AN ASSESSMENT OF RURAL NETWORK MANAGEMENT IN NIGERIA: AS A DRIVER OF ECONOMIC DEVELOPMENT

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ABSTRACT
The majority of the roads in use today and the primary means of getting about in rural areas are rural roads. Transport of products and services, as well as economic growth, are hampered by the poor condition of rural road networks. Using Dansadau District as an example, this research aimed to evaluate the role of rural road network management in fostering economic growth. Interviews and questionnaires were utilized to collect both qualitative and quantitative data, as part of a mixed design approach. A total of 95 persons were randomly selected from the population of political and technical employees engaged in rural road administration. Despite rapid deterioration from a lack of maintenance and excessive rains, the study's findings confirmed that the roads in the region remain navigable. According to the data, the main obstacles to efficient rural road management include high construction costs (=4.22), delayed releases (=3.91), a lack of funds (=3.79), unfavorable weather (=4.0), and a lack of appropriate equipment (=3.56). Roads are seen as a capital investment under this system, with maintenance given higher priority than new development. To lessen reliance on the national government, the study suggests instituting a culture of effective maintenance, incorporating public-private partnerships into road maintenance works, and encouraging public participation in the provision of basic facilities through various community self-help developments. If rural roads in Nigeria were given the same level of investment as urban ones, people would have easier, faster, and safer access to social services in their communities.

Keyword: Networks of Rural Roads, Unpaved Network, Economic Growth, Road Management, and Road Maintenance

INTRODUCTION

The transportation infrastructure of the world, and the developed economies in particular, relies heavily on rural roads. Because they let people to more easily access social services, they are vital for all types of road users, including residents, tourists, and resource managers. Consequently, SDG 9 places a premium on facilitating physical access by means of the renovation of rural roads; the development of innovative industries, and the expansion of essential infrastructure (UNDP, 2015). In many ways, this is the engine that will propel us toward the other SDGs, such as the elimination of all types of poverty. For this reason, rural roads are crucial to the economic and social growth of not just rural areas, but the entire nation (World Bank Group, 2016). Due to their crucial relevance and large influence on development, rural roads are no longer seen as a part of agricultural policy like they were in the 1980s (World Highways, 2014). This is especially true in Africa, where rural areas are home to more than half of the continent's population and where the majority of nations score poorly on the Rural Access Index (RAI) (Beegle et al., 2016 and Nkomo et al., 2016). More so, studies of women's and men's inability to move freely about rural African villages with limited road access reveal the frustrations and high expenses of life brought on by inadequate road networks (Mukiibi, 2012). This is due to a multitude of interconnected causes, such as political considerations including a preference for new construction over maintenance, low maintenance budgets, a lack of a maintenance culture, weak institutional structures, and inadequate rural road asset management (Burrow, et al., 2016). Over the past two decades, Nigeria's rural road network has expanded significantly because to increased financing for the roads industry and the purchase of new machinery (Odong, 2017). The agriculture, defense, mining, and tourism ministries are only some of the other government organizations that build and maintain roads in remote areas. With the help of these kind of programs, Nigeria hopes to realize her goal of being a middle-income country by 2020 (Government of Nigeria) (NG, 2015). In a country like Nigeria, where the majority of the population resides in rural regions, this designation indicates that locals might have easier access to social services. The aim may not be reached if the rural roads are not maintained properly and the community's transportation needs are not met. The majority of Nigeria's rural roads, however, are not being maintained, and vast swaths of the network are deteriorating. The study's four sub-goals—to (1) investigate the current state of rural road networks in Nigeria; (2) determine the impact of rural road networks on economic development in Nigeria; (3) identify the factors that impede effective rural road networks management in Nigeria; and (4) design a strategy for enhancing rural road networks—all contributed to the study's overarching goal of evaluating rural road networks management as a key driver of economic development in Nigeria.

