EVALUATING THE ROLES OF QUANTITY SURVEYORS IN SUSTAINABLE INFRASTRUCTURAL DEVELOPMENT IN NIGERIA

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Abstract

The role of quantity surveyors in sustainable infrastructural development in Nigeria is crucial, yet often overlooked. This study evaluates the contributions of quantity surveyors in promoting sustainability in infrastructural projects. A total of seventy- six (76) questionnaires were administered to Quantity Surveyors in Makurdi, Benue State, Nigeria and sixty-two (62) were returned, representing about 93.94%. A relative importance index was used to analyse the data ranking them according to importance. Descriptive statistical data analysis was used to analyze data collected herein. The results from the analysis revealed that Quantity Surveyors play a significant role in sustainability through cost management, value engineering, and life cycle costing. However, challenges such as lack of awareness, inadequate training, and limited regulatory frameworks hinder their effectiveness. The study recommends increased awareness, training, and regulatory support to enhance quantity surveyors' contributions to sustainable infrastructural development in Benue State. The

findings of this study are very resourceful as it informed policymakers, practitioners, and educators on the importance of quantity surveyors in promoting sustainability in infrastructural projects. The study concluded that Quantity Surveyors have vital roles in integrating sustainability to building and other construction project during design and construction process to deliver successful sustainable infrastructures. This implies that Quantity Surveyor can facilitate the changes required for a sustainable infrastructure due to their specific requirement.

Key words: Evaluation, Quantity Surveyor, Roles, Sustainable infrastructure, ppp and Development.

Introduction

Sustainable infrastructural projects are dated as far back as the 1600s (Grimsey and Lewis, 2004). Esther et al (2009) in their research on Perspective on Procuring Public Works Project stated that early types of public infrastructure projects that involved the private sector include the turnpikes built in the UK and the USA, and also the water facilities that the French delivered through the concession approach. It was only until the introduction of Private Finance Initiative during the 1990s in the UK, that the approach became recognized worldwide as an effective way of delivering value for money public infrastructure and services. Public-Private Partnerships are arrangements where the public and private sectors both bring their complementary skills to a project, with varying levels of involvement and responsibility, for the purpose of providing public services or projects (Yongjian, Xinbo, Yingying & Shou Qing, 2009).

The term "public-private partnership" as described by Corina (2006) defines sustainable infrastructure in two folds. First, it relates to the provision of public services or public infrastructure necessitates the transfer of risk between partners. Arrangements that do not include these two concepts are not technically "public-private partnerships". The definition embraced by The

Canadian Council for Public-Private Partnerships, for example further supports this definition as follows: A cooperative venture between the public and private sectors, built on the expertise of each partner, which best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards (CCPPP, P3 2025). Public-private partnerships span a spectrum of models that progressively engage the expertise or capital of the private sector. According to Njidda (2009) in view of the current economic realities of global financial meltdown coupled with dwindling oil prices; there are budget constraints at all levels of Government. It is obvious there should be an informed acceptance of this method of meeting the needs of the public. Happily, Nigerian Government particularly at the Federal level has embarked on and has passed the Infrastructural Concession and Regulatory sustainable infrastructures Commission (ICRC) with its board already re-constituted. Sustainable infrastructures can be applied in all sectors of any economy. For instance, in Lagos State sustainable infrastructures has been successfully applied in Transportation, Waste disposal and Management, Power generation, Road construction, Parks, etc. In a KPMG report by McManus (2009), he reported the success of sustainable infrastructures in the following sector: Rail, Roads, Ports, Airports, Schools, Colleges and Universities, Housing, Libraries, Museums, Parks, Courthouses, Jails/Correctional Facilities, Hospitals, Information Technology, Energy/Renewable, Water/Wastewater.

