

Evaluating the Levels of Performance of the Small Scale Contractors in Nigeria

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Abstract

This study is aimed at evaluating the performance levels of small scale contractors (SSC) in Nigeria. Previous studies focused most attention on benchmarking the performance of contractors which were mostly conceptual rather than from any empirical findings, this continuous to pose a challenge to the sustainable development of construction industries particularly in developing countries like Nigeria. There is need to identify the performance levels of these contractors that is the journey so far achieved in the establishment of strong and viable industry for rapid development of socio-economic standards of these countries. The overall performance of small scale contractor (OPC) comprises of financial, technical and managerial performances and the performance of each contractor was evaluated using five point likert scale to obtain the mean performance level in respect to those three classes of performances. Questionnaire survey were administered to the major stakeholders in the Nigerian construction industry comprises of clients, contractors and consultants selected using proportionate stratified random sampling and the results indicated that financial performance had a mean value of 3.58, technical performance was 3.56 and the managerial performance 3.84 means. The three classes of performances fall into the categories of average performing contractors. The study concluded that small scale contractors in Nigerian construction industry (SSC) were average performing contractors and there were significant differences between the contractors' levels of performances. The study recommended the introduction of project clients' support with advance to mediate between the major factors affecting cost and the levels of contractors' performances; this would enhance the rapid development of small scale construction business in Nigeria.

Keywords: *Contractors, Level of Performances, financial, technical and Management.*

1. Introduction

The performance levels of small scale contractors (SSC) pose a challenge to the sustainable development of indigenous small scale contract business that serve as a catalyst for employment generation, national growth, poverty alleviation and economic development particularly in developing countries (Mohammed & Obeleagu-Nzelibe, 2013). The performance level of SSC is critical to the development of construction industry in general and successful to the completion of any construction project in particular; it is the contractor who converts designs into practical reality. The performance level of SSC leads to an increase client satisfaction, an improved reputation and enhance competitiveness in the construction industry (Pheng & Chuan, 2006). The performance level of SSC have been criticized due to delays, cost and time overruns, projects abandonments and projects not meeting specifications (Alarcon & Mourgues, 2002; Cox, Issa, & Ahrens, 2003; Masrom, 2012). Each level of SSC is characterizes with the firm's efficiency, effectiveness or a quality of the work executed by the contractor ranging from poor/very low to excellent/very high performances, performance is anticipated destination expected to reach by each SSC and a level of

performance is a journey so far achieved to the destination (Elgar, 2006). Generally the level of SSC depends on three factors, financial, technical and management performances of the firms/ contractors (Elgar, 2006). Pinto and Pinto (1990) stated that performance or destination of a contractor includes the efficient utilization of the firm's financial, technical and management resources and the level of firm's performance defined the journey so far achieved by the firm in terms of project cost psychosocial outcomes which refer to the satisfaction of interpersonal relations between client and contractor and among other participants in the project team. The success of any SSC is to deliver a project on budgeted cost, time that conforms to the client's expectations, meets specifications, attains good workmanship and minimizes construction conflicts (Songer & Molenaar, 1997). The performance or destination of a SSC can be achieved by evaluating the performance levels project executed and identifying areas that need improvement (Kumaraswamy & Thorpe, 1996).

From the global perspective, attempts has been made in construction industry to measure the performance of contractors in the industry, in countries such as Indonesia, Singapore and others, key performance indicators similar to those used in manufacturing and service industries were developed to evaluate the performance of contractors in the construction industry. The key performance indicators were developed in the areas of cost performance factors, schedule/time, quality, waste management, customer satisfaction, profitability, productivity and safety. These performance indicators KPI were benchmarked to identify key factors that affect contractors' performances and are found to be cash flow problem and the nature of working environment (Zairi, 1994; Fisher, Mirrtschin & Pollock, 1995; Elmuti & Kathawala, 1997; Brah, Ong & Rao, 2000; Ling & Peh, 2005). In the other hand, performance of small scale contractors has been a source of concern to the clients as well as other parties involved in the industry (Amusa, 2009). The construction industry in Malaysia, is one of the industry facing poor level of contractors performance with 92% of projects faced cost overrun, only 8% of projects achieved target cost, the projects time overruns are between 5-10% time overruns , this was attributed to financial, technical and firms management problems (Rahman, Memon, Nagapan, Latif, & Azis, 2012) in India, over 40% of construction projects faces time overruns between 1-252 months due to contractors financial problems which is seen as the back borne of industry poor performance and leads to technical and management problems of most of the construction firms in the country (Iyer & Jha, 2006; Iyer & Jha, 2005; Loevinsohn & Harding, 2005; Majid & McCaffer 1998). In Ghana monthly payment difficulties by client agencies is the most important factor contributing to poor performance of small scale contractors, then followed by contractor management and technical performances (Frimpong, Oluwoye, & Crawford, 2003). The performance levels of SSC in Nigeria is very alarming with reports that 60% of the estimated initial cost is lost due to poor financial practices, technical and management know how of the contractors, this supported the report of Local Government Monitoring and Evaluation Committee(Ezeh, 2013). Most of the government projects in Nigeria are ended up as abandoned projects, Local Government Monitoring and Evaluation Committee reported that 65.5% of local government projects were abandoned between 2008-2009 financial years, because of financial and incompetency of small scale contractors in handling capital projects (Local government Monitoring and Evaluation Committee LGMEC, 2009). To solve these problems of poor performance of small scale contractors is not only by establishing key performance indicators in the industry without any empirical findings but there is need to identify the journey so far achieved