DESCRIPTION OF THE ISSUE

In a sense, roads may be thought of as metaphorical "arteries" through which the economy flows. Roads are essential to every development plan because they connect farmers to consumers, workers to employers, students to classrooms, and the sick to hospitals (World Bank, 2015). The road network in Nigeria has grown significantly from 78,000 kilometers in 2008 to 144,785 kilometers in 2016 (Odongo, 2017). (MoWT, 2018). There are a number of problems with the quality and use of this road system that make it unsafe to travel on most of the time. For the 2017/18 fiscal year, for instance, UNRA required just N596 billion for road repair, but onlyN267.8 billion was allocated for that purpose. This amounts to funding 45 percent of yearly maintenance needs (MoWT, 2018). Heavy rains in the upcountry, notably in Dansadau, Magami, Yar Galadima, in 2017/18 caused road closures and bridge collapses, according to the research. All of this necessitated quick action from authorities. Additionally, due to transportation delays, metropolitan and city people whose food basket is in rural areas do not obtain fresh food stuffs. Because of this, the national goal may not be realized or may take longer to accomplish than anticipated. If rural roads in all parts of Nigeria were given the same level of

investment in their construction and maintenance, Nigerians would benefit from increased economic opportunity, better health outcomes, and more efficient use of their time.

METHODOLOGY

Dansadau district was utilized as a case study to evaluate the role of rural road networks management in Nigeria's economic growth. Since it is the most effective way to handle both qualitative and quantitative data, a mixed-methods research design was chosen for this study. A population of 181 was used to calculate a sample size of 94 using an internet calculator with a 95% confidence level and a 7% margin of error. A quantitative strategy was utilized, with the use of structured questionnaires, to gather primary data. Some technical elements were evaluated by visual examination, and questionnaires were utilized to collect qualitative data that could not be obtained through quantitative means. At the end of each day spent collecting data in the field, the information was coded and verified for completeness and accuracy before being stored. Following collection, Ms Excel and IBM SPSS statistics version 20 were used to analyze, recode, and enter the data from the filled-out questionnaires into a computer system. Descriptive statistics were calculated and shown in the form of tables, bar graphs, and pie charts using the aforementioned programs. Sought-after conformity was noted across qualitative and physical assessments.

WHAT WE LEARNED AND WHY

The first part of the questionnaire asked respondents to provide basic information such as their gender, level of education, occupation, and length of time living in the study region; this was followed by a more specific question about their experiences managing rural road networks. In order to better comprehend the impact of rural road management on economic growth, it was necessary to gather data on respondents' involvement, expertise, and perceptions in the field of road management. The second part of the paper tried to collect data to support the hypotheses.

Background Data on ParticipantsMales accounted for 64% of the sample while females made up just 36%. Respondents' educational backgrounds varied widely, with 50% holding a bachelor's degree, 34% holding a diploma, and 10% holding certificates of completion or below. About five percent of the workforce has advanced degrees such as a master's or doctorate. The results revealed that the majority of respondents (50%) worked as implementers of traffic management system activities, while the remainder (34%), made up of planners, and (14%), policymakers. Eight male policymakers, nineteen male planners, and thirty male implementers were included in the research of rural road management. Thirty-two female participants were included: five policymakers, twelve planners, and fifteen implementers.

WHERE WE STAND NOW WITH RURAL ROAD SYSTEMS

The first purpose of the research was to analyze the availability, condition, and deterioration rate of the rural road network as it exists at the present time. Distancing oneself from an all-weather road is the gold standard for measuring accessibility (World highways, 2013). If the index is less than 2 kilometers, then the neighborhood has access to the road system. The proximity of a person to several social service facilities, including a hospital, a market, and a trading center, was also considered. All of the country roads that are part of the system were considered in this analysis. There were four grades assigned to the road's condition: good, fair, poor, and bad. Consideration of the defecting period and the primary causes contributing to the road's degradation allowed us to calculate its rate of deterioration. Except for the road network coverage, which was derived from key respondents, data was obtained from ninety individuals. Additionally, 20 kilometers of the road were physically inspected to determine how they held up. Excel was used to provide descriptive findings and SPSS

