1st International Civil Engineering Conference (ICEC2018)
Department of Civil Engineering
Federal University of Technology, Minna, Nigeria

APPLICATION OF VALUE MANAGEMENT TO ENHANCE CONSTRUCTION OF RESIDENTIAL HOUSING FOR FEDERAL CIVIL SERVANTS IN NIGERIA

*Umesi, R. O.[1];& Ganiyu, B. O[2]
[1] Department of Quantity Surveying Federal Polytechnic, Bida
[2]Department of Quantity Surveying, Federal University of technology, Minna
*Corresponding author email:ruthomozokpia@gmail.com

ABSTRACT
Value management techniques have been successfully applied to all types of construction projects from buildings to offshore oil and gas platforms, and for all types of clients from private industry to governmental organizations worldwide. One of the Sustainable Development Goals objectives is increasing access to new technologies to support sustainable development; this has led to the application of value management to residential housing to ensure sustainable development of affordable housing. In Nigeria, access to affordable housing has largely remained an unfulfilled dream to the vast majority most especially, the middle and the lower class of the society. The gap between the need for housing and the capacity to acquire the desired housing type has led to a demand crisis for affordable housing in Nigeria. In this paper, the concept and benefits of the application of Value Management was explored to enhance affordability of sustainable residential housing for civil servants in Nigeria. The quantitative approach employed was to understand the perception on the benefit of the application of value management on residential project in Niger state. This was done by the use of well structured questionnaire. A great number of innovative ideas are brainstormed during the Value Management process.

Keywords: *Affordable housing; construction; sustainability; sustainable residential housing; value management.*

1 INTRODUCTION

Accommodation is one of the basic need of man and has no doubt a widespread impact on the health, welfare and productivity of the individual (Akintunde, 2008; Akinyode and Tareef, 2014). Adapted and affordable housing arrangement has over the years been the necessity of most countries, especially the developing ones, given that it is one of the three most notable basic necessity of mankind –others been food and clothing. Accommodation (Shelter) is basically one of the requirements of man. It is classified second after food in t
(2009) it is the first and most expressive of all rights. As such, the supply of housing along with the fact that dwelling involves more than mere shelter since it encompasses all social services and utilities that make a society or neighbourhood a livable environment, is now a right.

Precedent Nigerian government have made invested efforts in housing delivery through various policies and scheme either as a provider in the 70's and 80's, and as facilitator and enabler in recent time (Aminu and Rukazat, 2013). Public-Private Partnership in housing provisions was commended as a means of addressing this problem. An investigation carried out on thirteen government agencies in some selected zones in Nigeria shows that although the agencies aim is to focus on the availability of access to land and the regulatory structure for housing growth, a great multitude of Nigerians have not benefited from Public-Private Partnership arrangement (Eziyi, 2010). More exertion is required to deal with this uncertainty.

The quality and quantity of useful dwelling unit in any country is also a well acknowledge indices of a country's level of growth and quality of life. Nations, therefore, pay special attention to the availability of affordable housing, for its residents. Statistics signify that investment in shelter accounts for 15 –35% of total investment worldwide compared to only 0.4% in Nigeria. Furthermore, shelter represents 15 – 40% of monthly expenditure of families globally. The present government in effect keyed in to the earlier "visions" that is vision 2010 and then inaugurated the vision 20:2020. The vision is designed to place Nigeria among the largest economies in the world by the year 2020. This means that in Africa, Nigeria must rise from our current 3rd position with a GDP of $294.8b to surpass

Egypt with a GDP of $432.9b and South Africa ($467.6b), within the same period (www.nigerianstat.gov.ng). There has been tremendous growth in the nations GDP over the last five years. The nation's GDP grew in the third quarter of 2017 by 1.4%. This growth is 3.74% rate higher in the third quarter of 2016. Presently, Nigeria is singled as the most developed country in Africa. Services in the largest distinctive part of the economy, accounts for 50% of total GDP. Information and telecommunication which together attribute for 10% of the total output is one of the fastest growing segments in services. Agriculture, former biggest sector now accounts for 23%, Industry and Construction accounts for 16% of GDP (www.tradingeconomics.com).

