DOI: https://doi.org/10.68128/jocrebe.2018.qt4q09v2

Journal of Contemporary Research in the Built Environment ISSN: 2636-4468
Volume 2, Numbers 1&2, 2018 © Department of Building, University of Uyo

ECONOMIC PERFORMANCE OF SMALL, MEDIUM AND LARGE CONSTRUCTION FIRMS IN NIGER - DELTA, NIGERIA

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ABSTRACT

Purpose: The call for the sustainability of construction firms in Niger Delta, Nigeria cannot be over emphasized. This study assessed the economic performance of small, medium and large construction firms in Niger Delta, Nigeria.

Design/methodology/approach: Survey design approach was adopted in this study. Data were obtained using 1179 copies of structured questionnaire, administered by the researcher and research assistants. The Data were collected on a five-point scale of 1, 2, 3, 4 and 5 and were assigned to the options of very low growth, low growth, moderate growth, high growth and very high growth respectively. Methods of data analysis were simple percentage, and mean score, Kruskal Wallis test and Bonferroni dunnett test.

Findings: This study revealed that the overall level of employment growth among construction firms in Niger-Delta is moderate. The result of the study also showed that the level of employment growth among large construction firms is higher than the level of employment growth among small and medium construction firms in Niger- Delta. Further, the overall level of financial turnover growth of construction firms in Niger Delta is moderate. The level of financial turnover growth of small, medium and large firms is also moderate. This study also revealed that the level of financial turnover growth of large construction firms is higher than the level of financial turnover of small, and medium construction firms in Niger- Delta. This study evaluated the net income growth of construction firms in Niger Delta, Nigeria and found out that there is moderate level of net income growth among the construction firms in Niger- Delta. Finally, the study showed that the level of net income growth of large construction firms is higher than the net income growth of small, and medium construction firms in Niger- Delta.

Research Limitation: This study adopted subjective measure to evaluate annual employment growth, annual financial turn-over and net-income growth of construction firms in Niger- Delta, Nigeria over a period of ten years (2007-2017) on a five-point scale.

Originality/value: The outcome of the article will help constructions firms and construction stakeholders at large to know the level of economic performance of small, medium and large construction firms and make better decisions as far as construction activities are concerned in Niger- Delta, Nigeria.

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Keywords: Construction firms; economic performance; Niger-Delta; Nigeria; small, medium and large.

1. INTRODUCTION

The construction industry is an important industry for the development of every society but it takes up a lot of non-renewable resources and contributes to natural resources depletion as well as responsibility for high levels of pollution, climate change and other environmental threats (Klang etal, 2003). According to Chambers (1993), sustainability is defined as "that which is capable of being sustained; in ecology, the amount or degree to which the earth's resources may be exploited without deleterious effects. Sustainability at the firm level refers to meeting social and environmental needs in addition to the firm's profitability (Porter, 2008).

The Niger Delta which is located in the southern part of Nigeria has some peculiar characteristics ranging from the climate, terrain, vegetation, culture, economic activities and value system. The Niger Delta Region of Nigeria produces a significant portion of the aggregate oil wealth of Nigeria. Since 1956 when oil was first discovered in Oloibiri in Southern Nigeria, the Niger Delta region has accounted for over 90 per cent of Nigeria's oil income (Ujene, 2014). However, the region has perennially suffered from environmental neglect, crumbling infrastructures and services, high unemployment, social deprivation, abject poverty and endemic conflict. This has led to calls for firms operating in the Niger- Delta to demonstrate the value of their investments to Nigeria by undertaking increased community development initiatives that provide direct social benefits such as local employment, new infrastructure, schools, and improved health care delivery (Ijaiya, 2014).

Tam (2008) and Lilja (2009) stated that in the construction industry, sustainability is generally interpreted as environment oriented or focused. In contrast, Shen etal (2010) stated that a greater concern is given to economic and social issues. According to Ekundayo etal (2011), the construction industry has often explored the economic dimension which explains why most of the times projects are awarded to the contractor with the lowest tender (Fotwe and Price, 2009).

Many researches were conducted to determine key performance indices but most of them were project specific. They concentrated on the performance measurement at the project level. Existing research, which has been conducted for performance evaluation and comparison at the company level, is limited in the literature (Ali etal, 2012). To bridge this gap, this research evaluated a set of economic performance indicators (EPIs) that can be implemented by construction executives in measuring the construction performance at the firm level in Niger Delta in particular and Nigeria in general.

1.1. Objective of the study

The objective of this study is to assess the economic performance of small, medium and large construction firms in Niger Delta, Nigeria.

