AN APPRAISAL OF INDIGENOUS LIMITED LIABILITY CONSTRUCTION COMPANY IN SOUTH-WESTERN NIGERIA

O. Oladimeji and G. K. Ojo
Department, Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife.
Department of Quantity Surveying, Obafemi Awolowo University, Ile-Ife

Viability of any construction industry determines the level and frequency of its involvement in the construction activities and consequently its survival. Survival of the ILLCC is mostly threatened by the existence and performance of the foreign companies. However, the competitive environment still gives room for the willing ILLCC to strive for excellence. Therefore this paper assessed the determinants of the viability of ILLCC in South-western Nigeria so as to predict their survival in the highly competitive construction environment. Archival data on 54 annual financial status of projects executed by 19 contractors purposively selected in the study area were used for this study. The data included construction and overhead cost, their fixed assets, gross earning and profit between 2008 and 2010. These were subjected to analyses of regression and correlation to determine the relationship between profit and gross earning and also between profit and fixed asset. The result indicated that the sum spent on fixed asset was low and average profit of ILLCC in South-western Nigeria was low although higher that UK margin. The profit was positively and significantly influenced by gross earning and fixed asset except in 2008. ILLCC contractors in Nigeria should concentrate more on the financial factors with great effect on their profit for growth and sustenance in the competitive building environment.

Keywords: indigenous, limited liability company, Nigeria, South-western

INTRODUCTION

The contribution of the construction industry to national economic necessitates improved efficiency in the industry. About 69% of Nigeria's fixed capital formation is produced by the construction industry (Federal Office of Statistics, 1998). This showed the significance of the industry within the economy because the percentage above represents nearly 70% of the capital base of the national economy. In the 1980s, construction industry was one of the major contributors to Nigeria gross domestic profit (GDP) (Federal Office of Statistics, 1996) while in 2007 its contribution dropped to 1.72% of the GDP (National Bureau of Statistics, 2007). This is an unsteady development and an indication of an ailing industry which demand prompt and adequate attention.

There is a strong link between construction and economic activities, the link is expectedly stronger in developing countries of which Nigeria is a typical example (Hughes and Hillebrandt, 2003; Ofori, 2010). Construction is location specific. Thus, the employment generation potential and stimulation of the local economy can be realized. This potential and its positive impact on employment drive are well

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highlighted by literature and report (Hillebrandt 2006: National Bureau of Statistics; 2006). Part of the employment generation drive has been the increase in the number of local and foreign investors in the construction market in Nigeria. Expectedly, the number of indigenous contractor (wholly Nigeria owned) far outnumber the number of foreign contractors (other Nigeria branch of a foreign company or Nigeria/foreign joint venture) (Aniekwu, 1995). Aniekwu (1995) discovered that 266 (79.64%) of 334 construction contractors surveyed in Nigeria where indigenous contractors. The ratio is likely to have increased in recent time due to the recent clamour on the need to patronize more indigenous construction firms and professionals in Nigeria (Nigeria Business, 2007).

Indigenous Limited Liability Construction Companies (ILLCC) in Nigeria are construction companies that are registered by the Corporate Affair Commission (CAC) for the execution of building and road projects in accordance with the contract documents (Corporate Affair Commission, 2005). The Government is the major client of the company; this is a common feature in developing nation in Africa (Jaselskis and Talukhaba, 1998). They are also expected to be registered with the Federal Ministry of Works and obtain an up-to-date Value Added Tax (VAT) certificate before they are entitled to the award of any government project or contract (Economic Watch, 2010). ILLCC in Nigeria, more than often, play the role of a general contractor who is refer to as an organization or individual who undertakes to supply the resources and services require to execute a project (Murdoch and Huges, 2008; Hackett et al, 2007). They could also play the role of a specialist contractor to a project already awarded to either a local or foreign firm.

The Indigenous construction industries have been credited with lack of capacity to deliver which may be due to insufficient capital to finance the project (Yin, 2006), rush nature of project implementation (Mosaku, 1984; Musa, 1990), inadequate planning and budgetary provisions (Elinwa and Buba, 1993). The outcome have been several reports of projects executed at higher sums (Giwa, 1988; Okuwoga, 1998), inefficient and poor service delivery (Aibinu and Jagboro, 2002), abandoned or non-functional facilities and collapsed building (Wahab, 2006). The perennial nature of these traits creates dissatisfaction amongst clients (Omole, 2000; Ajator, 2004) which, more often, has resulted into the award of major and capital intensive contracts to foreign firm especially when quality and time of construction is of utmost demand. Therefore, as observed by Aniekwu (1995), the total annual volume of work done by foreign contractors are more likely to be more than that of the indigenous contractors. If this is the frequent experience, the possibility of existence of indigenous firms may be very low. It is expedient for construction firms to undertake regular performance evaluation of their financial performance to ensure their viability (Wong and Ng, 2010).

