UTM UNIVERSITI TEKNOLOGI MALAYSIA

IJBES

International Journal of Built Environment and Sustainability
Published by Penerbit UTM Press, Universiti Teknologi Malaysia
IJBES 7(2)/2020, 1-14

Unique Factors of Best Value Procurement From the Perspective of Nigerian Construction Professionals

Gumgaro Simon-Peter Buba
Department of Quantity Surveying, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia, 81310, UTM Johor Bahru, Johor

Razali Adul Hamid and Zuhaili Mohamad Ramly
Department of Quantity Surveying, Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia, 81310, UTM Johor Bahru, Johor

Tchad Sharon Jatau and James David Jatau
Department of Quantity Surveying, Faculty of Environmental Science, Kaduna State University, Kaduna, Nigeria

ABSTRACT

The construction industry is vital to the economic development of any country. It has a major role in providing built infrastructures in an innovative and cost-effective way using an effective procurement approach. In contrast, the most widely used procurement method in Nigeria is the traditional procurement approach which is known for plaguing the industry with the poor working condition and poor performances thus, reducing the sustainability and quality of products and services. For this reason, there is a need for a procurement approach which utilises expertise to minimise the risk of non-performance and create a win-win environment for both client and contractors, while increasing transparency and add value to the project such like, the Best Value Procurement. Against the background, this paper aims to establish the perception of the Nigerian construction professionals on the unique factors of the Best Value Procurement. The paper outlines the following objectives: To identify the unique factors of the Best Value Procurement and, to establish the perception of the Nigerian construction professionals on the Best Value Procurement unique factors. Using a questionnaire survey, data was collected form 314 construction professionals involving Quantity Surveyors, Architects, Builders and Civil Engineers. Kruskal Wallis Test and mean score ranking was used for data analysis. The findings show that the professionals generally agree that the Best Value Procurement unique factors can bring about transparency, accountability, increase project performance and the contractor is the best to control risk and adds value to the project. This paper derives its significance from the need to stabilise the procurement system in Nigeria by transferring the risk and control to contractors who must act in the best interest of the client.

Article History

Received: *3 February 2019*
Received in revised form: *19 December 2019*
Accepted: *31 December 2019*
Published Online: *30 April 2020*

Keywords:

Best Value Procurement, Construction Industry, Nigeria, Procurement

Corresponding Author Contact:

bubasimonp@kasu.edu.ng

DOI: 10.11113/ijbes.v7.n2.354

1. Introduction

Procurement is a series of activities and procedures that are necessary to acquire essential products or services from the best contractors at the best price (Fournier j, 2015). Lim (2014), opined that procurement involves the process of selecting contractors, creating payment terms, strategic vetting, selection and the negotiation of contracts and actual construction (Idiake et. al, 2015). The construction industry is so important to the economic development of any country that it cannot be ignored. A modern and efficient infrastructure is the key driver of productivity, and the construction industry has a major role in providing the built infrastructure in an innovative and cost-effective way (Walesbusiness.org, 2013).

Kashiwagi et. al. (2004) stated that a lot of changes has befallen the construction industry which has brought about several project delivery systems such as Lowest-bid, Design-bid-build, construction management at risk and others. This has been a major feature of the construction industry over the last three decades or so (Naoum and Egbu, 2015). Naoum and Egbu (2015), noted that despite the various project delivery systems in the

construction industry there is, however, an absence of reporting on the association between procurement methods and matters such as innovation and technology, supply chain, lean construction, buildability, sustainability and value management. The association between the procurement method and these matters are supposed to help to improve the construction project delivery performances and provide insights on the best value to be delivered in the construction industry.

In Nigeria, the most widely used procurement method is the traditional procurement method also known as Design-Bid-Build (Idiake et. al, 2015). Baloi & Price (2003), highlighted that the traditional procurement method has plagued the construction industry with poor working condition, poor wages and a degraded environmental ideal, therefore, reducing the sustainability and quality of both products and services. Also, many users of the method have documented poor performance and poor quality of contractors procured using the traditional procurement method (Hampton et. al., 2012; Idoro, 2012; Smallwood, 2000). Mshelbwala (2005), stated that the role contractors play in the construction industry was key, as the services they rendered are critical to the quality of the end product as well as meeting cost and time targets. For that reason, selecting a suitable contractor increases the odds of a successful construction project completion which fulfils the client's goals of keeping the schedule, cost, time and quality in balance (Jiya, 2012). Mshelbwala (2005) also added that a good contractor is expected to complete a project on time, within budgeted cost and to the desired level of quality because, the quality of a product to a large extent depends on the skills and experience as well as the competence of the producing agents.

In contrast, the traditional procurement method used in Nigeria is known by its peculiar used of the contract to control both parties especially the contractors. The contractor, who is supposed to be an expert in managing, directing and visionary expert is not given adequate opportunity to impart their experiences hence, creating additional works, variations and prolong dissatisfaction (Kashiwagi et. al., 2012). As a result of the control, the procurement method is seen adversarial in nature and result in high expectations, lack of performance information and other aspects from lack of measurement (Dorée, 2004). Also, according to Bos, Kashiwagi and Kashiwagi (2015), the non-involvement of contractors from the beginning of the project leads to non-utilisation of their expertise, hence, create non-transparent, lose-lose, reactive project environment which the larger contractors felt uncomfortable with.