1.2. Research hypothesis

Some researchers claim size influences firms' economic performance and some claim it does not. In view of this debate, this study tested three hypotheses in order to establish if there is significant difference in the economic performance of construction firms based on firm size. The hypotheses are as follows:

i. There is no significant difference in the level of annual employment growth among small, medium and large construction firms in Niger- Delta, Nigeria
ii. There is no significant difference in the level of annual financial turnover growth among small, medium and large construction firms in Niger- Delta, Nigeria
iii. There is no significant difference in the level of net income growth among small, medium and large construction firms in Niger- Delta, Nigeria.

2. REVIEW OF RELATED LITERATURE

This section comprises of the measurement of firm performance and the influence of firm size on the performance of construction firms.

2.1. Measurement of firm performance

Highly competitive and profound changes in the construction industry are forcing construction executives to continuously improve the performance of their firms. According to Luu *et al.* (2008), performance measurement is the heart of ceaseless improvement. The main objective of performance evaluation is to assist managers and members of the organization in developing the direction, and speed of their organization (Cokins, 2006). Firm's growth can be measured by several attributes such as turnover/sales, annual employment, return on assets, return on investment, market shares, annual financial turnover, profits and net income. However, in the context of this study, employment growth, financial turnover and net income were used as indicators of firm performance. This is because employment has been considered as an alternative measure for performance and with the public interest in new employment, there are arguments that employment growth is an important dimension to capture (Wiklund, 1999). The choice of annual financial turnover is also significant because it reveals the volume of work done by the firms within the period under study. It also reveals the level of survival and competitiveness of the firms in the study area. Superior financial performance is a way to satisfy investors (Chakravarthy, 1986) and can be represented by profitability, growth and market value (Venkatraman and Ramanujam, 1986; Cho and Pucik, 2005). These three aspects complement each other. Profitability measures a firm's past ability to generate returns (Glick *etal*, 2005). Growth demonstrates a firm's past ability to increase its size (Whetten, 1987). Increasing size, even at the same profitability level, will increase its absolute profit and cash generation. Larger size also can bring economies of scale and market power, leading to enhanced future profitability.

2.2. Influence of organizational size on the performance of construction firms

Organization size (as defined by the number of employees) has received substantial attention from researchers and management writers as a fundamental component affecting organizational design, structure and shape. Shaheen and Malik (2012) stated that firm size is the quantity and array of production capability and potential a firm has or the quantity and diversity of services a firm can concurrently make available to its clients. Some researchers claim size influences organizational effectiveness and efficiency and some claim it does not (Amah *et al*., 2013). Hofler (2010) stated that organisational size has been identified as an important variable that influences organizational performance. Babalola (2013) stated that larger firm has more influence on its stakeholders, therefore larger firms tend to outperform small firms.

Akinlo (2010) evaluated the long-run relationship and causality issues between the size of firm size and profitability in Nigeria. The result revealed that there was a long-run steady state relationship between firm size and profitability. Anila *et al.* (2011) investigated the determinants of profitability of Pakistani firms, in which size is a major determinant. The study showed a positive but insignificant impact of firm size on profitability. Halil and Hasan (2012) examined the effect of firm size on profitability, with evidence from Turkish manufacturing companies. The results of the study showed that firm size has a positive impact on the profitability of Turkish manufacturing companies. Bayyurt (2007) opined that large firms have more competitive power than small firms. This is because large firms have a bigger market share, as well as the opportunity to make more profit. Furthermore, large firms have high capital rates since they have larger resources, and this situation gives them the opportunity to work in more profitable fields with little competition. Majority of the studies in literature were carried out in the manufacturing industry. Hence the need for this study which evaluated the economic performance of construction firms based on firm size. Also, there is limited study in the Niger- Delta area of Nigeria that have evaluated the economic performance of construction firms using annual employment growth, annual financial growth and net- income growth.

3. RESEARCH METHODOLOGY

Survey design approach was adopted in this study. Data were obtained using 1179 copies of structured questionnaire, administered by the researcher and research assistants. The Data were collected on a five-point scale of 1, 2, 3, 4 and 5 and were assigned to the options of very low growth, low growth, moderate growth, high growth and very high growth respectively. This is in consonance with Santos and Britos (2012). Methods of data analysis were simple percentage, and mean score, Kruskal Wallis test and Bonferroni dunnett test. Simple percentage was used to analyze the questionnaire distribution and response rate and firm characteristics. Kruskal Wallis test was used to test three hypotheses which state that there is no significant variation in the economic performance (annual employment growth, annual financial turn-over and net-income growth) among small, medium and large construction firms in Niger- Delta, Nigeria. The three hypotheses were tested and the result of Kruskal Wallis test showed that there is significant difference in annual employment growth, annual financial turn-over and net- income among small, medium and large construction firms. Bonferroni dunnett test was carried out to know the

source of the difference in economic performance among small, medium and large construction in Niger- Delta, Nigeria.

