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SWOT Analysis of Nigerian Roads: A Synopsis on Benin-Auchi Road

Paul C. Richard
Training Department
Federal Road Safety Corps
Iruepken Unit Command
Esan West, Edo State, Nigeria
Email: richard78ng@gmail.com

Abstract

Road is an integral part of the supply chain. It contributes immensely to all economic activities. In other words, the strength of a nation's economy lies in the nature of the road infrastructure put in place to support it. The sectors of the Nigerian economy particularly the transport sector is faced with staggering challenges which are inimical to the nation's growth and development. Among these challenges are heavy traffic gridlocks and road obstructions occasioned by the deplorable state of the roads. Benin-Auchi Road reflects the true characteristics of a typical Nigerian Road and was used as a case study in this study. This paper aimed at analysing the situation along the Benin-Auchi Road using the SWOT method while further analysis with the Confrontation Matrix was applied to elicit narrowed outcomes sufficient enough for strategic decisions to create a lasting solution as well as provide new ideas for future policy direction. Information gathered from direct observation and secondary sources like journals, newspapers, web pages and relevant official reports served as inputs for the analysis. One of the results obtained reflected poor commitment (in terms of funding) towards the maintenance, rehabilitation and reconstruction of the road which was almost impassable. In view of this, the paper proposed that government should ensure appropriate disbursement of road intervention funds for maintenance, rehabilitation and reconstruction to meet the needs of the current reality. The funds should be thoroughly monitored to avoid delay in projects delivery and poor-quality works.

Keywords: SWOT analysis, Confrontation Matrix, Benin-Auchi Road and Transport

Introduction

Nigerians and all sectors of the Nigerian economy rely on one form of transportation or the other, with the road being the most utilized means (Babalola, 2021; Shaibu, 2022). Road is an integral part of the supply chain. The network of roads is pivotal in economic development because the prosperity of any nation or region is tied to how accessible supply is. Countries that have experienced economic prosperity rely on efficient (road) transport systems to provide a conducive environment for manufacturing, retail and exportation to thrive (Adeleke, 2022). In a world striving towards sustainable development, economic, social and environmental (i.e., components of development) perspectives have to be implemented simultaneously (Larsen, Terjesen, Thorstensen & Kanstad, 2019). These

elements work inter-dependently within phenomena and their activities cannot be underplayed in the road transport sector. Overall, the strength of a nation's economy lies in the level of social and economic infrastructure as infrastructure contributes immensely to all economic activities, improves human welfare and has considerable potential for directly reducing poverty (Adeniyi, Aje, & Ogunsemi, 2011).

With the rapid development of the market economy and the acceleration of the urban-rural integration process, Nigeria's road transport sector is faced with staggering challenges which are inimical to growth and development of the nation. Babalola (2021) deduced that a good road network where commuters arrive at their destinations without any delay occurring from bad roads or where goods are safely and timeously transported from one location to the other is bound to foster economic progress as obtained in developed countries. For instance, in Texas, there are about 600,000 miles of road networks. This is more than the number of road networks in Europe which make Texas to move goods and services seamlessly (Adeleke, 2022). Undoubtedly, a seamless road network and infrastructure lowers production costs and raises productivity particularly in the agricultural sector where the transportation of crops from the farm to the consumers is a major factor in the production chains (Babalola, 2021). The development of road infrastructure is fundamental to the growth of the economy and welfare (Larsen *et al*., 2019). This is in agreement with Babalola (2021) who affirmed that good road infrastructure affects the flexibility and mobility of the workforce from one point to the other, and is indeed central to good governance and public welfare.

