginal when an extensive network is already present. Therefore, each development project must be considered independently.

## TRANSPORTATION AND SOCIAL DEVELOPMENT

Access to essential products of society such as health care, education and employment are related to personal mobility and access to adequate transportation. Communities lacking mobility options are seen as less developed. This makes it even more difficult for them to access support and opportunities and makes it more difficult for governments to achieve the Millennium Development Goals, particularly reducing global poverty, combating epidemic diseases, reducing child mortality rates and introducing universal primary education. Access to goods and services depends not only on the physical availability of infrastructure (such as tracks, roads, and bridges) but also on access to vehicles and transport services, both public and private. Factors affecting access include location, cost, and frequency of services, journey time and physical accessibility.

Transport provisions and social development is often seen as working in harmony based on its relationship when formulating transport policies, planning, procurement, monitoring and evaluation. Social development in the transport sector focuses generally on:

* Improving access to transport for everyone,
* Mitigating the negative impacts of transport on society and communities (such as involuntary resettlement, pollution etc.) while maximizing the opportunities that transport can present i.e. access to jobs, markets, education, etc.
* Using transport to promote and achieve social inclusion and cohesion,
* Reducing the social and health risks and dangers associated with transport,
* Sharing the social, economic and cultural benefits of transport more equally,
* Improving the design of transport systems and equipment so that they meet the needs of all, including users with specific needs (such as women, children, poor people, handicapped people, etc.)
* Ensuring public participation and representation in transport planning and decision-making.

## CONCLUSION

In summary, transportation as a means to an end and not an end in itself enables people and businesses to access services and a whole lot of other interests while creating a more sustainable economy and healthy environment. Advances in transportation technology have had a very substantial impact on long distance and less regular travel. With the advents of the railways, intercity buses, air services and private cars, travel at long distance is now common, not only for extended vacations but even for a single day of weekend trips As mobility increases, the ability to Travel long distances has enabled people to travel to other sections of the country and even to other countries which have different cultures, dominant industries and patterns of living undoubtedly causing a very considerable effect in the level of understanding of different groups and the mutual respect of one socio-economic group for another. This has also helped to bring nations with multiple cultural heritages together. The increase in speed of transportation and the reduction in the costs of transportation have resulted in a much wider variety of special patterns for human activities. The world has been reduced into a global village as a result of development in transportation technology.

Economic activities on the other hand are primarily concerned with the production, distribution and consumption of goods and services, which are of value to human. People must use the natural resources of the earth to satisfy the necessity of life, to provide food, clothing and shelter to the teeming population of the country not only for these basic necessities but also to use the resources to make life more pleasant, comfortable and rewarding. These resources are not usually found all in one place and no location is well endowed with all the resources. Thus, there is the universal need to transport some of these natural resources from places where they are abundantly available to areas where they are needed but not available. Most communities now consume food items produced in distance places because the cost of transportation is low. Such communities may exchange these distant products with the ones they produce locally. As a result of reduced cost of transportation, there have been some substantial shifts in the location or points of extraction of raw material. For example, the location of Kaduna Refinery in Nigeria, far away from the oil producing areas is economically attractive because of the cheapness of transportation.