

# **MAINTENANCE CULTURE AND SUSTAINABLE ECONOMIC DEVELOPMENT IN NIGERIA: ISSUES, PROBLEMS AND PROSPECTS**

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## **Abstract**

*The paper exposed the extent of non maintenance culture in Nigeria which has rendered many useful investments such as road network, buildings, plants, industries and other infrastructures useless to the extent of inability to support production capable of enhancing sustainable development. It was obvious that inadequate fund provision, lack of efficient maintenance department and poor quality manpower required to embark on repairs have contributed to the decay of assets, social overheads and infrastructure. Besides, the attitudes of the government that embarks on public goods provision but does not care so much for the quality of investment projects and ensuring living up to their life span gradually lead to deplorable infrastructure. The situation has resulted to the decline of developmental intention. On the basis of the obvious non maintenance culture, the authors articulated ways changes could be made, which includes, among others that in the award of contracts, there is the need to opt for quality and durable*

*assets and/or infrastructure and yearly maintenance cost covering the life span of assets/infrastructure be included; an Independent Maintenance Enforcement Commission (IMEC) should be established to oversee the role of maintenance departments of government infrastructure and private established assets.*

*Keywords: Culture, Development, Economics, Issues, Maintenance and Sustainability*

## **INTRODUCTION**

Nigeria as a developing country is seriously confronted with insufficient resources for establishment of capital overheads or infrastructure which are essential for harnessing the available raw materials for production. But the desire to reshape, improve and develop the economy has been paramount in the various programmes, strategies and policies of the country. Since after independence, a large chunk of the country's resources have been channeled to transportation infrastructure construction, industries, government administrative buildings for ministries and parastatals, schools, colleges and universities. Besides, assorted types of vehicles, tractors and trucks are acquired for essential services. All are geared toward repositioning the underdeveloped economy. However, one remarkable action needed to ensure sustainability of these varieties of infrastructure has not been given the right and sufficient attention.

Maintenance culture which encompasses provision for adequate care of the hard earned infrastructure have not gained ground in the consciousness of resource managers in the country over the years, and consequently, you see government buildings at the verge of collapsing, abandoned factory plants and machinery, dilapidated school buildings, pot-holes and chasms on the constructed highway roads, deserted vehicles with minor problems, moribund industries and a host of other property belonging to the country which have little or insignificant problem. These actions in myriad ways have resulted to a colossal waste of scarce resources. It is really one of the major problems, hitherto ravaging and undermining the developing countries, especially Nigeria. Bamgboye (2006) posits that maintenance is the art of bringing back the operating condition of an asset into normal functioning at a minimal cost capable of enhancing the life span of the item. In other words, maintenance is the ability and skill of keeping infrastructures available for normal use and the designed life span of many infrastructures are at present very low in Nigeria. Life span enhancement necessitates a culture of adequate maintenance.

They are various perception of the term culture, but in this work culture is perceived as the key that influences behaviour of getting things done the right way without which there is a

hindrance of the attainment of goals. It is shaped by the interaction between individual and groups that share the value, perception and goal they have assimilated from previously generation which is continued in other generations. Really, culture in the context of a work establishment or organisation is put in place when social relationship among members influences their pattern of thinking, behaviour and belief (Wilkins, 1994; Brendan, 2006; Sani et al, 2011). This implies that maintenance culture brings to bare the adoption of the attitude of ensuring regular servicing, repairs and maintenance of working assets or established system so as to the guarantee their continuous usefulness.

In Nigeria, the organisation and implementation of maintenance strategy have not been given adequate attention and so very low results are realised in the use of assets, which led to the country being categorised as part of 'poor maintenance culture' for engineering infrastructure, among others. Dishearteningly, huge and very expensive projects are allowed to go into disuse in a short while due to lack of maintenance culture. Succinctly, the establishment of infrastructure in Nigeria is not easily attained, but the extent to which the existing ones are allowed to deteriorate owing to lack of maintenance culture is a thing of worry.