Researches have shown that there is a strong and positive relationship between road transportation and economic growth in Nigeria (Adeyi, 2018; Agbigbe, 2016; Awujola, Ugbaka, & Ogwuche, 2018; Siyan, Eremionkhale, & Makwe, 2015). It has equally been demonstrated that transportation infrastructure can improve the well-being of the citizens in Nigeria (Babalola, 2021). The Nigerian Road network has an estimated length of 200,000 km of which 18% are owned by the federal government, 16% by the state governments and 66% (mostly earth roads) by the local governments (Transportation in Nigeria, n.d). The ones controlled by the federal government were mostly constructed during the military era as well as the early years of Nigeria's independence as such they are aged, ridden with potholes and in general state of disrepair (Shaibu, 2022). Awujola *et al*. (2018) affirmed that the Nigerian roads have been overwhelmed by myriad of problems which have substantially minimized their value. Notable among these problems are frequent traumatic traffic congestion, long delay in the movement of goods, road traffic crashes and fatalities.

Collectively, these undesirable road characteristics have clogged the stream of exchange of goods and services across the country as it has become expensive and more difficult to move products and services from producers to consumers, farm produce from rural to urban centers with a lot of man-hour losses. Consequently, these weaken the goal of desirable time bound, destination bound, cost bound and purpose bound operational efficiencies which should underscore effective transportation. Generally, the conditions of the roads substantially affect the cost of production and overall national productivity (Awujola *et al*., 2018). The Federal Government of Nigeria, through the Federal Ministry of Works and Housing, is responsible for financing, constructing and maintaining federal roads. Despite huge budgetary allocations been committed annually to infrastructural development projects, much yet remains to be seen on how the condition of the roads justifies their fiscal allocation (Babalola, 2021). There has been a recent push to improve the road network in Nigeria as the road infrastructure has seen decades of neglect (Transportation in Nigeria, n.d). According to report by Sunday, Gboregun and Njoku (2021), adopting new models of investments for infrastructural development in the country was imperative, as reliance on public expenditure alone was no longer sufficient to meet multiplying needs. With this realization, the federal government launched a series of policies to revamp the roads for good use. These include:

i. SUKUK

ii. Road Infrastructure Development and Refurbishment Investment Tax Credit Scheme
iii. Presidential Infrastructure Development Fund {PIDF)
iv. Highway Development Initiative

The road construction and rehabilitation project going on along the Benin-Auchi Road is among the 25 projects funded from the SUKUK and the road is a typical major road that depicts the true Nigerian Road. A group called Young Edo Professional in Politics issued a statement that was quoted in part by Adedipe (2022): "The pace of work on that road (Benin-Auchi Road) has been embarrassingly slow. It started in 2013 and the then Minister of Works said it was going to be completed within 18 months but almost nine years after, the job is nowhere near completion."

Three months after the aforementioned publication, a report on SUKUK-funded projects by Ujah (2022) stated that: "The use of SUKUK has enabled timely completion of the designated projects whilst also delivering the multiplier effects associated with the construction of capital projects such as roads." These two separate statements do not show clearer direction for the citizenry who care to know about the state of Nigerian roads and the need to thoroughly analyse the road situation becomes necessary. The strategic analysis of the major Nigerian roads can contribute to road development practice in three critical dimensions. Firstly, it allows the government and relevant stakeholders to further their understanding of current situation of Nigerian roads. Secondly, it enables the identification of problems leading to the road situation, based on which effective measures or interventions can be taken for improvements. Thirdly, the results obtained can be useful information to guide the construction, rehabilitation and upgrade of roads in Nigeria. It is on this premise that SWOT analysis was adopted for this paper and further step was taken using Confrontation Matrix in order to identify the most important strategic issues the roads are facing. Thereafter, proposed strategies for addressing the situation of the Nigerian Roads with respect to Benin-Auchi Road was assessed in this study.