DETERMINANTS OF VIABILITY OF INDIGENOUS LIMITED LIABILITY CONSTRUCTION INDUSTRY (ILLCC)

Construction is a risky business and the possibility of business failure always exists (Arslan and Kirvak 2008, Wong and Ng 2010). Constraints to viability of indigenous contractors in Nigeria have been identified to include uncertainties in supplies and prices of materials, difficulty in obtaining interim payment, access to capital, access to and maintenance of plant and equipment, poor accounting or financial management (Adams, 1997); dominance of foreign contractor and high rate of corruption (Alabi, 2010). Adams (1997) stated that one of the biggest consequences of this is their

inability to satisfy the financial requirements (e.g. bid and performance bonds) needed to win major contracts often awarded to their foreign counterparts and thus make their existence and sustenance difficult. Contractors are expected to produce good work at the cheapest price (lowest profit margin) because of the open tender system. Although the system is the best way to ensure the completion of any project at the lowest price, it is the most difficult obstacle faced by contractors in this highly competitive world.

Financial factors such as insufficient profit, heavy operational expenses, insufficient capital, country's economic conditions, poor accounting system and poor estimating and job costing (Kangari, 1988; Davidson and Maguire,2003; Kirvak and Aslan, 2008; Halim *et al.,* 2010; Wong and Ng 2010) were also identified as causes of failure which predict viability threat.

ILLCC in Nigeria are not excepted as they faced with delay in payment of valuation certificate, corrupt practice in the award of contract (Ayodele *et al,* 2011), difficulty in obtaining loans. For instance, construction firms in Nigeria will have to pay a bank interest of 20% or more on the loan obtained from the banks (Sanusi, 2007), Government collects a VAT of 5% from the contractor on every contract awarded (Economic Watch, 2010) which may be an indication of 5% reduction on profits made by contactors at the completion of the project. Besides, 5% of the contract sum will be held for a period of 6 to 12 month as retentions depending on the type of project (Nigeria Lawyer Link, 2012) which implied that the contractor will have no access to 5% of its contract sum until the expiration of the retention period after the completion of the project. With the identified problem of insufficient capital, persistence of any indigenous contractor in this condition will go a long way in determining his existence, therefore the viability of his firm in Nigeria.

The construction companies are particularly vulnerable to bankruptcy due to the fragmented nature of the industry, excessive competition, relatively low entry barrier, high uncertainty and risk involved, unpredictable fluctuations in construction volume (Edum-Fotwe *et al*., 1996; Kangari, 1988;Kale and Arditi, 1999) and low profit margin from projects (Halim et al 2010). A construction firm is considered viable when firm is able to utilize its assets, when the profit margin are in line with assets, when there are no excessive investment in fixed assets, when the business is adequately financed and when there are no signs of liquidity strain (Landford et al 1993). It is also a measure of its ability to pay its obligations when they are due and ability to plan and execute project successfully (Arslan and kirvak, 2008) which will be made possible by the robust income of the firm. The size (turnover) of companies, however, was significantly and positively correlated with profitability (Akintoye and Skitmore, 1991). Therefore, this paper focused on determining the relationship between the profit margin, the fixed asset and income as determinants of construction firm's viability in Southwestern Nigeria.

Low profit margin was identified by Kangari (1988, Osama (1997) and Halim *et al.* (2010) as part of causes of failure. It was observed by Fred and Janet as far back as1975 that the profit margins for the multinationals construction firms have been shrinking due to increased competition. A winning Italian consortium for example was figured as having 3% profit margin in its bid for the Kariba dam. It was observed at the same period that profit in Korea construction firm was at an average of 13.54% while British and United state had been aiming at 14% profit margin on their project. According to Construction Market Data (2011 and 2012) and (2011), average profit margin in the UK construction industry was less than 3%. In Nigerian construction industry, the profit margin on most of the project at the bidding stage is between ten

and fifteen percent depending on the bidding method, prevailing market situation and a host of other factors. Therefore, as suggested by Wong and Ng (2010), financial performance of construction firms must be regularly evaluated so as to establish timely and appropriate strategies for survival. Therefore this paper focused on the financial performance of the ILLCC as determinant of viability so as to alert the indigenous contractors on the need for improved performance in this highly competitive business environment. For a firm to survive and be sustained its financial status must be well established and properly monitored. Previous researches on viability of ILLCC were very scanty; however, related studied on success and failure of construction industry abound. It is the intention of this study to open up this under-explored area of research for further investigation.

RESEARCH METHODOLOGY

This paper aimed at establishing the relationship between profit fixed asset and gross income as determinant of viability of the ILLCC firms. The data used for this study were archival data collected from 19 contractors in Southwestern Nigeria who were purposively selected. These were contractors of ILLCC whose head office and/or major branch office are located in Southwestern Nigeria. These data were collected and collated from the bid documents submitted by the selected firms in a prequalification exercise conducted by one of the Federal Government Health Institutions in Southwestern Nigeria in 2011. The contractors were purposively selected due to the nature of the required data and the reluctance by most of them to release such data. Archival data on 54 annual financial status of the selected contractors on projects executed between 2008 and 2010 were collected and used for the analysis. The data included the gross income, fixed asset, construction and overhead cost and profit (Tables 1, 2, 3 and 4).

An empirical investigation using regression and correlation analyses were used to test the level of possible relationship between ILLCC profit as the dependent variable with gross earning and fixed asset as the independent variables in the form:

Profit = a + b (Gross Earning); a = constant; b = coefficients of Gross Earning

Profit = c + d (Fixed Asset); a = constant; b = coefficients of Fixed Asset

where an increase or decrease in profit is associated with an increase or decrease in gross earning or fixed profit as the case may be.