was used to produce tables from the data that was analyzed. A report of physical inspection was utilized to analyze the results. For the research population, 58% lived within 2 kilometers of the rural road, while 42% lived further away. Additionally, 69% of respondents had access to an educational facility within a radius of less than or equal to 2 kilometers, while 31% were located further away. Finally, 51% of respondents had access to a healthcare facility within 2 kilometers, while 43% were located further away. 58% of the population in the study region had easy access to a country road, whereas 42% resided more than 2 kilometers away. Sixty-two percent (69%) of respondents live within two kilometers (km) of a school, while only thirty-one percent (31%) live further than two km away; fifty-one percent (57%) of respondents live within two km of a health care facility, while only forty-three percent (43%) live further than two km away. The fact that more than half of the respondents lived less than 2 kilometers from a school or health facility suggests that all respondents had access to these community facilities. Table 1 provides data on how easily children can get to a school, while table 2 lists the same information for a medical facility.

Table 1: Average Travel Time from Students' Homes to Their Schools

Distance of respondents to School				
		Frequency	Percent	Cumulative Percent
Closeness of House to Street	≤ 2km	68	75.6	75.6
	>2km	22	24.4	24.4
	Total	90	100.0	100.0

Table 2. How far residents live from the nearest Health Unit

How far people live from a hospital or other medical institution				
		Frequency	Percent	Cumulative Percent
Closeness of House to Street	≤ 2km	55	61	61.1
	>2km	35	39	100.0
	Total	90	100	

Markets and trading centers are hubs where goods and services are bought, sold, and bartered. According to the results, 24 of the 49 respondents live less than 2 kilometers from a rural road network and a market, while the remaining 25 live more than 2 kilometers from a market. Twenty-six out of the forty-one families' residences were more than two kilometers from the nearest road and were more than two kilometers from the nearest markets.

STATE OF THE ROAD
Only 1 in 10 people said their road system was excellent; 57.8 percent said it was just average; 24.4 percent said their roads were in very poor condition; and 5.6 percent said they utilized only the worst routes possible. The majority of respondents (82.2%) agreed that the quality of the road system is somewhere between fair and poor. To suggest that the road system is still passable, but that engineering elements such road form, drainage system, and clearance view are deteriorating or have

disappeared entirely. According to the survey's primary respondents, there are more than 1039.8 kilometers of rural roads in the region of research. There were 193.7 kilometers of tertiary roads, 229.8 kilometers of feeder roads, and 616.8 kilometers of Community Access Roads in the mapped network. Only 56 kilometers (5.4% of the whole) are concrete or asphalt, while the rest 983.8 kilometers (95.6%) are unimproved dirt or gravel. However, the most important responses mentioned another, unsampled system.

THE RATE OF DECAY

Fifty-two percent of respondents put the lifespan of a road between one and two years, while thirty percent said it would decay in six months, thirteen percent put it between three and four years, and only four percent said it would live more than four years. According to data kept by the District Works Department, the majority of feeder roads were remodeled within two years after their initial construction, suggesting a decay time of between two and three years. Heavy rains were cited as the cause of road deterioration by 46% of respondents, inadequate maintenance by 29%, poor soils by 19%, and heavy traffic by just 7%. Erosion, clogged drains, and animals on the road were named as additional problems. According to the key sources, the lack of gravel and the high transport routes prevent the roads from being fully graveled. Based on the results, it is clear that rural road networks enhance people's susceptibility to social enmities. Heavy rains, a lack of maintenance, and the intentional blocking of drainage systems have left these road networks in bad shape. The findings are consistent with those of the World Bank Group (2015), which found that 35,000 kilometers of rural roads in Sub-Saharan Africa are in poor condition; the National Sustainable Development Solutions (2015), which identified a lack of maintenance as the primary cause of those roads' deterioration; and Odongo (2017), who identified heavy rains as the principal factor in road deterioration.