by these contractor i.e. level of contractors performance and ways of improvement from where they are lagging behind.

2. Literature Review

The overall or general contractor performance comprises of three key areas of performances; financial, technical and management performances (Hatush & Skitmore, 1997; Alarcon & Mourgues, 2002; Singh & Tiong, 2005). These areas of performances have significant impact on the overall/general performances of SSLGC in developing countries (Singh & Tiong, 2005).

2.1 Financial Performance of SSLGCs

Contractor financial problems is the financial difficulties a contractor faced of not having sufficient fund to carryout construction activities, this includes payments of material, plant and equipments and salaries and wages of labour, and this contributes to his poor financial performance (Zagorsky, 2007; Ali, Smith & Pitt, 2012). The inability of project clients to pay contractors on time, contractors low profit margins, insufficient capital base and excessive debt are the major factors contributing to the financial difficulties of SSC (Thornton, 2007). Slow collection lack of prompt payment of approved valued work; topped the list in the years 2005 and 2007, where contractors received late payment from the client. This argument is supported by (Faridi & El-Sayegh 2006; Majid & McCaffer 1998; Arditi, Akan & Gurdamar, 1985; Al-Khalil & Al-Ghafly 1999; Frimpong et al. 2003, Assaf & Al-Hejji 2006). Delays in payments of approved valued works has a negative impacts on the financial performance of SSC, this leads to delays, abandonment of project and substituting specified material with an inferior unspecified materials ones (Sambasivan & Yau 2007). Insufficient profit is the second highest factor contributing to the financial difficulties of the contractor and also said that insufficient profit cannot be controlled because it is due to bad economic conditions (Ali, Smith & Pitt, 2012). Negative impact of insufficient capital is one of the major causes of financial difficulties among contractors, poor financial control by the contractor leads to insufficient capital and hence, the contractor will have excessive debt which causes them to face financial difficulties as they cannot pay back the debt (Ali *et al.* 2012; Liu, 2010). SSLGC have very low financial reserves and use the profit from ongoing projects to finance the next project, hence a loss in one project ultimately leads to cash flow problem and liquidation (Stretton, 1984). There is a tendency for SSC in developing countries to take money out of the business for spending on personal items (International Labour Organization ILO, 1987). Most SSCs' businesses are owned, operated and controlled by single person i.e. the sole owner and it is likely therefore, that project funds will sometimes be channeled into other personal matters which might result to financial strain on the projects. In addition, delays in contractor payment caused by the bureaucratic process of making contractor payments in the public sector create financial bottleneck for the contractor. Unless well managed, this delay is very damaging to contractors who are operating in a location remote from the client (Edmondsn & Miles, 1984; Wasi & Skitmore, 2001).

2.2 Technical Performance of SSLGCs

Technical performance is defined as the totality of features required by a project or services to satisfy a given need; fitness for purpose (Parfitt & Sanvido, 1993). Technical performance is the guarantee of the projects that convinces the client or the end-users that specification was adhered during construction. The meeting of specification is suggested by Songer and Molenaar (1996) and Wateridge (1995) as one way to achieve contractor's technical performance, and defined specification as workmanship guidelines provided to contractors by clients at the commencement of project execution. The aim of technical specification is to ensure that the technical requirements specified are achieved. Actually, technical specification is provided to ensure that buildings are built in good standard and in proper procedure. Freeman and Beale (1992) extended the definition of technical performance to scope and quality. Hence meeting technical specification is grouped under the "quality" category.