The choice of infrastructure development was inevitable in the sense that weak infrastructure is the single most important factor in Nigerians' quest for enhanced firm level competitiveness. Secondly, there is a growing demand for private sector participation in core infrastructure service delivery. Third, the huge and growing resource gap of government (Federal and States) meant that there is an urgent need for alternative funding of investment in the infrastructure sector. Fourth, adoption of suitable sustainable infrastructure schemes in the Nigerian economy would deliver real value for

money if properly managed, based on success stories from other countries which have successfully implemented sustainable projects (Nigerian Economic Summit Group NESG, 2010).

Government realized that viable partnerships can be developed with the private sector towards developing necessary infrastructure. Such ideas about extra budgetary financing of public infrastructure formed the basis upon which policy and legal frameworks were subsequently designed to set the rules of engagement between the private and public sectors. These efforts culminated in the passage of the Infrastructure Act 2005. The Late President Umaru Musa Yar 'Adua at the inauguration of ICRC in 2008 stated:

"Nigeria needs to make massive investments beyond the means available to government in order to close the yawning infrastructure gap. Private Sector capital therefore is the effective recourse for Government. It is our expectation that private participation in our infrastructure development will enhance efficiency, broaden access, and improve quality of service".

This research is basically on the relevance of Quantity Surveyors (QS) in attaining sustainable infrastructural development in Nigeria. This is because the Quantity Surveyor has always been involved in infrastructure development and their relevance in sustainable infrastructure is very pertinent. So therefore, the key roles played by Quantity Surveyors is revealed by exploring the processes involved in the contractual arrangement of sustainable infrastructural projects. The risk factor, legal framework, roles played by public and private sectors, benefits, limitations, processes/stages in sustainable infrastructures and other relevant literature is highlighted in the main body of this research.

Global demands for basic infrastructural services have grown over the years, quickly outstripping the supply capacity of existing assets. Many years of under investment and poor maintenance have left Nigeria with a significant infrastructure deficit which is holding back the country's development and economic growth. This is the reason why Nigeria needs to make

massive investments beyond the means available to government in order to close its yawning infrastructure gap. The Federal Government believes that the private sector can play an important role in providing some of this new investment through sustainable infrastructures. With the advent of sustainable infrastructures procurement system, the hope that our infrastructure will be revived is very high, due to the involvement of private sector. A typical private company would not invest without profiting from it; sustainable infrastructures are normally long-term investment which means, it will take time for the investors to recoup. With this in mind the investors will design and execute the project to reduce future maintenance cost since the investor is also expected to carry out planned maintenance on this project because its rate of return of investment will be affected if the project defect is high thereby requiring high cost of maintenance. Advisors who can call upon this expertise are therefore well placed to work with public sector clients and their consultants to achieve the objectives of sustainable infrastructures projects (Brooke, 2008). From the foregoing, Quantity Surveyors despite their training have not fully been involved in construction project which could either be procured via traditional method or sustainable infrastructures. Therefore, the concern of the research paper is to access the relevance and level of involvement of the Quantity of Surveyor in sustainable infrastructures and factors preventing their involvement in this emerging procurement processes.

Aim and Objectives

The main aim of this study is evaluating the roles of the Quantity Surveyor in sustainable infrastructural development. The following specific objective has been set to facilitate the attainment of the aim of study.

i. to assess roles the Quantity Surveyors, play in the concession and implementation of sustainable infrastructure projects
ii. to assess the level of the Quantity Surveyors involvement in concession and implementation of sustainable

infrastructure projects.

iii. to assess the factors militating against the involvement of Quantity Surveyors in sustainable infrastructure projects

Research Questions

i. what are the roles Quantity Surveyors play in the concession and implementation of sustainable infrastructure projects?

ii. what is the level of the Quantity Surveyor's involvement in concession and implementation of sustainable infrastructure projects?

iii. what are the factors militating against the involvement of Quantity Surveyors in sustainable infrastructure projects?