The democratic administration, which began in 1999, brought revived vigour and opportunities in the housing sector. More financing options opened for local and international investors coupled with the influx of overseas construction firms, who are flocking in to benefit from this enormous opportunities existing in this sector. This has resulted in various state governments presently executing one housing project or the other either directly through their state housing corporations or in partnership with the private sector. For example, the Federal Mortgage Bank of Nigeria (FMBN) has invested about =N=1.423 billion Naira on 402 housing units in Niger state. The housing unit are FMBN/Sutas Estate in Zuba with 92 units, FMBN/Jedo ministerial Pilot housing scheme Estate in Suleja with 102 units, FMBN/Niima Shelter limited with 75 units and the FMBN/Sea mountain Estate in Minna with 133units (leadershipngr, july 19,2017).

In spite of all these attempts, it is regrettable to note that the federal civil servants are yet to be provided for because the available houses are not affordable. As a result there is severe reliance on rental housing which in itself is grossly insufficient both in qualitative and quantitative terms leading to enormous rents. Currently, the average worker spends as much as 40% – 50% of his allowance on rental. As a result very little is therefore saved at the end of the month. This result is the inability of the low-income earners in particular to benefit from the various housing scheme. It is compelling to identify initiatives that can exclude the extra cost of construction (hidden- costs that do not contribute to value) for the future visibility of affordable residential housing units. To eliminate the extra cost element caused by this aspect of inefficiency, a cost model must aim at improving the peculiarity of the decisions made throughout the life cycle of the construction projects. Hence, it is consequential to focus on the value of the construction project throughout the project duration. This can be achieved through value management as shown by the definition of Institute of Civil Engineers (1996):"Value Management addresses the value process during concept, definition, implementation and operation phases of a project.

Whilst there have been many studies on housing needs, demands and supply, housing delivery, housing policies and programmes in Nigeria, less attention has been given to affordability of housing (Akintunde, 2008; Ebie, 2009; Amao and Ilesanmi, 2013; Aminu and Ruhizal, 2013; Akinyode and Tareef, 2014). Recent literature tend to focus on effective housing policy and sustainable development and challenges to housing development and delivery (Omoniyi and Jiboye, 2011; Celestine and Fidelis, 2013). The use of value management to enhance affordability of residential housing in Nigeria has not been studied in any detail.

AFFORDABLE AND SUSTAINABLE HOUSING

Housing, literally is defined as buildings or other shelters in which people stay, a living, and to Countries an important element in social and economic structure. Housing represents one of the most basic human desires. To most groups housing means shelter however to others it means extra because it serves as one of the nice indicators of a person's standard of dwelling and her place in the society (Nubi, 2008). It's far a concern for the attainment of living preferred and it is important to both rural and urban areas. These attribute make demand for housing to recognize no certain as population boom and urbanization are booming very swiftly and the gap between housing want and supply becomes widen. Cultural elements together with choices and values or social repute, taste and financial resources, additionally have an impact on a house physical characteristics.

Nigeria is perhaps the fastest urbanizing country in the African continent. One of the maximum crucial challenges facing the country is the supply of low cost housing. As more Nigerians make towns and cities their homes, the resulting social, economic, environmental and political challenges need to be urgently addressed (Raji, 2008).

Low priced housing is housing that is reasonably good enough in standard and location for a lower or middle-income family and does not cost so much that this family is unlikely to meet other simple dwelling costs expenses on a sustainable basis (National Summit on Housing Affordability, 2006). Stone (2005) notes that affordability is not a function of housing per se, rather, it is a relationship between housing and people that relies on answering three questions: Low price to whom? On what standard of affordability? For how long?

Sparks (2007) defines green low cost housing as "housing that is better designed and constructed, more long lasting, not significantly more expensive, less expensive to operate, healthier, more environmentally sound, and less risky" (Sparks 2007 in Arman et al., 2009). Global Green USA (2007) also talks about green low cost housing and adds that such housing "forges a sturdy link between social justice and environmental sustainability, and connects the wellbeing of people with

the wellbeing of the environment, thus building on the core social and monetary values of affordable housing".

