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# Critical factors in road infrastructure development in Osun state, south western Nigeria

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## Abstract

Road infrastructure has a very high economic impact on the rural/urban integration especially with the creation of Osun State in 1992. The correlation between road infrastructure and economic development has been well established in literature. This study examined road infrastructure development in Osun State, South-western Nigeria between 1999 and 2008. Structured questionnaire administered on 74 construction professionals and 32 financial administrators with official cadre ranging between principal and director in the public service of the State provided quantitative data for the study. In addition, a field survey of (17) road projects budgeted for execution in the State during this period was carried out. Data obtained were analyzed using percentage and relative significance index. The result of the study indicated poor implementation incidence of road projects in the State which is attributed to funding and coordination issues. Findings from the study provide information for rethinking budgeting for road infrastructure development in developing economy where road infrastructure financing depends on public funding.

**Keywords:** Infrastructure, Road, Budgetary allocation, Implementation, Development

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## 1. Introduction

Road infrastructure development in the South-western Nigeria witnessed significant growth during the defunct Western region government. The total road network of Federal highways in the region as at 1951 was 4,161.06 km. In the present, the roads were only in fairly good condition with relatively low expansion and rehabilitation to the road network (Central Bank of Nigeria, 2003). The deplorable condition of the roads, the dependence as the major means of transportation and the socio-economic importance of roads in the region have resulted in greater concern in the recent time by the stakeholders (public, policy makers and researchers) on the need for improvement. A factor which could have contributed to non-sustainability of road development in the region is that road infrastructure procurement has remained a traditionally public task through public budgetary financing (Opawole et al., 2011). The increasing advocacies on the shift from the traditional budgetary financing approach to public-private partnership (PPP) financing initiative for road infrastructure development, especially concession, has only attracted less significant private sector participation. Reason for this may be that framework for alternative financing initiatives in Nigeria is not yet available.

While road development thus depends substantially on budgetary financing in the region, most roads projects undertaken through public budgetary allocations seem to be poorly implemented with the result that they are partially completed, suspended or abandoned. According to Opawole et al. (2011) only 45.3% of the road projects covered by public budgets are implemented in Nigeria. This phenomenon, though has long been worrisome, seems traceable to deficiency in budgetary allocation to cope with the desirable level of road constructions, lack of proper implementation of the government budget on road infrastructure, or lack of data on these to aid policy making and implementation, or some other factors. This phenomenon thus demands empirical investigation.

## 2. Overview of issues in road infrastructure development in Nigeria

The significant issues affecting infrastructure development in Nigeria related to procurement process and funding (Oyegoke, 2005; Oforeh, 2006). A survey conducted in the year 2000 by Wahab (2000) on infrastructure development revealed that before 1999, Nigeria was losing an average of \$265 million annually through various kinds of manipulation of the procurement procedure in award and execution of public contracts. These manipulations were in the forms of inflation of contract costs, use of contract system to divert public funds to private pockets, award of contracts for non-existent projects, use of inexperienced contractors, over-invoicing, influence peddling, award of contracts to friends, relations and family members, and award of contacts without adequate planning and budgetary provisions. The findings from the study supported by Babalola et al. (2010) identified these abuses as major causes of abandonment of public projects and by implication a major threat to sustainable infrastructure development in Nigeria. According to Oforeh (2006), another major problem of infrastructure development in Nigeria is attributed to policy formulation on infrastructure development being undertaking with minimum input of the construction professionals at macro-economic level.

Also, public investment in infrastructure development in Nigeria has been criticized to be inadequate (Oforeh, 2006). This assertion supported by growing bodies of evidence substantiating the importance of public investment in infrastructure for development is identified as an accumulation of evidence that infrastructure investment in developing countries is suboptimal (Susan et al., 1996). Another problem of road infrastructure sustainability in Nigeria could be traced to poor budget implementation. According to Olufidipe (2003), budget implementation in Nigeria is identified as low, exemplified by huge budget deficits and poor physical performance. Olufidipe (2006) identified significant number of projects contained in the annual budgets of government at all levels in Nigeria as either partly implemented or not implemented at all, thus resulting in wide divergence and persistent disparity between the actual and projected budget figure.

