

Survival Strategies Employed by Construction Firms during the 2016-2017 Recession in Kaduna

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Recession has been found to severely affect the Construction Industry through reduction of construction projects output, decreased employment as well as profitability, and at times, results in firms becoming insolvent. This led to the development of various responsive strategies for survival. However, previous research efforts have overlooked the three success indices (output, profitability and employment conditions), which have been found to be the major areas affected by recession which can lead to the total collapse of a firm. The aim of the research is to assess the influence of survival strategies on the growth or decline of profitability of construction firms. The study then established the relationship between the experience and profitability of the firms. A quantitative approach using an online questionnaire survey was adopted for this study. One hundred (100) of the top customers of some selected banks were contacted and sixty-seven (67) of those firms agreed to participate in the survey and had the survey links sent to them. Forty-two (42) filled questionnaires were retrieved. The SPSS (version 23) statistics software package was used to assess the mean scores and Pearson's chi-square test to assess the relationship between a firm's profitability and the firm's years of experience. The study found optimum utilization of workforce (Minimizing staff redundancies) to be the most used strategy; placing greater emphasis on marketing, building relationships, effective planning and management was rated as most important strategy; while trying new methods and technologies to improve productivity had the highest influence on growth in profitability. The study recommended that construction firms should make marketing to new clients and establishing a bond with existing clients a core job function while putting more efforts on understanding methods of optimally utilizing their existing workforce and eliminating staff redundancies.

Keywords: Recession, Construction Industry, Nigeria, response strategy, survival

INTRODUCTION

Nigeria, as data from the National Bureau of Statistics (NBS) suggested, slid into recession in July 2016. This was observed as the Nation's Gross Domestic Product (GDP) declined by -2.06% in the Second Quarter of 2016. This meant that the GDP fall worsened by 1.70% from -0.36% documented in the earlier three months, and 4.41% lower than the 2.35% noted in the Second Quarter of 2015 (National Bureau of Statistics, 2016). Studies have found global, continental or local recession to affect part or the entire Construction Industry (CI), which is a major contributor of the economy of any nation (Pheng & Hua, 2002; Tulacz *et al.*, 2003; Tulacz, 2009; Lim *et al.*, 2010; Chan & McCabe, 2010; Scott, 2011; Construction Industry Council UK, 2009; Emiedafe, 2015; Yoo & Kim, 2015). The areas affected by recession include output of work, conditions attached to employment as well as profitability. A significant fall in any of these can lead to the entire collapse of a firm (Scott, 2011).

To avoid folding up, firms adopt different strategies as survival means in events of recession. Studies have come up with various approaches which consist of Financial Management and Investment (Lim *et al.*, 2010); Diversification, Differentiation as well as Focusing on Core Business (Hillebrandt *et al.*, 1995; McCabe, 2010); and marketing (Bennett, 2005). Other

studies took a step further to rate the importance of various strategies (Scott, 2011).

Previous studies (Scott, 2011; Lim *et al.*, 2010) considered entire groups of construction firms that lived through recessions and chose respondents without consideration of the current performance of their firms to rank strategies for survival. The studies revealed that construction firms survive recessions by combining more than one of the various strategies. Therefore, this study seeks to build on the efforts made by these previous studies by incorporating the profitability index in qualifying the category of success achieved by the surviving firms. This is because success indices have been found to be the major areas affected by recession which can lead to the total collapse of a firm (Scott, 2011). The study assesses of influence each strategy has on the growth or decline of the firm's profitability as well as reveals the relationship between the experience and profitability of the firms.

LITERATURE REVIEW

Construction Industry and Survival Strategies

The construction industry is a major contributor to the economy of many countries globally, developed and developing alike. These contributions present in various forms including job and wealth creation, boosting national income, as well as providing infrastructure and housing (Onyeagam *et al.*, 2019; Nwaki & Eze, 2020).

There are ways to assess the success of construction businesses other than return on investment (ROI), sales growth, profits, numerical strength of employees, and corporate reputation. That is by way of their competitive and survival strength (Adu *et al.*, 2020). Construction organisations that have successfully formulated a comprehensive strategy are more successful in terms of achieving sustainable, progressive growth and survival. This is particularly in the event of volatile and turbulent periods for businesses (AbuBakar *et al.*, 2011). Several studies have looked at the survival strategies used by different professionals within the construction industry of Nigeria (Adu *et al.*, 2020; Okereke *et al.*, 2022). Some of the strategies used to survive in the construction business are discussed below.