Therefore, there is that need to employ an innovative procurement approach which utilises expertise to minimise the risk of non-performance and create a win-win environment for both client and contractors, while increasing transparency and add value to the project. This innovative procurement approach is called the "Best Value Procurement".

1.1 Research Problem

The construction industry in Nigeria accounts for almost 70% of the fixed capital formation of the Nation and contributes about 1.4% of the GDP (Odediren et. al., 2012) also, employs approximately 25% of Nigeria's workforce; the largest in Africa (Ibrahim & Musa-Haddary, 2010). Yet, the public construction projects in Nigeria has been faced with a lot of challenges before and after the Due Process Policy contract procurement process in Nigeria (Olatunji, 2007 and Familoye, 2015).

The Due Process Policy contract procurement process came about in order to entrench an effective contractor selection model that is based on world's best practice (Olatunji, 2008) so as to adopt the ethos of transparency, objectivity and accountability in a value-based public procurement system (Salama et. al., 2006; Wong and Holt 2003). Regrettably, Familoye et. al., (2015), noted that the public procurement act of Nigeria has not been able to achieve its primary objectives of transparency, accountability and value for money. These lead to the challenges of project non-performance in Nigeria. These challenges are: lateness in honouring payment certificate, too many variations, technical incompetence i.e use of non-expert contractor, design deficiencies, material shortage or late delivery, delays, inadequate project documentation, disputes, poor work condition, increase in project risk, cost overrun, time overrun and poor quality of work done (Ogunsanya et. al., 2016; Oladinrin et. al., 2013; Olatunji, 2007).

The gap in this research is that the Best Value Procurement (BVP) utilises a tool called 'Performance Information Procurement System (PIPS)' as the actual delivery structure for optimising the supply chain and the alignment of resources to minimise management, direction and control of the expert contractor and, increase accountability, transparency and value (Kashiwagi, 2017). These leads to the minimisation of the project cost by 98%, reduction of time overrun by 98%, increases contractor's profit by so doing creating a win-win environment, maximise technical competency, maximise client satisfaction and delivers an outstanding project quality while adding value (Kashiwagi, 2015). If incorporated into the project delivery system in Nigeria, it has a potential of stabilising the entire project delivery system in Nigeria as it is that, Nigeria intends to adopt the ethos of transparency, objectivity and accountability in a value-based public procurement system.Hence, improving project performances in Nigeria. Just as shown in Figure 1.