Literature Review

According to the report filed by National Planning Commission in 2004, Nigeria have an estimated population of over 140 million and an annual growth rate of about 2.4%. However, Nigeria still faces huge deficit of basic amenities and essential public infrastructure for the majority of the citizens (Ibrahim et al, 2006). Notwithstanding the huge investments made by successive Nigerian governments as further stresses by Ibrahim *et al,* (2006), the much needed rapid socio-economic and industrial developments have remained elusive. These scenarios have resulted in tremendous pressure on scarce public financial resources in the spate of escalating costs for development projects. In an attempt to contain the situation, the present Nigerian government encourages the introduction of public-private partnerships (sustainable infrastructures) as a way of promoting active private sector involvement in the provision of public infrastructure and services, improving public services, developing its tourist sector, improving transport links, creating new jobs and eradicating poverty. Nigeria's construction sector accounts for 1.4% of its GDP. More important, is the fact that despite the growth seen in the construction sector output, its

contribution to total GDP has remained at abysmally low levels as stated in a report by Oluwakiyesi, (2011). The reported further showed that the construction sector is yet to realize its potentials. undoubtedly, Nigeria's operating environment, has major constraints, both from a policy and politics point of view. Notwithstanding, Nigeria compares quite commendably relative to the big emerging markets of India, China and Brazil in some key metrics employed by the World Bank to compare general business environment, for the construction industry. There are also many projects executed by government and the private sector which are creating opportunities for growth in the industry. Most states have voted huge amounts of money for capital projects such as provision of infrastructure, housing, city expansion and beautification (Bolu, 2011). Quantity Surveying, as a profession offers unique services to construction clients. The uniqueness of their professional services is evident in the area of financial probity in the execution of construction works. Construction client always aims at completing projects at the estimated time and within budgetary cost limit. These services of evaluating cost-related issues of design and construction have been diligently rendered by Quantity Surveyor to corporate and individual clients at all level.

Majority of Nigerians are not well informed of the services offered by Quantity Surveyors in Nigeria. This lack of awareness has led to the execution of construction works without due consultation with the Quantity Surveyor, who is well-versed in financial and legal aspects of construction, hence, the consequent exploitations of clients at this level by construction workers and subsequent project abandonment (Babalola 2006). Spedding (2005) as buttressed by Awodele et al (2008) explains that quantity surveying firms will not be limited to providing estimates of capital costs of infrastructure projects but also their life-cycle costs. Such forecasts will require knowledge of some of the reasons for past failures, the cost of repairs and remedying of defects. Life cycle costing know-how is a grey area in Nigeria, because of poor record keeping cultures. At a two-day seminar organized by the Nigerian Institute of Quantity Surveyors

(NIQS) on Private Finance Initiative in November 2011, veritable tools for Infrastructure Development in An Emerging Economy, was recommended to the Federal Government to back up private sector 's infrastructure financing initiative. The body said that the private sector is ready to invest in tackling Nigeria 's infrastructure challenge estimated at around N30 trillion but only if the appropriate environment and incentives are put in place by the government. The development is coming on the heels of a new report ranking Nigeria as one of the emerging economies, with great prospect in construction development and predicting that the value of construction in emerging countries, including Nigeria, will more than double in the next 11 years according to Global Construction 2020. Specifically, Alufohai (2011) in a good will message at a two-day seminar, called on the Federal Government to match words with action on national transformation by pursuing a vigorous policy which backs infrastructure finance through sustainable infrastructures (sustainable infrastructures). The reform has shifted from public sector led to private sector led economy creating opportunities for massive investment from within and outside Nigeria. From Privatization of state own companies to bank consolidation and due process in procurement in the public sector have all created great opportunities for the Quantity Surveying profession, Jagun (2006). From the foregoing sustainable infrastructures seems to be the preferred procurement method by all tiers of government, so Quantity Surveyors need to reposition themselves in order to tap from these huge opportunities. Also, sustainable infrastructures have become national project, the involvement of the QS will bring the profession to limelight nationally and to remain relevant to national policy and plan.