The process of identification of factors contributing to the poor technical performance of SSC is one major step in improving performance of the contractors, most at times these contractors do not own plants and equipments required for the construction work, they rent the equipment when required and some time these equipment are scarce particularly during seasons of constructions, and the equipment are usually not properly maintained (Sambasivan & Yau, 2007). Mistakes in setting out building and construction stages, inadequate contractor experience and frequent failure of construction equipment are the main factor contributing to the poor technical performance of SSC (Sambasivan & Yau, 2007). A study by Memon, Abdul Rahman, Abdullah and Abdula Azis, (2011), supported the previous findings that contractor inexperience and inadequate experience of labour are the major factors contributing to poor technical performance of SSC in developing countries. Skill and technical competence of contractor workforce, contractor's ability to identify and mitigate technical and schedule/programme risk, contractor's compliance with technical requirements are the major factors influencing technical performance of projects (Jafari, 2013; Frimpong *et.al.* 2003). However, Luu, Kim and Huynh, (2008) argued that inability of the firms to recruits and retain qualified technical staff, inaccurate of detail working drawings and lack of good cooperation by the parties in the contracts are the major factors contributing to poor contractor's technical performance. This view was supported by Doloi, Iyer and Sawhney, (2011) and added that inability of contractor's to proactive respond to changes in technical direction influence their technical performance.

2.3 Management Performance of SSLGC

Effective and efficient management performance of contractors is very important to ensuring that projects are completed on time and within budgeted cost. Poor coordination contributes to delays as well as cost overrun. Poor site management contributed as a result of contractor's poor site planning procedure, organization and coordination and lack of knowledge in managing the project team (Kadir, Lee, Jaafar, Sapuan & Ali, 2005). A project manager is the leader in a construction project in the sense that he is required to manage all the works on site from monitoring progress of construction works to managing all the administrative work in the project. It is of utmost importance for the project manager to manage the work and project teams effectively. Hence, poor site control by the project manager will affect the whole team and also the progress of works, resulting in the eventual outcome of project cost and time overruns. (Augustine & Mangvwat, 2001; Faridi & El-Sayegh, 2006; Arditi, Akan & Gurdanar,

1985; 2006; Toor & Ogunlana, 2008; Aibinu & Odenyika 2006;). Poor management performance is one of the major factors that crippled the development of SSCs' businesses in developing countries. Studies in the past revealed that contractor's inability to effectively coordinate, integrate and manage the services of subcontractors, contractor's inefficiency in interfacing and communicating with the government's /client's staff or representative and contractor's ineffectiveness in dealing with emergency situations on site are the three major factors contributing to poor management performance of contractors (Assaf & Al-Hejji, 2006; Frimpong, Oluwoye & Crowford, 2003). While Faridi & El-Sayegh (2006) argued that contractor's poor demonstration of strong commitment to integrity and business ethics, contractor's reasonableness, cooperation and commitment to client satisfaction, poor level of decentralization of contractor's project organization are the major factors contributing to the poor management performance of SSC. Doloji *et. al.* (2011) supported this argument and added that trustworthiness of contractor, frequent site meetings and review of previous project programmes achieved or where the programmes are lagging behind to rectify would go a long way in improving management performance of SSLGC

3. Research Methodology

This study is a quantitative in nature; a questionnaire survey was administered to 550 construction, consulting firms and project client in northern part of Nigeria. The region comprises of 19 states and federal capital territory Abuja. The region representing almost 80% of the total country's land mass (744,249.08 Sq Km) and a population of about 95 million peoples (National population commission NPC 2000). A total of 357 questionnaires were returned and analyzed. One-way ANOVA with Post-Hoc was used to analyze the differences among the levels of performances of SSC in Nigeria. The study records the overall response rate of 65% against researches of Odeyinka, Lowe & Kaka, (2008) with 52% and Yassamis, Arditi & Mohammadi, (2002) with 54%. IBM SPSS version 21 was used to analyze the collated data. The research instrument was tested before administering to the respondents and the followings results were obtained for reliability test, the cronbach's alpha for financial performance is 0.71, technical performance is 0.84 and 0.83 for management performance all well above the prescribed 0.70 cronbach's alpha (Sekaran & Bourgie, 2011; pallant 2008). Similarly factor analysis was conducted to test and identify multicollinearity and singularity on the three major factors: Financial Technical and Management Performances of the contractors, the Kaiser-Olkin-Meyer's measure of sampling adequacy KMO was 0.92, 0.87 and 0.86 all significant at $p=0.00$ significance level, the total variance obtained are 58.68%, 64.27% and 71.53% respectively. The determinants of R-Matrix are 0.006, 0.001 and 0.003 for financial, technical and management performances respectively. This shows that all the three determinants are greater than 0.0001 which indicates that there is no multicollinearity or singularity among the factors in the research instrument and no any single factor extracted for this analysis (Field, 2009).