3.1. Sample frame and sample size

The population of this study comprises of small, medium and large construction operating in Niger- Delta, Nigeria. Table 1 shows the sample frame and sample size of this study. The Sample size was determined using the Yamane (1967) equation as shown below:

$$n = \frac{N}{1 + N(e)^2}$$

where n = Sample size
N = Finite population
e = Level of significance (0.05)
1 = Unity

This study adopted Yamane (1967) equation for determining sample size because of its simplicity, reliability and validity. These have encouraged its wider acceptance and usage among researchers over a long period of time.

Table 1: Sample frame and sample size of construction firms in Niger Delta

State	**Sample Frame**	**Sample Size**
Abia	165	117
Akwa Ibom	214	139
Bayelsa	128	97
Cross River	223	143
Delta	200	133
Edo	237	149
Imo	143	105
Ondo	221	142
Rivers	250	154
Total	**1781**	**1179**

4. DATA PRESENTATION AND DISCUSSION OF RESULTS

This section contains the results of the analysis of data collected for the study. It contains the descriptive results of the response rate of questionnaire, and firm characteristics. This section also contains the result of evaluation of economic performance of small, medium and large construction firms in Niger- Delta, Nigeria and the result of the hypothesis.

4.1. Questionnaire distribution and response in the study

One of the research instrument used in this study was structured questionnaire. The questionnaire was administered among the construction firms operating in Niger Delta, Nigeria. The results of analysis were presented in Table 2.

Table 2 showed that the number of questionnaire administered to the construction firms in Niger Delta were 117, 139, 97, 143, 133, 149, 105, 142, and 154 in Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, and Rivers state respectively. From the questionnaire distributed, the response rate ranges between 76.1% and 94.7%. Delta state received the highest response rate of 94.7% while Abia State got the least rate of 76.1 %. In all, an overall response rate of 83.2**%** was achieved. Groves (2006) noted that a response rate of at least 50 percent is considered adequate for analysis and reporting, a response of 60 percent is good and a response rate of 70 percent is very good. As a guide, researchers typically seek response rates of at least 70% to feel confident that their sample is representative of the sample frame. Hence, the overall response rate of 83.2% in this study is considered very good and adequate.

Table 4.2: Questionnaire distribution and response rate

S/N	States	Number of questionnaire administered on construction firms (NO)	Number of questionnaire returned (NO)	Percentage of questionnaire returned (%)	Average of the Response Rate (%)
1	Abia	117	89	76.1	
2	Akwa Ibom	139	113	81.3	
3	Bayelsa	97	85	87.6	
4	Cross River	143	112	78.3	
5	Delta	133	126	94.7	
6	Edo	149	114	76.5	
7	Imo	105	92	87.6	
8	Ondo	142	109	76.8	
9	Rivers	154	140	90.1	
10	TOTAL	1179	980		83.2

4.2. Firm characteristics

Firms' characteristics comprised of location of construction firms and size of construction firms.

4.2.1. Location of construction firms

Table 3 shows the distribution of construction firms in each state in Niger Delta, Nigeria. The percent of firms in Abia, Akwa Ibom, Bayelsa and Cross river states are 9.1%, 11.5%, 8.7% and 11.4%. Others are Delta, Edo, Imo, Ondo and Rivers with their percents of 12.9%, 11.6%, 9.4%, 11.1% and 14.3% respectively. Table 3 shows a good distribution of the construction firms among the states in Niger Delta. This implies that the results from this study represents the situation in Niger Delta and can be relied on.

4.2.2. Size of construction firms under study in Niger – Delta region of Nigeria between 2007- 2016

Analysis on Table 4 shows the average percentage distribution of construction firms in Niger Delta according to their sizes over a period of ten years (2007-2016). The analysis shows that small firms account for 84.7%, medium firms account for 11.61 and large construction firms account for 3.73%. This reveals that small and medium construction

firms are of the majority. This result is in consonance with Abdullah *etal*, (2012); and Thwala *et al.* (2012) who posited that firms in the construction industry have been grouped such that Small and Medium Firms (SMFs) were found be the majority.