Strategies Employed by Construction Businesses to Survive During a Recession - Response Strategies

An efficient response strategy is key to addressing issues related to environmental changes (Ye *et al.*, 2010). In business terms, Waddock and Isabella (1989) described response strategy as the ability of an organisation to make prompt response to changes in the external environment. Lansley (1987) describes it as a quick and innovative action that necessitate the expansion of novel connections with the business environment. Various strategies have been applied in to enable survival of construction firms in the event of economic decline. These include diversifying, differentiating and focusing on core business processes (Hillebrandt *et al.*, 1995; McCabe, 2010); marketing (Pheng & Hua, 2002; Bennett, 2005); as well as financial management and investment (Lim *et al.*, 2010).

Diversification, differentiation and focusing on core business

Diversification involves regressive incorporation (diversification into business with inputs into the main operations), progressive incorporation (expansion into the business activities of those firms who would typically purchase the outputs of the main operation) as well as horizontal incorporation (integration into other markets not linked with the existing business). Such diversification results in an increase in profits, efficiency and value of fixed assets of the company, and it helps avoid over-dependence on the construction industry's recurring nature (Hillebrandt *et al.*, 1995).

Target markets

The private and public (Government) sectors form the major sources of investment expenditure for the construction industry. The private developers invest for profit making whereas the public sector developers invest to cater for the social and political needs (Leung & Wong, 2005). During the flourishing periods of the business cycle, the private sector is visibly the more

active. This is resulting from available opportunities for profit creation and necessities for development of new buildings in a growing market. The public sector operates very differently by using the construction industry to boost the economy by developing major infrastructure projects (Pheng & Hua, 2002).

Marketing

Recessions have led construction organisations to discover alternative ways of acquiring works to sustain their turnover (Hillebrandt *et al.*, 1995). This is usually achieved by improving existing relationships with current clients as well as increasing market activities to attract new clients. Bennett (2005) observed that several studies ended up criticising the construction industry for failing to adopt a contemporary marketing approach that focuses on creating relationships with clients that would be beneficial in the long run rather than adversarial tendering market.

Employment-related strategies

Numerous reasons exist for variances in employment numbers in the event of recessions. One of such reasons is the necessity to reorganise organisations to replicate the decline in availability of work to those organisations, thereby reducing expenses (Hillebrandt *et al.*, 1995). Cost reducing strategies are regarded as the most crucial strategies for construction organisations. A construction business has to make profits in order to survive or at the very least, break even.

Financial management and investment

Effective financial management presents a crucial factor for any organisation to succeed. Arditi *et al.* (2000) found problems relating to budget including inadequate profits, hefty operating expenditures, deficient capital and institutional debt to be responsible for more than 40% of all project failures. These issues have been distinguished as internal to the organisations (Arditi *et al.*, 2000). Mutti and Hughes (2002) stressed that poor management, followed by inadequate finance control to be the major reasons construction insolvency.

Building relationships

Relationship with both clients and suppliers is essential for any industry to thrive. Lim *et al.* (2010) labels healthy relationships with clients to be a critical survival factor of construction companies. Main contractors have also been found to use subcontracting as a means to achieve competitive advantage over their competitors (Hillebrandt *et al.*, 1995). They have also been found to decrease their exposure to risk and reduce their overhead costs (Costantino *et al.*, 2000).

Joint venture has been used by smaller companies with other smaller companies as a way of riding out of recession using relationships (Hillebrandt *et al.*, 1995).

