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PARTICIPATION OF INDIGENOUS CONTRACTORS IN NIGERIAN PUBLIC SECTOR CONSTRUCTION PROJECTS AND THEIR CHALLENGES IN MANAGING WORKING CAPITAL.

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ABSTRACT*: Over the years, indigenous contractors in Nigeria have recorded a low level of participation and have often been sidelined in large scale construction activities. This has been attributed to, amongst a number of factors, mismanagement of funds and working capital which makes them prone to bankruptcy, with poor project execution and abandonment the likely outcome. The paper thus focused on studying the extent of participation of indigenous contractors in Nigerian construction projects, identifying and examining the most severe factors that hinder effective and efficient working capital management and affect the level or amount of working capital requirement of indigenous contractors. Literature studies, field survey and oral interviews were carried out to determine the major challenges faced by contractors in managing working capital and the extent of indigenous participation in public projects respectively, while questionnaires were distributed to a selected sample of contractors in Imo state to obtain the severity weight of each factor. Findings revealed that evidently, the common challenges facing Nigerian indigenous contractors in Nigeria in the area of working capital management are low awareness of the need for working capital management, one-man business setbacks, under-capitalization, poor funding and cash flow problems, high cost of construction finance, economic recession, reckless spending and diversion of funds, poor project planning and control. Factors affecting the level of working capital requirements comprises: inflation, delays in interim payments, taxation at source and deduction of retention funds. Indigenous contractors also recorded a low level of participation on major public contracts. Results of the severity ranking exercise indicated that the problems of the one-man business set up is the most severe of the factors hindering proper working capital management, while deduction of retention fund and inflation respectively, ranked highest in factors affecting the level or amount of the contractors' working capital requirement. It was thus recommended that in order to enable indigenous contractors realize construction projects within pre-planned cost, time and quality, reduce the incidences of project abandonment and improve their overall participation, there is need for concerted efforts on the part of the contractors to take appropriate steps in maximizing their awareness on the gains of proper working management and minimize incidences that will lead to cost escalation of his working capital requirement and on the part of the Government, a focused, political will to devise policies and create the enabling environment for improving indigenous content in the construction industry.*

KEYWORDS*: Challenges, Indigenous Contractors, Management, Nigeria, Participation, Working capital.*

INTRODUCTION

The Construction process is capital intensive. From inception to completion, cost is incurred at every stage. However, the major cost is incurred during the actual construction stage where irreversible commitment of fund is undertaken in the procurement and deployment of resources such as labour, plant, materials and managerial expertise to achieve the finished product. The contractor is the party who uses these resources to bring the works to fruition. These contractors are either foreigners or indigenes; in which case, they originate locally and operate within the immediate project vicinity, state or country. They are often referred to as natives.

Nigerian Indigenous contractors have not had a fair share of major construction activities in the country, as they are often awarded to their foreign counterparts whom are considered more technically and managerially more superior and efficient in funds acquisition and project execution (Ogbebor, 2002; Oseni, 2002; Akintude, 2003). Vis-a-vis this, indigenous contractors have over the years being plagued with under-capitalization, poor project performance in terms of meeting completion dates, work quality and capital management which has often led to bankruptcy and in extreme cases, project abandonment. In other words, most indigenous contractors complete construction contracts at sums far in excess of the initial contract sums and within time frames in excess of the pre-planned completion times. There is thus no gainsaying that for successful project initiation and delivery there must be adequate provision and availability of capital (Omole, 1992).

According to Harris and McCaffer (2005), the contractor's working capital or finance is the resource he requires to facilitate the smooth execution of the construction work on site. It is made up of cash at hand, bank loan, overdraft, credit purchases, work-in-progress, recoverable debts. Working capital also comprise the assets needed to lubricate the daily transactions of the construction business. Pilcher (1992) also defined working capital as the margin between current assets and current liabilities. i.e. current assets less current liabilities. Working capital requirements, its composition and use, changes as construction operation progresses on site. As a result of its fluidity, it is also called circulation capital in construction since it performs similar functions to that of blood in a human body. As blood circulates, so is working capital required throughout the construction period (Akinsulire, 2002).

The management of working capital involves the planning, sourcing, and controlling the use of working capital during construction. It borders on adequacy, the right composition and right financing at all times during the construction stage. It requires a concerted positive effort by the contractor as mismanagement can undermine his productivity and profit level (Nwude,2001; Pandey,2000) Management of working capital thus involves the determination of the optimal level of working capital requirement of a construction project, and to keep monitoring and controlling the level of individual components of working capital to ensure that the level is not exceeded, and that there is adequate provision of funds to finance current assets to enable projects to be delivered within reasonable cost and time.