The hypotheses proposed for the study were:

Hypothesis 1:

H0: There is no significant relationship between ILLCC profit and gross income.

H1: There is a significant relationship between ILLCC profit and gross income.

Hypothesis 2:

H0: There is no significant relationship between ILLCC profit and fixed assets.

H1: There is a significant relationship between ILLCC profit and fixed assets.

The significance of the relationship was based on a 0.05 level of significance.

Table 1: Annual account of selected ILLCC (2008)

ILLCC	Gross Earning	Construction and overhead cost (N)	Gross Profit (N)	Fixed Asset	Construction and overhead cost (%)	Gross profit (%)
1	72,162,000	66,717,000	5,445,000	32,601,000	92.45	7.55
2	200,155,000	185,970,000	14,185,000	26,224,000	92.91	7.09
3	14,446,000	13,469,875	976,125	569,830	93.24	6.76
4	342,053,000	281,900,337	60,152,663	3,549,925	82.41	17.59
5	22,458,248	22,221,930	236,318	7,813,530	98.95	1.05
6	51,360,445	50,938,382	422,063	6,702,860	99.18	0.82
7	155,138,215	151,122,909	4,015,306	5,879,755	97.41	2.59
8	5,000,000	4,896,117	103,883	364,940	97.92	2.08
9	169,872,180	168,937,926	934,254	2,490,257	99.45	0.55
10	750,820,000	7,280,772,999	22,747,001	42,407,008	96.97	3.03
11	1,434,765	1,212,262	222,503	335,127	84.49	15.51
12	50,447,891	39,290,465	11,157,426	24,918,520	77.88	22.12
13	31,903,359	25,294,372	6,608,987	31,599,920	79.28	20.72
14	232,816,000	218,580,023	14,235,977	2,025,000	93.89	6.11
15	24,677,375	21,305,555	3,371,820	13,744,440	86.34	13.66
16	4,204,751	4,086,639	118,112	335,000	97.19	2.81
17	199,608,071	186,594,156	13,013,915	14,234,209	93.48	6.52
18	705,800,900	676,199,500	26,601,400	109,233,925	96.23	3.77

Table 2: Annual account of selected ILLCC (2009)

ILLCC	Gross Earning (N)	Constuction and overhead cost (N)	Gross Profit (N)	Fixed Asset	Construction and Overhead Cost (%)	profit (%)
1	106,670,000	99,538,000	7,132,000.00	39,238,000	93.31	6.69
2	1,582,631,000	1,463,729,000	118,902,000.00	1,218,968,000	92.49	7.51
3	195,055,000	169,326,000	25,729,000.00	26,224,000	86.81	13.19
4	17,405,000	16,654,521	750,479.00	479,450	95.69	4.31
5	243,823,000	241,239,740	2,583,260.00	2,489,000	98.94	1.06
6	26,744,610	20,886,157	5,858,453.00	19,670,888	78.09	21.91
7	108,127,340	104,034,259	4,093,081.00	5,592,190	96.21	3.79
8	171,280,955	167,291,500	3,989,455.00	8,410,297	97.67	2.33
9	7,500,000	7,388,775	111,225.00	222,785	98.52	1.48
10	131,161,850	130,100,604	1,061,246.00	9,650,913	99.19	0.81
11	137,161,850	136,100,604	1,061,246.00	9,650,913	99.23	0.77
12	4,906,083	4,727,872	178,211.00	297,890	96.37	3.63
13	47,861,179	38,273,815	9,587,364.00	45,594,480	79.97	20.03
14	38,284,189	29,282,671	9,001,518.00	24,824,940	76.49	23.51
15	306,700,000	282,377,068	24,322,932.00	1,227,500	92.07	7.93
16	105,771,546	72,003,748	33,767,798.00	49,013,740	68.07	31.93
17	6,354,075	6,235,073	119,002.00	274,010	98.13	1.87
18	210,153,094	198,656,596	11,496,498.00	32,912,135	94.53	5.47
19	694,500,200	675,000,601	19,499,599.00	130,541,645	97.19	2.81

Table 3: Annual account of selected ILLCC (2010)

ILLCC	Gross Earning (N)	Construction and overhead cost (N)	Gross Profit (N)	Fixed Asset	Construction and Overhead Cost (%)	profit (%)
1	118,254,000	108836000.00	9,418,000	52,657,000	92.04	7.96
2	2,790,454,000	2621056000.00	169,398,000	1,218,513,000	93.93	6.07
3	120,560,000	101834000.00	18,726,000	16,313,000	84.47	15.53
4	27,562,000	26004127.00	1,557,873	478,450	94.35	5.65
5	410,464,000	338280805.00	72,183,195	3,735,000	82.41	17.59
6	42,635,930	34084818.00	8,551,112	18,580,236	79.94	20.06
7	10,000,000	9868163.00	131,837	89,100,000	98.68	1.32
8	168,743,465	165231998.00	3,511,467	15,897,390	97.92	2.08
9	769,460,240	704121294.00	65,338,946	74,442,613	91.51	8.49
10	1,897,687	1626343.00	271,344	372,363	85.70	14.30
11	120,875,110	89255428.00	31,619,682	43,182,970	73.84	26.16
12	41,660,224	31254635.00	10,405,589	21,437,450	75.02	24.98
13	310,816,200	279614121.00	31,202,079	2,430,000	89.96	10.04
14	79,326,118	56183661.00	23,142,457	44,578,880	70.83	29.17
15	111,099,143	104905089.00	6,194,054	6,361,219	94.42	5.58
16	9,700,105	9159149.00	540,956	244,520	94.42	5.58
17	260,110,931	250019747.00	10,091,184	31,172,961	96.12	3.88