Table 1: Summary of some common strategies used by contractors in response to a recession

Strategy	Source
Trying new methods and technologies to improve productivity	Wong and Logcher (1986); Low and Lim (2000)
Placing greater emphasis on marketing, building relationships, effective planning and management	Wong and Logcher (1986); Low and Lim (2000); Hillebrandt <i>et al.</i> (1995)
Optimum utilization of workforce (Minimizing staff redundancies)	Hillebrandt <i>et al.</i> (1995); Boon (1996); The Contractor (1998)
Implementing stricter financial management techniques	Hillebrandt <i>et al.</i> (1995); Boon (1996); Low and Lim (2000)
Reduction of staff strength / Staff layoff	Low and Lim (2000)
Freezing or cutting staff salaries or bonuses	Low and Lim (2000); Hillebrandt <i>et al.</i> (1995)
Diversifying into new areas or other lines of business	Hillebrandt <i>et al.</i> (1995); Wong and Logcher (1986) and Mills (1997)
Borrowing to augment working capital or execute contracts	Wong and Logcher (1986); Hillebrandt <i>et al.</i> (1995)
Joint venturing, forming partnerships, attempting mergers or acquisitions with/of other firms, clients, contractors etc. to further explore business opportunities	The Contractor (1998); Mills (1997)
Lowering tender prices to the barest minimum	Hillebrandt <i>et al.</i> (1995); The Contractor (1998); Low and Lim (2000)

RESEARCH METHODOLOGY

A quantitative approach using questionnaires via an online survey portal was adopted for this study. The design of online survey tool was designed using the “Survey Monkey” platform for ease of access to respondents of the study. The online survey channel was designed with a simple and clean interface and flexible options using Likert Scale type response to ascertain the perceived importance of each strategy to the survival of the firm. The scale ranged from 1 (not important) to 5 (most important).

A branch of a leading commercial bank in Kaduna State, Nigeria was later contacted, to provide a list of their top performers in the construction business. The consent of the customers who were assured of confidentiality was sought. The researchers later returned to the bank which assisted in providing information on the credit turnovers, debit turnovers, average balances and year end balances (annual bank statements) of their top customers who agreed to the study. This is because the annual debit turnovers, annual credit turnovers, the year end balances of the firms as well as average balances over a period leads to the understanding of a firm’s net income, proceeds, and expenses. It also gives an insight into the firm’s profitability over a given period (Carcello, 2008).

Information on the employment statistics was gotten directly from the same bank customers that agreed to participate in the survey through the online questionnaire. Links to the online survey were sent to respondents that agreed to the study, who are executives

of construction firms in Nigeria that survived the 1999 recession and/or the 2008 global economic crises and were still in business during the last recession (2016-2017) via multiple channels such as their emails, phone text messages and the WhatsApp medium on mobile devices to know the strategies of survival they adopted during the previous recessions and are still adapting. Firms that began operation after the 1999 or 2008 financial crisis, but were found to be performing credibly in terms of output, profitability and employment conditions in the last recession were considered.

One hundred (100) of the top customers of the bank were initially contacted from the contact details obtained from the initial interaction with the bank. 100 participants were chosen as the data in the database could not allow for more. Sixty-seven (67) of those firms agreed to participate in the survey and had the survey links sent to them. At the point of data collation, only forty-two (42) respondents had filled the questionnaire making a reasonable response rate as Moser and Kalton (1979) found a response rate greater than 30-40% of distributed samples to be workable.

The SPSS (version 23) statistics software package was used for analysing the results obtained. A descriptive analysis using mean was adopted to assess and rank the variables. Then inferential statistics, specifically, Pearson’s chi-square test was used to assess the relationship between a firm’s profitability and the firm’s years of experience.

RESULTS AND DISCUSSION

Demographic Information

The data collected on the qualification of the respondents shows that the respondents have high educational qualification. Majority of respondents have qualifications of BSc/BEng and above. On the year of the respondent company's experience in the Nigerian

construction industry, respondents mostly have 5-10 years' experience representing 59.52%. The respondent's profession shows that Engineers are the majority with 42.86%. All the respondents selected hold management positions in their firms with 61.9% of the respondents being managing directors. 54.76% of the firms had between ₦50million to less than ₦500million.