The situation in Nigeria can be attributed to poorly equipped maintenance department where it exist; insufficient funding for operation and maintenance; poor arrangement of institution; inappropriate technologies ; lack of spare parts; transfer of plants without enough manpower requirement on ground and insufficient monitoring and evaluation of operation of infrastructure.

Inadequate capital stock for industrialisation has contributed to low level of income in developing countries, thereby affecting capital formation. The protagonists of this view are Hans Singer and Regnar Nurkse. In his perception, Singer (1949) states that the less developed countries experience "a dominant vicious circle of low productivity" deficiency of surplus for industrial development presupposes inability to acquire the necessary tools and equipment for industrial development. From the view of Nurkse (1953), a developing country is "poor because it is poor". Inability to earn sufficient income gives rise to low saving, low investment, low productivity and then low income. Ironically, the hardly acquired capital assets/infrastructure are not given adequate care to enable it have a longer life span needed to support development efforts, and so in a short while, they deteriorate to the point of starting afresh to build. From economic perspective, acquired infrastructure, plants, machinery/automobile, constructed road network and other scarce resources should be properly managed, adequately cared for to ensure their continual support in production. In addition, in consideration of the fact that they are not easily acquired, especially in developing country, it presupposes that adequate effort is required to maintain them so as to enable them live up to their life span.

Disgustingly, most infrastructures in Nigeria are decayed and need repair, rehabilitation or replacement (Oyedele, 2012). All over the world, the activity of all economic agents depend on efficient and effective infrastructure. The two categories of infrastructure are the hard and soft infrastructure. The hard infrastructure are broadly physical networks essentially required for the functioning of modern industrial nation while soft infrastructure involves all the institutions which are relevant to enhance economic, health, cultural and social standard of a country, among which are the financial, the education, the health, the governance and judiciary systems, and including security( Kumar, 2005). This situation is arrived due to little or no maintenance at time they were minor problems. But the power to make, improve and destroy rest in the government. The situation of decay of environmental facilities for production needs urgent attention if the country must achieve a pass mark in the millennium development goal by 2015.

Each aspect of the infrastructure needs sufficient maintenance if it must achieve the goal for which it is established. Every facet of production; be it at the private or public sectors in Nigeria involves capital overheads, but over the years the attitude of leaders and public servants imply absence of the culture of maintenance. For instance, Nigeria has consistently experienced poor transportation infrastructure due to insufficiency and lack of maintenance, which have encouraged low production, low foreign investment, unemployment and poverty. Really, when a considerable chunk of the population are seriously constrained from working and earning income due to lack of capital overheads, and the available ones are in a deplorable state, it gives room for diversion of investment, thereby discouraging average resources capacity utilisation, under employment, and consequently poor living standard.

Nigeria had about 195,500km road network all over the country. Out of the whole, a proportion of about 32,000km are federal roads while 31,000km are state roads. A large proportion of these roads are so poor due to insufficient investment and lack of adequate maintenance (FRN, 2000). However, each of the tiers of government shared the responsibility of planning, construction and maintenance of roads in each respective domain. This bargain is aimed at even development of the entire country (Ighodaro, 2009; CBN, 2003). Unbelievably, lack of adequate maintenance has made these roads very poor, and as such has retarded the level of resources mobility over the years, which is associated with economic backwardness effects, in terms of inefficient mobility of inputs of production and low income generation.

Many Schools and tertiary institutions started with relevant equipment, vehicles and laboratory facilities, among others. Although there is high degree of paucity of required infrastructure in Nigerian universities, colleges and schools, but the few ones that are available, there is no provision for sufficient maintenance. Unfortunately, many were allowed to become useless due to minor faults and so gradually lived beyond their life span without getting

maximum benefit there-from. Government has always found it so difficult to provide schools' equipment and laboratory facilities. The few schools enjoying some, lack maintenance because of poor attitude to maintenance culture. This situation has resulted to gross insufficiency as no new ones are forth coming and the old ones are in disuse state.