The following hypotheses were developed to test the differences in the performance levels of SSLGC in Nigeria the hypotheses are based null hypotheses:

H_{01} = There are no significant differences and effects among the levels of contractors financial performance

H₀₂= There are no significant differences and effects among the levels of contractors technical performance

H₀₃=There are no significant differences and effects among the levels of contractors management performance

4. Data Analysis and Discussions

The analysis of the data collected for this study conducted by using IBM SPSS version 21. ANOVA with Post Hoc was conducted to assess the difference and effects among the levels of performance of small scale contractors in Nigeria.

4.1 One-way ANOVA with Post Hoc

One-way ANOVA with Post-Hoc analysis was used to evaluate the difference among the performance levels of SSC in Nigeria and to identify where the differences lies among the contractors' scores. The contractor's level of performances were categorized into 1.1-2.0 scores as contractors having very low performance in the industry then performance between 2.1-3.0 scores contractors with low performance in the industry, and then between 3.1- 4.0 scores contractors with average performance in the industry, scores between 4.1-4.5 contractors with high performance in the industry and finally scores of 4.6-5.0 referred to contractors with very high/excellent performance in the industry (Jafari, 2013; Assaf & Al-Hejji, 2006; Frimpong, Oluwoye & Crawford, 2003; Dissanayaka & Kumaraswamy, 1999)

4.2 ANOVA Descriptive Statistics of Financial Performance

Table 1.0 shows the descriptive statistics for the analysis which includes mean of the contractors that had a very low performance score was 1.56 and the standard deviation of 0.16, contractors that scored low performance had a mean value of 3.6 and the standard deviation of 1.14, the contractors with average performance score had a mean value of 2.95 with a standard deviation of 0.90 with regards to financial performance of the contractors. The contractors with high performance scored the mean value of 3.94 and the standard deviation of 0.60, and lastly contractors with the very high performance scored the mean value of 4.81 and standard deviation of 0.32 with regards to the financial performance of the contractors. The total mean score was 3.58 which indicated that contractors in Nigeria performed average in terms of financial performances.

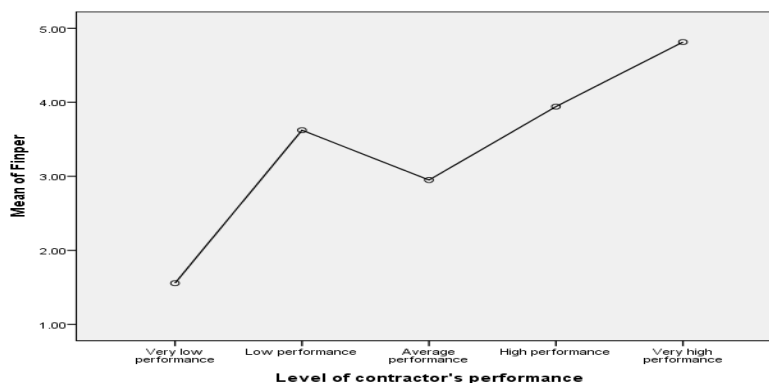


Figure 1: Level of Contractor's Financial Performance

Figure 1.0 above shows the graph of the levels of contractors' financial performance, contractors with very low level performance had a mean of 1.56, the contractors with low performance had a mean of 3.60, contractors with average performance scored the mean value of 2.95, contractors with high performance level scored 3.94 and lastly contractors with very high performance scored 4.81 mean. The total mean was 3.58, this indicated that small scale contractors in Nigeria performed financially average.

4.3 Descriptive Statistics of Technical Performance

From the table 1 below shows the descriptive statistics of technical performance of the contractors, contractors with a very low performance scores were having a mean of 1.41 and standard deviation of 0.58, those contractors with a low performance scores were having a 3.63 and standard deviation of 1.16, contractors that scored average performance with regards to their technical performance were having a mean of 2.85 and standard deviation of 0.66, contractors with a high performance with regards to their technical performance scored a mean 4.00 and standard deviation of 0.52. Lastly contractors that scored very high performance with regards to their technical performance scored a mean figure of 4.85 and standard deviation 0.26. The total mean technical performance of small scale contractors in Nigeria was 3.56 which indicates that the contractors performed technically average.