The need for this study has become very crucial due to the high rate of cost and time overruns and shoddy quality of construction projects executed by indigenous contractors in Nigeria because of inefficient working capital management; a situation that has become embarrassing to Industry stakeholders.It is in the light of the foregoing, that the research studies the extent of indigenous participation on major construction projects in Nigeria, via percentage participation; empirical results, on major, recently awarded contracts and ranking the problems or challenges (obtained from literature and oral interviews) in order of severity that face indigenous contractors in the area of efficient working capital management and requirements which previous studies didn't properly address. This is with a view to proffering some strategies for mitigating them, thereby achieving optimum working capital throughout the construction period and realizing public projects within pre-planned cost, time and quality.

The study area

Imo state is situated in the South-East zone of Nigeria. It is the Ibo heartland with capital at Owerri. The State is bounded in the North by Abia-State, in the South by Rivers State, in the East by Abia State and in the West by Anambra State. Extensive construction activities and concentration of construction industry participants such as clients, contractors and professional consultants are found in the state capital of Owerri and other commercial towns such as Okigwe, Nkwerre, Orlu and oil producing areas around Azumiri, Ohaji, Oguta and Egbema areas. These areas of high construction activities were considered in this study. In Imo State the importance of the construction Industry has been described succinctly as occupying an important position in the structure of the State economy. Its contribution has over the years been representing a reasonable percentage of the Gross Domestic

Product (GDP) of the state, and providing a substantial source of employment, especially for unskilled labour"

Research aim and objectives

This paper is aimed at studying the participation of indigenous contractors in the Nigerian construction industry and the processes and challenges of working capital management in the construction industry. Specifically, the objectives which are the premise for achieving the aim are:

- To review the extent of participation of indigenous contractors in Nigerian public construction projects.
- To identify and examine the major factors which constitute challenges facing indigenous contractors in the area working capital requirement and management, and to rank these factors in order of severity.
- To assess, via respondents' perceptions, the extent or percentage increases to which these factors affect or influence the level or amount of indigenous contractors' working capital requirements for construction projects,.

Scope of the study

This study centers on indigenous construction firms of not less than five years practical experience, executing public construction projects in specifically six major towns of Imo state in Nigeria ; Okigwe, Orlu, Oguta, Nkwerre and Mbano and the state capital, Owerri.

LITERATURE

Overview of Indigenous Contracting in Nigeria

The construction industry in Nigeria provides the driving force necessary for sustaining economic buoyancy. It contributes an average of 5 percent to the annual gross domestic product and an average of about one-third of the total fixed capital investment (Omole, 2000). Firms, companies or organizations that carry out construction works are called 'contractors'. They offer their skills and services and accept the challenge of executing the works in exchange for financial reward.

The concept of indigenous contractors came to limelight with the introduction of the Nigeria Enterprises Promotion decree of February 1972, and since then indigenous contractors have been playing an important role in the construction industry. An indigenous contractor in Nigeria is regarded as a person or private organization established under the Nigeria Enterprises Promotion Decree of February 1972, and has no other base than Nigeria and its capital base and ownership is entirely Nigerian (Owoh,1993). These firms range in size from the self-employed craftsmen known as jobbers who engage mainly in repairs and maintenance of buildings to the very large multi-national or foreign-based construction company. Sadly, the Nigerian indigenous contractor base is largely incompetent and inexperienced (Adams,1997; Ogbebor,2002; Awoyinfa,1991). Akintunde (2003) and Ogunlana (2010) opined that for this reason, the Nigerian government still lacks confidence in its Construction sector.

Shittu (1997) surmised that the combination of the small and medium sized construction firms make up 90 percent of the total registered contractors in Nigeria. These indigenous contractors are characterized by under-capitalization, under capacity utilization, understaffing, and are generally managerially handicapped. Over the years, the poor performance of this category of contractors has been a source of concern and worry particularly when compared with their foreign counterparts. Judging by the record of high number of bankruptcies in this group, poor quality work, mismanagement, diversion and embezzlement of project fund, and the general economic depression, the survival and growth of indigenous contractors may be difficult, particularly in view of inflationary trends, high cost of construction materials, high cost of borrowing capital, government policy change in favour of deregulation, and the current wave of global economic meltdown (Husseini, 1991).

