

RAIL TRANSIT OPERATIONS AND PASSENGER'S SATISFACTION IN LAGOS DISTRICT OF THE NIGERIAN RAILWAY CORPORATION: BEST PRACTICE APPROACH

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Abstract

This study examines the rail transit operations and passenger's satisfaction within the ideals of international best practices using the Lagos District of the Nigerian Railway Corporation as a study area. The aim of the study is to ascertain the degree to which the rail system's use and operations have been able to incorporate global best practices. The study employed the international best practices on rail transportation and incorporated both the use of primary and secondary data sources. The primary data source relied on questionnaire which was administered to rail users to generate information for the study while the secondary data relied essentially on the review of literatures, articles, books and journals. The result from the findings shows that international best practices are yet to be fully reflected in the development of railway system in the study area, meaning that issues of international best practices which include environmental friendliness, speed and propulsion, multiple use of ticketing system as well as multimodality applications are grossly absent in the day to day operations of the rail transport system in the study area. The findings from this study provide the basis for recommendations highlighted. The non-compliance of the Nigerian rail transport system with international best practices have policy and planning implications which include operational constraints, inefficiency as well as anticipated huge cost. It is therefore recommended that the railway transport development agenda of the country must take into consideration immediate, short, medium, and long term policy and planning measures that conform to the ideals of international best practices.

Keywords: Rail Transport, Best Practices, passenger operations, satisfaction, Lagos.

1.0 Introduction

The distributive economy's trajectory is being shaped by transportation, which is essential to development. Any country that neglects to build out its transportation infrastructure weakens the key force driving socioeconomic and political unity and development (Filani, 1988). Also, it is impossible to imagine a scenario in which transportation does not play a significant role in the lives of any given person or civilization. In simple term 'there is no escape from transport' (Munby, 1968). Transport, then, is life itself, feeds life, and sustains life (Badejo 2014). This implies that transportation should be treated seriously by all governments because it is a key component of social, economic, and political development. Transport also serves as a method for preserving and sustaining social connections and provides essential connections between facilities and infrastructure that are physically dispersed. This suggest

that country's economic and social progress, as well as local, regional, and international collaboration, depend on transportation (Abduhamid, 2015).

Rail transportation refers to the movement of people and cargo along railways or other tracks using wheeled vehicles. According to Yusuf (2015), the logistics chain that supports trade and economic progress in the majority of nations includes rail transportation. Typical railway/railroad tracks consist of two parallel rails, normally made of steel, secured to cross-beams, termed sleepers or ties. The sleepers keep the track's "gauge"—the measurement of the space between the two rails—constant. The track is either laid on a bed of ballast or fastened to a sturdy concrete foundation in order to preserve alignment. It is referred to as the permanent way or right-of-way as a whole. When compared to road vehicles, railway rolling stock, which has metal wheels, moves with less friction. However, in order to gain traction and adhesion, locomotives and propelled vehicles typically rely on the point at which the wheel makes contact with the rail (the part of the transmitted axle load that makes the wheel "adheres" to the smooth rail). While this is typically enough in dry, typical rail circumstances, adhesion can be hindered or even destroyed by the presence of undesirable materials like moisture, grease, ice, or dead leaves on the rail surface. Moreover, rail transport is an energy-efficient and capital-intensive means of mechanized land transport and is a component of logistics. Along with various engineered components, rails constitute a large part of the permanent way. They provide smooth and hard surfaces on which the wheels of the train can roll with a minimum of friction. As an example, a typical modern wagon can hold up to 125 tons of freight on two four-wheel bogies/trucks. The contact area between each wheel and the rail is tiny, a strip no more than a few millimeters wide, which minimizes friction. In addition, the track distributes the weight of the train evenly, allowing significantly greater loads per axle / wheel than in road transport, leading to less wear and tear on the permanent way. This can save energy compared with other forms of transportation, such as road transport, which depends on the friction between rubber tires and the road (Hiroumi, 2003).