Table 4: Annual account of selected ILLCC (2008-2010)

ILLCC	Gross Earning	Construction and overhead cost (N)	Gross Profit (N)	Fixed Asset	Construction and overhead cost (%)	Gross profit (%)
1	72,162,000	66,717,000	5,445,000	32,601,000	92.45	7.55
2	200,155,000	185,970,000	14,185,000	26,224,000	92.91	7.09
3	14,446,000	13,469,875	976,125	569,830	93.24	6.76
4	342,053,000	281,900,337	60,152,663	3,549,925	82.41	17.59
5	22,458,248	22,221,930	236,318	7,813,530	98.95	1.05
6	51,360,445	50,938,382	422,063	6,702,860	99.18	0.82
7	155,138,215	151,122,909	4,015,306	5,879,755	97.41	2.59
8	5,000,000	4,896,117	103,883	364,940	97.92	2.08
9	169,872,180	168,937,926	934,254	2,490,257	99.45	0.55
10	750,820,000	7,280,772,999	22,747,001	42,407,008	96.97	3.03
11	1,434,765	1,212,262	222,503	335,127	84.49	15.51
12	50,447,891	39,290,465	11,157,426	24,918,520	77.88	22.12
13	31,903,359	25,294,372	6,608,987	31,599,920	79.28	20.72
14	232,816,000	218,580,023	14,235,977	2,025,000	93.89	6.11
15	24,677,375	21,305,555	3,371,820	13,744,440	86.34	13.66
16	4,204,751	4,086,639	118,112	335,000	97.19	2.81
17	199,608,071	186,594,156	13,013,915	14,234,209	93.48	6.52

ILLCC	Gross Earning	Construction and overhead cost (N)	Gross Profit (N)	Fixed Asset	Construction and overhead cost (%)	Gross profit (%)
18	705,800,900	676,199,500	26,601,400	109,233,925	96.23	3.77
19	106,670,000	99,538,000	7,132,000	39,238,000	93.31	6.69
20	1,582,631,000	1,463,729,000	118,902,000	1,218,968,000	92.49	7.51
21	195,055,000	169,326,000	25,729,000	26,224,000	86.81	13.19
22	17,405,000	16,654,521	750,479	479,450	95.69	4.31
23	243,823,000	241,239,740	2,583,260	2,489,000	98.94	1.06
24	26,744,610	20,886,157	5,858,453	19,670,888	78.09	21.91
25	108,127,340	104,034,259	4,093,081	5,592,190	96.21	3.79
26	171,280,955	167,291,500	3,989,455	8,410,297	97.67	2.33
27	7,500,000	7,388,775	111,225	222,785	98.52	1.48
28	131,161,850	130,100,604	1,061,246	9,650,913	99.19	0.81
29	137,161,850	136,100,604	1,061,246	9,650,913	99.23	0.77
30	4,906,083	4,727,872	178,211	297,890	96.37	3.63
31	47,861,179	38,273,815	9,587,364	45,594,480	79.97	20.03
32	38,284,189	29,282,671	9,001,518	24,824,940	76.49	23.51
33	306,700,000	282,377,068	24,322,932	1,227,500	92.07	7.93
34	105,771,546	72,003,748	33,767,798	49,013,740	68.07	31.93
35	6,354,075	6,235,073	119,002	274,010	98.13	1.87
36	210,153,094	198,656,596	11,496,498	32,912,135	94.53	5.47
37	694,500,200	675,000,601	19,499,599	130,541,645	97.19	2.81
38	118,254,000	108836000	9,418,000	52,657,000	92.04	7.96
39	2,790,454,000	2621056000	169,398,000	1,218,513,000	93.93	6.07
40	120,560,000	101834000	18,726,000	16,313,000	84.47	15.53
41	27,562,000	26004127	1,557,873	478,450	94.35	5.65
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43	42,635,930	34084818	8,551,112	18,580,236	79.94	20.06
44	10,000,000	9868163	131,837	89,100,000	98.68	1.32
45	168,743,465	165231998	3,511,467	15,897,390	97.92	2.08
46	769,460,240	704121294	65,338,946	74,442,613	91.51	8.49
47	1,897,687	1626343	271,344	372,363	85.70	14.30
48	120,875,110	89255428	31,619,682	43,182,970	73.84	26.16
49	41,660,224	31254635	10,405,589	21,437,450	75.02	24.98
50	310,816,200	279614121	31,202,079	2,430,000	89.96	10.04
51	79,326,118	56183661	23,142,457	44,578,880	70.83	29.17
52	111,099,143	104905089	6,194,054	6,361,219	94.42	5.58
53	9,700,105	9159149	540,956	244,520	94.42	5.58
54	260,110,931	250019747	10,091,184	31,172,961	96.12	3.88

DATA PRESENTATION AND RESULT

The archival data used for this study were evaluated and analyzed using descriptive and inferential statistics, Tables 5 and 6 gave the summary of the result of descriptive statistics.