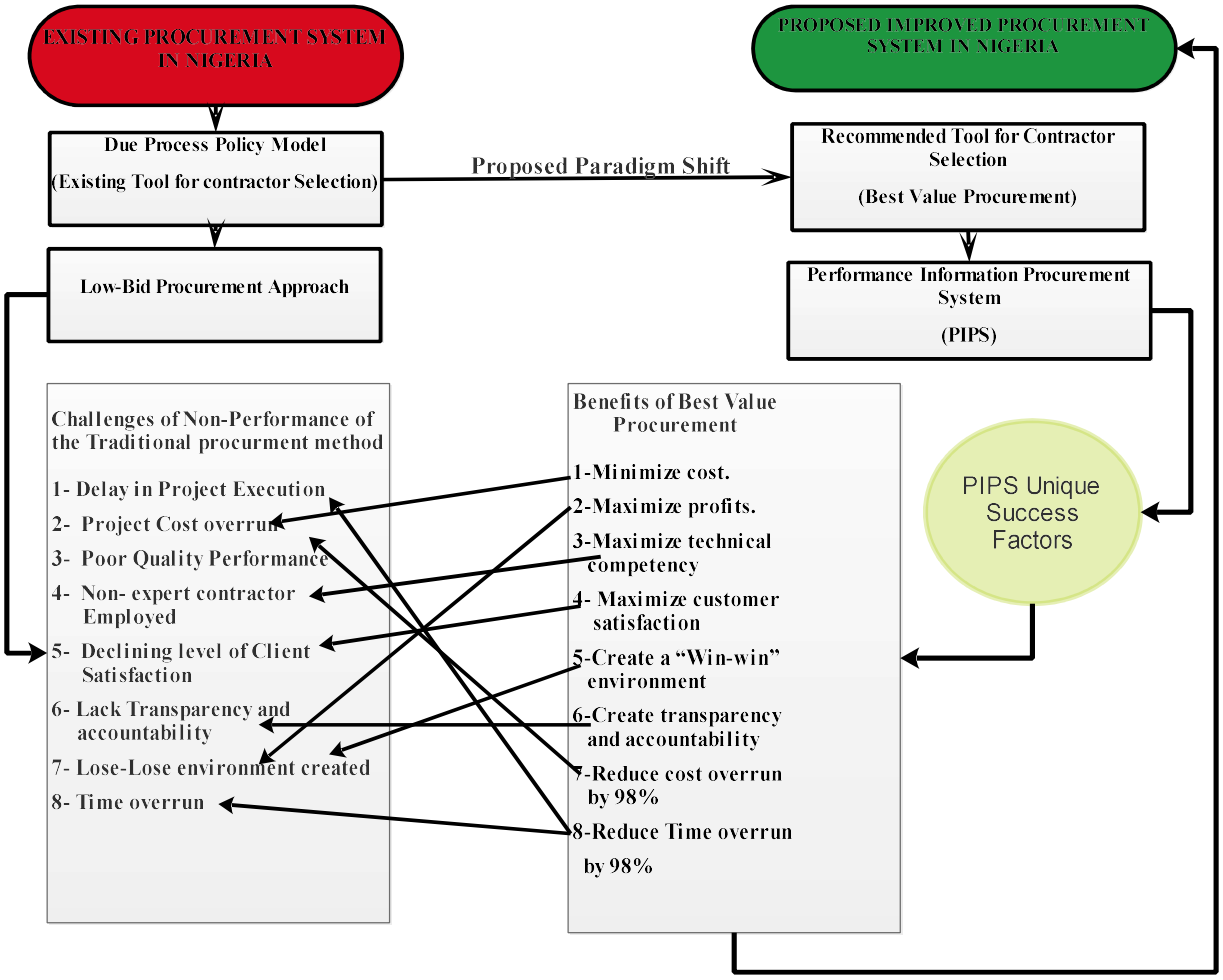

Figure 1 Conceptual Framework

1.2 Research Questions

1. What are those factors that make the Best Value Procurement unique?
2. How do the Nigerian construction professionals perceive these factors' ability to improve project delivery in Nigeria?

1.3 Aim and Objectives

This research aims at establishing the perception of Nigerian construction professionals on the unique factors of the Best Value Procurement. In accomplishing this aim the following objectives are to be achieved:

1. To identify those unique factors of the Best Value Procurement.
2. To establish the perception of the Nigerian construction professionals on the Best Value Procurement unique factors.

The best value Procurement (BVP) substitutes traditional project risk and, procurement management, as well as contract administration with the alignment of expertise and accountability (Kashiwagi, 2012). The Best Value Procurement (BVP) is a change in paradigm. As it focuses on replacing the traditional business model which involves making decisions, managing, directing and controlling the contractor with the utilisation of expertise, it is an approach of an intelligent person who utilises expertise to create a "win-win" environment for everyone. This approach is comprehensive in its application into business but is mainly used in the field of procurement (Kashiwagi solution Model Inc., 2016).

Kashiwagi et. al. (2012), Added that it is an efficient and potent method that reduces the detailed needless information and communications, and creates a win-win environment for both the parties, achieve superior possible value at the lowest price, high contractor profit, and minimal project deviations in cost and time. BVP emphasises efficiency, achieving worth for money, performance criteria and, it centres on instituting best practices for public sector organisations by putting into words incontestable standards and develops an adequate contractual procedure in delivering services to the public" (Akintoye et. al, 2003).

Therefore, the Best Value Procurement (BVP) selection method distinguishes the most qualified contractor from others based on provable past performance metrics instead of more traditional criteria (Abdelrahman et. al., 2008). As it is, the best value guarantees the selection of the most qualified contractor regardless of the price and, the understanding of the Best Value system will greatly benefit both clients and contractors (Hasnain and Thaheem, 2016). Below are the objectives of the best value procurement as well as the tool used in procuring an expert contractor in the BVP approach

1.4 Objectives of Best Value Procurement (University of Minnesota, 2016):

1. Reduce the risk of non-performance.
2. Optimise the supply chains.
3. Minimise life-cycle cost.
4. Increasing organizational efficiency
5. Improve the quality of construction work and vendor services (including on-time delivery and eliminating change orders).

1.5 Performance Information Procurement System (PIPS)

The delivery method of the Best Value Procurement uses the tool called "Performance Information Procurement System(PIPS)". PIPS was originally, strictly a selection process. The first test of the process was performed in 1994 according to Kashiwagi & Savicky cited in Kashiwagi (2013), was used in selecting roofing systems and contractors for private organizations such as Intel, IBM, and McDonald Douglas. The system was documented and performed so well, for the roofing industry, the system spread to other construction areas. It has been transformed into four models which are: (1) selection Model, (2) Measurement Model, (3) Risk model and, (4) Management model (Kashiwagi, 2012). Best value PIPS procurement is more than just a procurement system. It is a business model, cutting edge technology and a leadership model that looks at factors other than just prices, such as quality and expertise when selecting contractors. Hence, proving a visionary outlook to the construction project right at its onset (Nihas, 2017). Performance-Based Studies Research Group (2016), also concur that the PIPS process offers clients a tool to identify and choose the Best Value vendors or contractors for their projects, based on performance instead of just lowest price. Unlike other Best Value methods out there, PIPS also has mechanisms to measure the contractor's performance throughout the duration of the project.

1.6 The Concept of Performance Information Procurement System

The PIPS concept is based on outsourcing, quality control (rather than management and inspection), continuous improvement with minimal client control, and the process is based on leadership rather than management principles to improve the success rate (on time, on budget, no change orders) of construction delivery (Kashiwagi et. al., 2005). Deductive logic or common sense proposes, that since the construction industry non-performance problem has existed for such a long time, it may be a systems problem instead of individual participant's non-performance or lack of technical expertise or a problem that can be overcome simply by re-ordering or changing the grouping of participants (Sullivan et. al., 2009; Collins, 2001; Deming, 1982; Ford, 1922). Kashiwagi et. al. (2005), Also opined that the poor level of performance in construction is being stirred by the client's price-based environment. This will be best explained in the construction Industry Structure.