In addition, it is impossible to overstate the importance of the rail transportation system. Access to places of work, medical facilities, and educational institutions is made possible by an efficient and effective rail transportation infrastructure. It also enables crucial connections between physically separated facilities and serves as a conduit for social interaction. Rail transportation services enhance social interaction while also reducing spatial inequality. In addition, rail transport system plays a key role in the development of a country's market, transforming local markets into national, regional and international hubs and it permits economies of scale in areas that have promising comparative advantage with concomitant generation of huge employment opportunities (Badejo, 2015). The essential associated benefits of rail system are mobility, employment, revenue generation, alternative mode of transport especially relieving the road, market expansion, economies of scale, urbanization, industrialization, and redistribution of urban population growth

This study however, examined the emerging international best practices in the development of rail transportation system and how such best practices have been reflected in the subsequent development of rail transportation in the country. Best practices are used to maintain quality as an alternative to mandatory legislated standards and can be based on self-assessment or benchmarking. Best practice also called "smart practices" is a feature of accredited management standards such as International Standard Organisation (ISO), Union

International des Chemin {International Union of Railway (UIC)} etc. While best practices generally dictate the recommended course of action, some situations require that such practices be followed. Again, an international best practice is seen as a means of revealing how, what we do locally can fit into international horizon. It is for this reasons that this study attempt to use international best practices approach towards realigning the Nigerian rail system (most especially the Lagos District) within the global rail transport family.

Furthermore, in the last five years, numerous efforts have been put in place by the Nigerian government (both at the federal and state level) to reposition the nation's rail transit system by improving the transport infrastructure in such a way that it responds to the mobility needs of the country. In addition, it has gone further to prepare a 25year rail Master Plan development agenda. Despite all the efforts at repositioning the railways, it has not been able to respond to the needs of the country. For example in the study area – Lagos District, the following problems still persist: demand for rail service is higher than the supply; road mode accounting for about 90% of the distributive economy; railway system in Lagos District still depends solely on the use of fuel, narrow gauge and depending on intercity rail system and the global thinking is essentially directed through international best practices agenda. However, the Lagos District rail system has not imbibed the culture of international best practices. It is on this basis that this study examined rail transit operations and passenger's satisfaction in Lagos District of the Nigerian Railway Corporation with a view to improve best practices to enhance commuters' satisfaction and patronage.

2.0 Literature Review/ Conceptual Underpinning

Railway systems are viewed favorably by policymakers and people all over the world because of their effect on mobility, their potential to enhance land use and development in both rural and urban centers, and because rail has a relatively low environmental footprint when compared to other modes of transportation (Arne Beck et al, 2013 and Badejo, 2015). Additionally, any serious government and key stakeholders should gather resources to improve the industry as a result of these anticipated benefits and others. Therefore, the government must genuinely care about ensuring that the railway system - within any given policy targets - delivers the highest rate of return on investment.

Gairns, (1925) in his book "Railways for all", described railway as a way or prepared path, formed by rails". There is no mention of locomotives, and it is not necessary that they should be used. There were indeed railways long before there were locomotive engines, and there are still some forms of railway which do without them. Rodrigue, Comtois & Slack (2013), observed that the first railways were built in the 17th and 18th centuries for carrying coal and other minerals. Rails were of wood and small wagons, and were pulled by horses or pushed by men. As a result, special wagon-ways were made from length of wood spaced so that the wagon wheels ran along the timber. In order to keep the wagons on the timber track, the wheels were guided by other pieces of wood placed on the side of the running surface. Accordingly, railways undoubtedly not only played important role in the expansion of the industrial revolution and the development of civilization, but also enhance better ways of moving people and goods across land at greater speeds than could be achieved by the horse.

Globally, the current railway operations have much to be desired when one considers the scope and zeal with which railway operational services are planned and carried out. It took

the development of the steam engine and the use of iron in place of wood for wheels and rails for the primitive railways to experience some notable advancement with the power of steam invented by some engineers in the 1700s (Rodrigue et al, 2013).