Table 3: Location of construction firms

States	**Frequency**	**Valid Percent**	**Cumulative Percent**
Abia state	89	9.1	9.1
Akwa Ibom state	113	11.5	20.6
Bayelsa state	85	8.7	29.3
Crossriver state	112	11.4	40.7
Delta state	126	12.9	53.6
Edo state	114	11.6	65.2
Imo state	92	9.4	74.6
Ondo state	109	11.1	85.7
Rivers state	140	14.3	100.0
Total	980	100.0	

Table 4: Size of construction firms under study in Niger - Delta between 2007- 2016

S/N	YEAR	1-50		50-250		250 AND ABOVE	
		FREQ	PER	FREQ	PER	FREQ	PER
1	2007	857	87.4	88	9.0	35	3.6
2	2008	790	80.6	155	15.8	35	3.6
3	2009	842	85.9	103	10.5	35	3.6
4	2010	821	83.8	120	12.2	39	4.0
5	2011	813	83.0	129	13.2	38	3.9
6	2012	754	76.9	188	19.2	38	3.9
7	2013	811	82.8	131	13.4	38	3.9
8	2014	870	88.8	75	7.7	35	3.6
9	2015	868	88.6	77	7.9	35	3.6
10	2016	874	89.2	71	7.2	35	3.6
AVERAGE			84.7		11.61		3.73

4.3. Annual employment growth of small medium and large construction firms in Niger- Delta, Nigeria

Table 5 shows the annual employment growth of small, medium and large construction firms in Niger Delta. The decision rule is that any employment growth whose mean falls between 1.0 – 1.8 is of very low growth, 1.8 – 2.6 is of low growth, 2.6 – 3.4 is of moderate growth, 3.4 – 4.2 is having high growth and 4.2 – 5.0 is regarded as having very high growth. The result analysis showed that small size (1-50 employees) construction firms experienced low employment growth in 2007 and 2008. The mean scores ranging between 2.6018 and 3.2860 showed that the small construction firms experienced moderate employment growth from 2009 to 2015. It was also revealed that the employment growth among small construction firms declined from moderate level to low level in 2016 as indicated by the mean score of 2.51. The average mean score of 2.83 showed that the overall level of employment growth among small (1-50 employees) construction firms in Niger Delta was moderate.

The mean score of 2.25 indicated that medium size (50-250 employees) construction firms in Niger Delta experienced low employment growth in 2007. However, mean scores ranging between 2.63 and 3.21 showed that there was moderate employment growth among medium size construction firms from 2008 to 2016. The average mean score of 2.84 implied that the overall level of employment growth among medium size construction firms in Niger Delta was moderate. Furthermore, it was revealed that the employment growth of the large size (above 250 employees) construction firms was moderate in 2007, 2008, 2009, 2010 and 2011. There was an improvement on the employment growth of large size construction firms in 2012 and 2013 as the firms recorded high employment growth.

However, the employment growth declined from high growth level in 2013 to moderate growth level in 2014. The large construction firms also experienced moderate employment growth in 2015 and 2016 respectively. The mean score of 3.23 showed that the level of employment growth among large construction firms in Niger Delta is moderate. The average mean score of 2.84 showed that the overall level of employment growth according to the three firm sizes was moderate.

Table 5: Annual employment growth of small medium and large construction firms in Niger-Delta, Nigeria

Size of Firms /Year	**Small Firms (1-50) N=874**		**Medium Firms (50-250) N=71**		**Large Firms (Above 250) N=35**		**Combined N=980**	
	M.S	Remark	M.S	Remark	M.S	Remark	M.S	Remark
2007	2.27	L.G	2.25	L.G	2.91	M.G	2.29	L.G
2008	2.53	L.G	2.63	M.G	3.11	M.G	2.56	L.G
2009	2.60	M.G	2.75	M.G	3.20	M.G	2.63	M.G
2010	2.82	M.G	3.03	M.G	3.34	M.G	2.86	M.G
2011	2.97	M.G	3.04	M.G	3.31	M.G	2.99	M.G
2012	3.18	M.G	3.08	M.G	3.40	H.G	3.18	M.G
2013	3.29	M.G	3.21	M.G	3.49	H.G	3.29	M.G
2014	3.13	M.G	2.92	M.G	3.34	M.G	3.13	M.G
2015	2.97	M.G	2.93	M.G	3.23	M.G	2.98	M.G
2016	2.56	L.G	2.51	L.G	2.97	M.G	2.53	L..G
Overall Level of Employment Growth in Niger Delta	2.83	M.G	2.84	M.G	3.23	M.G	2.84	M.G

L.G=Low Growth, M.G = Moderate Growth, H.G = High Growth

4.3.1. Kruskal Wallis test for comparing the annual employment growth among small medium and large construction firms in Niger- Delta, Nigeria

Table 6 shows the result of Kruskal Wallis test that was conducted to test the hypothesis which states that there is no significant difference in the level of annual employment growth among small medium and large construction firms in Niger- Delta, Nigeria. The P-value of 0.001 is less than 0.05 significance level, hence the hypothesis was rejected. This implies that there is a statistically significant difference in the level of employment growth of firms based on size of the firms in Niger Delta. In other word, the size of construction firms affects the level of employment growth of construction firms in Niger Delta. The mean ranks showed that large construction have higher annual employment growth than small and medium construction firms in Niger Delta, Nigeria.