Studies have shown that in Nigeria, few large companies control a large percentage of the total workload of the construction industry, while a large number of small and medium sized companies which make up the class of indigenous contractors share a very low percentage of the construction workload.

An insight into indigenous contractors participation in the Nigerian construction industry

According to Ademoroti (1997), the Nigerian Society of Engineers conceived the idea of producing a draft recommendation for the "National Construction Policy" to back-up its long canvassed need for government to take the question of technological development of indigenous capacity more seriously. Later, other interested groups like the Nigerian Institute of Building, the Nigerian Institute of Architects, the Nigerian Institute of Quantity Surveyors etc organized seminars and workshops aimed at encouraging the development of indigenous capacity and participation and ultimately, indigenous control of all facets of the construction industry in Nigeria. The situation however, is still far from encouraging.

Olateju (1991) and Ademoroti (1997) also emphasized, that relative to the volume of work available in Nigeria, the percentage in value of contract handled by the indigenous contractors is still too low compared to those handled by foreign and multi-national companies. This is indeed disheartening because most of the indigenous contractors have not lived up to expectation. Olateju (1991) further lamented that indigenous contractors are faced with several management problems in obtaining jobs, controlling its finance and successfully managing its project to completion within a scheduled time period.

In an attempt to examine how much of the construction projects executed in Nigeria are given to indigenous contractors, their management strategies and the adequacy of these strategies in preparing them for the future challenges of the industry, Olateju (1991) embarked on a study of 1133 projects costing ₦11.25 billion awarded by the Federal government between 1974 – 1978, a period when construction activities were highest in the country. The results showed that while the indigenous contractors got awarded 77.2 percent of the number of contracts, they only had 6.95 percent of the value of the contracts. The study also showed that the indigenous contractor had created virtually no impact in the areas of heavy infrastructural development such as civil works in refineries, hydro-electric dams, airports etc. In fact, the foreign contractors averaged ₦40.75million per contract, as against an average of ₦890, 000 per contract by indigenous contractors. The study attributed this low level of participation to perceived inability of local contractors to effectively manage large projects.

Local contractors are generally seen as holding the greatest potential for increasing construction industry capacity and for general economic development. However, the construction industry in developing countries is dominated by foreign contractors and a few large local contractors (Larcher,1999). Adams (1997) further revealed that foreign construction firms dominate major projects in most developing countries as a result of deficiencies in indigenous construction capacity. Similarly, Chen, Chiu, Orr and Goldstein (2007) buttressed this point by surmising that indigenous construction companies in the African continent do not represent a strong source of competition and are thought to lack financial and technical capacity. In a similar vein, Oseni (2002) stressed that foreign construction companies dominate the Nigerian construction industry. To corroborate this, Ogbebor (2002) noted that 96% of the Nigerian Construction Industry is still dominated by foreign contractors on the grounds that indigenous contractors cannot be entrusted with complex project. .

Going down memory lane Somolu (2003) revealed that in the early seventies indigenous construction professionals enjoyed some patronage from the Government, but presently, the Nigerian Government has developed so much fondness and huge patronage for foreign companies thereby leaving their own contractors starved of work . According to Akintunde (2003), as foreign contractors carry out more jobs, they gain better expertise on the job while the Nigerian contractors remain inexperienced

and therefore are unable to compete with their foreign counterparts. In the view of this, Somolu (2003) surmised that a complex construction job is only an aggregate of many simple tasks and experience can only be acquired by doing and trying ;an opportunity that has not been granted to the indigenous Nigerian contractor. Table 1, depicts this sad scenario by way of indicating the volume of completed projects under the Federal Ministry of Works, Housing and Urban Development at the first quarter of 2009.

Table 1.Completed Projects under the Federal Ministry of Works, Housing and Urban Development at the first quarter of 2009

Contractor	**Volume of work in ₦Billions**	
	Nigerian Contractors	**Foreign Contractors**
A		1.26
B		44.87
C	13.78	
D		47.17
E		1.87
F		5.71
G		20.67
H	2.25	
I	52.19	
J		43.82
K		30.24
L		39.90
Total	**68.22**	**235.51**

Source: Budget Office of the Federation, Federal Ministry of Finance (2009)

Nature of working capital and its relevance to the contractor and construction projects.
Capital, money or finance, in the first instance can be considered the blood or life line of any construction activity; and dictates the scope, pace, quality, direction of the final product. It is in fact regarded as the most important resource in carrying-out the execution of a construction project. Without it, the contractor cannot acquire other resources. Money is needed to acquire construction resources such as materials, labour, plant and management expertise. The client thus needs capital to finance his project through interim payments to the contractor as work progresses on site. He also requires capital to finance additional increases that give rise to construction cost over-runs. Capital employed for a project is however not the same as working capital (Nigerian Institute of Quantity Surveyors (NIQS), 2003). In Nigeria, recession, inflation, political instability, unstable exchange rate and high interest rates have created unfavourable business climatic, which has eroded business confidence in the construction sector. Consequently, very few contractors are willing to use their money to finance a construction project. This is evidenced by the high rate of bankruptcies and project abandonment in the construction industry in Nigeria.