Meanwhile, Jakpa and Igben (1977) highlighted the problems and prospects of Nigeria Railway Corporation. Analysis were made by them that the level of liability of rail transport system, which was found to be at critical point for its inability to break – even are based on the fact that it has a smaller coverage for its customers and not compliant with international best practices. Also, African Railway Congress (1962) evaluated rail transport system in Nigeria as having enough potential to move large tonnage of goods at a minimum marginal cost. Rail transport is an important component of the Nigerian transport system which plays a major role in the socio-economic, political and cultural activities of the country. As a high capacity land-based transport mode, rail transport contributes immensely to the general development of any country. A country without rail transport suffers a great deal of setback in its developmental process. Benson and Whitehead (1975) affirmed the above assertion by defining transport, of which rail transport is a mode, as a catalyst. He went further to say that it raises the level of activities in an economy and releases utilities trapped in undeveloped areas of a country. This is exactly the role transport is expected play when complied with international best practices.

Badejo (2014) opined that the history of modern Nigeria is essentially tied to the apron of the Nigerian Railways and hardly could the understanding and general appreciation of the political, social and economic progress of the country be completed without a critical role allocated to the Nigerian Railways. Hence, the growth and subsequent infrastructural transformation of the railways intended must respond or align with international best practices in order to achieve the socio-economic and political objectives and goals of the government.

An efficient and reliable transport system is indispensable for the growth and development of the national economy. Buchaman and Pugh (1955) and Omiunu (1981) after a study on Nigeria economy and the development for early railway in Nigeria, assert that railway transport was vital for functional economic system, and also the solution to the chronic traffic problem in Nigeria. The significance of the rail transport sector lies fundamentally in the fact that mobility and accessibility are essential to the realization of the objectives of all the other sectors of the economy. Undoubtedly things are not the same with the Nigerian Railways as a result of NRC being a player and referee. Also the existence of weak regulatory framework, inadequate funding, technology dynamics, climate change, poor data management and lack of management information system, dearth of technocrats and expertise at every level of decision making in government has altogether contributed to haphazard response to the needs of the rail transport in Nigeria.

Again, the deterioration of the railways in Nigeria has been partly due to the Federal Government's disproportionate investment allocation to the road sector and the neglect of the railways (Badejo, 2014). In terms of infrastructure, locomotives and rolling stock of Nigerian Railways are in very bad shapes. The rail line is characterized by worn out rails, steep gradients, sharp and in some cases, reverse curve, leading to poor speed of train, poor turnaround time for wagons/coaches and even accidents. In a survey undertaken in 2004 it was discovered that out of the total of 3987 wagons available in the system, 2,294 (57.5%) were defective and, therefore, not in use while 115 were beyond economic repairs and hence condemned. Effectively, therefore, only 1587 wagons (36.6%) were fit and operational. Although some

improvements have occurred in recent years, the lack of commitment in implementing and meeting the timelines spelt out in the 25 year Strategic Vision for Nigerian Railway System is a major challenge to the resuscitation and development of the railways to a modern and efficient railway system.

Furthermore, measuring Nigeria's rail transport industry with international best practices using key indicators like speed, standard gauge system, employment, energy source, revenue generation, policy, investment, technology improvement etc., shows that Nigeria is seriously lagging behind. Survey conducted by Worldwatch Institute in Washington (2010) on global rail industry trends shows that countries like Germany, Spain, Japan and China employed at least half a million people in total directly on rail vehicle manufacturing, with an unknown number of additional jobs in the supply chain. In addition, the global demand for passenger and freight rail equipment, infrastructure, and related services in 2007 was \$169 billion and is projected to grow to \$214 billion by 2016. Western Europe dominates the market, followed by Asia and the Pacific. Also, urban light rail systems and subways are expanding in many regions of the world, and there is growing investment in intercity high-speed rail lines. However, while the Japanese Maglev bullet trains have reached speeds of up to 580km/hr, Nigeria's rail transport system still struggle between 35km and 90km/hr.

2.1 Global Trends in Rail Transport Industry

It is apparent that rail is currently experiencing something of renaissance as against its traditionally fleet-footed or slow to react (Stewart, 2014). The rapid pace of technological, demographic and environmental changes has led to an increasing agile and dynamic rail industry. In addition, regions that have not traditionally had a culture of rail travel, and places where there has been historical underinvestment, are turning to rail with vigor. Suffice to say, that the rail system in Nigeria if tailored in line with global trends will have great impact on the socio- economic life of the citizenry. 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. The priority for these changes has 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 (Odeleye, 2015). He further affirms that 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 Oresund Strait project between Denmark and Sweden.