In consideration of the foregoing, it is our intention to examine the role of maintenance culture in sustainable economic development of Nigeria. So, the paper is stream-lined thus: section two dwells on the maintenance culture and economic development; the cases and problems of non maintenance culture is the section three while section four focuses on way forward and conclusion.

## **THE MAINTENANCE CULTURE AND ECONOMIC DEVELOPMENT**

The life of a man, animals, plants and non living things needed for life sustenance require regular maintenance so as to sustain their usefulness and ensure their contributions to the transformation process for output production. Maintenance encapsulates positive efforts, actions and activities aimed at sustainability of the life of any infrastructure. Infrastructures are among the necessary and sufficient requirements for repositioning a less developed nation. Oyedele (2012) posits that infrastructure is generally a set of interconnected structural elements that gives rise to the framework supporting an entire structure of development which is a means of attaining set of objectives and considered so much in judging a nation's development status. Its provision and maintenance are very significant to propel economic growth and development.

Undoubtedly, the extent of productivity in a country is a function of functional and effective input of production which infrastructure occupies a large position. Production, distribution and even consumption involve assets. Conveyance of raw materials and human being within the country requires good road network, functional air transport, railway lines and water ways. In Nigeria, the established transportation infrastructure has not been given enough attention and maintenance to support the growing population. So, there is high degree of deplorable road network, abandoned railway lines and other infrastructure at the sea ports and air ports. This has in various ways retarded resources mobility, output production and income generation in Nigeria. The much focused in term of public expenditure which is road is in a very bad shape all over the country resulting to incessant road accidents, which have sent a large number of our bright and quality manpower to their graves, denying the country of quality manpower in the midst of scarcity.

The CBN (2003) notes that the annual loss due to bad roads in Nigeria is valued at N80 billion, while additional vehicle operating cost brought about by bad roads is valued at N53.8 billion, hence total loss per annum is N133.8 billion. This value does not include other losses

such as man-hour emanating from traffic congestion due to bad roads and emotional and psychological disequilibrium. This situation has impacted adversely on production costs and has raised cost of doing business which does give rise to cost-push inflation in Nigeria. The losses and situation in Nigeria could have been avoided if there have been a sufficient maintenance culture capable of taking needed repairs at the right time.

Besides, one major consideration by foreign investors in opting for investment in a country during feasibility study is the level of infrastructure. In Nigeria, there is a large market for varieties of goods and services, but infrastructure deficiency owing to lack of maintenance have restrained investment. For instance, power supply gadgets exist, pipe borne water plants are available but improper maintenance, sabotage, selfishness, corruption, among others have made them non functional and supposed provided services are non- available and where available, they function erratically. This has discouraged foreign investment needed to boost up the economy. Poor infrastructure has sent some foreign investors operating in Nigeria to relocate to other countries. In some cases, domestic investors would prefer investing in nearby countries due to high cost of doing business emanating from poor infrastructure. The adverse effect of this is reduced resources use in Nigeria which has helped to raise unemployment level.

A look at the connectedness between economic development and infrastructure necessitates proper maintenance. Sound infrastructure affects production and consumption in a country in the sense that it brings numerous direct and indirect positive effects. It is the source of wealth creation if sufficiently put in place and maintained. It is not a good option to adopt the habit of allowing scarce resource to waste base on ignorance of maintenance culture. The attitudes of Nigerians in this direction need be reformed, revived, re-changed and repackaged to ensure the realisation of sufficient benefits of infrastructural investment. This positive attitude on maintenance culture will curtail the delay in tackling problem of decay at the early stage, in the sense that 'a stitch in time saves nine'.

A well maintained building has numerous economic benefits to the owners and the occupants. It is quite obvious that the goals of adequate maintenance of residential and commercial houses are that it raises the greatest benefit as it attracts consumers if it is for commercial purpose; it brings about utmost performance at a very minimal cost and provides comfort and decency to the occupants.