1.6.1 Construction Industry Structure (CIS) Analysis

Kashiwagi (2011), Uses Figure 2 The CIS explanation to show that PIPS has leading value and the reason the majority of project/risk management concepts are not precise or efficient.

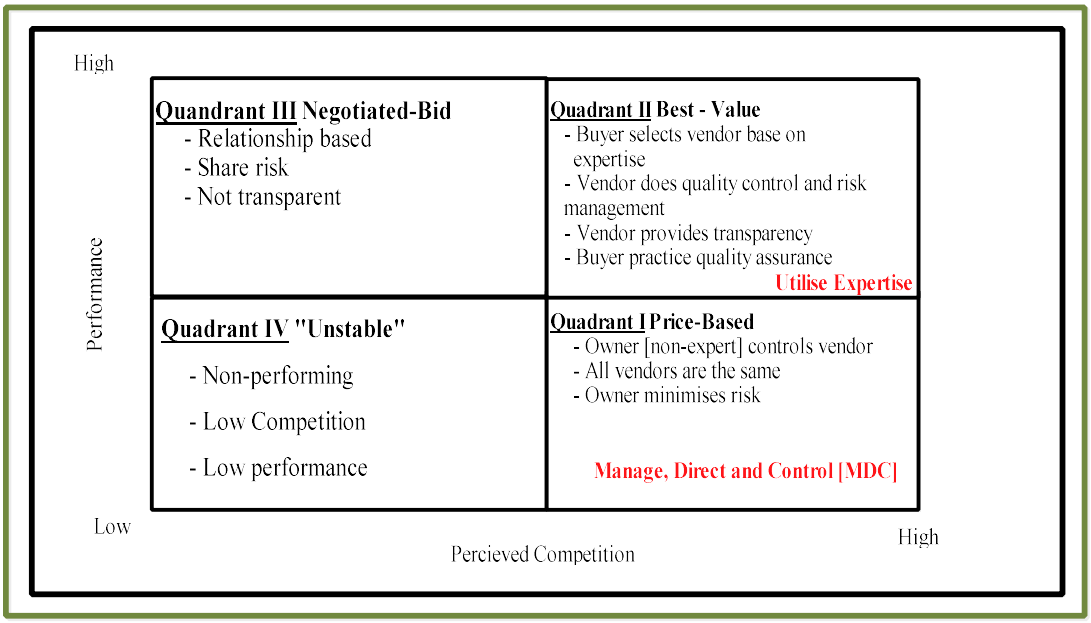

Figure 2 Construction Industry Structure. Source: (Kashiwagi, 2011)

1.6.2 Price based Quadrant I

"The BVP/PIPS was developed as a result of the fact that the service delivery system was identified as the problem and not the shortage or unavailability of qualified technical personnel (Meyer et. al, 2010; Kashiwagi, 2010). By means of an industry structure diagram (Figure 2), the following observations were deductively made:

a. In the price base environment, performance is low due to the fact that the client or client representative who has less technical experience is the one giving direction to the contractor that is supposed to be the expert.
b. Quality will constantly drop as a result of the usage of minimum requirement which is subjectively created and requires interpretation to apply. Hence, creating an adversarial relationship between the owner and the contractor. The owner hungers for a low price and superior value while the contractor wants a minimum performing systems.
c. The client tends to increase directing, controlling and management when the quality and prices decrease.
d. When the client increase directing, controlling and management, value and performance decrease thereby increasing the cost.

The lack of recognising and appreciating the differences in the contractor's quality, performance and value in the price based awards, tends to motivate contractors to be more adversarial, offer lower quality, not to pre-plan nor utilise expertise. No transparency in the price base system, it requires more of decision making that increases the risk of expectations and deviations. In order to shift from poor performance to high performance, there must be an increase in efficiency and minimising cost, directing, controlling and management from the owner. The contractor's expertise level must be increased also.

1.6.3 Quadrant II Best Value

When the contractor increases accountability, measurement of performance, pre-planning, quality and risk management then, will there be an increase in performance. The contractor is identified in the best value environment as an expert. Thus, assigned the role of quality control and risk management. While the client representative in the best value environment is given the role of non-technical quality assurance which ensures that the contractor has the needed systems used to minimise deviation. Therefore, in describing the best value quadrant, it is a deductive argument which is dominant and utilises common sense. The following deductive logic is the basis of the design of the BVP/PIPS structure:

a. An expert contractor can deliver at a lower price, a high quality and has less risk.
b. Controlling a contractor is impossible and, attempting to do so brings about decision making, additional transactions, increase in cost and risk also, a declining effect on quality and value.
c. The risk that expert contractors cannot control is their only risk, this is because an expert contractor has very little technical risk.
d. Expert contractors maximise their profits by attempting to manage and minimise the risk they have no control over.
e. Expert contractors pre-plan and do operate proactive systems of risk management that help manage their risk before it occurs.
f. The best value for the lowest price is the 'best value'.