Roles Played by Quantity Surveyor in Sustainable Infrastructural Development

The basis of the Quantity Surveying fortunes lies in procurement work in addition to a range of high-end services. Over the last 50 years, the services offered by the professional Quantity Surveyors have changed, Jagun (2006). Quantity surveying

services by nature is an aggregation of diverse skills and disciplines packaged to deliver value – addition to the Built Environment Industry (Anago, 2006). The Quantity Surveying Profession has developed a long way since it was first conceived over two centuries ago. Then, it was a post-measurement and accounting discipline only. Over the years the role of the Quantity Surveyor (QS) increased in its importance due to its impact to the rapid development and urbanization of cities and town and with increased emphasis place upon costs of building, Jagun (2006). In his paper, Public-Private Partnerships in Infrastructure development; the role of the Quantity Surveyor and Cost Engineer, Oladapo (2011) stated the following as the role of a Quantity Surveyor in sustainable infrastructures including : development appraisals, cost modeling, cost planning, estimating, whole life-cycle costing, post contract administration and financial management, project management, risk management, value engineering and management, sensitivity analysis, etc

Sanni (2006) described cost savings, risk sharing, improved level of service, enhanced revenue, more efficient implementation and economic benefits. Pant (2005) in his paper listed some of the benefits as, optimum allocation and transfer of part of the risk to private partners, realistic evolution and control of costs, optimized whole life costs, fixed capital costs, contractual incentives are provided to perform, acceleration of infrastructure provision, faster implementation, public private partnership provides higher quality of services at lower cost to public, easing budgetary constraints, value for money' issues, economic and social benefits, indirect benefits, access to extra budgetary resources, reforming the role of state and technological benefits. Private sector participation in this sector offers clear benefits, as follows, stimulate economic growth, improved and expanded infrastructure services that would not be there otherwise, technology transfer, training of local personal and development of national capital markets, competition and innovation, improved efficiency, faster implementation, relieving the government budget and

borrowing, better allocation of risk between the public and private sector and improve service delivery

The Services Offered By the Quantity Surveyor as outlined by NIQS (2006) includes feasibility studies of capital projects, cost modeling, contract documentation and procurement, contract administration as well as construction project management. Others includes monitoring of capital projects, preparation of cost reports, priced bills of quantities, facilities management. Other management-oriented Services of the Quantity Surveyors are direct labour projects management and administration, arbitration and alternative dispute resolution and management. The Quantity Surveyor carries out expert witness which includes the provision of expert opinion in construction disputes. Fire insurance assessment and dilapidation is another services rendered by the Quantity Surveyor where preparation of schedules of conditions, pricing, negotiation are carried out on respective projects.

Factors Militating Against the Involvement of Quantity Surveyors in Sustainable Infrastructural Projects

Some factors like government policy, encroachment by other professionals, corruption, public awareness and patronage are militating against Quantity Surveyors involvement in sustainable infrastructure. Other factors suggested in the open-ended questions are patronage, inadequate quantity surveyors, internal problems within the regulatory bodies, number of Quantity Surveyors in the public sector and lack of dynamism

MATERIALS AND METHODS

Research Design

The qualitative research technique was used for this study where the researcher conducted intensive individual interview with the correspondents to explore their perspectives on the project method. The design is considered suitable to enable the researcher collect information directly from the various parties.

Area of the Study

This research was carried out in Benue state. Benue State which occupies a landmass of 34,059 square kilometers is one of the 36 states of Nigeria and lies in the North Central of Nigeria with Makurdi as its capital and largest city. Benue State is named after the Benue River and was formed from the former Benue-Plateau State in 1976, along with Igala and some part of Kwara State. Benue State lies within the lower river Benue through the middle belt region of Nigeria. Its geographic coordinates are longitude 7° 47' and 10° 0' East. Latitude 6° 25' and 8° 8' North; and shares boundaries with five other states namely: Nasarawa State to the north, Taraba State to the east, Cross-River State to the south, Enugu State to the south-west and Kogi State to the west. The state also shares a common boundary with the Republic of Cameroon on the south-east. In 1991 some areas of Benue state (mostly Igala area), along with areas in Kwara State, were carved out to become part of the new Kogi State. Igbo people are found in the boundary areas of Ebonyi State and Enugu State in local government areas like the Obi, Oju etc. Benue State as it exists today is a surviving legacy of an administrative entity which was carved out of the protectorate of northern Nigeria at the beginning of the twentieth century. The territory was initially known as Munshi Province until 1918 when the name of its dominant geographical feature, the 'Benue River' was adopted.