Wolfe (2014) explained working capital as how much in liquid assets a company has in hand. It is needed to pay for planned and unexpected expenses, meet short term obligations of the business. A lack of working capital makes it hard to attract investors or get business loans or obtain credit. In the view of Shelton (2002), it is the excess of current assets over current liabilities. Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events while Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events. He further stressed that an understanding and analysis of working capital is crucial to the financial position of construction contractors. Adopting the terms of Calvert

(1990); working capital, or circulating capital as the amount by which the readily convertible liquid or current assets of a company exceed it current liabilities. Thus, the total of a company's cash investments, bills receivables, stocks, book debts, and similar floating assets minus the company's trade creditors, bank overdrafts, bills payable and similar floating liabilities equals the circulating or working capital of the company.

With respect to construction, Maniar (2011) defined Least Working Capital (LWC) for a construction project as "the minimum cash requirement for a contractor to complete the construction project within the construction period", Contractors must have enough working capital to cushion the effects of delay in payment of certificates, especially on government contractors, which they require for payment of wages, purchase of materials, hiring of plants etc during the gap between valuation of work and actual payment. This means that contractors actively participate in financing construction projects.

According to Ernst & Young (2013), working capital performance provides critical insight into the state of a company's financial position. It is an important indicator of financial fitness. The key to success of any enterprise is skillful cash management, including working capital management, cash forecasting and financing. Harris and McCaffer (2005); Pilcher (1992) viewed working capital as comprising the liquid (easily converted to cash) or near-liquid assets (properties or economic resources owned by the organization) needed to lubricate its daily transactions. It is represented by the difference between current assets and current liabilities.

Akinsulire (2002) compared the importance of working capital (which he also terms circulating capital) to that of blood in a human being. It is needed for the day-to-day operation of a company. Working capital, he explained further is one of the most strategic asset holdings of construction companies. It is the capital which flows and changes form as the company pursues its goals and performs its operations. It is a financial lubricant or life stream for the contracting company and maintains constant process of circulation throughout the construction stage of the project. Similarly, Pandey(2000) stressed that the threat of a company becoming insolvent is as real as the threat of death to a man without sufficient blood. More contracting firms, he further stressed appear to fail through lack of liquidity than do so by inadequacy of site control. Hence, the need for proper budget forecasting and flow of funds in the management of working captial.The indigenous contracting firm, like any other business concern cannot survive without adequate working capital**.** Working capital is thus a critical element needed by a contractor to achieve successful construction project procurement.

Nwude (2001) asserted that many indigenous contractors under-estimate the level of working capital they need for construction resources and this accounts for poor project performance and bankruptcies among them. In some projects, particularly public projects, bureaucratic bottlenecks, delays interim payments for two to six-months upwards hinder working capital availability. The average indigenous contractor therefore needs to make provision for enough capital to pay wages, purchase materials, hire plant during the gap between valuation/certification of executed work and actual payment. He must also consider the effect of retention deductions by the client. In his view, it is rare to find a contractor who does not require working capital. However, contractors differ in their requirement for working capital. He represents the net working capital (or working capital) in form of a simple equation:

WORKING CAPITAL = CURRENT ASSETS - CURRENT LIABILITIES.

Working capital is difficult to obtain in Nigeria because, with the prevailing, deregulated economic climate, materials and equipment suppliers, finance houses refuse to extend credit to contractors because of the unpredictable funds flow position, arising out of the perennial delay by clients in the payment of "interim certificates" which usually leads to unpredictable funds flow and so makes financial planning practicably impossible. Many suppliers in the construction business regard contractors as high risk customers and are not willing to accept orders without cash deposits. Also financial institutions have removed construction companies from their priority list owing to high

incidence of default in repayment of loans by the contractors in the past. Today, because of the risks involved in construction financing, the cost of borrowing for construction work, ie. interest on loan is very high. This obviously poses a serious challenge to the indigenous contractor.Harris and McCaffer (2005) explained that working capital is incurred as construction work proceeds on site and is locked up in a continuous cycle, as shown in Figure 1.