Presently, the international organisation / association promoting best standard in the world of rail transport is called The International Union of Railways (UIC). UIC was created

in October 1922 with the aim of standardizing rail industry practices with respect to the deployment of railway technology. The UIC currently is the worldwide Organization for international cooperation for railways and promotion of the rail transport mode generally. The association currently gathers about 200 members on all 7 continents. The Union's main mission is to promote rail transport at a global level in order to cope with current challenges of mobility and sustainable development, by enhancing international cooperation between its members. The UIC's objectives are to facilitate exchange on best practices among members, support members in their efforts to develop new business opportunities, propose new ways for improving economic performance of the rail network, achieve interoperability and create new world standards for railways including common standards with other modes. The association plays an important role in standardization of railway parts, data and terminology. Nigeria is recognized as an associate member of the UIC unlike other North African countries such as Egypt and Algeria that are active members. The association is thus a viable plug in for developing countries like Nigeria to adopt these international best practices.

2.2 Selected International Best Practices as it relates to Rail Transit System

The following are the selected international best practices in rail transport system:

- 2.2.1 **Intermodalism:** Intermodal passenger transport, also called mixed-mode commuting, involves using two or more modes of transportation in a journey. Mixed-mode commuting is often used to combine the strengths (and offset the weaknesses) of various transportation options. A major goal of modern intermodal passenger transport is to reduce dependence on the automobile as the major mode of ground transportation and increase use of public transport (Rodrigue et al, 2013). Mixed-mode commuting often centers on one type of rapid transit, such as regional rail, to which low-speed options (i.e. bus, tram, or bicycle) are appended at the beginning or end of the journey. Trains offer quick transit from a suburb into an urban area, where passengers can choose a way to complete the trip. Most transportation modes have always been used intermodally. Therefore, intermodal transportation in the literal sense refers to an exchange of passengers or freight between two transportation modes.
- 2.2.2 **Single Ticketing System** that can be used to criss-cross the entire country with the available modes (road, rail, water etc.) of transport. The single ticketing system can only function when there is multi-modal connectivity.
- 2.2.3 **Standard Gauge System:** As railways developed and expanded, one of the key issues was the track gauge. According to Rodrigue et al (2013), the deficiency of traditional narrow gauge system denoted by its inability to accommodate high speed rail lead the need for the standard gauge system. The standard gauge (also called Stephenson gauge, international gauge, or normal gauge) is a widely used railway track gauge and accounts for about 55% of the lines in the world are this gauge. All high speed rail lines in the world are standard gauge (except those in Russia, Uzbekistan, and Finland).
- 2.2.4 **Speed:** Much of the current excitement is directed toward the expansion of high speed intercity rail (HSR) lines. Worldwatch Institute (2009) affirm that 6,650miles HSR lines were operational in which China accounted for 1,490miles, France 1,180miles and the rest of European Union members had a combined high speed network close to

3,600miles. High speed offers a sustainable, progressive means of managing the economic and environmental cost of travel.

2.2.5 Energy Source: The rail sector is continuously seeking to improve energy efficiency performance. The energy source in rail transport has greatly and dynamically metamorphous from coal and coal products to oil products, then to gas and nuclear materials and subsequently in recent time to renewable energy to generate electricity such as biomass, wind, solar, geothermal and hydrogen. In addition, the use of Hydrogen Powered Locomotive (HYDRAIL) in UK (2012) and China (2013). This combined hydrogen fuel cell and lead acid batteries similar to the one used in cars. The fuel cell is used both to power the permanent magnet electric motors and to charge the batteries, with the batteries helping to meet the peak power demands when accelerating under load.

2.2.6 Urban Public Transportation: In most developed countries, rail transport system is now being used to provide passenger and freight services within and around urban or suburban areas. The reason being that cities are now centers of diverse activities, which require efficient and convenient transportation of persons and goods. Moreover, the high density of activities observed in an urbanized area demand that high capacity modes such as light rail, metro etc. be used because they are more economical, more energy efficient and require much less space than private cars. Thus, cities need and benefit from public transportation services, which offer greater mobility for the entire population.