Population of the Study

The population of the study consists of 84 selected professionals who were involved in some ongoing projects in Makurdi town.

Sample and Sampling Procedures

Out of the population of 84 persons in Dantata and Sawoe construction companies, 62 persons were selected using the simple random sampling technique. The logic behind this is in conformity with the views of Okoh, (2005) in his book, the principles of educational research. He opined that for any population below 100 persons or object at least more than 50%

of the population is adopted as its sample to enhance effective representation so that conclusions from the study can be generalized.

Instrumentation

The major instrument used for this study is the questionnaire which consists of well-structured questions in a pre-determined manner in which all the respondents answer in the same order. They were asked question concerning the cost escalation on projects and their answers were written down for analytical procession. The questionnaire was structured in a five like scale measuring attitude of Strongly Agreed, Agreed, Undecided, Disagree and Strongly Disagreed.

Procedure for Data Collection

The researcher personally collected data from the respondents through the help of the human resource manager. After distribution of the questionnaire, respondents were given enough time to fill out the questionnaire. This time frame was given in order to give enough time to the respondents to reflect on the items on the questionnaire to facilitate valid responses.

Procedure for Data Analysis

Data was collected using structured questionnaires which were designed to obtain the relevance of Quantity Surveyor in a sustainable infrastructural development in Nigeria. A total of 76 questionnaires were purposefully administered to the respondents but only 62 were returned to the researcher. The respondents were requested to rank these factors in order of importance. The rating values of 1, 2, 3, 4, and 5 were assigned to the options least relevant, less relevant, relevant, moderately relevant, and most relevant respectively in obtaining the respondents' perception on the roles of Quantity Surveyor in a sustainable infrastructural development in Nigeria. These factors were analyzed by a descriptive statistical tool based on the questionnaire using Likert rating scale.

Results and Discussions

In this section, the respondents were classified in terms of the Type of Organization and Age, Nature of Business, Professional Experience, Academic and Professional Qualifications and Position in the Organization. Structured questionnaires were distributed among Quantity surveyors in various sectors of the built environment. The questionnaires were primarily used to collects data that was very resourceful in evaluating the roles of Quantity Surveyor in sustainable infrastructural development. A qualified assistant from the Nigeria Institute of Quantity Surveyors assisted in administering the questionnaires.

Data Presentation

This section contains the responses of completed and returned questionnaires. A total of seventy- six questionnaires were administered and sixty-two were returned, representing about 93.94%.

Table 1: Type of organization

ORGANIZATION	NO. OF RESPONDENT	% PERCENTA
Partnership	20	32.26
Contracting	19	30.65
Integrated Practice	9	14.52
Consortium	3	4.84
Federal Government Ministry, Parastatal or Agency	0	0
State Government Ministry, Parastatal or Agency	4	6.45
Local Government Ministry, Parastatal or Agency	0	0
Educational Institution	3	4.84
Others	4	6.45

Source: Field Survey, 2025

In Table 1 above, Quantity Surveyors are mostly employed by Quantity surveying firms and construction companies as each of them make 32.26% and 30.65% respectively of the total

respondents. The next are Integrated Practice 14.52%, State Government and others (Sole Proprietorship & Banking) each make 6.45%. Consortium and Educational Institution make 4.84% each.

Table 2: Nature of Business

CATEGORY	NO. OF RESPONDENTS	PERCENTAGE
Consultancy (Qs Practice)	34	54.84
Engineering (Building, Civil, Mechanical, Electrical, etc)	8	12.90
Petrochemical	0	0.00
Logistics	1	1.61
Research	3	4.84
Project Management	16	25.81
Military	0	0.00
TOTAL	**62**	**100.00**

Source: Field Survey, 2025

From table 2 above 54.84% of the respondents work as Quantity surveying consultants, 25.81% are engaged in project management, followed by those that work in Engineering 12.90%, next are those that are involved with research (4.84%), while Logistics take 1.61% of the population.