Table 6: Kruskal Wallis test for comparing the annual employment growth among small medium and large construction firms in Niger- Delta, Nigeria

Level of Employment Growth of Firms based on Size of the Firms in Niger Delta	Mean Rank	Decision @ 0.05 Sig lev.
SMALL FIRMS	12.77	
MEDIUM FIRMS	12.64	
LARGE FIRMS	25.59	
Chi-Square	13.03	
D.F	2	
P- Value	.001	Reject

4.3.2. Post Hoc test on level of employment growth of small medium and large construction firms in Niger Delta

Table 7 shows the results of Post Hoc Test on Level employment growth of firms based on size of the firms in Niger Delta. The result of Bonferroni's multiple comparisons shows that large construction firms contributed to the significant difference in the level of employment growth of firms in Niger Delta. This was validated by Dunnest test result which showed that small and medium construction firms have the p- values of 0.002 and 0.003 respectively. These P- values are less than the 0.05 significant level. This implies that that the level of employment growth of firms among small and medium construction firms are significantly different from large construction firms in Niger Delta.

Table 7: Post Hoc test on level of employment growth of small medium and large construction firms in Niger Delta

	(I) SIZE OF CONSTRUCTION FIRMS	(J) Size of Construction Firms	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Bonferroni	SMALL FIRMS	MEDIUM FIRMS	-.0079	.11335	1.000	-.2953	.2795
		LARGE FIRMS	-.4041*	.11335	.004	-.6915	-.1167
	MEDIUM FIRMS	SMALL FIRMS	.0079	.11335	1.000	-.2795	.2953
		LARGE FIRMS	-.3962*	.11335	.004	-.6836	-.1088
	LARGE FIRMS	SMALL FIRMS	.4041*	.11335	.004	.1167	.6915
		MEDIUM FIRMS	.3962*	.11335	.004	.1088	.6836
Dunnett (2-sided)	SMALL FIRMS	LARGE FIRMS	-.4041*	.11335	.002	-.6672	-.1410
	MEDIUM FIRMS	LARGE FIRMS	-.3962*	.11335	.003	-.6593	-.1332

4.4. Annual financial turnover growth of construction firms of small, medium and large construction firms in Niger Delta, Nigeria

Table 8 shows the annual financial turnover growth of construction firms based on the size of firms. The decision rule is that any financial turnover growth whose mean falls between 1.0 – 1.8 is of very low growth, 1.8 – 2.6 is of low growth, 2.6 – 3.4 is of moderate growth, 3.4 – 4.2 is having high growth and 4.2 – 5.0 is regarded as having very high growth. The result indicated that small and medium size construction firms in Niger Delta experienced moderate financial turnover growth from 2007 to 2015. However, there was a

decline in the financial turnover growth of the small and medium size construction firms from moderate level to low level in 2016. The average mean scores of 2.89 and 2.96 for small and medium construction firms respectively implied that their overall level of financial turnover growth of firms small and medium size construction firms in Niger Delta, was moderate.

Table 8 also shows that large construction firms experienced moderate financial turnover growth from 2007 to 2009. It was also noted that large firms experienced improvement in their financial turnover growth between 2010 and 2013. However, the high financial turnover growth dropped to moderate growth in 2014 and the situation continued till 2016. The average mean score of 3.34 showed that the overall level of financial turnover growth among large construction firms in Niger Delta was moderate within the period under this study.

Table 8: Annual Financial Turnover Growth of Small, Medium and Large Construction Firms in Niger Delta, Nigeria

Size of Firms /Year	**Small Firms (1-50) N=874**		**Medium Firms (50-250) N=71**		**Large Firms (Above 250) N=35**		**Combined N=980**	
	M.S	Remark	M.S	Remark	M.S	Remark	M.S	Remark
2007	2.62	M.G	2.82	M.G	3.31	M.G	2.66	M.G
2008	2.61	M.G	2.82	M.G	3.31	M.G	2.65	M.G
2009	2.70	M.G	2.86	M.G	3.34	M.G	2.74	M.G
2010	2.95	M.G	3.06	M.G	3.46	H.G	2.98	M.G
2011	3.08	M.G	3.20	M.G	3.51	H.G	3.11	M.G
2012	3.22	M.G	3.27	M.G	3.57	H.G	3.23	M.G
2013	3.29	M.G	3.35	M.G	3.63	H.G	3.31	M.G
2014	2.99	M.G	2.85	M.G	3.29	M.G	2.99	M.G
2015	2.94	M.G	2.93	M.G	3.14	M.G	2.95	M.G
2016	2.46	L.G	2.42	L.G	2.86	M.G	2.47	L.G
Level of Annual Financial Turnover in Niger Delta	2.89	M.G	2.96	M.G	3.34	M.G	2.91	M.G