3.0 Methodology

The data collection techniques for these research work relied heavily on both primary data and secondary data sources. The primary data include the administration of questionnaires directed to relevant stakeholders in rail transport industry capturing their opinions on the subject matter. While the secondary data information obtained from Nigerian Railway Corporation, relevant journals article, textbooks, published and unpublished research work related to the study were used. The questionnaires were directed to the rail transport users (Passengers). The questionnaire has two sections (A and B). The section A addressed the socio-demographic of respondents while section B captured the opinion of the rail users (passenger) in line with the objectives of the research study. The questionnaires consist of both opened and closed ended questions and a total of one hundred and ten (110) questionnaires were administered but only One hundred and three (103) were retrieved. In addition, three (3) survey points was cordoned off for the purpose of this study and these were listed in the Table 1.

Table 1: Survey Points

Survey Points	Questionnaire Allocated	Questionnaire Retrieved for Analysis
Iddo	40	38
Oshodi	35	33
Ijoko	35	32
Total	110	103

Source: Author's field survey 2019

The in-depth interview with the service provider and careful observations (one week) were carried out on the operations of the service provider. Information gathered was used to complement the opinion of passengers. The study adopted purposive techniques for selecting respondents. In addition, the sample size for this study is One hundred and ten (110) and was administered to the rail transport users. The data collected were analysed using descriptive approach employing simple statistical tables, showing percentage distribution of the variables, charts to present the data derived from the study and cross tabulation of relevant variables in order to affirm the need for compliance and best practice in rail transport system.

4.0 Results and Discussion

4.1 Demography of Respondents

The study revealed in Table 2 that out of the total of 103 respondents, male were 58 which represented 56.3% of the respondents while 43 were female which represented 41.7% of respondents that depended on the rail transport system. However, two (2) passengers did not disclose their gender and this represent 1.9% of the respondents. This suggests that there are more male respondents than female respondents in the survey that patronized the rail transport system.

Table 2: Demography of Respondents

Gender	Frequency	Percentage
Male	58	56.3
Female	43	41.7
Non- response	2	1.9
Total	103	100
Age Distribution		
0 – 20yrs	7	6.8
21 – 40yrs	50	48.6
41 – 60yrs	43	41.7
61yrs and above	3	2.9
Total	103	100
Marital Status		
Single	42	40.8
Married	49	47.6
Divorced	1	1.0
Separated	6	5.8
Widow	4	3.9
No Response	1	1.0
Total	103	100
Educational Background		
Primary	21	20.4
Secondary	30	29.1
Tertiary	47	45.6
Others (Specify)	5	4.9
Total	103	100
Occupation		
Civil Service	14	13.6
Private Sector	7	6.8
Self employed	50	48.5
Retiree	7	6.8
Unemployed	7	6.8
Others (Specify)	18	17.5
Total	103	100
Income		

<#200,000	25	24.3
#200,000 - #600,000	17	16.5
#600,000 - #1 million	24	23.3
Above 1 million	10	9.7
Don't know	17	16.5
Non response	10	9.7
Total	103	100

Source: Author's field survey 2019

Also, the marital status of the distribution revealed that 47.6% of them were married, 40.8% were single, 1% has divorced, 5.8% were separated and 3.4% were widow. Again, 1% of the respondents did not disclose their marital status. Therefore, one can deduce that married people used the rail transport more frequently than any other counterpart in the distribution. Similarly, the age distribution revealed that 6.8% of the total percentage of respondents account for those who are less than 20years, while respondents in the age group 21-40years, 41-60years and more than 61years account for 48.6%, 41.7% and 2.9% respectively. This infers that those within the age group of 21-40years and 41- 60years are frequent users of rail transport. By implication, younger people are not too exposed to rail transit system in Nigeria.