Moreover, sensitive stages, especially, identification, definition, planning, and budgeting, for infrastructure sector at macro-level have also been criticized to be dominated by the executive arm of the government with minimum input of the construction professionals (Mogbo, 2001; Opawole et al., 2012). Oforeh (2006) asserted that the policy makers who plan for infrastructure development in both the national and state budgets lack adequate knowledge of the complex technological processes of construction and the cost characteristics of infrastructure constructions. These factors could have been critical to poor road infrastructure sustainability in Nigeria.

### 3. Methodology

Osun State located in the South-western region of Nigeria, was considered appropriate for this study. This is because road infrastructure development in the State depends substantially on budgetary financing (Opawole et al., 2011). A total of 72 (out of 106 copies administered) properly completed questionnaire by 6 architects, 4 quantity surveyor, 6 town planner, 5 estate surveyors, 4 builders, 21 engineers (mechanical, civil, and electrical) and 26 economists/accountants representing a response rate of 68% provided quantitative data for the study. Data analysis was done through, mean, percentage and relative significance index. The 17 road projects covered in the field survey were selected from six (6) local governments in the three (3) senatorial zones of the State. The selections of the projects were on the basis that the roads projects were adequately defined in term of either location or cost or both in the ten editions of Osun State budget between 1999 and 2008. Two local governments were randomly selected from each of the three senatorial zones. These include Oshogbo and Olorunda (Osun Central); Egbedore and Ede South (Osun West); and Ife Central and Ilesha West (Osun East) local governments.

### 4. Data analysis

The statistical tools used for data analysis were percentage and relative significance index and the linear trend graph. The formula for the relative significance index (RSI) is given as:

$$RII = \frac{\sum^5 N_i K_i}{NR_h}$$

where,  $N_i$  = number of respondents;  $K_i$  = 1-5 on the likert scale;  $N$  = total number of questionnaire collected and  $R_h$  = highest value in ranking. A rating scale of 1 to 5 was adopted with 1 representing the lowest level and 5 representing the highest level.

#### 4.1. Demographic characteristics of the respondents

Table 1 shows the percentage representation of the respondents. Respondents that were architects represents 8.3%, 8.3% were town planners, 5.6% were builders, 5.6% were quantity surveyors, 29.2% were engineers, 6.9% were estate surveyors and 36.1% were economists/accountants. This result expressed adequate opinion of the infrastructure stakeholders as both the financial administrators and construction professional were adequately represented.

In Table 2, 26.4% of the respondents were holders of Master of Science or Masters of Technology; 44.5% were holders of Bachelor of Science or Bachelor of Technology; 18.1% obtained Post Graduate Diploma (PGD); 9.7% held Higher National Diploma (HND); and 1.4% held Doctor of Philosophy.

Table 1. Type of Respondents

<b>Respondents</b>	<b>Number administered</b>	<b>Number collected</b>	<b>Percentage (%)</b>
Architects	8	6	8.3
Town Planners	7	6	8.3
Builders	8	4	5.6
Quantity Surveyors	4	4	5.6
Engineers	40	21	29.2
Estate Surveyors	7	5	6.9
Accountants/Economists	32	26	36.1
<b>Total</b>	<b>106</b>	<b>72</b>	<b>100.0</b>

The result shows that all the respondents possess the minimum registration qualification of their various professional bodies in Nigeria and are of adequate academic training to supply reliable data for this study.

Table 3 shows the working experience of the respondents. The mean year of working experience was estimated at 14 years, which represents the working experience of about 52% of the respondents. With this average working experience, respondents were deemed experienced enough to supply reliable data for this study.