Table 2: Demography of Respondents

	Frequency	Percent (%)
Respondents' educational qualification		
HND	9	21.4
BSc/BEng	19	45.2
MSc	12	28.6
PhD	2	4.8
Total	42	100
Respondent Company's experience in the Nigerian construction industry		
Below 5 years	2	4.8
5-10years	25	59.5
11-15 years	11	26.2
16-20 years	2	4.8
Above 20 years	2	4.8
Total	42	100
Profession of Respondent		
Engineer	18	42.9
Architect	10	23.8
Builder	7	16.7
Project manager	5	11.9
Others	2	4.8
Total	42	100
Respondent's Position in Firm		
Managing Director	26	61.9
Shareholder	1	2.4
General manager	5	11.9
Project manager	9	21.4
Other	1	2.4
Total	42	100
Firm's estimated annual turnover in 2016		
Less than N50m	17	40.5
N50m - less than N500m	23	54.8
Above N500 million	2	4.8
Total	42	100

The questionnaire collected responses on the firm's employee strength in June 2016 and their employee

strength on the 1st of April 2017 as shown in Tables 3 and 4.

Table 3: Firm's employee strength in June 2016

	Frequency	Percent
Less than 10 employees	12	28.6
10-49 employees	27	64.3
50 - 199 employees	3	7.1
Total	42	100

Table 4: Firm's employee strength as at 1st April 2017

	Frequency	Percent
Less than 10 employees	12	28.6
10-49 employees	28	66.6
50-199 employees	1	2.4
Above 200 employees	1	2.4
Total	42	100

Information on the firm's approximate profit before tax (PBT) in 2016 was also required in the survey and given in Table 5.

Table 5: Firm's estimated PBT

	Frequency	Percent
Less than N5m	10	23.8
N5m - less than N20m	21	50
N20m - less than N30m	4	9.5
N30m - less than N50m	3	7.1
Above N50million	4	9.5
A loss position	0	0
Total	42	100

Utilisation of Strategies by Respondent Firms

The second section of the questionnaire collected information on which strategies the respondent firms used and the respondents also rated the strategies in order of importance from Most Important to Not Important. The questionnaire asked the respondents to record if they had utilized the strategy during the

economic downturn. Ten strategies were selected to be rated using Lim *et al.* (2010) strategies as a guide. Respondents were first asked if they used the strategy. This was followed by a provision for the respondent to give an opinion on the importance of the strategy (whether it was used by them or not). Table 6 shows the count of firms that used (and did not use) each of the strategies

Table 6: Strategy utilisation data

Strategy	Number that used	Number that did not use	% that used	Ranking by usage
Optimum utilization of workforce (Minimizing staff redundancies)	27	13	67.5	1 st
Placing greater emphasis on marketing, building relationships, effective planning and management	26	14	65	2 nd
Implementing stricter financial management techniques	21	19	52.5	3 rd
Diversifying into new areas or other lines of business	18	22	45	4 th
Trying new methods and technologies to improve productivity	16	24	40	5 th
Borrowing to augment working capital or executive contracts	12	28	30	6 th
Reduction of staff strength / Staff layoff	6	34	15	7 th
Lowering tender prices to the barest minimum	4	36	10	8 th
Freezing or cutting staff salaries or bonuses	3	37	7.5	9 th
Joint venturing, forming partnerships, attempting mergers or acquisitions with/of other firms, clients, contractors etc. to further explore business opportunities	3	37	7.5	9 th

Level of Importance of Each Strategy

Section two of the survey ranked the strategies from the most important to the least important. The overall ranking in Table 7 has been done by calculating the means. The table shows a mean rating of importance or ranking of strategies in order of descending priority.

As shown in Table 5, placing greater emphasis on marketing, building relationships, effective planning and management had a mean value of 4.128 making it rank the highest in terms of importance. Pheng and Hua (2002), Hillebrandt *et al.* (1995) and Bennett (2005) all emphasized on the significant importance of this strategy to the survival of the firm. Optimum utilization

of work force/minimizing staff redundancies ranked second with a mean value of 4.07. This finding agreed to some existing studies on the relevance and influence of human resource management decisions on the performance of organizations. Implementing stricter financial management techniques ranked third with a mean value of 3.85. The three least ranked factors are lowering tender prices to the barest minimum ranked 8th with a mean value of 1.725, reduction of staff strength/staff layoff ranked 9th with a mean value of 1.71, while freezing or cutting staff salaries or bonuses ranked 10th with a mean value of 1.54.