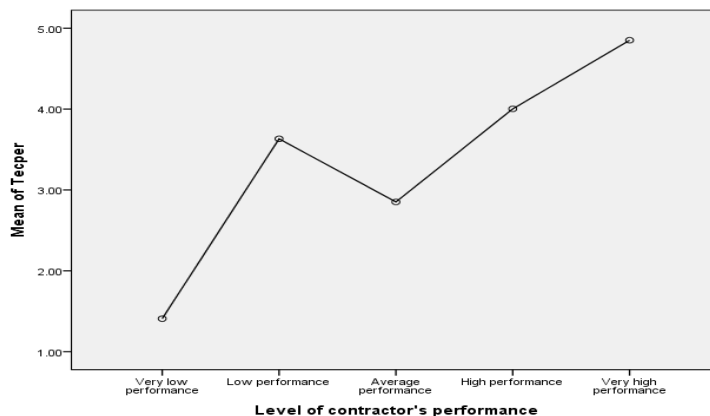


Figure 2: Level of Contractor's Technical Performance

Figure 2 above shows the graph of contractors' technical performance. The contractors with very low performance had a mean score of 1.41, contractors with low performance had a mean score of 3.63, contractors with average performance mean score had 2.85, the contractors with a mean high score had 4.00 and lastly contractors with very high score had a mean of 4.85, Finally, the total mean technical performance level was 3.56, this indicated that the contractors performed technically average.

4.4 Descriptive Statistics of Management Performance

Table 1 shows the One-way ANOVA descriptive statistics in respect of the managerial performance of the contractors. The contractors with a very low performance scored a mean value of 1.00 and standard deviation of 0.00, those that score low performance with regards to their management performance scored a mean value of 3.83 and standard deviation of 1.11, contractors with average performance scored a mean value of 3.61 and standard deviation of 0.98, contractors with the mean score of 3.84 and standard deviation of 0.83 performed high. Lastly contractors with the mean score of

4.85 performed very high with regards to their management performances. The total mean of contractors performance in terms of managerial performance was 3.84 with indicated that the contractors performed managerially average.

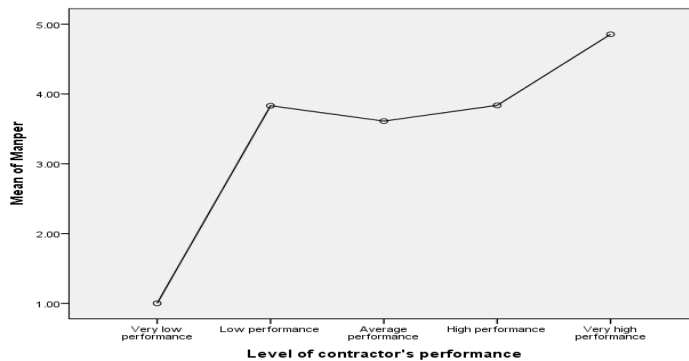


Figure 3: Level of Contractor's Management Performance

The figure 3.0 above shows the graph of management performance of small scale contractors in Nigeria. Contractors with the mean score of 1.00 were having a very low performance, followed by contractors with low scores having a mean of 3.83, contractors with mean score of 3.61 performed averages, then the contractors with 3.84 score performed high and lastly very high performed contractors scored 4.85. Finally, the total mean of contractors' management performance was 3.84 which indicate that small scale contractors in Nigeria performed average in terms of management performance.

Table 1: Descriptive Statistics of ANOVA with Post Hoc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Finper	VLP	2	1.5556	.15713	.11111	1.438	2.9674	1.44	1.67
	LP	69	3.6232	1.14415	.13774	3.3483	3.8980	1.56	5.00
	AP	138	2.9501	.89958	.07658	2.7987	3.1015	1.11	4.78
	HP	109	3.9419	.60227	.05769	3.8275	4.0562	1.78	5.00
	VHP	39	4.8148	.32075	.05136	4.7108	4.9188	3.89	5.00
Total	357	3.5789	1.03291	.05467	3.4714	3.6864	1.11	5.00	
Tecper	VLP	2	1.4091	.57854	.40909	-3.7889	6.6071	1.00	1.82
	LP	69	3.6324	1.16498	.14025	3.3526	3.9123	1.36	5.00
	AP	138	2.8518	.66406	.05653	2.7400	2.9636	1.45	5.00
	HP	109	4.0025	.52362	.05015	3.9031	4.1019	2.82	5.00
	VHP	39	4.8508	.26006	.04164	4.7665	4.9351	3.91	5.00
Total	357	3.5643	.99206	.05251	3.4610	3.6676	1.00	5.00	
Manper	VLP	2	1.0000	.00000	.00000	1.0000	1.0000	1.00	1.00
	LP	69	3.8309	1.10548	.13308	3.5654	4.0965	1.67	5.00
	AP	138	3.6111	.98271	.08365	3.4457	3.7765	1.11	5.00
	HP	109	3.8369	.82742	.07925	3.6798	3.9940	2.22	5.00
	VHP	39	4.8547	.23522	.03767	4.7784	4.9310	4.22	5.00
Total	357	3.8438	.99854	.05285	3.7398	3.9477	1.00	5.00	