Table 2. Academic Qualification of the Respondents

Qualification	Number of the Respondents	Percentage (%)
Ph.D	1	1.4
M.Sc/M.Tech	19	26.4
B.Sc/B.Tech.	32	44.4
PGD (Post Graduate Diploma)	13	18.1
HND (Higher National Diploma)	7	9.7
<b>Total</b>	<b>72</b>	<b>100</b>

Table 3. Working Experience of Respondents

Years	Midpoint ( X)	Frequency (F)	FX
0-5	2.5	7	17.5
5-10	7.5	10	75.0
1-15	13	4	52.0
16-20	18	13	234.0
20- 25	22.5	27	607.5
Above 26	26	11	286
<b>Total</b>		<b>72</b>	<b>1272</b>

Mean = 14

The professional qualification of the respondents is shown in Table 4. Sixty-seven (67) respondents representing 93.1% of the total respondents were either associate or corporate members of their various professional bodies. The result shows that the respondents are either associate or corporate members of the various professional bodies or possess some other professional qualification. This shows that the respondents are in the position to supply reliable data for this research.

Table 4. Professional qualification of the respondents

Professionals	Number	Percentage (%)
Nigerian Institute of Architects (NIA)	4	5.6
Nigerian Institute of Town Planners (TPL)	5	6.9
Nigerian Institute of Building (NIOB)	4	5.6
Nigerian Institute of Quantity Surveyors (NIQS)	4	5.6
Nigerian Society of Engineers (NSE)	19	26.4
Nigerian Institute of Estate Valuers and Surveyors (NIEVS)	5	6.9
Institute of Chartered Accountant (ICAN)/Association of National Accountants of Nigeria (ANAN)	25	34.7
Others	1	1.4
Non Professionally Qualified (NPQ)	5	6.9
<b>Total</b>	<b>72</b>	<b>100</b>

Table 5. State of roads in Osun state

Availability and Condition	Federal Road	State Road	Local Road
	TWF	TWF	TWF
Excellent	5.0	10.0	0.0
Good	24.0	68.0	8.0
Fair	138.0	117.0	87.0
Poor	34.0	26.0	60.0
Very Poor	2.0	1.0	11.0
<b>Mean</b>	<b>2.82</b>	<b>3.08</b>	<b>2.31</b>
<b>Remark</b>	<b>Fair</b>	<b>Fair</b>	<b>Poor</b>

TWF = Total Weighted Value

Source: Author's Field Survey (2010)

## 5. Results and dsicussion

Table 5 shows the assessment of the condition of Federal, State, and Local roads in the State. The assessment was based on the scale of 5 = excellent, 4 = good, 3 = fair, 2 = poor, and 1 = very poor. The interpretation of the scale as adopted from Central Bank of Nigeria (2003) report on the spot assessment of the state of roads in Nigeria is shown in Table 6. The mean rating was highest in the State road which indicates fair on the scale of assessment, while Federal and Local roads were rated 2.82 and 2.31 which indicate fair and poor respectively. This result revealed that the budgetary allocations to road development by the governments is either inadequate or the budget allocations are poorly implemented. The result also provides basis for assessment of road condition. Thus roads in excellent, good, fair, poor and very poor condition could be assessed with 4.5-5.0, 3.5-4.0, 2.5-3.0, 1.5-2.4 and 1.0-1.4 indices respectively on a scale of 0-5.

Table 6. Road Assessment Index

Condition Assessment	Characteristics as adopted from Central Bank of Nigeria (2003) Report	Assessment Index Range as Used in the Survey Questionnaire
Excellent	Free of potholes, peel offs, and cracks.	4.5-5.0
Good	Very few pot holes and peel offs	3.5-4.0
Fair	Some potholes and peel-offs that could be refilled to make traffic flow better.	2.5-3.0
Poor	Potholes and peel offs at almost every kilometre, the shoulder of the road had eroded off.	1.5-2.4
Very Poor	Many potholes with gullies and ditches, major cracks (longitudinal and transverse), depressions, broken down bridges, the shoulder, the road had eroded off.	1.0-1.4

Source: Author's Survey (2010)

Table 7 shows the profile of budgetary allocations for road projects in the State between 1999 and 2008. The mean budget allocation was established as N2,458.8m. This represents 23.7% and 10.7% of the capital budget and total budget respectively. The statistical detail of the trend of budget allocations is presented in Figure 1.