The inculcation of maintenance culture has the benefit of increasing the quality of maintenance work. Sani et al (2011) note that maintenance culture is unique for each organisation, and so there is the need to develop maintenance culture in each organisation so as to meet the changes in the market demands and trends. This also implies that maintenance culture should be implemented in the organisation of all classes so as to change the mindsets

and attitudes of maintenance team, which has the ability and capability to encourage regular knowledge acquisition, skill improvement, and performance advancement in maintenance activities.

The positive effect is that capital overheads, assets or infrastructures are made to function properly and enhance production quality. Besides, it is obvious that knowledge thoroughly learnt cannot easily be forgotten, and the atmosphere of culture in a society has execution effect in all spheres of life. This means that the private individuals will not be left out in this direction of maintenance of personal property. The awareness of the dire need of maintenance culture will sharpen the action of land-lords and other individuals who built but have no provision for maintenance, which usually result into gradual deterioration of an admired mansion or estates after construction. Maximal utilisation of all form of infrastructural investment is guaranteed if maintenance culture is put in place and vigorously pursued.

### **FEW CASES AND PROBLEMS OF NON MAINTENANCE CULTURE**

Abandonment of good road network, power supply gadgets, industries, vehicles and buildings in Nigeria, among others are so numerous to the extent that a non issue or no problem gradually became a huge problem. Nigeria is included among the poorest countries of the world due to infrastructure insufficiency and many other economic and social indicators. In the early 70s, there was a facet of the Ministry of Work called Public Work Department (PWD) which engaged in road repairs in every nook and cranny of the country and helped to sustain the road from the grip of erosion menace. Changes in the country led to the extinct of the PWD and that was the genesis of the great decay of Nigeria road network established at the period. The ugly situation resulted to non accessibility of some parts of the country. The emergence of Federal Road Maintenance Agency in recent time was characterized with fire brigade approach; waited for federal roads to collapse before any work is done. This is basically due to the non-culture of maintenance in the country.

Nigerians find it difficult to maintain their own property and see public facilities as government property which does not belong to any body (Adeleye, 2009). Many public facilities put in place mainly to give benefits to the people are left to decay without any positive actions from the people to encourage the sustainability of the property. Consequently, public facilities do not live up to its life span due to lack of maintenance. Lack of maintenance culture from all the economic agents in the country has played great role to keep the country at the level of high deficiency of infrastructure in the midst of insufficiency culminating to colossal waste. It is quite unfortunate that the consciousness of maintenance culture in Nigeria is very low. A beautiful edifice is a source of great joy to all at the inception, but in a short while, it is allowed to

deteriorate and collapse. Haruna (2009) notes that the National Arts Theatre, Igunmu, Lagos, an architectural masterpiece came on board during Nigeria's hosting of FESTAC in 1977. Owing to lack of maintenance culture the building has become a habitat for lizards, and roofs now leaking, furniture broken, mal-functional air conditioner and grossly unkempt, thereby appearing like a ghostly place. The edifice lost its grandeur due to lack of maintenance.

The state of conduciveness and quality of infrastructure show the concern or non-concern of the users or providers. The quality of Nigerian infrastructure, few years after its commissioning shows lack of maintenance culture which has retarded the life of valued infrastructure. Odediran et al (2012) states that buildings are essentially made available to give conducive and safe environment for the exercise of various economic and social activities, and a yardstick for upholding such role is on the basis of the ability of a building to make available safe environment. However, the deterioration of a components and elements of a building necessitates opting for measures targeted at guaranteeing that the features that help the building to sustain convenience and safety are repositioned and provided. Maintenance is aimed retaining the status quo of an infrastructure to continue to ensure adequate satisfaction for which it is put in place.

CBN (2003) report shows the ugly situation of Nigerian highways. Many of the roads constructed over thirty years ago have not been rehabilitated for once, giving rise to cracks, chasms, depression, fallen bridges, among others which make Nigerian roads a death trap. This situation retards efficient mobility of input of production from regions of abundance to areas of scarcity, and help greatly to quicken the worn out and death of vehicles. The economic loss associated with the state of our roads is enormous. This situation could not have reached to its crescendo if and only if maintenance culture is in place.