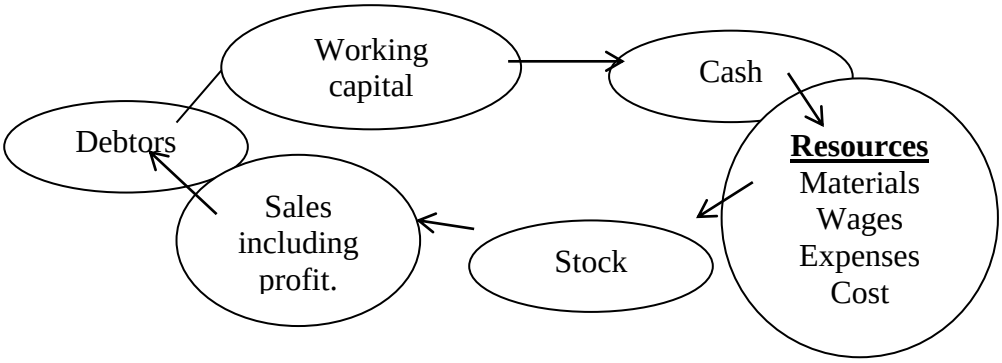

Figure 1. The Working Capital Cycle (Harris and McCaffer, 2005)

During the construction stage of a project, the contractor's quantities of current assets and current liabilities constantly change as activities increase on site. The contractor hires labour, hires plant, buys materials from building merchants/suppliers and uses the materials on site for the work. He pays wages, receives payment from the client for the work executed and certified, pays sub-contractors, suppliers, statutory authorities, bank loans, taxes, etc as the case may be. Because of the fluidity in the level and composition of working capital, it is called the circulating capital of the business, since it constantly changes as a result of the continuous cycle of construction activities.

Working capital is basically composed of cash which includes both cash and bank balances, debtors: which represents the level of outstanding certificate payments yet to be collected from the client by the contractor, Bank credits: which provides provide short-term credit to contractors to help them over temporary liquidity problems, inventory/Stock: which are the stock of materials work-in-progress, trade Creditors: which indicate the bills payable to contractors by sub-contractors and Suppliers (Nwude, 2001).

Sources of working capital finance

Hore et al (1997) ; Nwude (2001) and Wolfe (2014) broadly identified three groups of sources of working capital finance, namely short-term, medium term, and long-term. The specific sources in these groups are as indicated in figure 2.