L.G = Low Growth, M.G = Moderate Growth, H.G = High Growth

4.4.1. Kruskal Wallis test for comparing the annual financial turnover growth among small, medium and large construction firms in Niger Delta, Nigeria

Table 9 shows the result of Kruskal Wallis test that was conducted to test the hypothesis which states that there is no significant difference in the level of annual financial turnover growth among small medium and large construction firms in Niger- Delta, Nigeria. P-value of 0.001 is less than 0.05 significance level, hence the hypothesis was rejected. This implies that there is a statistically significant difference in the level of annual financial turnover growth among small, medium and large construction firms in Niger Delta, Nigeria. The mean ranks revealed that the large construction firms experienced higher annual financial turnover growth than small and medium firms. In other word, the size of construction firms affects the level of annual financial turnover growth of construction firms in Niger Delta.

Table 9: Kruskal Wallis test for comparing the annual financial turnover growth among small, medium and large construction firms in Niger Delta, Nigeria

Level of Annual Financial turn Over Growth of Firms based on Size of the Firms in Niger Delta	Mean Rank	Decision @ 0.05 Sig lev.
Small Firms	11.91	
Medium Firms	13.36	
Large Firms	25.73	
Chi-Square	13.57	
D,F	2	
P- Value	.001	Reject

4.4.2. Post Hoc test on level of annual financial turnover growth of small, medium and large construction firms in Niger Delta, Nigeria

Table 10 shows the results of Post Hoc Test on Level annual financial turnover growth of firms based on size of the firms in Niger Delta. The result of Bonferroni's multiple comparisons shows that large construction firms contributed to the significant difference in the level of annual financial turnover growth of firms in Niger Delta. This was validated by Dunnest test result which showed that small and medium construction firms have the p-values of 0.001 and 0.002 respectively. These P- values are less than the 0.05 significant level. This implies that that the level of annual financial turnover growth of firms among small and medium construction firms are significantly different from large construction firms in Niger Delta.

Table 10: Post Hoc test on level of annual financial turnover growth of small, medium and large construction firms in Niger Delta, Nigeria

						95% Confidence Interval	
	(I) SIZE OF CONST FIRMS	(J) SIZE OF CONST FIRMS	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Bonferroni	SMALL FIRMS	MEDIUM FIRMS	-.0700	.10512	1.000	-.3365	.1966
		LARGE FIRMS	-.4565*	.10512	.001	-.7230	-.1899
	MEDIUM FIRMS	SMALL FIRMS	.0700	.10512	1.000	-.1966	.3365
		LARGE FIRMS	-.3865*	.10512	.003	-.6531	-.1200
	LARGE FIRMS	SMALL FIRMS	.4565*	.10512	.001	.1899	.7230
		MEDIUM FIRMS	.3865*	.10512	.003	.1200	.6531
Dunnett t (2-sided)[a]	SMALL FIRMS	LARGE FIRMS	-.4565*	.10512	.001	-.7004	-.2125
	MEDIUM FIRMS	LARGE FIRMS	-.3865*	.10512	.002	-.6305	-.1426

4.5. Net income growth of small, medium and large construction firms in Niger Delta, Nigeria

Table 11 shows the net income growth of construction firms based on the size of firms. The decision rule is that any net income growth whose mean falls between 1.0 – 1.8 is of very low growth, 1.8 – 2.6 is of low growth, 2.6 – 3.4 is of moderate growth, 3.4 – 4.2 is having high growth and 4.2 – 5.0 is regarded as having very high growth. The result showed that small and medium size construction firms in Niger Delta, Nigeria experienced

moderate net income growth from 2007 to 2016. The mean scores of 3.14, 3.11, 3.11, 3.14 and 3.29 indicated that large size construction firms in Niger Delta, experienced moderate net income growth in 2007, 2008, 2009, 2010 and 2011 respectively. The mean scores of 3.40, 3.43 and 3.40 implied that large size construction firms experienced high net income growth in 2012, 2013 and 2014 respectively. However, in 2015 and 2016 the large firms experienced moderate net income growth. The average mean score of 2.94 revealed that the overall level of net income growth of construction firms in Niger Delta was moderate within the period of this study.