Table 7. Trend of Budgetary Allocation for Road Projects in Osun State (N, Million)

Year	Total Budget	Capital Project	Budget Allocation to Road Infrastructure	Budget Allocation as % of Capital Budget (%)	Budget Allocation as % of Total Budget (%)
1999	4,790.00	1,530.00	405.00	26.44	8.46
2000	11,820.00	6,700.00	1,060.00	15.84	8.97
2001	20,480.00	12,040.00	3,500	29.02	17.09
2002	18,870.00	10,710.00	2,430	22.72	12.88
2003	14,530.00	4,830.00	609.00	12.62	4.19
2004	18,910.00	6,910.00	724.00	10.48	3.83
2005	25,220.00	11,630.00	3,930	33.81	15.58
2006	29,050.00	13,500.00	4,170	30.86	14.35
2007	34,770.00	17,790.00	3,960	22.23	11.39
2008	38,010.00	16,310.00	3,800	23.30	10.00

1\$ = N152.00 (As at October, 2011)

Source: Osun State Budget Estimate (1999-2008 Editions)

The trend of budget allocation for road projects between 1999 and 2008 is as shown in Figure 1. The profile of the graph of allocation versus year revealed a gradual increase of the allocation from N405m in 1999 to N3,500m in 2001. This progressively declined to N609m in 2003. The upward increase was restored in 2003 and this continued till 2006. The upward trend was, however, reversed in 2006 and steadily declined to 3,800m in 2008. The graph on the overall produced the best fit line defined by co-linearity coefficient of  $R^2 = 0.459$  which indicate a poor statistical significance among the budgetary allocations over the ten years. The patterns of the budgetary allocations as defined by  $R^2 = 0.459$  suggests absence of sound economic rational in the budgetary allocation procedure. This invariably suggests absence of macro-economic framework for road development or poor commitment of government to road projects in the State. This result reveals that if these trends continue unabated, the state may experience high profile of road infrastructure decay. This may

result in poor rural-urban integration in the State and thus impact negatively on the internal economic activities in the State.

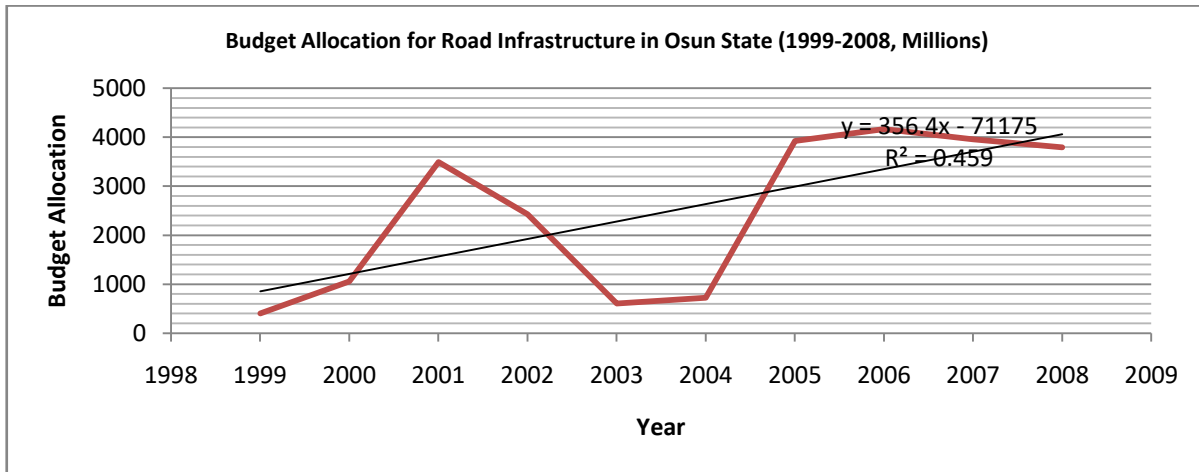


Figure 1. Trend of Budgetary Allocation for Road Infrastructure in Osun State (N, Million)