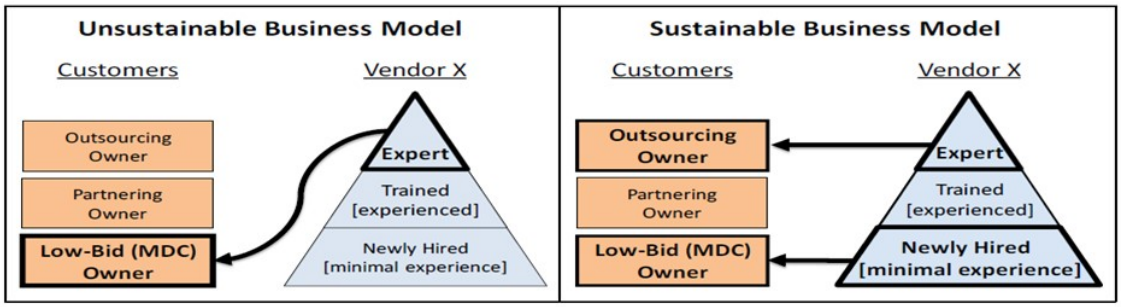

Figure 3 Industry Business Models. Source: (Kashiwagi, 2017)

Kashiwagi (2017), explained Figure 3 in his book titled "secrets of success how to know everything without knowing anything" which shows a vendor's employees as newly hired, trained and highly experienced. The owners are represented on the left side as outsourcing owner [utilize expert's expertise], partnering owner [collaboration and working together] and the low bid or price based owner who manages, directs and control [MDC].

If the vendor sends their most experienced and expert workers into the price based owner, who manages, directs and controls [MDC] the expert, the expert will resist the non-expert, the project duration will be extended, the cost will increase and the profit will decrease.

The vendors will quickly learn to send their new recruits to the MDC owner. They are cheaper and because they lack experience and expertise, they make the MDC owner comfortable by listening and following their instructions. The vendors have no risk if they carry out the instruction given to them diligently. Even if the results achieved are not satisfactory, as long as the vendor did as the owner directed, the owner's representatives become accountable for the results.

The only approach of successful vendors to utilize the expertise of the experts in their company is to send their experts to the outsourcing clients. The experts have a higher salary, but due to their planning, mitigation of risk, and expertise, they will lower the project cost. This is the only approach to maintain expertise in the industry.

The largest group of owners are the MDC owners. Due to their "blindness", they are driving the industry into the ground. There is no motivation for highly skilled project managers, skilled mechanical, piping and electricians (MEP) to increase in their level of expertise [change their paradigm, do more training and education and be proactive in leading projects].

1.7 Unique factors of the Best Value Procurement

Kashiwagi (2013), identified out of 44 clients'/contractors factors that Best Value Performance Information Procurement System (BVPIPS) has eight (8) unique factors that are different from the traditional procurement systems. These factors are:

1) No-influence, no-control, no management philosophy
2) Seamless contract
3) Supplier contract creation
4) Pre-planning
5) Problem Contracting
6) Communication Minimization
7) Expert Supplier Model
8) Dominant Information

No-Influence, No Control, No Management philosophy: PIPS gets the buyer to minimise direction and release control over the supplier since the supplier is the expert. This system also focuses on making the supplier accountable for the project, due to the owner minimizing direction and decision making on the project. According to Moteng (2016), it involves setting up a structure that makes each party responsible and accountable for knowing and doing the work they are hired to do which will be more efficient than the client having to manage, direct and control the project contractor.

Seamless Contract: Contract mitigates risk instead of being a legal/regulatory/control document. As established by Moteng (2016), If the project performance is measured on a weekly basis and published to all stakeholders, showing deviation created by each project stakeholder, then accountability will increase and project performance will improve.

Supplier Contract Creation: The supplier creates the contract and the scope of the project. Moteng (2016), asserted that contractors who are experts are more qualified than the client and its advisors to develop the best solution to the problem that the project is requested to solve.

Pre-planning: The PIPS/PIRMS places more importance on pre-planning before the contract is signed than after the contract is signed. The contract representing the start or implementation of the service, since usually the contract binds all parties to an identified project plan and set of activities. Therefore, Requiring the expert contractor to have a detailed project plan and to show what awaits each stakeholder over the entire course of the project before signing the contract will improve project performance (Moteng, 2016).

Problem Contracting: PIPS/PIRMS does not require the buyer to identify the scope of the project. Allowing the buyer to only relay their intent and expectations. This thus makes project requirement defined in terms of high-level objectives instead of minimum specifications which allows the expert contractor to be innovative and create greater value for all stakeholders (Moteng, 2016).

Communication Minimization: This system minimises buyer/supplier communication. Therefore, using simple terms that non-technical stakeholders can understand and reducing the circulation of highly technical information will improve communication and project performance (Moteng, 2016).

Expert Supplier Model: Supplier has no technical risk and focuses on mitigating risk the supplier does not control. Consequently, it Requires the expert contractor to identify and pro-actively track all the project risks that they do not control thus, making every stakeholder be more accountable (Moteng, 2016).

Dominant Information: Communication to be in simple, clear, and in non-technical terms. This creates a transparent system thereby; deters project parties from feeling like they are being cheated hence, benefits generated by the project becomes clearer (Moteng, 2016).