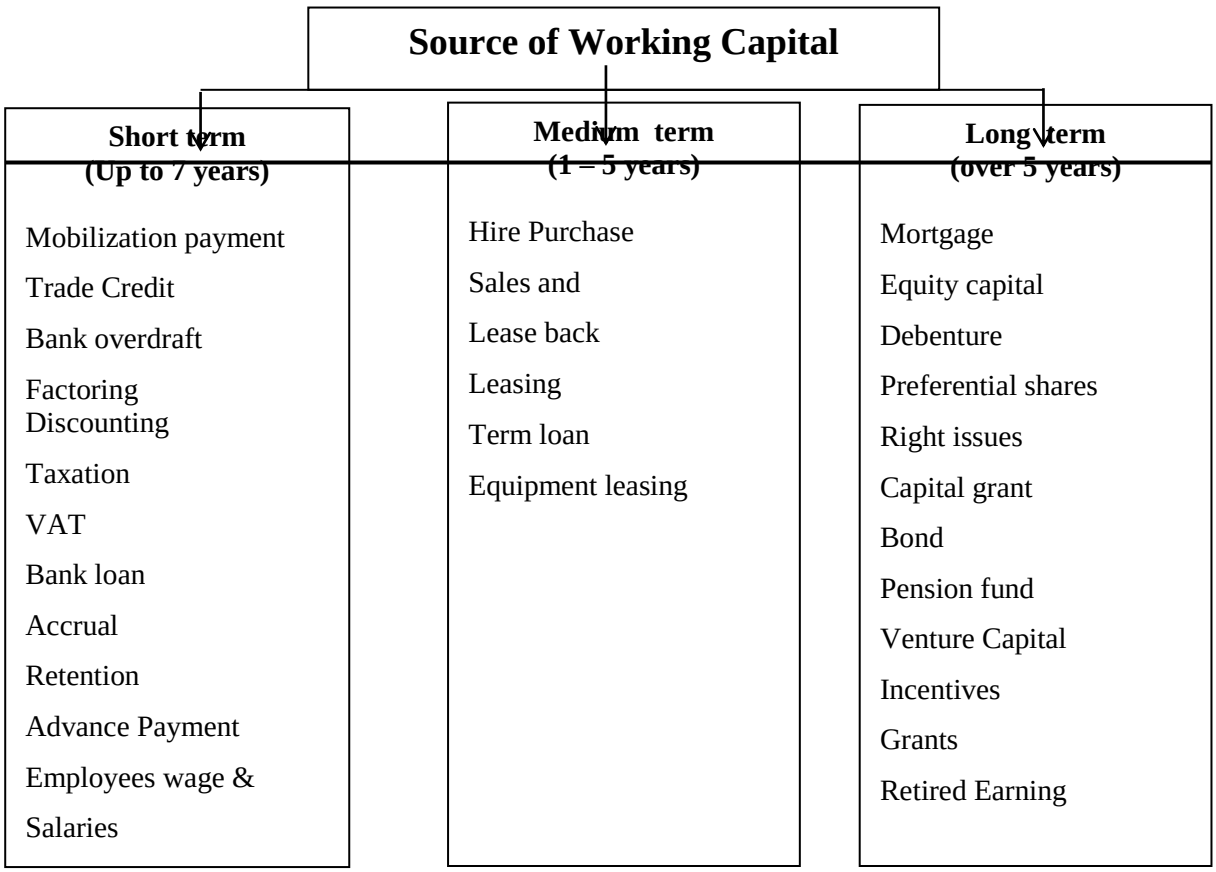

Figure 2. Sources of working capital (Hore et al, 1997; Nwude, 2001; Wolfe, 2014)

Management of working capital

According to Nwude (2001) working capital management is the management of investments/divestments in current assets and increases/decreases in current liabilities. That is, the management of current assets levels and the arrangement of the short-term credit to finance the current assets investments. Pandey (2000) refers to working capital management as the administration of all aspects of current assets, namely, cash, marketable securities, debtors and stocks and current liabilities. As construction work on site increases, so does the value of work-in-progress, which becomes a debt to the paid by the client to the contractor. Inevitably, the contractor's purchases increase and this brings about increased balance in creditor's account (suppliers, subcontractors). Consequently, it is important for the contractor to maintain adequate balance of current assets and current liabilities. Thus, as construction activities increase, the working capital requirement increases. During this period, any shortage of working capital can cause serious problems such as shortages of materials, labour and plant, and will ultimately lead to delay in completion of the project or even abandonment of the project. Efficient working capital management should ensure that such problems do not arise.

In addition to this, Maniar (2014) opines that working capital management involves maintaining an optimum balance of working capital components: receivables, inventory and payables and using the cash efficiently for day-to-day operations. Optimization of working capital balance means minimizing the working capital requirements and realizing maximum possible revenues. Efficient working capital management increases firms' free cash flow, which in turn increases the firms' growth opportunities and return to shareholders. Even though firms traditionally are focused on long term capital budgeting

and capital structure, the recent trend is that many companies across different industries focus on working capital management efficiency.

The construction industry has various unusual elements in the production process that gives rise to working capital management challenges. The uniqueness of every construction project, the turnover of contractors (particularly at large scale projects) and the long term nature of construction projects, clearly distinguishes it from other businesses. Additional sources of finance may be provided through effective management of working capital and to free up working capital (Anonymous, 2009) An understanding of working capital is thus crucial to understanding and analyzing the financial position of construction contractors. The goal of working capital management is simply to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. Pandey (2000) surmised that working capital management is an important function of the financial manager. The indigenous contractor therefore needs competent financial manpower to take charge of the working captial management of the company, preferably under the leadership of a financial manager/director.

According to Olowe(1998). The current assets must be capable of being turned quickly into cash. The incidence of insufficent cash to meet the company's obligations as they become due would make the company to be techncially insolvent. Trade creditors, wages, taxes and debts of all kind are due for payment in future, usually upon predetermined dates. Inability to pay up on the due day creates a loss of confidence among creditors and credit standing suffers.