Table 11: Net income growth of small, medium and large construction firms in Niger Delta, Nigeria

Size of Firms /Year	**Small Firms (1-50) N=874**		**Medium Firms (50-250) N=71**		**Large Firms (Above 250) N=35**		**Combined N=980**	
	M.S	Remark	M.S	Remark	M.S	Remark	M.S	Remark
2007	2.66	M.G	2.70	M.G	3.14	M.G	2.68	M.G
2008	2.65	M.G	2.70	M.G	3.11	M.G	2.70	M.G
2009	2.66	M.G	2.70	M.G	3.11	M.G	2.68	M.G
2010	2.81	M.G	2.76	M.G	3.14	M.G	2.84	M.G
2011	2.99	M.G	3.01	M.G	3.29	M.G	3.01	M.G
2012	3.16	M.G	3.18	M.G	3.40	H.G	3.17	M.G
2013	3.30	M.G	3.32	M.G	3.43	H.G	3.31	M.G
2014	3.17	M.G	3.24	M.G	3.40	H.G	3.26	M.G
2015	2.96	M.G	2.94	M.G	3.23	M.G	2.97	M.G
2016	2.65	M.G	2.76	M.G	3.11	M.G	2.74	M.G
Level of Net income of Construction Firms in Niger Delta	2.90	M.G	2.94	M.G	3.24	M.G	2.94	M.G

L.G = Low Growth, M.G = Moderate Growth, H.G = High Growth

4.5.1. Kruskal Wallis test for comparing the level of net income growth among small, medium and large construction firms in Niger Delta, Nigeria

Table 12 shows the result of Kruskal Wallis test that was conducted to test the hypothesis which states that there is no significant difference in the level of net income growth among small medium and large construction firms in Niger- Delta, Nigeria. P-value of 0.005 is less than 0.05 significance level, hence the hypothesis was rejected. This implies that there is a statistically significant difference in the level of net income growth of firms based on size of the firms in Niger Delta.

Table 12: Kruskal Wallis test for comparing the level of net income growth among small, medium and large construction firms in Niger Delta, Nigeria

Level of Net Income Growth of Firms based on Size of the Firms in Niger Delta	**Mean Rank**	**Decision @ 0.05 Sig lev.**
Small Firms	12.18	
Medium Firms	14.18	
Large Firms	24.64	
Chi-Square	10.55	
D.F	2	
P- Value	.005	Reject

The mean ranks showed that large construction firms experienced higher net income growth than small and medium construction firms in Niger Delta, Nigeria. In other word, the size of construction firms affects the level of net income growth of construction firms in Niger Delta.

4.5.2. Post Hoc test on level of net income growth among small, medium and large construction firms in Niger Delta, Nigeria

Table 13 shows the results of Post Hoc Test on Level net income growth of firms based on size of the firms in Niger Delta. The result of Bonferroni's multiple comparisons shows that large construction firms contributed to the significant difference in the level of net income growth of firms in Niger Delta. This was validated by Dunnest test result which showed that small and medium construction firms have the p- values of 0.01 and 0.03 respectively. These P- values are less than the 0.05 significant level. This implies that that the level of net income growth of firms among small and medium construction firms are significantly different from large construction firms in Niger Delta.

Table 13: Post Hoc test on level of net income growth among small, medium and large construction firms in Niger Delta, Nigeria

	(I) SIZE OF CONSTRUCTION FIRMS	(J) SIZE OF CONSTRUCTION FIRMS	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Bonferroni	SMAL FIRMS	MEDIUM FIRMS	-.0330	.08703	1.000	-.2536	.1877
		LARGE FIRMS	-.3358*	.08703	.002	-.5565	-.1151
	MEDIUM FIRMS	SMAL FIRMS	.0330	.08703	1.000	-.1877	.2536
		LARGE FIRMS	-.3029*	.08703	.005	-.5235	-.0822
	LARGE FIRMS	SMAL FIRMS	.3358*	.08703	.002	.1151	.5565
		MEDIUM FIRMS	.3029*	.08703	.005	.0822	.5235
Dunnett t (2-sided)[a]	SMAL FIRMS	LARGE FIRMS	-.3358*	.08703	.001	-.5378	-.1338
	MEDIUM FIRMS	LARGE FIRMS	-.3029*	.08703	.003	-.5048	-.1009

4.5. Discussion of findings

The economic performance of construction firms was evaluated using the employment growth, Annual financial turnover growth and net income growth. This study reveals that the overall level of employment growth among small and medium size construction firms in Niger Delta is moderate and the level of employment growth among large construction firms in Niger Delta is moderate. It also reveals that the overall level of employment growth based on the three firm sizes was moderate.