There are many economic and social determinants of affordability (including costs of running a home and associated cost of maintenance), the most widely used measure in Australia (use by, for example, Australian Government, 2008; Beer et al., 2007; Berry et al., 2004; Disney, 2007; Gurran et al., 2008; Yates et al., 2007; Yates et al., 2008) is the '30/40 split' which indicates that housing costs have to no longer exceed 30% of household income for the bottom 40% of income groups. Knowing average incomes, it's far then possible to calculate a low cost house cost in terms of purchase price and rent and such figures also determine eligibility for certain low cost housing schemes

Arman et al. (2009) reviewed a spread of definitions of affordability, low cost housing, sustainability and sustainable housing and arrived at a conceptual definition of inexpensive and sustainable housing, housing that meets the needs and demands of the present generation without compromising the capability of future generations to meet their housing desires and demands. Inexpensive and sustainable housing has strong and inter-related economic, social and environmental components (Arman et al., 2009). They counseled that unique standard may be required to ensure that affordability and sustainability in housing are sincerely realized. To this end, Arman et al (2009) arrived at ten 'traits' of cheap and sustainable housing. These broad traits sought to mirror literature on affordability (traits 1-4) economic sustainability (traits 5), social sustainability (traits 6) and environmental sustainability (traits 7).

1.1 FEATURES OF SUSTAINABLE AFFORDABLE DWELLING.

	Dwelling Features	Source
1	Adequate in standard and location and does not cost so much	National Summit on Housing Affordability, (2006)
2	A product where the rent or mortgage repayments do not exceed 30% of household incomes for the bottom 40% of income groups.	Beer et al, 2007;Gurran et al, 2008., Yates et al., 2008
3	A product that is of a suitable size and quality for its occupants.	Stone(2005)
4	A product that does not increase the incidence of housing stress over the lifecycle of the house.	Sparks (2007) in Arman et al., (2009)
5	Meets the need and demands of the present generation without compromising the ability of future generations on affordability and sustainability.	Arman et al (2009)
6	A product that is socially acceptable and does not increase social exclusion or polarization.	Global Green USA (2007)
7	A product that encompasses the following environmental features; Energy efficiency; Passive solar design; sun shading; water conservation, appropriate waste management during construction, occupation and deconstruction.	Arman et al. (2009)

Source: author summary from Literature review

2 BENEFITS OF VALUE MANAGEMENT

Over the past few decades, the economy has modified hastily and increasing competition has positioned an significant call on increased efficiency, effectiveness and value for money (Rangelova and Traykova, 2014). Value Management addresses these three facets sucessfully and directly. The Institute of Value Management (2008) and The department of Housing and Works (2005) additionally observed that apart from acting as a cost reduction tool, the most glaring benefits arising out of the application of Value Management encompass: higher business decisions by providing decision makers a legitimate basis for their desire; enhanced competitiveness via facilitating technical and organizational innovation; a common value culture, thus enhancing every member's understanding of the organization's dream; improved products and services to external customers by clearly understanding, and giving due priority to their real desires; improved internal communication as well as common knowledge of the main success factors for the organization; simultaneously enhanced communication and efficiency through developing multidisciplinary and multitask teamwork; decisions which can be supported by the stakeholders; time savings through focus of attempt; aid to the briefing and approvals process; enhancement of danger control measures; improved quality; improved sustainability; and promotion of modern service delivery techniques. These benefits according to Oke and Ogunsemi, (2011) are available and update to providers and consumers in all sectors of the society.

Following the Society of American Value Engineers (2008) definition of Value Management being a systematic, multi-disciplinary attempt directed towards analysing the functions of projects for the purpose of achieving the best value at the lowest overall life cycle cost. The premise is that some unnecessary costs are inevitable in any building design; Value Management sets out to identify and eliminate these unnecessary

costs, resulting in cost savings. Value Management should not be confused for cost control. Value Management focuses on value in relation to the function while cost control focus on cost of construction.

Noor, Kamruzzaman and Ghaffar (2015) observed that in Malaysia, Value Management has been diagnosed by the authorities as a strategic planning tool and it has been practiced ever since as an appropriate mechanism to deliver sustainable construction project. The application of Value Management during project development phase may be utilized to improve building sustainability. Therefore, the appropriate approach of sustainable development as a process will be to balance and integrate social, economic and environmental sustainable values in construction.

In area of production, Yekinni et. al (2015) found out that there is a conceptual synergy between Value Management and Sustainable product and service design that leads to achieving best value in terms of quality and cost of a product/service. Thus, Value Management can be said to be a reliable tool in providing sustainable products.