Table 8 shows the information on the seventeen (17) road projects budgeted for execution between 1999 and 2008 in the State. The results of the field survey are shown in Table 8. Among these projects, 58.82% were not completed or abandoned or suspended; 29.41% were completed and 11.76% were still under construction. Among those that were completed, they were either completed at some years different from the budget year (expected completion date). An important issue that was noted in the patterns of budgetary allocations for the projects was inconsistent approach of the allocations. This was much evident in the case of Oshogbo-Iwo road project. In the situation, the budget allocations for the project were N150m in 2000, N210m in 2002, N50m in 2003, N200m in 2005, N22m in 2006, N45m in 2007 and N70m 2008. This been the situation, the road projects was still yet to be constructed at the time of the field survey.

Two inferences were drawn from these results which are critical to implementation of public financed road projects in the State. Either the government lacks genuine political will to execute the projects budgeted for or the budgetary allocations for the projects are not subjected to holistic technical and cost evaluation considering for example, allocations in this pattern for same project. A serious methodological evaluation of the cost implication of the project would be expected to reveal related costs increasing across the years in proportion to only the inflationary trend in the country. In summary, the budgeting process for road infrastructure development in Nigeria indicate that majority of projects budgeted for execution lack serious technical evaluation and cost assessment which is often reflected in the patterns of the budget allocation to the projects.



Table 8. Implementation of Road Projects Budgeted for Execution Between 1999-2008

Title of Project	Location	Local Govt. Area	Budget Year (s)	Budget Estimate	Comm. Year	Discussion/Remark
Construction of Ede (Oke-Gada)-Awo-Iragberi-Ejigbo road	Ede	Ede North	2005 2006	300m 350m	2005 2006	The road was started in 2005 but was not yet completed. The road is yet to receive attention since then and is presently in state of disrepair
Dualisation of Okefia-West pass	Osogbo	Osogbo	2004 2006	140m 18m	2004 2006	The road was completed in 2006
Rehabilitation of Osogbo-Iwo Road	Osogbo	Egbedore	2000 2002 2003 2005 2006 2007 2008	150m 210m 50m 200m 22m 45m 70m	2000	The road is in acute state of disrepair and work is yet to continue on the road despite fact that it has reoccurred in seven editions of budget
Rehabilitation of Ajebandele road	Ile-Ife	Ife Central	2006	7m	2006	It was constructed in 2008
Rehabilitation of Ede-Alajue-Aminwojo-Osu road	Ede	Ede North	2006 2007 2008	205.5m 150m 250m	2007	The rehabilitation work was partly constructed to Aato village between Awo and Iragberi town. The rehabilitated part is back to state of disrepair.
Dualisation of Osogbo Orita-Olaiya-Akoda road	Osogbo	Olorunda	2005 2006	1,000m 660m	2005 2006	Construction still continues but the project was expected to be completed in 2006.
Rehabilitation of Akoda-Ede-Awo-Ejigbo Road	Ede	Ede North	2002 2003	30m 10m		Completed but the road is back to state of disrepair.
Construction of Osogbo-Iragbiji road	Osogbo	Osogbo	2003	10m	2004	Commenced. Earthwork and culvert completed. The earthwork has, however, been washed by erosion
Ilesa-Eti-Oni-Faforiji Ondo Road State Boundary	Ilesa	Ilesa West	2002 2003 2008	100m 20m 80m	2002 2003 2008	Not yet constructed

Source: Authors' Field Survey (2010)

Table 8. Implementation of Road Projects Budgeted for Execution Between 1999-2008 (Cont'd)