These factors were found to be unique because they could not be found in any other client/contractor systems. When compared to the traditional client/contractor factors, none of the factors could be matched up with a traditional factor.

2. Methodology

2.1 Area of Study

This study was conducted in Abuja, the Federal Capital Territory (FCT) of Nigeria and some significant states in Nigeria as well. These states are Kaduna State (Located in the north-western region of Nigeria, the capital of the former northern region of Nigeria), Jos, plateau state (located in the middle belt of Nigeria) and Minna, Niger State (located in west-central Nigeria). Being that Abuja is a hub of construction with professionals from different locations in Nigeria practising in different fields then, professionals from the north, Middle belt and west-central have captured a cross-sectional profile of the professionals in the country. See Figure 4

Figure 4 Map of Nigeria showing the state for data collection (Abuja, Kaduna, Jos and Minna)

2.2 Population and Sample size

The type of data collected is made up of primary data as Rubin & Babbie (2009), opined that the use of primary data collection method is effective to provide valid and reliable research data and it helps to develop relevant understanding about the topic by involving the research participants in the study. Therefore, a questionnaire was used for the collection of data being that questionnaires are effective means of measuring the behaviour, attitudes, preferences, opinions and intentions of relatively large numbers of subjects more cheaply and quickly than other methods" (McLeod, 2014). The questions in the questionnaire were close-ended and on an attitude scale called 'Likert Scales'. Hence, the target population of this study are Architect, Quantity Surveyors, Civil Engineers and Builders that are registered with their respective professional body. This is because, for any procurement approach to perform very well as to time, cost and quality which are the key performance indicators of any project, it has to depend on the expertise and experience of these professionals from the beginning to the end.

The target population of the construction professionals in Abuja, Kaduna, Jos and Minna put together as at 2017 when the data was collected was about 3,438 which comprise of Quantity Surveyors, Architects, Builders and Civil Engineers (Nigerian Institute of Quantity Surveyors 'NIQS'; Architects Registration Council of Nigeria 'ARCON'; Council of Registered Builders of Nigeria "CORBON" and Nigerian Society of Engineers 'NSE', 2016). Based on this, using Krejcie and Morgan (1970), table for determining Sample Size form a Given Population, the closest to this study's

population is 3,500 of which the sample size for data collection is 341. Hence, a random sampling procedure was used in disseminating the questionnaires. This survey was carried out from February 2017 - September 2017. Out of 341 respondents 314 questionnaires were completed and returned for data analysis which is about 92% of the questionnaires completed and returned. According to Baruch (1999), cited in Nulty (2008 Pg. 306), he stated that the overall average acceptable response rate was 55.6%. Based on this, the response rate of this study can be said to be adequate.

2.3 Method of Data Analysis

The method of analysis used are Kruskal Wallis Test so as to, help access the differences among the professionals' perception on the unique factors of BVP (Najib and McKnight, 2010; Pallant, 2005) and mean score ranking to help determine the hierarchy of probability of the unique factors of BVP i.e., to quickly learn the true popularity ranking of the unique factors of BVP (unbiased by the made suggestions) and suggest true popular unique factors of BVP (Davino and Fabbris, 2014; Vojnovic' et. al., 2009)

2.4 Instrument (Questionnaire) Reliability

From Table 1, the professionals used for this pilot survey were 18 in number. Hence, the responses for the pilot survey was completely filled and returned. 5% of a total of 350 expected responses was used for the pilot survey. Viechtbauer et. al., (2015), asserted that, if a problem exists with 5% probability in a potential study participant, then the problem most likely for sure be identified with 95% confidence. Furthermore, Table 2 shows the reliability of the instrument used. According to Nunally (1994), Cronbach's alpha normally measures for scale reliability of 0.7 as a cut-off value. Anelli et. al. (2018), contributed that a value ≥ 0.7 indicates high reliability as well. Hence, form Table 2, the Cronbach's alpha coefficients for the instrument used is highly reliable at 0.901 value which is above the acceptable value of 0.7.

Table 1 Case Processing Summary

		N	%
Cases	Valid	18	100.0
	Excluded[a]	0	.0
	Total	18	100.0

a. Listwise deletion based on all variables in the procedure.

Table 2 Reliability Statistics

Cronbach's Alpha	N of Items
.901	59

2.5 Data Analysis.

2.5.1 Data Presentation and Discussion

Table 3 is a presentation of the number of registered construction professionals that were the respondents in this study. From the table the following where the number of each professional field: Architect (64), Quantity Surveyor (104), Builders (72) and Civil Engineers (74). These are the representation of the sample for the population of this study.

Table 3 Registered Professionals Involved in the Study

Professional Field	Professional Body				Total
	ARCON	NIQS	CORBON	NSE	
Architecture	64				64
Quantity Surveying		104			104
Building			72		72
Civil Engineering				74	74
					314

Table 4 Professional's Years of Experience in the Construction Industry

Professional Field	Years in the construction industry				Total
	6-10years	11-15years	16-20years	>20years	
Architecture	4	33	20	7	64
Quantity Surveying	13	44	33	14	104
Building	4	32	36	0	72
Civil Engineering	4	28	40	2	74
Total	25	137	129	23	314
	8%	44%	41%	7%	100%

Table 4 is a presentation of the years of experience of the respondent in this study. From the table, the following are the percentages of respondents' years of experience captured in this study: 6-10 years (8%), 11-15 years (44%), 16-20years (41%) and above 20 years (7%).