In addition, the data on the level of education clearly showed a high level of literacy and suffice to say that education attainment is one of the major attributes that influences the demand for transport. A greater proportion of the respondents were literate in which 45.6% were either a University or Polytechnic graduates while 29.1% obtained the senior secondary school certificate or its equivalent. Also, 20.4% of the respondents obtained primary school leaving certificate while others which did not specify their level of education were 4.9%. The occupation status of respondents indicating that a high proportion of respondents are self-employed and this accounted for 48.5% (50). The civil service accounted for 13.6% (14) while the private sector, unemployed and retiree were all 6.7% (7) each. However, respondents who refuse to indicate their occupation status represent 17.5% (18). By implication, the data above clearly revealed that the self-employed patronize the rail transport more than any other group. Lastly, the income level (annually) of respondents in the study area in which majority earned below 200,000 and this represent 24.3%. Respondents earning 200,000-600,000 were 16.5% while 23.3% earned 600,000-1million. Only ten (10) respondents earned above 1million and this accounted for 9.7%. Meanwhile, 16.5% of the respondents do not know their annual income while 9.7% refused to disclose their income. Hence, the findings on income clearly revealed that income earner between the range of 0 – 200,000 and 600,000 – 1million uses / patronize the rail transport more than others.

4.2 Assessment of Rail Transit System in Nigeria

This section presents the respondents perspective in relations to nature and attributes of rail transport system in Nigeria within the context of international best practices. The data results of the analysed data presented in Table 3 revealed that 83.5% of the respondents are familiar with rail transportation, which suggests that they make use of this mode of transportation often when there is need to embark on a journey; while 14.6% of the respondents are not familiar with rail transportation. However, this does not mean that they are not aware that the rail system is operational but does not often travel on it when making their journey. Meanwhile 1.9% did not indicate if they are familiar with rail transportation. Moreover, the

study revealed the number of years the respondents has been patronizing rail transportation in Nigeria. 42.7% of the respondents implies that, their familiarity and patronage of rail transportation is less than 5years, while 33% shows less than or 10years of patronage. Also, 7.8% of the respondents depict 11 - 15years of patronage and 3.9% shows that their familiarity with rail transportation is above 16years of patronage. However, 12.6 of the respondents cannot ascertain their year of familiarity and patronage of rail transportation in Nigeria. Also in relation to respondents that commute on rail transportation, 69.9% of the respondents shows they commute on rail transport when there is opportunity for them to do so, while 18.4% of the respondents does not commute on rail transport probably it is their first time of commuting on rail transport.

The assessment shows the frequent use of rail transport by the respondents. It revealed that 13.6% of the respondents use rail transport everyday while 27.2% use this mode of transportation weekdays only. Also, 7.8% of the respondents depict that they use rail transport on weekends, while 53.4% rarely use rail transportation until it is very necessary for them to make use of it, may be because of distance of their destination or safety reasons. Also, the study revealed the train station where respondents begin their journey that is trip origin. The respondents from Iddo which also include Lagos accounted for 67.0%, 13.6% of the passengers commenced their journey from Agbado and 10.7% from Ijoko. However, respondents with 1% each began their journey from Ilorin, Kaduna, Kano, Minna and Ogun respectively while 1.9% began their journey from Ibadan. Also, the train station where respondents end their journey that is trip destination were evaluated; 24.3% of the respondents ends their train ride at Iddo station, while Ijoko, Kano, Zaria and Agbado accounted for 17.5%, 12.6% , 8.7% and 6.8% respectively. More also, Ibadan, Ilorin, Jebba, Kaduna, Minna, Offa, Osogbo and Zungeru accounted for 1.0%, 1.9%, 2.9%, 3.9%, 1.0%, 2.9% and 1.9% respectively.

Furthermore, the study revealed the purpose of travel of the respondents; 62.1% of the respondents travel on rail transport for work purpose, while 7.8% each travel by train for the purpose of school, tourism and social reasons. Again, 3.9% and 1% of the respondents commute on rail transport for the purpose of shopping and religious activity respectively. However, 9.7% of the respondents could not specify or disclose the purpose of the use of rail transport. The means of transportation that conveys the respondents to the train station; 18.4% of the respondents walked to the train station while 63.1% uses bus to the train station. In addition, 11.7% of the respondents chartered a taxi cab to the train station, 5.8% of the respondents came in private cars to the train station while 1% could not specify how they got to the train station. The study also revealed the waiting time for the train to arrive or depart the train station; 23.3% of the respondents waited for less than or equal to 15minutes, 36.9% waited for 16minutes to 30minutes and 10.7% of the respondents waited for 31minutes to 60minutes before the train departs from the train station. More also, 29.1% waited for more than 46minutes before the commencement of the journey from the rail station.