*. The mean difference is significant at the 0.05 level. VLP=Very Low Performance, LP=Low Performance, AP=Average Performance, HP=High Performance, VHP=Very High Performance

4.5 Result of ANOVA Test

Table 2 below shows the result of ANOVA test, this indicated that the level of contractors performance has significant effect on the financial system of their firms in the execution a project, $F(4, 352) = 49.551, p = 0.000$. The mean value for the five performance levels indicated that its increases from very low performance to very high performance except between low and average performance, eta squared was 0.36 which

indicated that there was large effect among the performance levels of these contractors with regards to their financial performance (Cohen, 1988). This leads to the rejection of null hypothesis (H_{01}) that there are no significant differences and effects among the levels of contractors' financial performance in Nigeria.

The levels of contractors performance with regards to technical capability of the contractors were significant $F(4, 352) = 78.466, p = 0.000$, the mean value for the five level of performances increases from very low performance to very high performance with the exception between low and average performances, eta squared was 0.47 which indicated that there is large effect among the performance levels of these contractors with regards to their technical performance (Cohen, 1988). This leads to the rejection of null hypotheses (H_{02}) that there are no significant differences and effects among the levels of contractors' technical performance in Nigeria. The management performance, the level of contractors performance was also significant $F(4, 352) = 19.179, p = 0.000$, the mean value increases from very low to very high performances, eta squared was 0.18 which indicated that there is large effects on their levels of performance with regards to their management performance (Cohen, 1988). This leads to rejection of null hypotheses (H_{03}) that there are no significant differences and effects among the levels of contractors Management performance in Nigeria.

Table 2: Table of ANOVA Test

		Sum of Squares	df	Mean Square	F	Sig.	Eta squared
Finper	Between Groups	136.825	4	34.206	49.551	.000	0.36
	Within Groups	242.993	352	.690			
	Total	379.818	356				
Tecper	Between Groups	165.151	4	41.288	78.466	.000	0.47
	Within Groups	185.218	352	.526			
	Total	350.369	356				
Manper	Between Groups	63.518	4	15.879	19.179	.000	0.18
	Within Groups	291.446	352	.828			
	Total	354.964	356				

Table 3 below shows the multiple comparisons among the contractors' levels of performances, the contractors' with very low performance level differ significantly with the low, high and very high performance levels at $p < 0.05$ level of significance, but does not differ significantly with average performance level. The contractors' with low performance levels differ significantly with very low, average and very high levels of performances at $p < 0.05$ level of significance. The average contractor's performance level differ significantly with low, high and very high performances level at $p < 0.05$ significance level. Lastly the very high contractor's performance levels differ significantly with very low, low, average and high performance levels. This indicated that the financial performance of contractors improve whenever they move from lower performance level to very high performance level, they tend to achieve financial stability.

Table 3: Post Hoc comparison of Financial Performance Scheffe

(I) Level of contractor's performance	(J) Level of contractor's performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
VLP	LP	2.06763*	.59596	.018	3.9131	.2222
	AP	-1.39452	.59175	.237	-3.2270	.4379
	HP	2.38634*	.59287	.003	4.2222	.5504
	VHP	-3.25926*	.60238	.000	-5.1246	-1.3939
	VLP	2.06763*	.59596	.018	2222	3.9131
LP	AP	.67311*	.12250	.000	.2938	1.0525
	HP	-.31871	.12782	.186	-.7145	.0771
	VHP	-1.19163*	.16645	.000	-1.7071	-.6762
AP	VLP	1.39452	.59175	.237	-.4379	3.2270
	LP	-.67311*	.12250	.000	-1.0525	-.2938

	HP	-.99182*	10647	.000	-1.3215	-.6621
	VHP	-1.86473*	15067	.000	-2.3313	-1.3981
	VLP	2.38634*	59287	.003	.5504	4.2222
HP	LP	.31871	12782	.186	-.0771	.7145
	AP	.99182*	10647	.000	.6621	1.3215
	VHP	-.87292*	15503	.000	-1.3530	-.3929
	VLP	3.25926*	60238	.000	1.3939	5.1246
VHP	LP	1.19163*	16645	.000	.6762	1.7071
	AP	1.86473*	15067	.000	1.3981	2.3313
	HP	.87292*	15503	.000	.3929	1.3530