In practice, at various stages of a Value Management workshop, the Value Management team tries to analyze each characteristic and look for better alternatives. Certain questions are asked and this includes questions like: What an element is? What does it do? What else can it do? What does it cost? What is its value? When these questions are answered, several alternatives are drawn and the best alternative is developed. In doing this, the Value Manangement crew try to identify unnecessary cost which can be in; use of unnecessary materials which less expensive materials would have been able to replace and do the job satisfactorily or failure to identify opportunity cost. This being the case, since cost savings is one of the major objectives of sustainable development from the economic point of view (Agenda 21, 1992, as citied in Romiguer, 2011), and Value Management sets out to achieve "value for money", it therefore follows that Value Management is the appropriate mechanism for selling the objective of an economic sustainable development. Hence Value Management plays a vital role in the delivery of economic sustainable construction.

According to research carried out by SAVE, Value Management methodology can increase customer satisfaction and add value to an organization's investment in any business or economic setting (www.value-eng.org). Value Management practitioners apply Value Management methodology to products and services in industries such as the following: corporations and manufacturing, construction, transportation, government, health care and environmental engineering. Similarly, from the studies carried out they found out that Value Management methodology easily produces financial savings of 30 % of the estimated cost for manufacturing a product, constructing a project or providing a service. The return on investment that public and private organizations derive from implementing Value Management programs averages 10 to 1. That is, for every dollar invested in a Value Management study, including participants' time and implementation costs, 10 dollars in net saving results.

The following are some of the results of Value Management application by some agencies

Benefits of Value Management highlighted by design consultants included (Come de Leeuw 2001): evidence that the initial design was indeed the best; the owner receives good value for money; an introduction of higher quality products; best up-to-date technology introduced at lowest cost; and a clear focus on project objectives as well as several alternatives for the design being considered.

2.1 BENEFITS OF VALUE MANAGEMENT

BENEFITS		SOURCES
1	Cost reduction tool	Yekinni et al (2015), IVM (2008), Romiguer (2011), SAVE (2008), DHW(2005)
2	It enables better business decisions based on choice	Come de Leeuw (2001), SAVE(2008), IVM (2008)
3	It enhances competitiveness based on technical and organizational innovation	Come de Leeuw (2001), IVM (2008)
4	A common value culture, every member in the team understand organizational goal	Come de Leeuw (2001), IVM (2008)
5	Improved products and service	Yekinni et al (2015), IVM (2008)
6	Improved internal communication	IVM (2008)
7	Strategic Planning tool	Noor, Kamuzzaman and Ghaffer (2015), IVM (2008)
8	Develops multidisciplinary and multitask teamwork	SAVE (2008), IVM(2008)
9	Time saving	IVM (2008)
10	Aid to the briefing and approvals process	Come de Leeuw (2001), IVM (2008)
11	Enhance risk management measure	IVM (2008)
12	Increased quality	Come de Leeuw (2001), IVM (2008), Yekinni et al (2015)
13	Improved sustainability	Noor, Kamuzzaman and

		Ghaffer (2015), IVM (2008), Romiguer (2011), Yekinni et al (2015)
14	Promote innovative service delivery process	Come de Leeuw (2001)

Source: author summary from Literature review

3 METHODOLOGY

One of the methods of survey employed in this study is the cluster and simple random sampling. This was done by sending out questionnaires to some professionals and stakeholders in the building industry in Niger state and the interview of key actors in the industry.

Analysis of data was done using both descriptive and inferential statistical methods. Descriptive statistic was carried out to reveal difference in demographic attributes of the respondents. A summary of the benefits of value Management for residential projects was analyzed. Benefits were categorized into Planning and Design Stage and Construction Stage. Respondent's opinions were ranked from the opinion that was very significant on to the one not sure about. Inferential statistic allows the use of samples of mean and standard deviation to make generalization about the population from which the sample were drawn.

.