Table 5 revealed that 14 (73.68%) of the indigenous contractors firm sampled executed construction project with contract sum ranged between 50 million and 99million naira with 10 (52.63%) of them executed project below N50 million naira.

From Table 6, profit earned by the surveyed ILLCC ranged from 4.81% and 6.80% for the year reviewed with the average profit of 5.90%, it was also observed that there was no consistency in the trend of profit earned per year, there was an observed decrease from 2008 to 2009 and increase from 2009 to 2010. Also, the result from Table 6 showed that the ILLCC sampled spent an average of 94.10% of their gross earning on the actual construction work and overhead while they made a percentage of 5.90 as profit. Average sum spent on fixed asset was 1.59% and 21.54 of the average gross earning and average profit respectively.

Results of the correlation and regression analyses of the observed relationship between profit and gross income and the observed relationship between profit and fixed asset were as shown in Tables 7 and 8.

Relationship between Profit and Gross Income of ILLCC

Table 5:Summary of project successfully completed by ILLCC

Cost of completed project	F	%
Below N50 million Naira Project	10	52.63
Between N50- N99 million Naira Project	4	21.05
Between N100 –N199 million Naira Project	2	10.53
No information on project completed	3	15.79

Table 6: Summary of annual account of selected ILLCC 2008 -2010

Years	Fixed Asset (N)	Gross Earning (N)	Construction and overhead Cost (N)	Gross Profit (N)	Construction and overhead Cost (%)	Average Gross Profit (%)
2008	18515539	3034358200	2849810447	184547753	93.92	6.08
2009	84541199	4142090971	3862846604	279244367	95.19	4.81
2010	96441003	5393619153	4931335378	462283775	93.2	6.80
Years average	66499247	4190022775	3881330810	308691965	94.10	5.90

The coefficients of the developed relationship between profit and gross income were presented in Table 7 and the equations were given in equations 1-4.

From Table 7, it showed that the relationship between profit and gross income developed through regression analysis can be presented in the form of these equations:

For 2008, Profit = 3.226E6 + 0.042Gross Income……..…Equation 1

For 2009, Profit = 31432.792 +0.067 Gross Income……
…….……Equation 2

For 2010, Profit = 7.991E6+0.061 Gross
Income……..…….....Equation 3

For all data (2008-2010), Profit = 2.819E6+0.062 Gross
Income…..……...Equation 4

Table 7: Result of Correlation and Regression Analyses of Profit/Gross Income Relationship

Coefficients	2008	2009	2010	All
A	3.226E6	31432.792	7.991E6	2.819E6
B	0.042	0.067	0.061	0.062
R	0.634	0.910	0.948	0.909
R2	0.402	0.829	0.900	0.826
F	10.735	82.199	134.443	247.104
Significance (F)	0.005	.000	.000	.000

Table 7 gave the summary of the result which showed that the prediction of profit of ILLCC were obtained with R = 0.634, 0.910, 0.948, and 0.909 in 2008, 2009, 2010 and combined data respectively. Generally, R is the measure of correlation between the observed value and the predicted value of the profit. The R- values from Table7 revealed a strong correlation between the observed gross income and the predicted value of profit of ILLCC. This implied that there exists very strong positive relationship between the profit and the gross income of ILLCC in Southwestern Nigeria. The R^2 value, on the other hand, is the proportion of the observed variance in the profit which can be accounted for by this relationship. R^2 values = 0.402, 0.829, 0.900, and 0.826 in 2008, 2009, 2010 and combined data respectively. Therefore, it could be concluded that this relationship could account for 41%, 82.9%, 90%, and 82.6% of the observed variance in profit in 2008, 2009, 2010 and combined data respectively. This implied that 41%, 82.9%, 90%, and 82.6% of the profit in 2008, 2009, 2010 and combined data respectively can be attributed to the observed gross income and 59%, 17.1%, 10%, and 17.4% being accounted for by other factors not included in the equation.

It is possible to have a model predicting an outcome but may not do so significantly (Fields, 2005). The regression procedure made provision for testing the significance of a relationship through ANOVA test of difference and hypothesis testing. The tested hypothesis is as follows:

H_0: There exists an insignificant relationship between profit and gross income of ILLCC.

$H_{1:}$ There exists a significant relationship between profit and gross income of ILLCC.

Table 7 showed that an F-value = 10.735, 82.199, 134.443 and 247.104 respectively in 2008, 2009, 2010 and all data at $p<0.05$ which denotes that the null hypothesis cannot be accepted but rejected. Hence, it can be concluded that there exists a significant relationship between profit and gross income of ILLCC.

Relationship between profit and Fixed Asset

The coefficients of the developed relationship between profit and fixed asset were presented in Table 8 and the equations were given in equations 5-8.