The indigenous contractor must also be able to forecast the amount of cash requirement for his various projects at hand. This requires the preparation of cash budgets (Bamisile, 2008; Adetola, 1999). The starting point in managing working capital is in fact control of cash and preparation of cash budget. Cash budgets are often produced for different periods up to twelve months ahead. The monthly and quarterly breakdowns of the annual budget may need to be analyzed each month, revised if necessary, to show week-to-week or day to-day cash positions. Obviously, if temporary shortages can be pinpointed in advance, arrangements can be made to make up the deficency, perhaps by a bank overdraft. Hore et al (1997) advised that the indigenous contractor needs to monitor the money coming in as "cash-in-flow" and money going out as "cash-out-flow" and ascertain the finance/cash requirement at various stages of the project. This obviously requires the peparation of cash flow analysis or forecast. Similarly, Abeysinghe (2011) emphasized that the cornerstone of successful cash management is the effective management of working capital. No matter how big an organization is, or how strong its ability to source external financing.

Akinsulire (2002) further noted that the indigenous contractor must strive to maintain a healthy balance in his business activities to guide against over trading (i.e under-capitalization) or undertrading (or over-capitaliation), which may threaten the adequate working capital requirement of the firm.Overtrading occurs when a company tries to support too large a volume of trade with too little capital resources at his disposal. The consequence is always illiquidity problems and ultimate liquidation of the company. On the other hand, under-trading is also a reflection of bad working capital management, showing that the firm is under investing and so reducing its profit margin by not investing the idle funds. An efficient working capital management is aimed at avoiding these two extreme conditions.

Determining the right-source of funding for meeting the working capital requirement of a construction firm is also a crucial management responsibility. Akinsulire (2002) suggested that management must take decisions on how current assets should be financed either by short, medium or long term finance, which type of finance i.e bank loan or overdraft, and the relationship between the levels of fixed assets and current assets. Construction finance has always been difficult to secure by indigenous contractors in Nigeria because of lack of predictable cash flow in the industry that has resulted in contractors defaulting in repayment of loans and overdrafts. This situation has worsened especially

with construction attracting almost a zero finance owing to the banks having better competitive options from other more stable industries. Evidences of past failures and poor repayment records equally threatens the future of construction finance. Indigeneous contractors in Nigeria must thus create the enabling environment, through efficient management for reliability and validity so as to become attractive to the various finance institutions.

Revathi (2012) emphasized that working capital in any organization has a significant role in driving business forward. The efficiency with which working capital is managed in a business or organization determines the health of the business or the organization. Effective working capital management tends to make firms more successful while ineffective working management leads to business failure. Hence,the immense importance of properly managing working capital. The construction industry generates substantial employment and provides a growth impetus to other sectors. It is therefore essential therefore, that this vital activity is nurtured for the healthy growth of the economy.

RESEARCH METHOD

The design adopted in the study is a survey design. Field survey of the activities of indigenous contractors were carried out and from review of existing literature, interviews and discussions with indigenous contractors and their accountants or financial managers on indigenous contracting and issues bothering on of managing working capital. From this, it was possible to identify a number of factors that pose challenges to Nigerian contractors in managing their working capital requirements for construction projects.

The indigenous contractors, who were the target sample of the population selected via systematic random sampling for the survey, were all located in Imo state and had not less than five years practical experience. These subjects were selected based on information garnered from the state chapter registers of Federation of Construction Industry Employers .The contractors were all distributed throughout six major towns, namely: Owerri, Okigwe, Orlu, Oguta, Nkwerre and Mbano since they are the headquarters of the three senatorial districts in the state and represent the beehive of construction activities. They also represent the highest concentration of contractors in the state

Furthermore, the construction firms selected for the survey met two specific criteria: experienced and qualified staff and professionals in their employ who had an adequate knowledge of what working capital entails and an annual turnover above twenty million naira. In all, 12 factors were selected that constitute serious challenges to working capital management. A questionnaire, designed to elicit the relevant information was then drawn up, based on the compiled list of factors and distributed to 25 contractors. 23 replies were however received, representing a response rate of 92%.

Data analysis

The procedure used in analyzing the results was aimed at establishing the severity weight of the various factors that constitute challenges in working capital management and its requirements.The score for each factor is calculated by summing up the scores assigned to it by respondents. Therefore, the levels of severity as indicated by the contractors were used to measure the severity weight of each factor. The severity weight (SW) was computed using the following equation:

$$SW = \frac{\sum_{i=1}^{5} ai.ni}{\sum_{j=1}^{N} xj} \quad X \quad 100 \qquad (1)$$

Where xj = sum of the jth factor; j = the factors 1,2,3,4,……N; N= total number of factors (8, for factors affecting working capital management and 4, for factors affecting level of working capital requirements); a_i = constant expressing the weight given to the ith response: i = 1, 2, 3, 4,5

for a response of 'very high severity' $a_1 = 5$
for a response of 'high severity' $a_1 = 4$
for a response of 'medium severity' $a_1 = 3$
for a response of 'low severity' $a_1 = 2$
for a response of 'very low severity' $a_1 = 1$

n_i = the variable expressing the frequency of the ith response, n_1 = the frequency of 'very high' response, n_2 = the frequency of 'high' response, n_3= the frequency of 'medium' response, n_4= the frequency of 'low' response, n_5= the frequency of 'very low' response.