Similarly, respondents experienced delay in the course of their journey; 50.5% of the respondents experienced delay on the journey while 32% does not experience delay on their journey, however 17.5% of the respondents does not disclose if they experience delay on the journey. The nature of delay experienced on the journey by the respondents were also evaluated; 19.4% of the respondents which represented 20 affirms that intersection was the cause of the delay, 2.9% says bad weather, 27.2% attributed the delay to mechanical failures

and 6.8% of the respondents could not specify the nature of the delay experienced in the course of the journey. In the same vein, the study revealed how long the delay takes; 17.5% of the respondents say the delay lasted between 0 – 15minutes and 13.6% experienced 16 – 30minutes of delay while 11.7% says the delay lasted for 60minutes. Also, 16.5% of the respondents say that the delay experienced on the journey lasted for more than 1hour. Meanwhile 40.8% could not ascertain the number of minutes or hours in which the delay experienced takes. Also, the study examined if there is any form of information on the cause of delay; 76.7% which represented 78 in frequency says there are no information on the cause of the delay while 24.3% of the respondents says there are information on the cause of the delay.

The affordability of the train fare were also examined; 5.8% of the respondents says the fare is low and 68.9 says is moderate while 22.3% of the respondents said the fare is high. Obvious in the study is the fact that out of the 103 respondents, 71 respondents considerably believe that the train fare is moderate which rightly justify the fact that rail transport is cheaper when compared to other mode of transport. However, 1% of the respondents are not sure of the affordability of the fare. The mode of payment in the rail transport system in Nigeria; larger percentage of the respondents which accounted for 97.1% make their payment by cash while 1.9% of the respondents uses POS and 1.0% does not specify the mode of payment. By implication, the data clearly indicate the low level of electronic payment in Nigeria's rail transport system. Furthermore, the duration of journey; 28.2% of the respondents journey on the train take less than or 1hour and 19.4% says their journeys took them 2 – 3 hours while 8.7% of the respondents journey take 3- 5hours. Also, 41.7% of the respondent's journey take above 5hours, however, 1.9% of the respondents are not sure or does not specify the duration of journey. Lastly, the study revealed reasons why respondents preferred to use rail transport system in Nigeria; larger percentage of the passengers preferred the rail transport system because it is affordable and this accounted for 69.9% (72 out of 103 respondents). Also, 20% of the respondents use the train because it is safe while 8.8% for comfortability and 1.9% for accessibility. Hence, one can allude from the data gathered from the respondents that an average user of rail transport in Nigeria does so on the basis of affordability and safety and not because it is comfortable or accessible.

Table 3: Assessment of Rail Transit System in Nigeria

Description	Response	Frequency	Percentage (%)
Are you familiar with rail transportation?	Yes	86	83.5
	No	15	14.6
	No response	2	1.9
	Total	103	100
	0 - 5 years	44	42.7
If yes, for how long?	6 - 10 years	34	33.0
	11 - 20 years	8	7.8
	21 year and above	4	3.9
	System	13	12.6
	Total	103	100
Do you commute on Rail Transport?	Yes	72	69.9
	No	19	18.4
	No response	12	11.7
	Total	103	100.0
	Everyday	14	13.6