Table 8: Result of Correlation and Regression Analyses of Profit/Fixed Asset Relationship

Coefficients	2008	2009	2010	All
C	7.067E6	6.755E6	1.497E7	9.765E6
D	0.176	0.093	0.127	0.111
R	0.313	0.945	0.866	0.843
R^2	0.098	0.894	0.751	0.711
F	1.734	143.202	45.150	127.892
Significance (F)	0.206	.000	.000	.000

The result from Table 8 revealed that the relationship between profit and fixed asset developed through regression analysis can be presented in the form of these equations:

For 2008, Profit = 7.076E6 + 0.176Fixed Asset
……..…Equation 5

For 2009, Profit = 6.755E6 + 0.093Fixed Asset
…….Equation 6

For 2010, Profit = 1.497E7 +0.127 Fixed Asset
…….....Equation 7

For all data, Profit = 9.765E6+0.111Fixed
Asset……..……Equation 8

Table 8 gave the summary of the result which indicated that the prediction of profit of ILLCC were obtained with R = 0.313, 0.945, 0.866, and 0.843 in 2008, 2009, 2010 and combined data (2008-2010) respectively.

The R- values from Table 8 showed a very strong correlation between the observed fixed asset and the predicted value of profit of ILLCC except for 2008 which was weak correlation (R=0.313). This implied that there exists very strong positive relationship between the profit and the fixed asset of ILLCC in Southwestern Nigeria except for 2008. On the other hand, R^2 values = 0.894, 0.751, and 0.711 in 2009, 2010 and combined data respectively. Therefore, it could be concluded that this relationship could account for 89.4%, 75.1%, and 71.1% of the observed variance in profit in 2009, 2010 and combined data respectively. This implies that 89.4%, 75.1%, and 71.1% of the profit can be attributed to the observed fixed asset and 10.6%, 24.9%, and 28.9% in 2009, 2010 and combined data respectively being accounted for by other factors not included in the equation. However, R^2 value = 0.098 for 2008 which indicated that only 9.8% of the profit can be attributed to the observed fixed asset and 92% being accounted for by other factors not included in the equation.

The test of the significance of a relationship through ANOVA test of difference and hypothesis testing was also carried out. The tested hypothesis is as follows:

H_0: There exists an insignificant relationship between profit and fixed asset of ILLCC.

$H_{1:}$ There exists a significant relationship between profit and fixed asset of ILLCC.

Table 8 also showed that an F_value = 1.734 at $p > 0.005$ for 2008 data which denoted that the null hypothesis cannot be rejected but accepted. Hence, it can be concluded that there exists an insignificant relationship between profit and fixed asset of ILLCC in 2008. However, for 2009, 2010 and combined data (2008-2010), F_values = 143.202, 45.150 and 127.892 respectively at $p<0.005$, which denotes that the null

hypothesis cannot be accepted but rejected. Hence, it can be concluded that there exists a significant relationship between profit and fixed asset of ILLCC.

DISCUSSION

The nature of indigenous companies is confirmed by the result of this study through the size of the project executed, more that 50% of the projects executed by the ILLCC surveyed were less than N50million. This revealed type of project that ILLCC can engage in and reinforced the fact about their low financial capacity to be involved in large and complex project that can increase their gross income through which their fixed asset can be increased and lead to an improved profit. This reinforced the study of Yin (2006) which established that indigenous contractor had very low financial base and this invariably affect their ability to compete with foreign counterparts.

Also, profit earned by the surveyed ILLCC ranged from 4.81% and 6.80% for the year reviewed with the average profit of 5.90%. This was very low compared to 17% which is the Malaysian construction industry average recorded by Halim *et al,* (2010), although this result was in agreement with Halim *et al*. (2010) of 5% to 10% which was the actual percentage profit earned by Malaysian contractors. This result recorded higher percentage compared to that of UK which was less than 3% (**Construction Market Data, 2012 and adf, 2011)**. The reasons for this included low contract price resulted from open tender system. High competition, delay in project completion, escalating prices of materials, high dependence on debt capital, high interest charge and high price of purchasing materials through credit facilities were causes of low profit margin (Arslan *et al.,* 2006; Halim *et al,* 2010) as experienced by ILLCC in Nigeria. It was also observed that there was no consistency in the trend of profit earned per year, there was on observed decrease from 2008 to 2009 and increase from 2009 to 2010. This may be due to the situation of the country in which there was instability in market prices of construction resources, and other economic indicators like inflation rate, interest rate, government policy, e.t.c. and these will have significant effect on the final construction cost of the project and consequent effect on the earned profit. There is, therefore, the need for government to evaluate properly the adverse effect of various financial policies on project administration, financing and monitoring so as to enhance the capacity and capability of the ILLCC in Nigeria. This will enable them deliver a higher volume of output to meet the increased demand which according to Ofori (2010) can be achieved in a cost effective and time efficient manner, to a high quality and with overall value for money.