THE ROLE OF RURAL ROAD SYSTEMS IN NIGERIA'S ECONOMIC GROWTH

The second goal was to determine how rural road networks in Nigeria have affected the country's economy. The purpose of this research was to evaluate economic growth as a result of rural road network management. The respondents ranked the influence of rural roads on economic growth during the past decade on a scale from 1 to 5. (1being very low, 2- Low, 3- moderate, 4- high and 5- very high impact). Ninety responses were input into Excel, and then transferred to SPSS for analysis. Data collected from people responsible for implementing the management of the rural road network was used to calculate mean values and standard deviation. The median values were graded from most to least influential to show how the economy is affected. We utilized the standard deviation to measure the dispersion of the answers around the mean. The social and economic benefits of better management of rural road networks were also considered in the research. The study's findings were based on interviews with engineering technical employees who had direct experience with rural road management's effects on economic growth and other social advantages. Some notes were taken and given in the report from the site inspections as well.

Table 3. Indicator of Economic Growth Based on Mean and Standard Deviation

Measuring economic growth indicators	N	Standard Deviation	Mean μ	Ranking
Availability of medical care	45	0.98	4.00	1

Raised living conditions	45	1.01	3.98	2
Agriculture has seen a significant increase in output.	45	1.11	3.89	3
An increase in the fairness of wealth distribution	44	1.08	3.64	4
Heightened Educational Standards	45	1.09	3.62	5
Elevated Standard of Living Thanks to Upgraded Facilities	45	1.16	3.58	6
Growth in Commercial Activity	44	1.37	3.57	7
Urbanization	44	1.33	3.39	8
Rapid increase in the world's population	45	1.14	3.38	9
Improved Tourism	45	1.51	3.11	10
Increased employment	44	1.33	3.11	11
Reduced infant mortality	45	1.24	3.09	12
Providers of technical services to whom they can be accessed	45	1.37	2.93	13
Average mean value			3.48	

Most respondents (67) found that roads had a moderate to very high effect on economic development by evaluating most measures of economic development as moderate to very high, while only a minority (23%) said that roads had a low or very low effect on economic development. Table 3 displays descriptive statistics using mean as the scale of measure, with respondents' perceptions of the impact of various aspects of economic development listed in descending order from "access to medical services" (Mean () = 4.0) to "improved standards of living" (Mean () = 3.98), "increased agricultural production" (Mean () = 3.89), "improved distribution of wealth" (Mean () = 3.64), "increased standard of Indicators of economic growth were seen to be more robust if their mean values were above the thick line marking the mean of means 3.48. The respondents were more likely to agree that road management does, in fact, affect economic growth, as all of the standard deviations are quite near to one.There are other societal advantages to rural road access.Ninety-three percent of respondents said that it is true that roads come with conveniences like the expansion of the electricity grid, the extension of safe piped water, the distribution of schools and medical facilities evenly, and the improvement of all of these, as well as agricultural services like and Operation Wealth Creation (OWC), the expansion of administrative units and their associated services, more investment opportunities, and better security. The research also found that people were buying farm goods from farm gates, collecting centers, and faster transportation.

The local communities benefit since they may sell their goods close to home and devote more time to other growth-promoting endeavors. Poor waste management, such as rubbish being left to fester in drains and on the highway, was seen to be a byproduct of these roadside stalls. Since the packing occurs on the highway, there is also a greater chance of incidents occurring.These findings coincide with World Bank, (2015) indicating that roads are crucial to any growth. It was found that the study's findings were consistent with those of Burgess and Donaldson (2012), who found that investments in

better roads boost agricultural commerce and revenue and lessen the likelihood of famine. Reducing transportation costs has been shown to promote local economic activity, which in turn increases demand for locally produced non-tradable items and income (Ghani et al., 2015; Stoyeygard, 2016). Both Ghani et al. (2015) and Stoyeygard (2016) remarked on the positive impact of rural roads on access to finance, which led to increased investment in productive enterprises.