Study Area

Benin-Auchi Road is situated between the Edo State Capital, Benin and the northern Edo Town of Auchi. The strategic road connects Benin City through Okpella, Etsako East Local Government Area to Okene, Lokoja both in Kogi State and all way to Abuja, Kaduna, Zaria and Kano. It also connects the eastern part of the country with Abuja and the north (Oliomogbe, 2019). The road is one of the major economic corridors in the country and predominantly noted for trucking activities due to the transportation of domestic, agricultural and industrial goods through the road. Oliomogbe (2019) pointed out that the road distance (of 119km) which ordinarily supposed to be covered in one and an half hours now last over five hours as a result of the terrible state of the road. The worst section of the road is the Ekpoma axis, which is so deplorable and almost not motorable for smaller vehicles. The condition of the axis worsened when it rained or a tanker/trailer broke down at any of the many failed portions, causing serious traffic gridlock for days (Federal Road Safety Corps, 2022). The scenes in figure 1 depict the conditions of the road during rainy season.

Figure 1: Typical scenes along Benin-Auchi Road on 21st August 2022

Oliomogbe (2019) reported that three contractors; Dantata & Sawoe (D&S), Mothercat and Reynolds Construction Company (RCC) are in charge of the dualization projects and are working. While D&S is in charge of the section which runs from Ekpoma to Auchi (52km), and Benin to Ekpoma section (the largest – 67 km) is being constructed by RCC.

Method

In achieving the aim of this paper, a survey approach was adopted in gathering primary information. Notwithstanding, other sources were utilised to gather secondary information.

Sources of Information

Direct observation (surveillance) was the primary means of obtaining some of the required information along the road under consideration. While, secondary information was obtained from journals, newspapers, web pages and official reports. The information gathered were used as inputs for the analysis.

Method of Analysis

SWOT was used for analysing the information received from the surveillance and secondary sources to make informed decisions. SWOT is an alphabetization of strength, weakness, opportunities, and threats (Adeniyi et al., 2011). It is often presented as a grid-like matrix with four distinct quadrants – one representing each individual element i.e., strengths, weaknesses, opportunities and threats (Shewan, 2017). SWOT is a qualitative analysis method which can be used in various development strategies, plans and decision-making etc. (He *et al*., 2019) and also to ascertain how well a particular project is performing according to initial projections (Shewan, 2017). These corroborate with Achilike (2015) who highlighted the importance of SWOT analysis in helping to reach the best solution by:

- Helping decision makers share and compare ideas,
- Bringing about a clearer common purpose and understanding of factors for success,
- Organising the important factors linked to success and failure in the business world (road infrastructural projects),
- Analysing issues that have led to failure in the past,
- Providing linearity to the decision-making process allowing complex ideas to be presented systematically,
- In addition, it produces new ideas to help take advantage of an organisation's (project) strengths and defends against threats,
- Creates awareness of political and environmental threats which allow an organisation (government) to have response plans prepared.

In furtherance to the aforementioned, a Confrontation Matrix is required in order to objectively help in working through the various options generated from the SWOT analysis in developing the most appropriate strategies for a particular situation (Take SWOT, n.d).

Results and Discussion

SWOT Analysis

Strength Analysis (S)

S1. Good road connectivity

The road links the north and south-south regions of the country and is a main artery in Edo State as it connects three senatorial districts of the state.

S2. Economy

Benin-Auchi Road is one of the economic corridors in the country and predominantly noted for trucking activities with constant flow of agricultural, domestic and industrial goods.

S3. High traffic volume

The traffic volume along the Benin-Auchi Road is high being a critical road corridor.

S4. Provision of road intervention projects

Because of the critical nature of the road, it attracts intervention funds called 'SUKUK' from the federal government through public-private partnership (PPP) arrangements used for intervention projects on the road.

Weakness Analysis (W)

W1. Single carriageway

The road is not wide enough to accommodate heavy volume of traffic plying it. This oftenresults in traffic gridlocks and road obstructions when vehicles broke down.

W2. Delay in the movement of the factors of production

The factors of production are man, materials and machines and are essential to complete the production cycle. When the movement of these necessities is being delayed on the road, it slows down the production process and by extension, creates a scarcity.

W3. Frequent breakdown of vehicles

There is frequent breakdown of vehicles particularly articulated ones due to many failed portions along the stretch of the road.