*. The mean difference is significant at the 0.05 level. VLP=Very Low Performance, LP=Low Performance, AP=Average Performance, HP=High Performance, VHP=Very High Performance

Table 4 shows the Post Hoc comparisons among the five contractors' performance levels with respect to the firm's technical capability. The contractors with very low performance levels differ significantly with low, high and very high performance levels at $p < 0.05$ significance level, but does not differ significantly with average performance level. The contractors with low performance level differ significantly with very low, average, high and very high performance levels at $p < 0.05$ significance level. The contractors with average performance levels differ significantly with low, high and very high performance levels at $p < 0.05$, but does not differ significantly with very low performance levels. The contractors with high performance levels differ significantly with very low, low average, high and very high performance levels at $p < 0.05$ significance level. The contractors with high performance levels differ significantly from very low, low, average and high performance levels at $p < 0.05$ significance level. This indicated that the technical performance of contractors improve whenever the firm moves from lower performance level to very high performance level they tend to achieve very high technical performance.

Table 4: Post Hoc Comparison of Technical Performance

Scheffe	(J) Level of contractor's performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
VLP	LP	-2.22332*	.52031	.001	-3.8345	-.6121
	AP	-1.44269	.51663	.102	-3.0425	.1571
	HP	-2.59341*	.51761	.000	-4.1963	-.9905
	VHP	-3.44172*	.52591	.000	-5.0703	-1.8132
LP	VLP	2.22332*	.52031	.001	.6121	3.8345
	AP	.78063*	.10695	.000	.4494	1.1118
	HP	-.37009*	.11159	.028	-.7157	-.0245
	VHP	-1.21840*	.14532	.000	-1.6684	-.7684
AP	VLP	1.44269	.51663	.102	-.1571	3.0425
	LP	-.78063*	.10695	.000	-1.1118	-.4494
	HP	-1.15072*	.09295	.000	-1.4386	-.8629
	VHP	-1.99904*	.13155	.000	-2.4064	-1.5917
HP	VLP	2.59341*	.51761	.000	.9905	4.1963
	LP	.37009*	.11159	.028	.0245	.7157
	AP	1.15072*	.09295	.000	.8629	1.4386
	VHP	-.84831*	.13535	.000	-1.2674	-.4292
VHP	VLP	3.44172*	.52591	.000	1.8132	5.0703
	LP	1.21840*	.14532	.000	.7684	1.6684
	AP	1.99904*	.13155	.000	1.5917	2.4064
	HP	.84831*	.13535	.000	.4292	1.2674

*. The mean difference is significant at the 0.05 level. VLP=Very Low Performance, LP=Low Performance, AP=Average Performance, HP=High Performance, VHP=Very High Performance

Table 5 shows the Post Hoc comparisons among the contractors' performance levels with respect to the firms' management performance. The contractors with very low performance level differ significantly with low, average, high and very high performance levels at $p < 0.05$ significance level. The contractors with low performance levels differ significantly with very low and very high performance levels, but does not

differ significantly with average and high performance levels at $p < 0.05$ significance level. The contractors average performance level differ significantly with low and very high performance levels but does not differ with average and high performance levels at $p < 0.05$ significance level. The contractors with high performance levels differ significantly with very, low and very high performance levels but does not differ significantly with average and high performance levels at $p < 0.05$ significance level. Lastly, the contractors with very high performance levels differ significantly with very low, low, average and high performance levels at $p < 0.05$ significance level. This indicated that the management performance of contractors improve whenever the firm moves from lower performance level to very high performance level they tend to achieve very high management capability.