CHALLENGES TO EFFICIENT MANAGEMENT OF RURAL ROAD NETWORKS

The third purpose of the research was to identify the barriers to efficient management of rural road networks. Maintenance practices in the region were reviewed to see where they fell short and whether any novel approaches should be introduced. Njangu (2015), Porter (2014), and Odongo (2016) and 2017 were utilized to inform the development of the structured questionnaire investigating the elements affecting rural road management. On a scale from 1 (very little impact) to 5 (very significant impact), respondents were asked to assess the degree to which they believed each of these variables impeded effective management of rural road networks. Members of the technical personnel of the UNRA Fort Portal station and the Works Department Dansadau were interviewed. A list and ranking of the factors that impede rural road management was compiled. Additionally, the study aimed to quantify rural road management by examining the planning cycle and the role of local communities. What might be done to improve rural road management was also asked for, with technical staff's input sought. In order to determine the importance of the link between items, the data collected from the questionnaire was entered in Ms excel and imported to SPSS software, where it was analyzed and displayed in the form of descriptive statistics and correlations. The analysis and results of the interviews were reported in the research. This information was utilized to develop a strategy for better managing rural road networks (objective four).

STRATEGIES FOR ROAD ADMINISTRATION

Collaborative efforts, gang systems, mechanized maintenance, periodic maintenance, and rehabilitation were the road management strategies found in the research region. Around 21% of respondents said that they performed periodic maintenance, while 44% noted that they used a combination of routine automated maintenance and manual maintenance (gang systems) to keep the roads in good shape. While normal manual and automated maintenance covered most of the study area plans owing to limited resources, communal/labor based was more typical in the mountainous areas where mechanized equipment cannot readily reach. These results are consistent with those published by NRRDA, (2015), which said that the type of technology used is determined by the specifics of the job at hand as well as the local labor and technological resource markets. That the best answer is frequently found when human and mechanical labor are combined. O'Neil (2011) suggested that engineers evaluate the possibilities in their immediate area by drawing on their knowledge and experience.It's common for rural roads to have unimproved, dirt paths. Cotton black soils were found to be used in the construction of roads, which made for a dusty ride in the dry season and a slippery, impassable one in the wet. This soil type is particularly prone to soil erosion under wet and windy conditions, and also during periods of high foot activity. It is also mentioned that if the road is not surfaced with gravel, its rate of deterioration is extremely rapid. Since gravel is in short supply in the research area, this poses a serious problem (Kabarole DLG Roads and Engineering reports, 2016; 2017 and 2018).

LIMITING FACTORS IN THE MANAGEMENT OF RURAL ROAD NETWORKS

The averages and standard deviations of the factors preventing efficient road management are shown in Table 4. Those factors whose means were higher than the thick line's median was deemed most important and had the greatest bearing on efficient management of rural road networks. High construction costs (=4.22) were seen as the main barrier to successful rural road networks, whereas seasonal unskilled labor (=2.48, S. D=1.298) was seen as a minor barrier. A similar conclusion was reached by Nallatginga (2017) and the National Rural Roads Development Authority (NRRDA) in 2015: high construction and maintenance costs are the primary impediment to effectively managing the rural road network. Rains caused mudslides, embankment washout, pavement submergence, bridge and culvert collapse, and other associated damages, as confirmed by Odongo, (2017), and as seen in the research with a mean =4. Oxfam, (2013) found the same thing, noticing that severe weather led to weather-related crises on rural roadways.Construction materials (=3.49) and inadequate equipment (=3.56) were also identified as key barriers to rural road management, corroborated by findings from a previous research by Njangu, (2015).While 35% of the roads being built are being funded by NG, findings also demonstrated a low rate of mismanagement of money of mean =2.80, as represented in President Yoweri Kaguta Museveni's (2018) national address. The revenue from the excise duty on fuel was channeled to the consolidated fund and apportioned through the normal budget process, according to Mukiibi, (2012), reducing the percentage that would be released if the collection was done under Road Fund, confirming the low-level mismanagement of funds.