W4. Delay in the disbursement of road intervention funds

Delay in disbursement of road intervention funds further exposes the road to rapid tear and wear due to lack of maintenance, rehabilitation and reconstruction where they are necessary.

W5. Inadequate road components and road furniture

Inadequate road components such as drainage system expose the road to excessive flooding during the rainy season which makes the road deteriorate with time and get worsened due to the heavy volume of traffic such as trucks, tanker, trailers and other smaller vehicles plying it. In addition, the absence of road furniture such as road shoulders prevents vehicles from pulling over or maneuvering a perceived danger.

W6. Absence of security surveillance system

The absence of security surveillance system along the stretch of road promotes crime and criminality. It becomes exacerbated when it is very difficult to sight the presence of armed security personnel. It is worthy of note that safety and security cannot be treated separately. High insecurity on the road forces unsafe driving behaviour among motorists which in most cases lead to road traffic crashes.

Opportunity Analysis (O)

O1. Promote petty business

Small businesses spring up in areas that have opened up due to the road traversing them and some of these areas are driver's resting points which encourage passengers to always engage in buying of goods for families or love ones and indirectly, boost the local economy.

O2. Increase in state government revenue generation

State governments are always the beneficiaries of the federal road project's return on investment since the road will open up unattractive areas in their states for businesses or economic activities which will invariably further expand the tentacle of the states where the businesses are domiciled, in terms of revenue generation.

O3. Viable route for motorists

Due to its good connectivity, the road is more preferred for motorists moving to the northern axis of the country.

O4. Improve road maintenance, rehabilitation and reconstruction

Availability of intervention funds would create opportunity for routine maintenance, rehabilitation and reconstruction of the road, making its condition to be in good state at all times.

O5. Improve employment of labour

The presence of road network creates a strong ground for local economy and economic nature of the Benin-Auchi Road creates an ample employment opportunity in the areas where it traverses as more active people willing to work in an informal setting gain access to the business environment built around the road network.

Threat Analysis (T)

T1. Encroachment of the road with illegal kiosks

This act reduces the wideness of the road and has serious road safety implications considering the nature of vehicles plying the road.

T2. Proliferation of illegal road tax collectors

Illegal road tax collectors would spring up on the road that often than not cause violence while forcefully levying unsuspecting motorists.

T3. Incessant traffic gridlock and road obstruction

The nation is on the path of economic recovery due to the effect of the COVID-19 pandemic. Round the clock mobility will help to boost the economic activities because it permits continuous flow of the factors of production. In the event that the road is almost impassable (due to traffic gridlock or road obstruction), ease of doing business is hindered which is capable of escalating people's anger (demonstrated in form of protest) to draw the attention of the government to their plights on the road (see Figure 2).

Figure 2: Scene of protest at Ekpoma axis along Benin-Auchi Road on 24th August, 2022

T4. Road projects/works abandonment

Delay in the payment of intervention funds results in road projects/works abandonment.

T5. Increase in crime and criminality

The road environment where business activities are booming attracts crime and criminality as unscrupulous elements take advantage of the atmosphere to carry out their evil intentions.

T6. Increase in road traffic crashes

Bad road not only deteriorates vehicles conditions but also causes road traffic crashes. Also, mechanically deficient vehicles induced by bad road can also cause road traffic crashes.

Table 1: SWOT of Benin-Auchi Road

Strengths (S)	Weaknesses (W)
S1. Good road connectivity linking the north and south-south regions of the country	W1. Single carriageway
S2. One of the economic corridors in the country with constant flow of agricultural, domestic and industrial goods.	W2. Delay in the movement of the factors of production.
S3. The traffic volume along the Benin-Auchi Road is high.	W3. There is frequent breakdown of vehicles particularly articulated ones due to many failed portions along the stretch of the road.
S4. Provision of road intervention projects through intervention funds called 'SUKUK'.	W4. Delay in the disbursement of road intervention funds.