The result of Kruskal Wallis test that was conducted to test the hypothesis which states that there is no significant difference in the level of employment growth of firms based on size of the firms in Niger Delta, showed that there is a statistically significant difference in the level of employment growth of firms based on size of the firms in Niger Delta. In other word, the size of construction firms affects the level of employment growth of construction firms in Niger Delta.

The results of Post Hoc Test on level of employment growth of firms based on size of the firms in Niger Delta, shows that large construction firms contributed to the significant

difference in the level of employment growth of firms in Niger Delta. This implies that the level of employment growth among large construction firms is significantly different from small and medium construction firms in Niger Delta.

This study concurs with Dania *et al.* (2013), who concluded that multinational firms have higher capability, organization, and capacity than indigenous construction firms. This study is also in consonance with Messersmith and Guthrie (2010) which suggested three reasons why the level of employment growth in large construction firms is higher than that of small firms. Firstly, by their nature, small firms tend to require a greater degree of flexibility from their employees as individuals have greater variety of tasks. Secondly, human resource decisions can have a larger impact on small firms. A poor recruitment decision or the failure to retain a skilled member of staff is likely to be more significant in small firms than large firms. Thirdly, small firms are likely to have fewer formal procedures in place than larger firms.

The result shows that the overall level of financial turnover of construction firms operating in Niger Delta was moderate within the period of this study. The overall level of financial turnover growth of small and medium construction firms in Niger Delta, was moderate and the overall level of financial turnover growth among large construction firms in Niger Delta was moderate within the period under this study.

The result of Kruskal Wallis test on the hypothesis which states that there is no significant difference in the level of annual financial turnover growth among small, medium and large firms in Niger Delta shows that there is a statistically significant difference in the level of annual financial turnover growth of the firms. In other word, the size of construction firms affects the level of annual financial turnover growth of construction firms in Niger Delta.

The results of Post Hoc Test on level annual financial turnover growth of firms based on size of the firms in Niger Delta shows that large construction firms contributed to the significant difference in the level of annual financial turnover growth of firms in Niger Delta. This implies that that the level of annual financial turnover growth of large construction firms is significantly different from small and medium construction firms in Niger Delta. This implies that the volume of work done by large construction firms is more than the volume of work done by small and medium construction firms within the period of this study. This can be attributed to their capacity, innovativeness, and managerial qualities. The level of resources available to bid and execute project can also affect the volume of work done by the firms.

The result revealed the overall level of net income of construction firms operating in Niger Delta, Nigeria was moderate within the period of this study. The result of Kruskal Wallis test that was conducted to test the hypothesis which states that there is no significant difference in the level of net income growth of firms based on size of the firms in Niger Delta shows that there is a statistically significant difference in the level of net income growth of firms based on size of the firms in Niger Delta. In other word, the size of construction firms affects the level of net income growth of construction firms in Niger Delta. The results of Post Hoc test shows that large construction firms contributed to the significant difference in the level of net income growth of firms in Niger Delta. This implies that that the level of net income growth large construction firms is significantly different from small and medium construction firms in Niger Delta.

This study is in agreement with Fiegenbaum and Karnani (1991), and Hardwick (1997) and who opined that larger firms have some advantages over small firms such as a greater possibility of taking advantage of scale of economies which can enable more efficient production, a greater bargaining power over both suppliers and distributors or clients, exploiting experience curve effects and setting prices above the competitive level. It is also

argued that larger firms are more stable and mature and they can generate greater sales and greater volume of work because of the greater production capacity that will enhance capital cost savings with the economies of scale. This study is consistent with most studies which concluded that firm size greatly influenced its performance (Kipesha, 2013)

5. CONCLUSION

This study concluded that the overall level of employment growth among construction firms in Niger Delta is moderate. It concludes that the level of employment growth among large construction firms is higher than the level of employment growth among small, and medium construction firms in Niger Delta.

This study concluded that the overall level of financial turnover growth of construction firms in Niger Delta is moderate. The level of financial turnover growth of small, medium and large firms is also moderate. This study also concluded that the level of financial turnover growth of large construction firms in Niger Delta is higher than the level of financial turnover of small, and medium construction firms in Niger - Delta.

This study evaluated the net income growth of construction firms in Niger Delta, Nigeria and concluded that there is moderate level of net income growth among the construction firms in Niger Delta. It also concluded that the level of net income growth of large construction firms is higher than the net income growth of small, and medium construction firms in Niger Delta.

This study adopted subjective measure to evaluate some sets of economic performance indicators (annual employment growth, annual financial turn-over and net-income growth) of construction firms in Niger- Delta, Nigeria over a period of ten years (2007-2017) on a five-point scale (1-5).

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