Table 4: Reactions to factors impeding the management of rural road networks

Factors impeding the management of rural road networks	Standard. Deviation	Mean μ	Ranking
Expensive building costs	1.074	4.22	1
Bad weather	1.234	4.00	2
Money not being released on time	1.151	3.91	3
Insufficient funds	1.457	3.79	4
Poorly designed machinery	1.194	3.56	5
Lack of materials	1.343	3.49	6
Price fluctuation	1.415	3.46	7
Terrain on a global scale	1.308	3.46	8
Impact on politics	1.466	3.39	9
Conditional fund	1.436	3.27	10
Faulty building work	1.376	3.06	11
Because of insufficient technology	1.410	3.03	12
Institutional policy	1.259	2.99	13
Poor planning	1.364	2.84	12
Expenditures that were badly handled	1.567	2.80	15
Due to a lack of available technical staff	1.413	2.57	16
temporary work for the unskilled	1.298	2.48	17
Average mean score		3.31	

District records showed that the study area had 80% of the Works Department structure positions filled with a substantive District Engineer, implying that there were minimal issues of human resource gaps

compared to other districts in Nigeria. This is also reflected in the study where absence of technical personnel and seasonal unskilled labour affects rural road network management ranked the least (μ=2.57, S. D=1.413 and μ=2.48, S. D=1.298 respectively) which results were much lower than the mean value of 3.31. Findings are contrary to Njangu, (2015) findings which indicate limited skilled labour as a major constraint in rural road management and NSDS, (2015) report that indicated lack of engineers as the main reason for the poor state of all types of roads. The study's findings, however, suggest that this obstacle poses little of a threat.A Proposed Methodology for Enhanced Management of Rural Road NetworksThose factors in Table 4 with ratings higher than the average of 3.31 inspired the development of the approach depicted in Figure 2. These are high construction cost, bad weather, and delayed release of funds, insufficient funding, and inadequate equipment, lack of materials, price fluctuation, geographical terrain and political influence.

ADMINISTRATION OF RURAL ROAD SYSTEMS

While developing this methodology for improving rural road networks management, three operational levels were considered; Strategic, Network and Project. At strategic level, the missions and vision statement are developed aimed at connectivity of the rural area to the social centers and main roads. At tactical (network) level, the mission and vision are translated into objectives. It is also at this level that the rural road administration is developed to undertaken a self- assessment of the organization structural capacity and performance. Development and performance of road administrations should be dependent of: the technical ability to undertake engineering activities, the institutional, organizational and managerial arrangements, finance and human resources and external factors which the organization has no direct control over, but which may constrain the way in which the organization operates. While at project level, standards and interventions are selected to meet the needs of local rural road authorities. The agents' ability to make sustainable improvements to road management is linked to external factors that need to be addressed before institutional arrangements are dealt with and later technical capability is developed.

SELLING HIGHWAYS FOR PROFIT

This research suggests commercializing rural road management, which is treating rural roads like an asset or a company rather than a public good. The well-known Asset Management Approach is also connected to this technique. Since most road expenditures are funded by general tax income, road building, maintenance, and financing are not market-driven, and there is no defined price for roads. With strict implementation of the Nigeria Road Fund Act, 2008, roads can be opened to private enterprise. Because of this, the transportation department will be more likely to streamline operations and make better use of available resources. In order to improve management, get public support for road financing, and keep expenditure in check, it is necessary to commercialize roads and assign responsibilities that establish ownership through road users' engagement in the administration of the roads.