Table 3: Professional Experience

YEARS OF EXPERIENCE	NO. OF RESPONDENT	PERCENTAGE (%)
1-5 Years	18	29.03
6-10 Years	18	29.03
11-15 Years	15	24.19
16-20 Years	5	8.06
20 Years and Above	6	9.68
Total	62	100

Source: Field Survey, 2025

Table 3.1: Professional Experience

AGE	FREQUENCY (f)	MEAN	x (ASUMED MEAN)	Xf	(x - mean)	$(x-mean)^2$	$(x-mean)^2f$
1-5yrs	18	10.21	3	54	-7.21	51.98	935.71
6-10yrs	18	10.21	8	144	-2.21	4.88	87.91
11-15yrs	15	10.21	13	195	2.79	7.78	116.76
16-20yrs	5	10.21	18	90	7.79	60.68	303.42
20-30yrs	6	10.21	25	150	14.79	218.74	1312.46
TOTAL	**62**			**633**			**2756.27**
MEAN AGE	**10.21**	1.00					
S^2	**43.46**						
S	**6.59**						

Source: Field Survey, 2025

Comparing table 3 and 3.1 a mean age of about 10.21years was established. This mean age gives us the average professional experience of the respondents which also is reliable for this research.

Table 4: Professional Qualification

PROFESSIONAL MEMBERSHIP OF RESPONDENTS	NO. OF RESPONDENTS	PERCENTAGE (%)
FNIQS	0	0.00
MNIQS	45	72.58
RQS	11	17.74
NSE	0	0.00
NIM	3	4.84
Probationer (NIQS)	2	3.23
Graduateship (NIQS)	1	1.61
TOTAL	**62**	**100.00**

Source: Field Survey, 2025

From Table 4 we can deduce that 72.58% of the respondents are Corporate Member of the Nigeria Institute of Quantity Surveyors (NIQS), 17.74% are registered with the Quantity Surveying Registration Board of Nigeria (QSRBN) while 4.84% are members of Nigeria Institute of Management (NIM). Generally, about 95.16% of the respondents are professionally qualified.

Research Question 1: what are the roles Quantity Surveyors play in the concession and implementation of sustainable infrastructure projects?

Table 5: Roles the Quantity Surveyors to sustainable infrastructures Project.

S/No	Quantity Surveyors Services	1	2	3	4	5	Mean Score	Rank
1	Contract Documentation & Procurement	0	0	9	12	38	4.49	1
2	Contract Administration & Management	0	0	10	16	32	4.38	2
3	Project Management	0	1	9	17	31	4.34	3
4	Feasibility Studies of Capital Projects	1	0	17	10	31	4.19	4
5	Monitoring of Capital Projects	0	0	17	18	25	4.13	5
6	Arbitration & Dispute Management Services	0	5	14	15	25	4.02	6
7	Cost Modelling	0	2	13	17	27	3.88	7
8	Technical & Contract Auditing	1	3	17	21	16	3.83	8
9	Management of Capital Expenditure	2	1	21	20	15	3.76	9
10	Expert Witness	1	10	12	14	18	3.72	10
11	Execute a Risk Analysis Exercise	2	6	21	19	13	3.57	11
12	Facilities Management	1	0	17	10	31	3.54	12
13	Dilapidation	2	12	22	9	12	3.30	13
14	Fire Insurance Assessment	3	14	18	9	13	3.26	14
15	Capital Allowance & Taxation Advice	2	12	27	6	11	3.21	15

Source: Field Survey, 2025

From table 5 above fifteen services offered by the Quantity Surveyor were summarized, tabulated. These services are related to sustainable infrastructures procurement processes. From the responses, all the services offered by the Quantity Surveyor are very relevant to the sustainable infrastructures as the difference between the first and the fifteenth is just 1.17 bases point. The services are Contract Administration & Management (1^{st}) and Capital Allowance & Taxation Advice (15^{th}) with mean scores of 4.38 and 3.21 respectively.