4 RESULTS AND DISCUSSION

TABLE 1: PLANNING AND DESIGN STAGE

BENEFITS OF VALUE MANAGEMENT	Mean	Standard Deviation
Better business decision based on choice	4.63	.554
A common value culture, every member in the team understand organizational goal	4.54	.691
Enhanced competitiveness based on technical and organizational innovation	4.43	.635
Promote innovative service	4.37	.699
Aid to the briefing and approval process	4.37	.895
Strategic planning tool	4.33	.702
Develops multidisciplinary and multitask teamwork	4.33	.731
Time saving	4.24	.875

Source: Researcher's fieldwork (2018)

The benefits of Value Management in Planning and Design Stage as shown in table 1.1 revealed that all eight benefits had a mean score above 4.0. This implies that the respondents strongly agreed the benefits are achieved through Value Management. The first benefit is that Value Management enables better business decision based on choice. This had a mean score of 4.63. This implies respondent strongly agreed to the finding of Come de Leeuw (2001) and the Institute of Value Management (2008). Value Management enables a common value culture and enhance competitiveness were the second and third benefits with a mean score of 4.54. These findings is in agreement with Come de Leeuw (2001), Rangelova and Traykoya (2014) and the Institute of Value Management (2008) findings. The least benefit is Time saving with a mean score of 4.24. All respondents agreed to the finding of the institute of Value Management.

TABLE 2: CONSTRUCTION STAGE

BENEFITS OF VALUE MANAGEMENT	Mean	Standard Deviation
Cost reduction tool	4.42	.862
Improved product and service	4.37	.539
Increased quality	4.35	.631
Increased sustainability	4.30	.732
Improved internal communication	4.24	.733
Enhance risk management measures	4.17	.850

Source: Researcher's fieldwork (2018)

The benefits of Value Management in the construction stage are revealed in table (1.2). All six benefits had a mean score above 4.0. The first benefit of Value Management in construction stage is Value Management is a cost reduction tool with a mean of 4.42. This indicates that respondent agreed to the

findings of Yekinni et al (2015), Insitute of Value Management (2008), Romiguer (2011) and SAVE (2000) who believes a cost reduction tool for sustainable development is achieved by Value Management mechanism. SAVE(2000) discovered the return on investment that Public and Private organization derive from implementing Value Management programs. The second benefit of Value Management on construction stage is improved product and service with a mean score of 4.37. This supports the findings of Yekinni et al (2015) and Institute of Value Management (2008). Increased quality is the third benefits of Value Management in construction stage with a mean of 4.35. Come de Leeuw(2001) stated that Value management introduces higher quality products while Yekinni et al (2015) is of the opinion that there is a conceptual synergy between forth point, increased sustainability with a mean score of 4.30. This result is inline with the findings of Noor, Kamuzzamam and Ghaffer(2015) and Romiguer(2011). The fifth and sixth benefits are increased internal communication and enhance risk measures. There mean scores are 4.24 and 4.17. This findings support the findings of Institute of Value Management (2008).

5 CONCLUSION

Research on benefits of Value Management for Residential housing outlines numerous benefits both in the planning and design stage and also the construction stage. These will enable affordable, sustainable, innovative residential housing for civil servant. This research has outline define ways in which Value Management contributes to a successful delivery of economic sustainable construction. A great number of innovative ideas are usually brainstormed during the Value Management process. This enables affordability. There should be communication between all parties in the project, from the professionals down to the end user – civil servant so as to achieve an affordable residential building. Value Management should be encouraged.

REFERENCES

Akintunde, K. O. (2008). Housing Needs and Land Administration in Nigeria: Problems and Prospects. *Social Research Network. In Smith, I.O. (Ed.).* Land and Real Property Rights in Nigeria.

Akinyode, B.F. and Tareef, H.K. (2014). Bridging the Gap Between the housing demand and housing supply in Nigeira Urban Centres: A review of Government intervention so far. *British Journal of Arts and Social Science*, 18(2), 94-104.

Amao, F.L. and Ilesanmi, A.O. (2013). Housing Delivery in Nigeria: Repackaging for sustainable development, *International Journal of African and Asian Studies*, 1, 80-85.

Aminu G.W, Ruhizal R. (2013) Housing Policies and Programmes in Nigeria: A review of the concept and implementation. *Business Management Dynamics*, 3(2), 60-68.