The health sector in Nigeria is not given preference. There is great inadequacy of health centres and health facilities. Both the buildings and equipment have been left to become obsolete. Even the functional ones are not maintained. The ugly trend has discouraged patronages in Nigerian health centres as many prefer herbal treatment to orthodox medicine. Access to decent medication is relatively very low due to lack of and improper maintenance of facilities. Consequently, many people do translate even when ailment is curable owing to poor maintained health centres. Olufunke (2011) notes that a quick look at Nigerian health sector shows deficiency of maintenance culture; it is demoralising and disheartening in the sense that the sector is very essential in ensuring the good health of the people. The existing situation is an impediment in boasting sustainable development.

Regular aircraft crash in Nigeria is also associated with lack of maintenance culture. Hundreds of lives have been lost in recent time due to the careless attitude of many aviation workers. The

only way to guarantee the life span of asserts is regular maintenance and the earlier the country adopts maintenance culture the better for the safety of infrastructure users.

The Academic Staff Union of Universities (ASUU) in Nigeria has embarked on industrial strike in many occasions due to lack of functional equipment in the universities in Nigeria. Although some facilities are outdated but the few modern ones are not maintained. Besides, the buildings erected over thirty years ago at the inception of some of the universities are not maintained. Building installations such as electric fans, lights, toilets, windows, roofs and doors are in serious deplorable state and non functional, yet the country claims to be the giant of Africa while many Nigerians study under non-conducive environment.

Enofe (2009) points out that one of the major problems in developing countries is inadequate maintenance. It is perceived as unimportant tasks in most developing countries. Specifically, the Power Holding Company of Nigeria has its main problem as inability to put in place appropriate maintenance, in spite of its modern technology and this has marred the attainment of goals. Consequently, it is difficult to have or experience regular power supply in Nigeria in the area in which the National power grids exist.

Public and private industries have folded up in Nigeria due to lack of maintenance. Refineries and railway line in Nigeria have experience high level of non maintenance leading to huge investment in the sectors becoming useless which is like intentional destruction of own treasured assets. Private and public buildings have collapsed owing to similar reason of non maintenance culture. Even human capital has degenerated in vigor, ability and capability owing to deficiency of maintenance culture. Really, every facet of the country is not exempted in the deficiency of maintenance culture and re-orientation is imperative now.

## **WAYFORWARD**

Just as every pad-lock has a special key and enzymes are specific in operation, so also every problem has its unique solutions. It is a matter of selecting from among the alternatives that is/are relevant for the solution of a societal problem. In Nigeria, the losses, discomforts, emotional trauma, psychological disequilibrium and low productivity due to attitude of non maintenance culture can be annihilated if and if, the following points are given adequate consideration:

(i) In the award of contracts by the government, there is the need to opt for quality and durable assets and/or infrastructure. Besides, it is imperative that yearly maintenance cost covering the life span of assets/infrastructure be included. This is expected to guard against any change in the leadership of the society/ organisation and ensuring that assets do not die before life span.

- (ii) Funds provided for maintenance should strictly be left for that. This implies avoiding any form of diversion of fund and corruption.
- (iii) The National Orientation Agency should design regular enlightenment campaign so as to properly educate Nigerians on the essence and benefits of maintenance culture. Developed nation do budget heavily for maintenance so as to reap all the values of an investment, whereas a developing country such as Nigeria that lacks capital would spend heavily on putting an edifice but watch it until it collapsed and become useless. It is uneconomical and foolishness.
- (iv) Maintenance department that is well equipped and funded should be domiciled in every government and private establishment, and the heads be held responsible for any asset/infrastructure that is allowed to waste when its life span has not expired.
- (v) Private individuals and organisations should include yearly maintenance cost of building and declaration of maintenance on the building construction plan before approval by Town Planning Authority. This will help to hold responsible or initiate litigation action if the individual or organisation fails to maintain residential or organisational building/estate.
- (vi) Development fees paid by undergraduates and students should be used adequately and properly accounted for by school management. It is disheartening that after such payment you see undergraduates not provided with necessary facilities in class room and hostels.
- (vii) An Independent Maintenance Enforcement Commission should be established to oversee the role of maintenance departments of government infrastructure and private established assets. Members of the Commission can be co-opted from appropriate existing institutions or associations.