	W5. Inadequate road components and road furniture
	W6. Absence of security surveillance system
Opportunities (O)	Threats (T)
O1. Small businesses spring up in areas that have opened up due to the road traversing them	T1. Encroachment of the road with illegal kiosks.
O2. Increase in state government revenue generation	T2. Proliferation of illegal road tax collectors.
O3. Viable route for motorists moving to the northern axis of the country.	T3. Incessant traffic gridlock and road obstruction
O4. It creates opportunity for routine maintenance, rehabilitation and reconstruction of the road through access to intervention funds.	T4. Road projects/works abandonment
O5. The road creates an ample employment opportunity for active people willing to work in the areas where it traverses.	T5. Increase in crime and criminality
	T6. Increase in road traffic crashes

Source: Author, 2022

Confrontation Matrix

The Confrontation Matrix (see Table 2) weighs each strength and opportunity against each weakness and threat based on the information derived from SWOT in Table 1 which clearly identified the critical aspect of each positive element to define the proposed strategies in improving the situation of the Benin-Auchi Road.

Table 2: Confrontation matrix

S/W	W1	W2	W3	W4	W5	W6
S1	+	-	-	-	+	-
S2	+	+	+	-	-	+
S3	-	+	+	-	-	+
S4	-	-	-	+	-	-

O/T	T1	T2	T3	T4	T5	T6
O1	-	+	+	-	+	-
O2	-	-	-	-	-	-
O3	+	+	+	-	+	+
O4	-	-	-	+	-	-
O5	-	+	-	-	+	-

Source: Author, 2022

As shown in Table 2, S1 and S2 are affected by W1 which means good road connectivity as well as economic corridor massively encourages more vehicles to ply it. However, the design from the onset is of single carriageway which create regular bottleneck when the vehicle carrying capacity is exceeded.

Upgrading the single carriageway to appropriate mode cannot be ignored. It will promote ease of doing business as the road experiences less obstructions. This was buttressed by Duranton *et al*. (2013, as cited in Ejiogu, Nelson and Adedotun, 2020) that in situation where a road expansion improves the road system to handle greater vehicles and volumes of traffic, the enhanced road system contributes to greater efficiency for product flow. In addition, such an upgrade also enables an area to handle outputs that depend on bigger vehicles to transport goods and materials which ultimately promote urban economic growth and benefit most enterprises and individuals using the new road system from cost reduction.

S1-W5 though good road network but has inadequate road components and road furniture characterizing road with poor nature.

S2 and S3 are affected by W2/W3/W6, which indicates that frequent breakdown of vehicles, delay in the movement of the factors of production and absence of security surveillance system threaten both traffic flow and the economic nature of the Benin-Auchi Road.

S4 is affected by W4 which means that provision of road intervention projects is only possible when SUKUK is appropriately disbursed.

Below is the analysis of the results shown in Table 2 when the opportunities were confronted with threats in Table 1.

O1 and O3 are affected by T2/T3/T5 reflecting that Benin-Auchi Road is a viable economic corridor for motorists moving to the northern axis of the country and in terms of business promotion of areas where the road traverses. Unfortunately, economic viability the road offers could be reduced owing to proliferation of illegal road tax collectors, incessant traffic gridlock and road obstruction as well as increase in crime and criminality.

O3-T1/T6 explained that encroachment and road traffic crashes are frequent occurrences along the Benin-Auchi Road and capable of making motorists plying it to seek other convenient options. Encroachment and road traffic crashes are obstructions to traffic flow which increase man-hour lost due to delay and could relegate the economic road corridor to being a non-viable option for motorists.

O4 is affected by T4 showing that projects/works abandonment frustrates maintenance, rehabilitation and reconstruction taking place along the Benin-Auchi Road. The biggest issue hindering the continuous development of the road network is the abandonment of construction projects. A steady flow of investments into the road infrastructure can significantly ease the distribution of goods, leading to a boost in economic development in the country (Transportation in Nigeria, n.d). However, meaningful outcomes will not be achieved if proper monitoring mechanism of road intervention funds is not put in place.