In addition, for the years under review, the ILLCC sampled spent an average of 94.10% of their gross earning on the actual construction work and overhead while they made a percentage of 5.90 as profit. This may be due to their high overhead cost on the contract which may be as a result of unnecessary prolonged construction period experienced, late valuation certificate preparation and payment, inaccessibility or delay in getting loan among many other factors. This finding was in agreement with Halim *et al*. (2010) who confirmed that construction firms shouldered high construction costs. The result also revealed that average sum spent on fixed asset was 1.59% and 21.54% of the average gross earning and average profit respectively. This is an indication of a low fixed asset and this may be because most of the major plant and equipment required by the contractors during construction were hired while only basic construction tools and vehicle for logistics purposes were owned. This will have an increasing effect on the overhead and deceasing effect on the profit. Also, tendency

of competing with foreign firms for capital intensive contracts will be reduced; hence, their viability or long term existence of such firms will be at risk.

The result of from this study revealed a strong correlation and a significant relationship between the sampled firm annual profit and their gross income and fixed asset except for 2008 where the relationship between the profit and fixed asset was statistically insignificant. This indicated that, in 2008, profit was not influenced by the fixed asset. This may be attributed to the fact that few or no fixed asset that could have remarkable effect on the profit was acquired that year by the surveyed contractors. It is important to note that the observed relationship between the annual profit and the gross income; and between the annual profit and fixed asset for the combined data was strong and significant. This implied that their profits are significantly influenced by their gross earning, so also their fixed asset. Therefore, an increase in either the gross earning or fixed asset will result in an increase in profit, however the percentage increase may not be known. This study, thus, concluded that gross earning and fixed asset of ILLCC are significant determinants of profit. This study agreed with Arslan and Kirvak (2008) and Akintoye and Skitmore (1991). This means that an improved income and fixed asset acquired will result in an improved profit and consequently a viable organization which can withstand ever increasing competitive economy. Therefore, for the profit of the ILLCC to improve, there should be an improvement on the gross earning and or fixed asset. There should be increase in the owned plant and equipment, financial base must be increased either by obtaining loan, engaging in partnership instead of one-man business or through other means as this will allow for ILLCC an opportunity to be engaged in projects of large magnitude which may improve the earned profit and also to favorably compete with their foreign counterpart in the highly competitive construction environment.

CONCLUSION

The objective of this study research was to investigate the relationship between profit and the gross income and fixed asset of Indigenous Limited Liability Construction Company in Southwestern Nigeria with the aim of determining the viability of these firms in a competitive construction market. Archival data of contractors within this category were collected and subjected to regression and correlation analysis. The result indicated that the average profit of ILLCC in Southwestern Nigeria was 5.90%, average sum spent on fixed asset was 1.59% and 21.54 of the average gross earning and average profit respectively. The relationship between profit and gross income was linear, positive and significant in the form: **Profit = 2.819E6+0.062Gross Income** and the relationship between profit and fixed asset was linear, positive and significant in the form: **Profit = 9.765E6+0.111Fixed Asset.** The paper concluded that profit of ILLCC was significantly influenced by their gross income and fixed asset. The study will help the ILLCC contractors in Nigeria to give more attention to the major items of their financial factors which can lead to an improved profit for sustenance in the building environment.

REFERENCE

Adams, O. (1997) Contractor development in Nigeria: perceptions of contractors and professionals, Construction Management and Economics, 15(1), 95-108.

Adf (2011): Rising Costs are Driving Down Profit Margins in the UK Construction Industry, 4/03/2011

news, available at http://www.adfonline.eu/pressrelease/pressrelease.aspx?companyname=Plimsoll+Publishing+&title=Rising+Costs+are+Driving+Down+Profit+Margins+in+the+UK+Construction+Industry, (accessed on 15/04/12)

Aibinu, A. A., and Jagboro, G. O. (2002). The Effect of Construction Delays on Project Delivery in Nigerian Construction Industry. *International Journal of Project Management* , 20, 593-599.

Ajator, U. (2004). Value Management and Buildability Assessment as Indispensable Tool for Efficient, Cost-Effective Building Production. *The Quantity Surveyor ,* 48, 2 - 9.

Akintoye, A. and Skitmore, M. (1991): Profitability of UK construction contractors, Construction Management and Economics, 9(4), 311-325.

Alabi, F.O. (2010) The macroeconomic review of building and construction sector in Nigeria: pre 1980-2006 *In:* Laryea, S., Leiringer, R. and Hughes, W. (Eds) *Procs West Africa Built Environment Research (WABER) Conference,* 27-28 July 2010, Accra, Ghana, 605-13.

Aniekwu, A.N (1995) The Business Environment of the Construction Industry in Nigeria, Construction Management and Economics, 13, 445–455.

Arslan G. and Kivrak S. (2008) Critical factors to company success in the construction industry. World Academy of Science, Engineering and Technology, 45, 43-46.

Ayodele, E. O. Ogunbode, A. B. Ariyo, I. E. and Alabi O. M. (2011) Corruption in the Construction Industry of Nigeria: Causes and Solutions. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)* 2 (3), 156-159.

Construction Market Data, (2012a): theconstructionindex, Top 100 Construction Companies 2010, available at http://www.theconstructionindex.co.uk/market-data/top-100-construction-companies/2011 (accessed on 15/04/12)

Construction Market Data, (2012b): theconstructionindex, Top 100 Construction Companies 2010, available at http://www.theconstructionindex.co.uk/market-data/top-100-construction-companies/2011 (accessed on 15/04/12)

Corporate Affair Commission (CAC) (2005) Registration of companies. http://www.CAC.gov.ng (accessed 4 April 2012)

Dantata S. (2008) General overview of the Nigeria construction industry. Unpublished Master of Engineering in Civil and Environmental Engineering thesis, Department of Civil and Environmental Engineering, Massachusetts institute of technology, USA.