Arman, M., Zuo, J., Wilson, L., Zillante, G., Pullen, S. (2009a) 'Challenges of responding to sustainability with implications for affordable housing', *Ecological Economics*, **68**, 3034–041

Arman, M., Wilson, L., Zuo, J., Zillante, G. and Pullen, S. (2009b) 'Conceptualising affordable and sustainable housing: Towards a working model to guide planning and construction', *Proceedings of 34th Australasian Universities Building Educators Conference*, Barossa Valley, South Australia

Beer, A., Kearins, B. and Pieters, H. (2007) 'Housing Affordability and Planning in Australia: The Challenge of Policy Under Neo-liberalism', *Housing Studies*, **22** (1),11-24

Berry, M., Whitehead, C., Williams, P. and Yates, J. (2004) *Financing Affordable Housing: a Critical Comparative Review of the United Kingdom and Australia*. AHURI Final Report No 72 Nov

Celestine U. Ugonabo1 and Fidelis I. Emoh (2013) The Major Challenges To Housing Development And Delivery In Anambra State Of Nigeria. *Civil and Environmental Research www.iiste.org* ISSN 2224-5790, ISSN 2225-0514 (3)(4)

Come P. de Leeuw. (2001) Value *Management: An Optimum Solution*, International Conference on Spatial Information for Sustainable Development, Kenya.

Disney, J. (2007) 'Affordable Housing in Australia: Some Key Problems and Priorities for Action', Paper presented at the *National Forum on Affordable Housing*, 19 Apr 2007, AHURI, Melbourne

Ebie, S.P. (2009). Public sector driven housing; achievements and problems. Paper presented at the 2009 Faculty of Environmental Sciences Annual lecture, Nnamdi Azikiwe University, Awka. Federal Republic of Nigeria (1999) Constitution 10

Global Green, USA (2007) *Blueprint for Greening Affordable Housing*. Island Press, Washington, USA

Gurran, N., Milligan, V. and Baker, D. (2008) *New Directions in Planning for Affordable Housing: Australian and International Evidence and*

Implications, AHURI Final Report No. 120, Sydney Research Centre

Ibem, Eziyi O. and Amole, O.O (2010) ***Evaluation of Public Housing Programmes in Nigeria: A Theoretical and Conceptual Approach.*** The Built & Human Environment Review, 3, 88-117.

National Summit on Housing Affordability (2006) *Achieving a National Affordable Housing Agreement: Background Paper 2: Key Terminology and Indicators*, National Summit on Housing Affordability, http://www.housingsummit.org.au/media/BP2c.pdf viewed 1 Dec 2008

Noor, N. F, Kamruzzaman, S. N. and Ghaffar, N (2015), Sustainability concern in value management: A study on Governments building project. *International Journal of Current Research and Academic Review*; Special Issue-2 pp 72-83

Oke,A.E., Aghimien, D.O., and Olatunji, S. O. (2015) Implementation of Value Management as an Economic sustainability tool for building construction in Nigeria, International Journal of Managing Value and Supply Chains (NMVSC) vol 6, No 4, December 2015.

Oke, A. E. and Ogunsemi, D. R. (2011). Value Management in the Nigerian Construction Industry: Militating factors and perceived benefits. *Proceeding of the second international conference on advances in engineering and technology*. Faculty of Technology, Makerere University, Uganda, 30 January – 1 February, 353-359

Omoniyi, S and Jiboye, A.D (2011). Effective housing policy and sustainable development in Nigeria. *International Journal of Development Studies*. 6(1), 129-135

Rangelova, F. and Traykova, M. (2014). Value Management in Construction Project; *First Scientific – Applied Conference with International Participation "Project Management in Construction"/Pmc/* University Of Architecture, Civil Engineering and Geodesy.

Society of American Value Engineers (2008). What is value engineering? Retrieved September 27, 2015 from http://www.value-eng.org/

Standards Australia (2007) *Australian Standard: Value Management (AS 4183—2007)*, Council of Standards Australia, Australia

Stone, M. (2005) 'What is Housing Affordability? The case for the residual income approach" *Housing Policy Debate*, **17** (1) 151-184

The Department of Housing and Works (2005). Value Management Guidelines, Government of Western Australia. Retrieved June 7, 2015 from http://www.utm.my/staff/value-management/

The Institute of Value management (2008). what is value management? Retrieved June 7, 2015 from http://www.ivm.org.uk/what_vm.htm