Table 5: Post Hoc Comparison of Management Performance (Scheffe)

(I) Level of contractor's performance	(J) Level of contractor's performance	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
VLP	LP	-2.83092*	.65268	.001	-4.8520	-.8098
	AP	-2.61111*	.64806	.003	-4.6179	-.6043
	HP	-2.83690*	.64929	.001	-4.8475	-.8263
	VHP	-3.85470*	.65971	.000	-5.8976	-1.8118
LP	VLP	2.83092*	.65268	.001	.8098	4.8520
	AP	.21981	.13416	.612	-.1956	.6353
	HP	-.00598	.13998	1.000	-.4395	.4275
	VHP	-1.02378*	.18229	.000	-1.5883	-.4593
AP	VLP	2.61111*	.64806	.003	.6043	4.6179
	LP	-.21981	.13416	.612	-.6353	.1956
	HP	-.22579	.11660	.442	-.5869	.1353
	VHP	-1.24359*	.16501	.000	-1.7546	-.7326
HP	VLP	2.83690*	.64929	.001	.8263	4.8475
	LP	.00598	.13998	1.000	-.4275	.4395
	AP	.22579	.11660	.442	-.1353	.5869
	VHP	-1.01780*	.16978	.000	-1.5436	-.4920
VHP	VLP	3.85470*	.65971	.000	1.8118	5.8976
	LP	1.02378*	.18229	.000	.4593	1.5883
	AP	1.24359*	.16501	.000	.7326	1.7546
	HP	1.01780*	.16978	.000	.4920	1.5436

*. The mean difference is significant at the 0.05 level. VLP=Very Low Performance, LP=Low Performance, AP=Average Performance, HP=High Performance, VHP=Very High Performance

5. Discussions and findings

One-way ANOVA with Post-Hoc was used to analyze the differences between levels of contractors' performances. The levels are classified into five groups from very low/poor performing contractors to very high/excellent performing contractors (Oyewobi & Ogunsemi, 2010; Bassioni, Price & Hassan, 2007; Luu, Kim & Huynh, 2007). The overall contractors' performance comprises of financial, technical and management performances (Hatush & Skitmore, 1997; Alarcon & Mourgues, 2002; Singh & Tiong, 2005).

The mean value of SSCs' financial performance was 3.58, this falls within the range of average financially performing contractors. There were significant differences between contractors level of financial performance. This means that whenever a contractor moves from lower to higher performance levels the contractor achieves great financial skill and hence manage financial resources and minimize waste. The factors that affect financial performance of SSCs were inability of contractors' to apply cost efficient practices like cost control etc, contractors' inaccuracy in pricing bid document, scarce resources to execute project, inability of the contractor to conform with planned

expenditure, contractors' inexperience in financial management and inability of contractors' to attract loans from commercial banks were the major factors affecting financial performances of SSC in Nigeria. The value of small scale contractors' technical performance was 3.56 which fall within average technical performing contractors. There were significant differences between their levels of performances with a high effect, means that contractors with very low performance were as a result of low technical skills or know how, insufficient of appropriate plants and equipments to execute projects, inability of SSC to response quickly and positive in technical direction, inaccuracy and details in working drawings, ambiguities and divergences in contract documents, lack of cooperation between project managers on site and government representatives, in ability of the contractors' to recruits and retain qualified registered technical personals and lack of prompt attention in mitigating any technical problems/risk that could happen on site. These are the major technical factors that deter SSC from achieving their technical potentials in the Nigerian construction industry. Whenever these contractors migrated from one level to the higher level tends to achieve great technical skills and expertise. The mean value of contractors' management performance was 3.84 which also falls within the range of contractors performed average in terms of firm's management. There were significant differences between the contractor's management performance levels, which means that whenever a contractor moves from lower to higher performance levels tends to achieve great experience and skills in terms of firms management. The inability of contractors' to plan, coordinate, integrate and manage the services of sub contractors is one major factor affecting the management performance of SSC in Nigeria other factors were contactors' inefficiency in interfacing and communication with government or government representative, lack of frequent site meeting to identify if there is loop holes with the intention of rectifying them, level of decentralization of contractors project organization and trustworthiness of contractors were the factors that deter SSC from achieving their potentials in management performance.

6. Conclusions and Recommendations

This study evaluated into the performance levels of SSC in Nigeria. The study found that SSC in Nigeria performed averagely in respect to financial, technical and management performances. Hence it can conclude that SSC in Nigeria were average performing contractors and average performing contractor cannot be entrusted with special and more sophisticated projects like oil and gas projects. The performance of SSC in Nigeria is characterizes by delays, costs and times overruns, projects abandonments and poor quality products. It was found that there was a significant differences on the levels of contractors performances that very low performing contractor has difference with high performing contractor in terms of financial technical and management skills, and whenever a contractors moves from lower performance level to higher he tends to achieve higher skills and vice versa. The study recommended the introduction of mediating variable that would cancel out the effects of factors contributing to the poor performances of SSC in Nigeria. Most of the factors identified here are more or less related to financing of projects an upfront payment system in the name of "advance" should be given to the contractors to purchase plant and equipments, trained staff financially and technically recruits qualified project managers and have enough resources to commence projects without delays.

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