2.5.1.1 Perception of the Construction Professionals on Unique Factors of Best Value Procurement.

Table 5 shows the summary of the perception of all the professional fields as to their level of agreement to each best value statement of the BVP unique factors.

Table 5 Summary of the Perception of all the Professional Fields

S/No.	BEST VALUE PROCUREMENT UNIQUE FACTOR	BVA STATEMENT	Professionals' Perception		
			Strongly Disagree / Disagree	Not Sure	Strongly Agree / Agree
1	No influence, no control, no management philosophy	Setting up a structure that makes each party responsible and accountable for knowing and doing the work they are hired to do will be more efficient than the client having to manage, direct and control the project contractor.	0%	4%	96%
2	Seamless contract	If the project performance is measured on a weekly basis and published to all stakeholders, showing deviation created by each project stakeholder, then accountability will increase and project performance will increase.	0%	0%	100%
3	Supplier contract creation	Contractors who are experts are more qualified than the client and its advisors to develop the best solution to the problem that the project is requested to solve.	0%	0%	100%
4	Pre-planning	Requiring the expert contractor to have a detailed project plan and to show what awaits each stakeholder over the entire course of the project before signing the contract will not improve project performance.	0%	0%	100%
5	Problem contracting	Having a project requirement defined in terms of high-level objectives instead of minimum specifications will allow the expert contractor to be innovative and create greater value for all stakeholders.	0%	1%	99%

6	Communications minimization	Using simple terms that non-technical stakeholders can understand and reducing the circulation of highly technical information will improve communication and project performance.	0%	0%	100%
7	Expert supplier model	Requiring the expert contractor to identify and pro-actively track all the project risks that they do not control will result in every stakeholder being more accountable.	0%	1%	99%
8	Dominant information	A transparent system prevents project parties from feeling like they are being cheated and helps them to see all the benefits generated by the project.	0%	0%	100%

From Table 5 it can be said that the Nigerian construction professionals do agree with the best value procurement unique factor's applicability to improve project delivery in the construction industry particularly the Nigerian construction industry. this agrees with Moteng (2016), in his research said that the majority of practitioners (80 %) believe that the BVP principles if implemented in can improve projects performance.

There is a need to confirm whether there are any differences in the professionals' level of agreement across the different professional groups to each of the Unique factors of BVP. Hence, a Kruskal-Wallis test was carried out to address the issue.

Table 6 Test Statistics [a,b]

Unique Factors of the Best Value Procurement	Chi-Square	df	Asymp. Sig.
No Influence, No Control, No Management Philosophy	15.385	4	.004
Seamless Contract	14.386	4	.006
Supplier Contract Creation	15.567	4	.004
Pre-Planning	.179	4	.996
Problem Contracting	13.807	4	.008
Communication Minimization	8.850	4	.065
Expert Supplier Model	10.452	4	.033
Dominant Information	7.163	4	.128

a. Kruskal Wallis Test
b. Grouping Variable: PROF FIELD
Note: Significance level, Value < α (0.05)

From the output in Table 6, of the Kruskal-Wallis test, it suggests that there is a significant difference in the professionals' level of agreement across the different professional groups to some unique factors of BVP and they are No Influence, No Control, No Management Philosophy, Seamless Contract, Supplier Contract Creation, Problem Contracting and, Expert Supplier Model all having significance levels value of < 0.05 each. While, to some, it suggests that there is no significant difference in the professionals' level of agreement across the different professional groups to the remaining unique factors of BVP and they are Pre-Planning, Communication Minimization and, Dominant Information all having significance levels value of > 0.05 each. Consequently, meaning that, there is a difference in their perception on the following Unique factors: No Influence, No Control, No Management Philosophy, Seamless Contract, Supplier Contract Creation, Problem Contracting and, Expert Supplier. While, having an unwavering agreeing position on the following BVP unique factors: Pre-Planning, Communication Minimization and, Dominant Information.

For a better understanding of the professionals' rating of each of these unique factors of Best Value, a ranking of these unique factors was conducted by the use of mean score (MS) to ascertain the level of acceptability of each unique factors by the Professionals. The formula for the mean score used is:

$$MS = \frac{\sum n.p}{N} = \frac{P_1 * n_1 + P_2 * n_2 \ldots n}{N}$$

Where, MS= Mean Score,

n = weighting number of the scale,

p = probability distribution of respondent,

N = total number of respondents.

The decision rule on Likert scale on the mean score from this entailed weightings of Strongly Disagree=1, Disagree=2, Not Sure=3, Agree=4, Strongly Agree=5. Therefore, and averaged on the scale is:

$$\frac{1+2+3+4+5}{5} = 3$$

Therefore, any score over the average score of 3 can be regarded as an agreement of some magnitude. As supported by Ameyaw (2015), Mean Score <1.50 = very low, 1.5 – 2.49 = low, 2.50-3.49 = moderate, 3.5-4.49 = high then > 4.50 = very high.