Title of Project	Location	Local Govt. Area	Budget Year(s)	Budget Estimate	Comm. Year	Discussion/Remark
Ife-Famia-Ajebamidele-Ashipa-Edun-Abon Road	Ile-Ife	Ife Central	2002	50m	2003	Completed but back to state of disrepair
Ilesha-Eti Oni	Ilesa	Ilesa West	2003	20m	2003	Not yet constructed
Faforiji(Ondo State Boundary)			2006	100m	2006	
Ife-Famia-Akinlalu-Ashipa-Edunabo Road	Ile-Ife	Ife Central	2003	10m	2009	Not yet completed and was not extended through Ashipa
Igbona-Oke Onitea – West Bye-Pass Road Junction, Osogbo,	Osogbo	Olorunda	2005	60m	2005	Completed in 2009
			2007	6m	2007	
			2008	10m	2008	
Osogbo Ring Road Phase II	Osogbo	Olorunda	2005	466m	2005	Started but has been suspended
			2008	50m	2008	
Awo-Iwoye-Ogbaagbo-Osogbo/Iwo Road Junction	Awo	Egbedore	2008	60m	2008	Commenced but not yet completed
Akoda-Ede-Awo-Ejigbo, road	Ede	Ede North	2003	10m	2003	Completed but back to state of disrepair
Dualization of Osogbo-Akoda road	Osogbo	Olorunda	2006	660m	2006	Construction still continues. The project was expected to be completed in 2006.
			2007	500m	2006	

Comm. = commencement

Source: Authors' Field Survey (2010)

Table 9. Summary of Implementation of Road Projects in Osun State

Projects	Total Number	Completed		Not constructed/Suspended/Abandoned		Under construction	
		Number	%	Number	%	Number	%
Road	17	5	29.41	10	58.82	2	11.76

Source: Authors' Field Survey (2010)

This presumably could have been significant to implementation of the projects. It is thus imperative that a more practical approach to budgeting for road infrastructure should be considered. These results thus indicate that a greater number of road projects budgeted for execution often failed from the pre-budgetary stage where projects are under-evaluated or provide vehicle for corruption where allocations are made on non-technical evaluation and the projects could not be implemented.

Table 10 shows the factors influencing road infrastructure development in Osun State. The relative significance indices (RSI) obtained for the factors ranges between 0.588-0.792 which indicate that all the factors were significant. In the case of policy issues, over dependence of road development on public financing ranked highest with RSI of 0.792. This was closely followed by dominance of the political executive opinion in budgetary preparation process for road infrastructure sector, excessive bureaucracy in project implementation process and lack of clear long-term sector programme for road infrastructure development with respective indices of 0.716, 0.684 and 0.676. Absence of specific ministry/agency for road infrastructure development and absence of clear monitoring system for road infrastructure development were ranked lower with RSI of 0.0.634 and 0.588 respectively. Funding/financing issues had non-revenue generating nature of road projects with RSI of 0.770, huge funding profile/requirement of road projects and inadequate funding of maintenance of infrastructure projects both with the respective RSI of 0.764 as the factors with the highest ranking. Factors with the least ranking are absence of legal framework for commercialization or privatization of road infrastructure projects to take advantage of their revenue generation potential and long gestation (pay back) period of most road infrastructure projects with RSI of 0.072 and 0.712 respectively.

On the overall, over dependence of road development on public financing ranked highest with RSI of 0.792, non-revenue generating nature of road projects with RSI of 0.770, huge funding profile/requirement of road projects with index of 0.764 and low investment base (budgetary allocation) by government for road development schemes/projects with index of 0.726. On the other hand, factors with the least ranking were those of absence of specific ministry/agency saddled with role of road infrastructure development (0.588), absence of clear monitoring system for road infrastructure development with RSI of 0.634, absence of database system for road infrastructure development (0.644) and non-availability of reliable data for road infrastructure planning and supply by government (0.652).

These results showed that the factors that were critical to road infrastructure development were substantially funding/financing issue, that is, sole dependence of road infrastructure development on budgetary financing, non-revenue generating nature of road projects, huge funding profile/requirement of road projects and low investment base (budgetary allocation) by government for road development schemes/projects. This, therefore, presupposes the need for improved budgetary allocations for road development, adoption of alternative financing initiative and establishment of commercial and legal framework to take the advantage of the revenue generating potentials of some road projects. This would not only facilitate better development, but also provides attraction for the private sector participation in road infrastructure development in the State.