How frequent do you use rail transport?	Weekdays only	28	27.2
	Weekend only	6	5.8
	Rarely	52	50.5
	System	3	2.9
	Total	103	100.0
	Agbado	14	13.6
	Ibadan	2	1.9
	Iddo	53	51.5
	Ijoko	11	10.7
	Ilorin	1	1.0
	Kaduna - kano /		
Trip Origin (Train Station)	Iddo - Agbado	1	1.0
	crossing		
	Kano	1	1.0
	Lagos	16	15.5
	Minna	1	1.0
	Ogun	1	1.0
	Total	103	100.0
	Abeokuta	1	1.0
	Agbado	7	6.8
	Ibadan	1	1.0
	Iddo	25	24.3
	Ijoko	18	17.5
	Ilorin	2	1.9
	Jebba	3	2.9
	Kaduna	3	2.9
	Kaduna - kano /		
	Iddo - Agbado	1	1.0
	crossing		
Trip Destination (Train Station)	Kano	13	12.6
	Kwara	3	2.9
	Lagos	4	3.9
	Minna	1	1.0
	Offa	2	1.9
	Omoba	1	1.0
	Osogbo	3	2.9
	Osun	2	1.9
	Zaria	9	8.7
	Zungeru	2	1.9
	Total	103	100
	Work	64	62.1
	School	8	7.8
	Shopping	4	3.9
	Tourism	8	7.8
	Social	8	7.8
	Religious	1	1.0
Purpose of Travel?	Others (Specify)	9	8.7
	No response	1	1.0
	Total	103	100
	Walking	19	18.4
	Bus	65	63.1
	Taxi	12	11.7
	Private Car	6	5.8
	Others (Specify)	1	1.0
	Total	103	100
	0 - 15 minutes	24	23.3
How long do you have to wait for the train to arrive/move?	16 - 30 minutes	38	36.9
	31 - 60 minutes	11	10.7
	Above 1 hour	29	28.2
	No response	1	1.0
	Total	103	100

	Total	103	100
	Yes	52	50.5
Do you experience delay on the journey?	No	33	32.0
	No response	18	17.5
	Total	103	100
	Intersections	20	19.4
	Bad Weather	3	2.9
	Mechanical	28	27.2
If yes what is the nature of delay?	failure		
	others (Specify)	7	6.8
	No response	45	43.7
	Total	103	100
	0 - 15 minutes	18	17.5
	16 - 30 minutes	14	13.6
	31 - 60 minutes	12	11.7
How long the delay does takes?	Above 1 hour	17	16.5
	No response	42	40.8
	Total	103	100
	Yes	25	24.3
Is there any form of information on the cause of delay?	No	33	32.0
	No response	45	43.7
	Total	103	100
	Low	6	5.8
	Moderate	71	68.9
How affordable is the train fare?	High	23	22.3
	Not sure	2	1.9
	No response	1	1.0
	Total	103	100
	Cash	100	97.1
What is the mode of payment?	POS	2	1.9
	No response	1	1.0
	Total	103	100
	0 - 1hour	29	28.2
	2 - 3 hours	20	19.4
Duration of the Journey?	3 -5 hours	9	8.7
	Above 5 hours	43	41.7
	No response	2	1.9
	Total	103	100

5.0 Conclusion and Recommendations

This study has established the significant role of rail transport system in socio-economic development and growth of any nation, be it developed or developing ones. The Lagos District of the Nigerian Railway Corporation is the most economically viable of the Districts of the Nigerian Railway Corporation, this is because the district covers the most economic advanced, urbanized, industrialized and populated zone of the country. Hence, the international best practices consideration and compliance in Nigeria is best suitable using the study area so selected. Also, the revitalization agenda of the country's rail system must succinctly adhered to international best practices before it can have a meaningful impact and meet the socio, economic, political and environmental needs of the country. Therefore, there is an urgent need to incorporate the best practices in the rail transport policy document in other to enhance efficiency and effective rail transit system in Nigeria that is capable of responding and meeting the mobility need of citizen and relevant stakeholders.

Based on the findings from this study, it is recommended that the Nigeria Railway Corporation which is the Institution responsible for the development and management of the

Nigerian rail system review and re-strategize current approach, methods and procedures used for the development of the Nigerian railway system and to urgently comply with international best practices.

Also, in an attempt to meet international best practices requirements, it is necessary to categorize its compliance framework of the Corporation into immediate, short, medium and long term procedures in order to urgently minimize the environmental, social, economic shortcomings associated with the non-compliance with international best practices.

Meanwhile, the current rail modernization and development agenda which is an attempt to implement railway development Master Plan should ensure compliance with international best practices. This is to minimize the consequences of non-compliance with international best practices as well as to exert positive economic benefits to the overall economic space of the country.

Finally, every effort should ensure that international best practices reflects on the rail system development in the country. This should be pursued passionately in the aspect of inter-modalism and intra-urban / city rail development which is currently absent in the country.

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