Top amongst the relevant services is Contract Administration & Management (4.38), Project Management (4.34), Feasibility Studies of Capital Projects (4.19), Monitoring of Capital Projects (4.13) and Arbitration & Dispute Management Services (4.02). However, the other ten services have an average mean score of about 3.21 while the first five have a mean average of 4.21.

Research Question 2: what is the level of the Quantity Surveyors involvement in concession and implementation of sustainable infrastructure projects historically?

Table 6: Level of Involvement of the Quantity Surveyor

S/N	Procurement Processes	Score					Mean Score	Rank
1	Evaluating of Tenders	1	1	10	12	36	4.35	1
2	Pre-qualification of Tenders	1	3	11	13	33	4.21	2
3	The Preferred Bidder (Award)	1	2	12	20	25	4.10	3
4	Monitoring	1	4	12	14	28	4.08	4
5	Preparing for Procurement	1	2	19	10	21	4.02	5

Source: Field Survey, 2025

Result from the analyzed questionnaire revealed that all the sustainable infrastructures processes: Evaluation of Tenders, Prequalification of Tenders, The Award, Monitoring and Preparing for Procurement are part the services rendered by the Quantity Surveyor as their mean score are close. This corroborated with Oladapo (2011) who stated the following as the role of a Quantity Surveyor in sustainable infrastructure

Development appraisals, Cost modeling, Cost planning, Estimating, Whole life-cycle costing, Post contract Administration and Financial Management, etc, Project Management, Risk management, Value engineering and

management, Sensitivity analysis, ETC, Cost Modelling. Contract Documentation and procurement, Contract Administration and Management, Monitoring of Capital Projects, Capital allowances and taxation advice, Technical and Contract Auditing, Project Management, Facilities Management, Management of capital expenditure programme, Arbitration & Dispute Management Services, Expert Witness, Fire Insurance Assessment, Dilapidation.

Research Question 3: what are factors militating against the involvement of Quantity Surveyors in sustainable infrastructure projects?

Table 7: Factors militating against the Quantity Surveyors involvement in sustainable infrastructures

S/N	Factors	Scores					Mean Score	Rank
1	Government Policy	7	26	9	11	6	2.71	1
2	Encroachment by other professionals	17	20	7	9	9	2.49	2
3	Corruption	25	9	9	8	9	2.45	3
4	Public awareness of a QS	25	17	6	7	4	2.12	4

Source: Field Survey, 2025

Findings of this research reveal that the respondents strongly agree that Government Policy, Encroachment by other Professionals, Corruption and Public Awareness are militating against the Quantity Surveyor in this Procurement Method. Some other factors suggested by the respondents in the open-ended questions are: (i) Patronage, (ii) Inadequate Quantity Surveyors, (iii) Internal Problems within the Regulatory bodies, (iv) Number of Quantity Surveyors in the Public Sector and (v) Lack of Dynamism in the Profession.

Conclusion

This study has demonstrated the pivotal role quantity surveyors play in promoting sustainable infrastructural development in Benue State. Through their expertise in cost management, value engineering, and life cycle costing, quantity surveyors can significantly contribute to the economic, environmental, and social sustainability of infrastructure projects. The findings of this study highlight the need for increased awareness, training, and regulatory support to enhance quantity surveyors' contributions to sustainability. By addressing these challenges, quantity surveyors can effectively support the development of sustainable infrastructure in Benue State, ultimately contributing to the country's economic growth, environmental protection, and social well-being.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Professional bodies should promote awareness and provide training on sustainability principles and practices for quantity surveyors.
2. Regulatory agencies should develop and enforce regulations that support sustainable infrastructural development.
3. Quantity surveyors should integrate sustainability principles into their practice and advocate for sustainable development.

Reference

Alufohai, P. J. (2011). Infrastructure development in an emerging economy: The role of quantity surveyors. Goodwill message presented at the Nigerian Institute of Quantity Surveyors (NIQS) Seminar on Private Finance Initiative, Abuja, Nigeria.