Table 10. Factors Affecting Road Infrastructure Development in Osun State

Factors	5	4	3	2	1	TWV	RSI	R	Overall Rank
<b>Policy Issues</b>									
Over dependence of road development on public financing	31	18	15	5	3	285.00	0.792	1	1
Lack of clear long-term sector programme for road infrastructure development	12	22	25	7	6	243.00	0.676	4	10
Absence of specific ministry/agency saddled with role of road infrastructure development	6	19	20	19	8	212.00	0.588	8	14
Non-availability of reliable data for road infrastructure planning and supply by government	10	22	23	11	6	235.00	0.652	5	11
Absence of database system for road infrastructure development	11	22	17	16	6	232.00	0.644	6	12
Absence of clear monitoring system for road infrastructure development	9	17	26	17	3	228.00	0.634	7	13
Dominance of the political executive opinion in budgetary preparation for road infrastructure sector	15	25	20	11	1	258.00	0.716	2	7
Excessive bureaucracy in project implementation process	16	17	23	13	3	246.00	0.684	3	9
<b>Funding/Financing Issues</b>									
Huge funding profile/requirement of road projects	25	20	18	7	2	275.00	0.764	2	3
Low investment base (budgetary allocation) by government for road development schemes/projects	19	21	19	12	1	261.00	0.726	4	5
Long gestation (pay back) period of most road infrastructure projects	16	23	25	4	4	259.00	0.720	5	6
Inadequate funding of maintenance of infrastructure projects	24	22	16	9	1	275.00	0.764	2	3
Non-revenue generating nature of road projects	24	27	10	8	3	277.00	0.770	1	2
Absence of legal framework for commercialization or privatization of road infrastructure projects to take advantage of their revenue generation potential	17	22	20	10	3	256.00	0.712	6	8

*Source: Author's Field Survey (2010)*

In the case of policy issues, dominance of the political executives' opinion in the budgeting process for road infrastructure development was identified as most significant that should be looked into. Though this

problem had been asserted by Oforeh (2006) with respect to infrastructural development in Nigeria, it seems no attention had been given to the issue. This was established as an important issue with respect to budgeting process for road infrastructure development. This position suggests that budgeting for road development had not received adequate construction professionals (engineers and quantity surveyors among others) inputs with respect to pre-budgetary technical and cost evaluation and possibility of connectivity between the projects and budgetary allocations, which in most cases may be unrealistic, could have also accounted for poor level implementation of road projects in the State.

Moreover, this result identified the need for curtailing undue bureaucratic process in the implementation process of the road projects and the need for government to develop a long-term road development programme that would enhance development continuity should there be a change in government, a factor that has often lead to abandonment of public projects in Nigeria. The fact that absence of specific ministry/agency saddled with role of road infrastructure development and absence of clear monitoring system for road infrastructure development were indicated as less significant suggests that existing Ministry of Works and Transportation (MWT) saddled with this role is suitable for road infrastructure development in the State. This has again been strengthened by the establishment of Ministry of Infrastructure in the State by the present administration.

## **6. Conclusion**

This study revealed that the mean budget allocation for road infrastructural development in Osun State as 23.7% and 10.7% of the capital budget and total budget respectively. The study revealed budgetary allocations for road infrastructure development as lacking holistic technical evaluation and cost assessment. This was reflected in poor connectivity between road projects budgeted for execution and the budgetary allocations and is significant to poor implementation of road projects in the State. Moreover the study shows the factors that are critical to road infrastructure development as over dependence of road development on public financing, non-revenue generating nature of road projects, huge funding profile/requirement of road projects and low investment base (budgetary allocation) by government for road development schemes/projects, which are substantially funding issue. The study suggests holistic technical evaluation and cost assessment of road projects before inclusion into annual budgets and the adoption of alternative financing initiative as well as development of commercial and legal framework to take the advantage of the revenue generating potentials of some road projects. This would not only facilitate better funding and implementation of road projects but also provides attraction for the private sector participation in road infrastructure development in the State.

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