ENVIRONMENTALLY SOUND ROAD SYSTEM

The only way to create a sustainable road network is to get all of the roads on the list into good enough shape so they can be maintained, and then to control the costs of maintaining those roads within their means by increasing the efficiency with which rural road networks are managed and ensuring a steady supply of sufficient funding.In order to accomplish this, a detailed record of the existing infrastructures will be compiled, including their current states, collected data, and evaluated assets. This evaluation will reveal important historical information, such as the original cost, year of construction, materials used, and design for reconstruction or repair. The value of alternative distributions of the overhead cost

should be evaluated with input from local decision makers. Political influence, misuse of funding, and shoddy planning and construction may all be reduced if all parties involved in road maintenance are consulted and given a voice in the process.

INCLUDE THE COST OF ROAD MANAGEMENT.

By prioritizing roads based on their condition data, annual road works expenditure can be developed and maintenance costs for individual road segments can be estimated. Engineers will use collected data and their expertise to make decisions and follow-up activities to manage the situation with the available funds, which are less than the required.

HIGHWAYS THAT CAN AND CANNOT BE MAINTAINED

Prioritization is done by analyzing the cost of maintenance, the type of maintenance required, the number of people the road serves, and the route's intended function. Maintainable if and only if preventive actions can be taken; otherwise, unmaintainable. Plans for managing rural road networks are created by rating individual road segments in terms of their relative cost to ensure that they remain within the set budget.

TIME MANAGEMENT FOR THE SHORT AND LONG TERM

Long-term plans should account for things like rehabilitation, upgrades, and new constructions, while short-term plans should focus on things like regular and periodic maintenance. The maintenance plan is the foundation upon which the yearly maintenance plan and budget are built, as well as the blueprint upon which the works themselves are carried out. To bring the un-maintainable state under control, various measures, such as the implementation of Public Private Partnership (PPP) and community self-management, should be taken.

CONCLUTION

The majority of respondents were able to reach social and economic services, suggesting that Nigeria's rural road networks are in usable condition. Furthermore, rural roads degrade due to frequent rainfall, poor soils, and a lack of upkeep. According to the findings, proper management of rural roads has a major bearing on the expansion of utilities like electricity and water, as well as the enhancement of service delivery. There were a variety of obstacles to efficient administration of road networks. Factors like as adverse weather, lack of finance, delayed releases, inadequate equipment, scarcity of materials, price fluctuations, physical topography, and political influence all provide significant challenges to the efficient administration of road networks. Some of the causes include improper political meddling, financial mismanagement, and corruption. There has to be a strategy in place to deal with the varying degrees of degradation and the associated expenditures. Initially, focus should be placed primarily on roads that can be kept in good shape, but eventually, the entire core network should be brought up to par.

RECOMMENDATIONS

The key to successful rural road management is integrating the road's users in all phases of development, from planning and design through upgrades, rehabilitation, and maintenance. This will facilitate the tracking and reporting of road problems. Constant education and awareness-raising campaigns about safe driving and traffic management are thus essential.According to the research, wet weather combined with insufficient upkeep is the leading cause of road damage. The study author proposes the following;A culture of reliable upkeep. Set up maintenance units inside communities responsible for rural road maintenance to guarantee existing roads are kept in a drivable state. Units

dedicated to maintenance will tend to things like de-silting and opening drainage, clearing vegetation, cleaning culverts and bridges, and the like.For example, (ii) a public-private partnership program is another option for sustaining rural road repair. Considering the low ratings given to seasonal unskilled labor and the high ratings given to insufficient equipment, the study suggests that road repair performed by hand may be promoted.To lessen reliance on the central government, (iii) it is important to promote citizen involvement in the provision of essential services through various forms of community self-help development.

The study found that decent roads contributed to economic growth, but that only good roads allowed for long-term growth. The majority of rural roads lie within the purview of local governments, thus there is a pressing need to enhance finance for the administration of these networks and to educate these governments on the significance of this reality.

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