Davidson, R.A. and Maguire, M.G. (2003) Top common causes of construction contractor failures, Journal of Construction Accounting and Taxation, Jan/Feb 2003.

Economic Watch (2010) Value added Tax (VAT) in Nigeria. www.economywatch.com (accessed 22 March 2012)

Edum-Fotwe, F., Prince, A. and Thorpe, A. (1996), "A review of financial ratio tools for predicting contractors insolvency". Journal of Construction Management and Economic, 14, 189-198.

Elinwa, A. U., and Buba, S. A. (1993). Cost Factors in Nigeria. *Journal of Construction* Engineering and Management , 119 (4), 698-713.

Federal office of statistics (1996) Socio-economic profile of Nigeria. FOS, Lagos

Federal Office of Statistics (FOS) (1998) Review of the Nigeria Economy 1997. Federal office of Statistics, Abuja, Nigeria.

Field, A. P. (2005). Discovering statistics using SPSS, 2nd Edition, London Sage.

Giwa, S. L. (1988) Appraisal and Prediction of Final Contract Sums of Building Projects in *Nigeria,* Unpublished PhD Thesis, Ahmadu Bello University, Nigeria.

Halim M.S. Jaafar M. Osman O. and Akbar S. (2010) The Contracting firm's failure and financial related factors: a case study of Malaysian contracting firms. *International* Research Journal of Finance and Economics, 52, 28-39.

Hillebrandt, P M (2006) The construction industry and its resources: a research agenda. *Journal* Of Construction in Developing Countries, 11(1), 37-52.

Hughes, W. P. and Hillebrandt, P.M. (2003) Construction industry: historical overview and technological change, In: Mokyr, Joel (ed.-in. chief) The Oxford Encyclopaedia of Economic History, Oxford: Oxford University Press, 2003, 1, 504-512.

Jaselskis, J.E. and Talukhaba, A. (1998) Bidding considerations in developing countries, Journal of Construction Engineering and Management, 125(3), 185-193.

Kale, S. and Arditi, D. (1999) Age-dependent business failures in the US construction industry, Construction Management and Economics, 17(4), 493-503.

Kangari, R. (1988). "Business Failure in Construction Industry" *Journal of Construction* Engineering and Management, 114(2), 172-190.

Langford, D., Iyagba, R. and Komba, D.M. (1993), "Prediction of solvency in construction companies". Journal of management and economics, Vol 11, pp 317- 325

Mosaku, T. O. (1984) A system approach to effective project management control. Unpublished PhD Thesis, Department of Building, Ahmadu Bello University, Nigeria.

Moanvenzadeh F. Rossow J. A. (1975) The construction industry in developing countries. Technology adaption program, Massachusetts Institute of Technology

Musa, A. S. (1990) A cost advice system for construction projects at early design stage. Unpublished MSc. Thesis, Ahmadu Bello University, Nigeria.

Murdoch, J. and Hughes, W. (2008) Construction contracts, 4ed, London: Taylor and Francis.

National Bureau of Statistics (2006) National Account of Nigeria 1981-2006. Federal Republic of Nigeria, Abuja October, 2006.

National Bureau of Statistics (2007) National Account of Nigeria 1981-2006. Federal Republic of Nigeria, Abuja October, 2007.

Nigeria Business (2007) Expectations of the construction sector ahead of 2007 budget. Online

http: //Nigeria business. (Retrieve on January 15th, 2012).

Nigeria Lawyers Link (2012) Building contract/retention fees. www.linkedin.com/secure.

(accessed 22 March 2012)

Ofori, G. (2010) Built environment research and the millenium development goals *In:* Laryea, S.,

Leiringer, R.and Hughes, W. (Eds) *Procs West Africa Built Environment Research (WABER) Conference,* 27-28 July 2010, Accra, Ghana, 9-25.

Okuwoga, A. A. (1998). Cost-time Performance of Public Sector Housing Projects in Nigeria.

Habitat International , 22 (4), 389-385.

Omole, A. O. (2000). Quality of Professional Service and Ethics. *The Quantity Surveyor , 33*,

2 - 7 .

Osama, J. M. (1997) Reasons for construction business failures in Saudi Arabia, *Project*

Management Journal, 28(2), 32-36.

Wahab, K. A. (2006) Implementation of public procurement reforms in Nigeria. Paper

delivered at Workshop on World Bank Procurement Procedures, Organised by the

Nigeria Economic Submit Group at the Golden Gate Restaurant, Ikoyi, Lagos, 28th

September.

Wong, M.W. and Ng S.T. (2010) Business Failure in the Construction Industry: a Critical

Review and a Future Research Agenda. FIG Congress 2010. *Facing the Challenges – Building the Capacity.* Sydney, Australia, 11-16 April 2010

Yin, K.Y.,(2006), "How to become a competent contractor". The Monthly Bulletin of the

institution of Engineers, *Journal of Jurutera,* Malaysia. Vol. 02, pp. 38-39.