O5-T2/T5 explained that proliferation of illegal road tax collectors and increase in road traffic crashes could threaten the economic vibrancy of the areas the road traverses and by implication, decrease employment rate in the informal setting.

Drawing strength from the above analysis, it is significant to stress that the rate of traffic flow is one of the critical determinants to measure effective and efficient road transport system. When there is uninterrupted flow of traffic on the road, it enhances overall economic growth and development of the country.

It is important to mention as cited in Transportation in Nigeria (n.d), that the federal roads constitute only 18% of the road network but carry over 70% of the vehicular traffic. As a result of the undue pressure, their conditions become deplorable. The critical road corridors are presently facing this pathetic situation and it is obvious along the Benin-Auchi Road because of trucking activities. This is in agreement with Egbejule (2019) who reported that the high volume of vehicular traffic further aggravated the condition of the road, making it almost impossible to go far more than three minutes without encountering potholes and craters.

The call for deliberate action by government to addressing the issues on the road was borne out of the need for lasting solution. In this regards, Egbejule (2019) mentioned in his report that the Deputy Leader, honourable Marcus Onabun on the floor of the Edo State House of Assembly (EDHA), decried the deplorable state of the Benin-Auchi Road, pointing out the economic hardship and man-hour lost by road users plying it, which he said was further compounded by the rainy season. He frowned at the situation, which led to the relevant agencies connected to the road projects along Benin-Auchi Road being summoned before the House on Monday September 2, 2019.

The condition of the road would force one to wonder on the nature of the contracting arrangements in the road project delivery among the relevant parties. Nevertheless, the proposed strategies of this paper would go a long way to putting the concerned parties in the right perspective.

Conclusion

It is a common knowledge that Nigerian roads are either in a state of disrepair or poorly maintained (Babalola, 2021). Undoubtedly, ease of doing business is hampered because of the consequences of the deplorable condition of the major roads such as road traffic crashes, heavy traffic gridlocks or road obstructions. Benin-Auchi Road is among the notable economic

corridors in Nigeria and characterised with the aforementioned problems. These attributes made it to be considered for this paper.

It is evident that SWOT analysis is not only applicable to business endeavour but also to other areas of interest (Augustin & Akossiwa, 2018; Hashemi, Samani & Shahbazi, 2017; He *et al*., 2019; Reihanian, Mahmooda, Kahrom & Him, 2012; Rojas, 2018). The SWOT method was used to analyse the strengths, weaknesses, opportunity and threats of Benin-Auchi Road and strategies were formulated for immediate and future policy direction.

Based on the results of the analysis, this paper proposes the following strategies that government could adopt in addressing the challenges facing Nigerian Roads:

Ensure appropriate disbursement of road intervention funds for maintenance, rehabilitation and reconstruction to meet the needs of the current reality. The funds should be thoroughly monitored to avoid delay in projects delivery and poor quality works. When the non-performing contracting firms are found out, they should be heavily sanctioned to serve as a deterrent to others.

Take the issue of regular road maintenance as a matter of priority so as to increase their lifespan and by extension reduce the consequences associated with bad roads. It is worthy of note that regular maintenance of the existing roads ensures smooth flow of traffic which promotes ease of doing business.

Ensure there is adequate provision for road upgrade to permit more coordinated and improved flow of vehicles particularly the articulated ones.

Make it a point of duty to sensitize the people particularly in the local communities (on the imperative of road as a means of building unity and socio-cultural cohesion among connecting places as well as platform for businesses) so that they can value and protect government road projects in a sustainable manner.

Take conscious and serious action on the United Nations Conventions (related to road safety and security) she acceded to, by truly demonstrating the willpower to meet those conditions spelt out under them in order to attain sustainable safety and security on our roads.

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