Table 7: Mean Ranking of Strategies

Strategy	Mean	Standard deviation	Ranking
Placing greater emphasis on marketing, building relationships, effective planning and management	4.13	0.7225	1 ST
Optimum utilization of workforce (Minimizing staff redundancies)	4.07	0.7985	2 ND
Implementing stricter financial management techniques	3.85	0.7599	3 RD
Trying new methods and technologies to improve productivity	3.71	0.9072	4 TH
Diversifying into new areas or other lines of business	3.41	0.8075	5 TH
Joint venturing, forming partnerships, attempting mergers or acquisitions with/of other firms, clients, contractors etc. to further explore business opportunities	2.83	0.675	6 TH
Borrowing to augment working capital or execute contracts	2.63	0.8065	7 TH
Lowering tender prices to the barest minimum	1.73	0.836	8 TH
Reduction of staff strength / Staff layoff	1.71	0.8037	9 TH
Freezing or cutting staff salaries or bonuses	1.54	0.8426	10 TH

Further Survey on The Respondent Firm’s Profitability, Employment Conditions and Output During Recessions

Section three of the survey focused on the financial performance of the surviving respondent firm in terms of profitability, the employment conditions of the firms and their output during the recession period. The firm’s profit before tax in 2016 to the year 2015 in terms of growth. 52.5% of respondents said their profit before tax grew in 2016 compared to 2015 while 47.5% said there was a decline in profit before tax in 2016 compared to 2015. The survey shows that none of the respondent companies had a loss position. This means that the 47.5% captured above just had a decline in profitability but were still profitability. All the respondents remained profitable during the recession period. 52.5% of them recorded growths in profitability in the midst of the harsh economic conditions. This further authenticates the validity and reliability of the respondents that participated in the survey. Those with declines lean to reaffirm the negative effects of recession on an average construction firm’s balance sheet as enumerated in our review of literature.

Table 8 attempted to give an insight into how effective each strategy was to the firm’s growth in Profit Before Tax (PBT). A comparison was done between the total number of firms that used a strategy and the number of firms within this total that grew in PBT. From the analysis, trying new methods and technologies to improve productivity was the strategy with the highest influence on PBT growth. 43.75% of firms that used this strategy grew in PBT. This was followed by placing greater emphasis on marketing, building relationships, effective planning and management which had 42.3% of firms that used it growing in profitability. The third most influential strategy on PBT growth was optimum utilization of workforce (Minimizing staff redundancies) with 40.74% of firms that used it growing in profitability. This goes to show that the strategy that was rated most important didn’t have the greatest influence on PBT growth. The least influential strategy on PBT growth was lowering tender prices to the barest minimum. Only one firm that used this strategy grew in PBT. While the remaining 3 firms that used the strategy declined in Profitability.

Table 8: Ranking of Effectiveness of Strategies used

Strategy	Number of firms that used it	Number of firms that used it & grew in PBT	% effectiveness	Ranking
Trying new methods and technologies to improve productivity	16	7	43.75	1 ST
Placing greater emphasis on marketing, building relationships, effective planning and management	26	11	42.3	2 ND
Optimum utilization of workforce (Minimizing staff redundancies)	27	11	40.74	3 RD
Implementing stricter financial management techniques	21	8	38	4 TH
Reduction of staff strength / Staff layoff	6	2	33.33	5 TH
Freezing or cutting staff salaries or bonuses	3	1	33.33	6 TH
Diversifying into new areas or other lines of business	18	6	33.33	7 TH
Borrowing to augment working capital or execute contracts	12	4	33.33	8 TH
Joint venturing, forming partnerships, attempting mergers or acquisitions with/of other firms, clients, contractors etc. to further explore business opportunities	3	1	33.33	9 TH
Lowering tender prices to the barest minimum	4	1	25	10 TH

Table 9 is a cross-tabulation between the years of the respondent firm's experience and if there was PBT growth in the year 2016 when compared to 2015. The aim was to get the effect of a construction firm's experience on its profitability in a recession. Fifty percent (50%) of the respondent firms with below 5 years' experience grew in profitability while another 50% declined in PBT. For firms with 5-10 years' experience, 44% of them declined in profitability while 56% grew in profitability. 60% of firms with 11-15 years' experience declined in profitability while 40% grew in profitability. For firms with 16-20 years' experience, 50% declined and 50% also grew in profitability. For firms with above 20 years' experience,

100% grew in profitability while none declined in profitability.