Yates, J., Milligan, V., Berry, M., Burke, T., Gabriel, M., Phibbs, P., Pinnegar, S. and Randolph, B. (2007) *Housing Affordability: A 21st Century Problem*. National Research Venture 3: Housing Affordability for Lower Income Australians, Final Report, AHURI Sydney Research Centre

Yekinni A. A , Bello S. K and Olaiya K. A, (2015). Application of Value Engineering Techniques in Sustainable Product and Service Design. *Science and Engineering Perspectives* Vol. 10, pp 120-130

1st International Civil Engineering Conference (ICEC 2018)
Department of Civil Engineering
Federal University of Technology, Minna, Nigeria

PERFORMANCE EVALUATION OF CONSORTIA ON BUILDING CONSTRUCTION PROJECTS IN LAGOS

***Olorundare, F. P,** [1]**; & Anifowose M. O,** [2]
[1&2] Department of Quantity Surveying Federal University of Technology, Minna
*Corresponding author email: olorundarefemi7@gmail.com

ABSTRACT
Construction industry is one of the key industries in every nation, being a key contributor to country's economy that supports economic growth and is an instrument to achieve economic goals. One of the main objectives of embarking on a building construction projects by any building owner is to get satisfaction at the completion of the project. This has resulted to the emergent of professional consortia in building construction to offer a joint professionalism. In Lagos the satisfaction level of client on building construction is still far to attain it goal. The gap between the need to improve client satisfaction on building projects is yet to be filled. Data were collected through questionnaire survey and analysed using descriptive analysis. Results shows that completing the project within the projected estimated cost, Client assessment on quality of materials and Employer's involvement during construction phase are the most effective strategies that improve client satisfaction on building construction projects. The study concluded that using the listed strategies by the consortia for a building project will improve client satisfaction. Recommended that the established strategies should be applied on building construction in order to improve client satisfaction.
.

Keywords: Building projects, Consortia, client satisfaction, Lagos

1 INTRODUCTION

The construction industry is multifarious in its nature because it comprises large numbers of group as owners (clients), contractors, consultants, stakeholders, and regulators, despite this complexity, the industry plays a major role in the development and achievement of society's goals also It is one of the largest industries and contributes to about 10% of the total national product (GNP) in industrialized countries (Navon 2005). The construction industry is one of the most important industries in every country (Aziz and Abdel-Hakam, 2016), being a major contributor to country's economy (Alaghbari *et al*., 2007) that supports economic growth and is an instrument to achieve economic objectives. It ensures common benefits to all group involved by creating a collective situation, besides creating efficient teamwork. However, evaluation of the performance of partnering projects is still inconclusive. In construction industry today, the construction associating has become one of the major managerial forms utilized in important projects (Lin and Ho 2012). Due to the growing measure and complexity of construction projects, as well as technological innovations, groups have begun to set up associating to develop partner resources (Famakin *et al.* 2012; Zhao *et al.* 2012). Joint venture formation between construction companies has become one of the most commonly adopted methods in both developed and developing countries.

Popular building construction projects are those projects completed on time, within budget, in agreement with specifications and to shareholders' contentment (Chua, 2011). Research was conducted to examine factors impacting on project operation in developing countries. Shortage of skills and He further observed that the evaluation of performance has been a challenge for the construction industry for decades. The Architects and contractors expect more on profits while the client are more interested in completing their projects on time and on budget (Heywood and Smith, 2006; Meeampol and Ogunlana, 2006). However, the contractor may have roles; for example, extra costs are importance when overtime is required, to complete a project within the tendered time structure (Risner, 2010).

On this theme, agreeing to Memon *et al*. (2014), instability in the prices of materials owing to increase is the most vital factor that affects construction cost performance. Any mistake or deviation of information relayed from the client to the Architect team may cause revise and generate unnecessary costs and schedule overruns to construction projects (Lopez *et al*., 2010). Also, different viewpoints and know-how among several subcontractors require close communication and management in a construction project (Ye *et al*., 2014). It is common awareness that the execution of the construction project in the industry is usually go together with with time delay and cost increase as well as client dissatisfaction (Hafez, 2001). Majority of construction clients are attracted in the cost of execution of their projects as the most usual question asked are "what is the cost of the project?" and followed by "can there be a drop in cost?" (Cunningham, 2014).