Table 7 Mean Score Ranking of the Unique Factors of Best Value Procurement from the Professionals' Viewpoint

S/NO.	PIPS SUCCESS FACTOR	ARCH	Q/S	BUILD-ING	CIVIL ENG	S ENG	AVE MS	RANK
		MS	MS	MS	MS	MS		
1	No influence, no control, no management philosophy	4.667	4.732	4.688	4.591	4.967	4.729	3
2	Seamless contract	4.772	4.598	4.672	4.652	4.933	4.725	4
3	Supplier contract creation	4.772	4.680	4.813	4.561	4.867	4.738	2
4	Pre-planning	4.596	4.577	4.609	4.591	4.600	4.595	6
5	Problem contracting	4.386	4.485	4.453	4.682	4.367	4.474	8
6	Communications minimization	4.561	4.649	4.547	4.682	4.400	4.568	7
7	Expert supplier model	4.737	4.701	4.766	4.561	4.667	4.686	5
8	Dominant information	4.825	4.794	4.703	4.682	4.867	4.774	1

Table 7 hereby, expresses how the Nigerian construction experts' rates the Best Value Procurement unique factors which bring about success in project delivery in the construction industry. From the average mean score of all the unique factors of Best Value Procurement in Table 7, using the decision rule by Ameyaw (2015) is shows that there is a very high level of acceptability of the Best Value Procurement unique factors in the Nigerian construction industry with an average mean score of each unique factors greater than 3.5 which indicate high acceptability. Also, from the ranking, the professionals agreed that Dominant information ranks no. 1 with an average mean score of (4.774), Supplier contract creation no. 2 with an average mean score of (4.738), No influence, no control, no management philosophy no. 3 with an average mean score of (4.729), Seamless contract no. 4 with an average mean score of (4.725), Expert supplier model no. 5 with an average mean score of (4.686), Pre-planning no. 6 with an average mean score of (4.595), Communications minimization no. 7 with an average mean score of (4.568) and finally, Problem contracting no. 8 with an average mean score of (4.474).

Table 7 expresses that the professionals in the NCI generally agree with all the BVP statements which elaborate its potential towards improving the project delivery in the NCI. Out of the eight (8) unique factors statements the highest is 'Dominant information' which states that "a transparent system prevents project parties from feeling like they are being cheated, and helps them to see all the benefits generated by the project. This suggests that with the inclusion of dominant information in the Nigerian project delivery a transparent system is perceived to be established. This is followed by 'Supplier contract' which shows that contractors who are experts are more qualified than the client and its advisors to develop the best solution to the problem that the project is requested to solve hence, the contractor should create the contract and the scope of the project from the client's brief.

The third highest is the inclusion of the 'No influence, no control, no management philosophy' which suggest that, when a structure that makes each party responsible and accountable for knowing and doing the work they are hired to do is Set up, it will be more efficient than the client having to manage, direct and control the project contractor who is an expert. That will reduce to higher degree disputes within the project delivery system. Next to this is 'Seamless contract' which likewise, suggest that contract should be designed to mitigate risk instead of being a legal/regulatory/control document. With this, the project performance will be measured on a weekly basis and published to all stakeholders, showing deviation created by each project stakeholder, then accountability will increase and project performance will increase. Then the 5th in ranking is the inclusion of the 'Expert supplier model' which shows that the Contractor being an expert has no technical risk and focuses on mitigating risk he does not control. Consequently, it Requires the expert contractor to identify and pro-actively track all the project risks that they do not control thus, making every stakeholder be more accountable. This is a model of accountability.

The 6th in ranking being the addition of the contractor's 'Pre-planning' in project delivery. This is because, the contract represents the start or implementation of the service and, since typically, the contract binds all parties to an identified project plan and set of activities. Thus, requiring the expert contractor to have a detailed project plan and to show what awaits each stakeholder over the entire course of the project before signing the contract by so doing, project performance will be improved. Then 'communication minimisation' in project delivery helps minimises client/contractor communication. And so, using simple terms that non-technical stakeholders can understand and reducing the circulation of highly technical information will improve communication and project performance hence, agreeing with dominant information. The last being, 'Problem contracting' Allows the client to only communicate their intent and expectations. This accordingly, makes project requirement defined in terms of high-level objectives instead of minimum specifications which allows the expert contractor to be innovative and create greater value for all stakeholders. These are the perceptions of the Nigerian Construction Professionals on the BVP unique factors.

3. Conclusion

Employing an innovative procurement approach such like, the Best Value Procurement approach that utilises expertise to minimise the risk of non-performance and create a win-win environment for both client and contractors while, increasing transparency and add value to the project will, make project delivery failures in the Nigerian construction industry a thing of the past. The unique factors of the Best Value procurement, are the driving force in most of the project delivery successes recorded of Best Value Procurement and, from the analysis of data collected from the Nigerian construction industry professionals, they agreed that the utilisation of these unique Success factors of the Best Value procurement in the Nigerian construction industry can help improve project delivery with a very high acceptability rate from these construction professionals in Nigeria. Therefore, the Nigerian construction professionals perceive that the quest for an improved and stabilised project delivery in the Nigerian construction industry can be achieved by the usage of the unique factors of the Best Value Procurement.

Acknowledgement

The authors would like to thank the Kaduna State University, Nigeria and TETFUND for the Support granted for this programme.

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