Anago, A. A. (2006). Challenges and opportunities for quantity surveyors in Nigeria. A paper presented at the 22nd Biennial Conference of the Nigerian Institute of Quantity

Surveyors (NIQS), Calabar, Nigeria.

Awodele, O. A., Ogunsemi, D. R., & Olabode, J. (2008). An assessment of life cycle costing in the Nigerian construction industry. Proceedings of the 24th Annual ARCOM Conference, 1–3 September 2008, Cardiff, UK.

Babalola, O. (2006). Harnessing the opportunities at the grassroots to make quantity surveying profession competitive at the national and international markets. Paper presented at the 22nd Nigerian Institute of Quantity Surveyors (NIQS) Biennial Conference, Calabar, Nigeria.

Brooke, R. (2008). The impact of management Consultants on Public Service Efficiency McKiney and boston Publisher.

Corina, M. (2006). Public Private Partnership : Perspectives on Purposes, Publicness and good governance ResearchGate.net

Drapak, F. (2009, July 16). Nigeria: Taking the lead on PPPs in Africa? World Bank Blogs. https:// blogs.worldbank.org/en/psd/nigeria-taking-the-lead-on-ppps-in-africa

Esther, A., Albert, A., & Stephen, O. (2009). Perspective on procuring public works project.

Grimsey, D., & Lewis, M. K. (2004). Public private partnerships: The worldwide revolution in infrastructure provision and project finance. Edward Elgar Publishing.

Ibrahim, I. (2010). Project planning in construction procurement: The case of Nigerian indigenous contractors (Doctoral dissertation) submitted to University of Salford, United Kingdom. Retrieved fromttps://www.academia.edu /9343568/

Jagun, O. (2006). Privatization and the challenges for quantity surveyors in Nigeria. A paper presented at the Nigerian Institute of Quantity Surveyors (NIQS) Biennial Conference, Calabar, Nigeria.

McManus, J. (2009). KPMG report on sustainable infrastructure. KPMG.

Nigerian Economic Summit Group. (2010). Infrastructure Policy Commission.https://www.nesgroup.org/index.php/policycommissions/infrastructure

National Planning Commission. (2004). National economic empowerment and development strategy (NEEDS). Abuja, Nigeria: NPC.

NIQS. (2006). Scope and scale of services offered by the Quantity Surveyor. Nigerian Institute of Quantity Surveyors (NIQS) Professional Practice Manual.

Oladapo, A. A. (2011). Public-Private Partnerships in Infrastructure Development: The Role of the Quantity Surveyor and Cost Engineer. A paper presented at the 2011 NIQS Seminar on Infrastructure Development, Abuja, Nigeria.

Oluwakiyesi, T., (2011). Construction industry report: A haven of opportunities. Vitiva Research.

Okoh, A. O. (2005). The principles of educational research. Benin City: Ethiope Publishing Corporation.

Pant, L. (2005). Public-private partnerships in infrastructure development: Benefits and issues. *Retrieved from relevant online resource or journal 2005*

Sanni, A. (2006). Cost implications and economic benefits of sustainable infrastructure projects. NIQS Journal, 4(2), 45–52.

Sanni, A. (2022). Analyzing the environmental impact of public-private partnerships in Nigeria. *Global Journal of Business, Economics and Management: Current Issues, 12(2), 95–102. https://doi.org/10.18844/gjbem.v12i2.5439*

Spedding, A. (2005). Sustainability in the built environment: An introduction to its definition and measurement. In A. Spedding (Ed.), Sustainability in the built environment: An introduction to its definition and measurement (pp. 1–16). Taylor & Francis.

Yongjian, K., Xinbo, W., Yingying, C., & Shou Qing, W. (2009). Evaluating the role Quantity Surveyors in Sustainable . . . . . *www.http: Project4topics .com*

Wikipedia (2012). *http://en.wikipedia.org/wiki/standard_deviation*. – www. icaste. Org / wp-content/upload/2011/11/ icec- retrieved 2nd August, 2012