From the figures above, the only category of firms with 100% growth in profitability are the ones with the highest experience (Above 20 years). However, it should be noted that only one respondent firm falls into this category in the survey which is not vast enough to draw a definite conclusion. Also from the table, there is no defined relationship between the firm's experience and profitability. The category of firms with the second highest percentage in growth in profitability are those with 5-10 years' experience with 56% of the firms recording growth.

Table 9: Experience and PBT growth cross-tabulation of participating firms

Experience		Profitability		Total
		Yes	No	
Experience	Below 5 years	1	1	2
	5-10 years	14	11	25
	11-15 years	4	6	10
	16-20 years	1	1	2
	Above 20 years	1	0	1
	Total	21	19	40

The chi-square test in Table 10 is used to further determine if there is a significant relationship between the two variables. The calculated chi-square statistic is 3.469 and the degree of freedom is 4. The P-value is 0.483. Using an alpha of 0.05 as the cut-off for

significance, the result is not significant at p less than the significance level 0.05. From the responses to the survey, it can be concluded that the firm's number of experience years does not have any significant influence on growth in profitability during a recession.

Table 10: The Chi-square Tests results for Experience and PBT growth

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.469 ^a	4	.483
Likelihood Ratio	4.226	4	.376
Linear-by-Linear Association	1.502	1	.220
N of Valid Cases	42		

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .90.

CONCLUSION AND RECOMMENDATIONS

Three of the survival strategies listed in the survey have been distinguished by the results presented above. They are optimum utilization of workforce (Minimizing staff redundancies), placing greater emphasis on marketing, building relationships, effective planning and management and trying new methods and technologies to improve productivity. This had the highest influence on growth in profitability.

The result shows that the most used strategy wasn't regarded as the most important and the strategy regarded as the most important was not the most effective in terms of generating profits for the construction firms. From the result, we can deduce that there is a tendency for a firm to use a strategy without necessarily viewing it as important. Also, a tendency for a firm to not use a strategy and view it as important. The reason/reasons for this weren't investigated in this research and can be a concern for further study. Though Tatum and Nam (1988) examined the limitations of implementing strategies associated with technology which could discourage a firm that knows its importance from using it. More detailed research would be necessary.

The result on the most important strategy was based solely on the opinion of the respondents while the result on the most effective strategy on PBT growth was based on facts/data from the firm's actual performance. Taking a cue from the popular 'Friedman doctrine' where Friedman (1970) defined the goal of a firm to be profit maximization, it can be reasoned that the most relevant strategy should be the one that maximizes the firm's profit to its full potential. In this work, that would be the strategy with the highest influence on growth in Profit before tax (PBT) which is trying new methods and technologies to improve productivity. This strategy was selected based on actual data/facts while the most important strategy (Placing greater emphasis on marketing, building relationships, effective planning and management) was selected based on opinions of the screened respondents. The screening was to ensure that the respondent's opinions would be of a higher standard and more relevant than those of previous studies. Looking at the results, the strategy regarded as most important by the respondents (Placing greater emphasis on marketing, building relationships, effective planning

and management) was distinguished in all the analysis. It ranked 2nd under most utilized and also ranked 2nd under most effective for PBT growth.

Placing greater emphasis on marketing, building relationships, effective planning and management is the most important method for a construction firm to remain in business during a recession period without contributing to the unemployment challenge in the nation. There are direct and indirect costs associated with staff layoff exercises which can be avoided by simply retaining staff and ensuring that each staff is optimally utilized. Trying new methods and technologies is the most effective strategy that a construction firm can adopt during a recession period to grow in profitability.

The study recommends construction firms to make marketing of new clients and establishing a bond with existing clients a core job function. In order not to add to the nationwide unemployment challenge during periods of recession, construction firms should find ways of maximizing their existing staff output. Using the set of strategies ranked in descending order of priority, construction firms can make quick decisions on which strategy to adopt first and in this order to remain in business all through recession periods.

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