## CONCLUSION

The paper has unraveled that lack of maintenance culture has adversely affected sustainable development of Nigerian economy over the years. It is obvious that transport infrastructure put in place in Nigeria, vehicles, buildings, plants and machinery procured for production were left unmaintained and they gradually decay without reaping all the benefits there from due to lack of adequate maintenance. Industries, refineries, utility authorities have not been efficient in provision of essential services needed to enhance economic activity and consequently contributed to low production which gives rise to low income and poor living standard in Nigeria. Besides, irregular power supply in Nigeria and over dependence on road transport when railway line exists is attributed to lack of maintenance culture. In consideration of the colossal losses in varieties of ways emanating from poor attitude to maintenance culture, it becomes absolute necessary that the resource managers have to strictly consider the implementation of the suggested ways forward articulated in this paper.

## REFERENCES

- Adeleye S. I (2009). 'Maintenance Practice in Nigeria, Policy, Budgeting and Legislative Issues'. A paper presented at 'Sensitization Campaign on Maintenance Culture' Organized by National Orientation Agency, Oyo State Directorate, Ibadan.
- Bamgboye, O. A (2006). 'Capacity Building As A Strategy For Sustainable Infrastructures Maintenance Culture', Paper presented at National Engineering Conference, Nigerian Society of Engineers, Gateway 2006, Abeokuta, Nigeria, December .
- Brendan, J.S. (2006). Optimising the Maintenance Function - It's Just as Much About the People as the Technical Solution, WCEAM 2006, Paper Number 095.
- Central Bank of Nigeria (2003). Highway Maintenance in Nigeria; Lesson from Other Countries: Abuja: CBN Research Department Occasional Paper No 27.
- Federal Republic of Nigeria (FRN) (2000). *Obasanjo's Economic Direction 1999-2003*, Lagos: Dawn Functions Nigeria Limited.
- Haruna, G (2009). 'Bring Back the Culture of Maintenance'. This Day 27 April, 2009
- Ighodora, C.A.U (2009). 'Transport Infrastructure and Economic Growth in Nigeria,' *Journal of Research and National Development*, 7(2), 1-13.
- Kumar, D. (2005). 'Infrastructure in India'. ICFAI Journal of Infrastructure. Retrieved on January 31, 2014 from <http://129.3.20.41/eps/urb/papers/0506/0506002.pdf>.
- Nurkse, R (1953), *Problem of Capital Development in Underdeveloped Countries*, New York: Oxford University press.
- Odediran, S. J, Opatunji, O.A and Eghenure, F.O (2012). 'Maintenance of Residential Buildings: Users' Practices in Nigeria,' *Journal of Emerging Trends in Economics and Management Sciences*, 3(3), 261-265.
- Olufunke, A .M (2011). 'Education for Maintenance Culture in Nigeria: Implications for Community Development,' *International Journal of Sociology and Anthropology*, 3(8), 290-294
- Oyedel, O.A (2012). 'The Challenges of Infrastructure Development in Democratic Governance,' Retrieved on February 17, 2014 from [https://www.fig.net/pub/fig2012/papers/ts01c/TS01C\\_oyedele\\_6119.pd](https://www.fig.net/pub/fig2012/papers/ts01c/TS01C_oyedele_6119.pd)
- Sani, S. I. A, Muhammed, A. H, Shukor, F. S and Awang, M (2011). 'Development of Maintenance Culture: A Conceptual Framework,' *International Conference of Management Proceeding*, 1007-1013
- Singer, H.W (1949), 'Economic Development in Under-developed Countries', *Social Research*, 16(1).
- Wilkins, R.H. (1994). *The Quality-Empowered Business*. Englewood Cliffs (NJ): Prentice-Hall.