Simple percentages were also used to determine the proportion of respondents in a classification of one hundred (100), agreeing with a particular effect of a factor on the percentage level or amount of working capital requirement and also the proportion of participating indigenous contractors to the total number of government awarded contracts.

SALIENT FINDINGS

Factors affecting the amount of investment in working capital and need for credit finance

A contractor's/firm's working capital requirement cannot be established by principles, formulae or rules. Rather, they are determined or influenced by a number of individual factors, as follows:

- **Economic recession**: The nature of construction performance and workload is often related to the economy of developing nations like Nigeria. Where there is a boom in the economy, construction activities will increase, therefore increasing the scale of operations of a firm. This leads to an increase in level of stock and debtors, therefore necessitating an increase in working capital requirement of the firm. The reverse is the case when the economy is in recession and contractors require less working capital. Also most construction works in Nigeria take place during the dry season when the weather is very conducive for outdoor activities. However, there is reduction in construction activities during the rainy season, as rain or wet conditions disrupt construction activities. According to Pandey (2000), most construction firms experience seasonal and cyclical fluctuations in the demand for their products and services.
- **Price Changes/ Inflation:** In a period of rising price levels, i.e. inflation, the cost of goods will rise, and companies that need to maintain the same level of current assets will need more working capital. The low value of naira, the fact that a lot of the importation of numerous resources for construction ranging from materials to equipment/vehicle, unstable economic and political climate and government fiscal policy in terms of increases in tariffs, taxes duties etc all lead to inflation in prices of construction industry resources, and unpredictable increase in the cost of capital. In such a scenario, the contractor's working capital requirement for the project will rise above what it should normally be, and the contractor will have to look for external credit in order to finance the extra cost of increased working capital arising out of increases in current liabilities due to inflation.
- **Delays in Interim payment and settlement of Claims**: Interim payments assist in reducing the size of contractor's working capital requirement. When there is a delay in payment of the certificates and claims, or where such arrangement is not in place, the contractor's working capital requirement increases and he will need to depend on his personal or external sources to fund his working capital requirement. Most standard forms of contract, such as the Standard Form of Contract for use in building works, and that for Civil Engineering works incorporate clauses for periodic payment to the contractor for the work properly executed at the time of issue of certificate. They thus provide that the contractor should be paid periodically for the value of work completed at the different periods. Such payments depend on measurement of work properly completed and issue of interim certificates by consultants in favour of the contractor. Normally, the client is expected to pay the certificate within two weeks of its issue. However, the government who is the major client in the Nigeria construction industry perennially delays in payment of interim certificates, sometimes, for as much as several years. There is also delay by government in payment of contractor's claims in respect of variations, fluctuations, loss and expense and extension of time. These delays lead to unpredictable fund flow for

the contractor and makes financial planning practically impossible. The contractor is therefore, forced to look for external credit to fund his working capital requirement. Because he has to pay interest on the credit, his level of profit drops, and if he cannot obtain the credit, the company will likely go bankrupt.

- **Retention Money**: In construction contracts, a provision is made for the client to retain a certain percentage of the money paid to the contractor. This retention money ranges from three to ten percent. Obviously this has the tendency to increase the debtor's account especially as the money can only be released to the contractor after practical completion of the project. This reduces the contractor's working capital, and so puts pressure on him to source funds from other sources to finance his working capital requirement with the attendant high cost of capital in Nigeria.
- **Taxation at Source**: The standard form of contract provides for withholding tax to be deducted at source before interim certificates and claims are paid to the contractor. This tends to reduce the amount of working capital available to him and he may be required to look elsewhere to make up the shortfall if he has to have adequate working capital for the project. The public sector client is required under taxation law of Nigeria to retain ten to fifteen percent of value of a contractor's earned certificate to cover the contractor's payment of withholding tax and value added tax (VAT). Therefore the contractor is taxed at source and often before the end of the year instead of paying his tax after the end of the year. The implication is that the contractor is prevented from using the value of the tax to fund his working capital requirement and he resorts to borrowing from external source of credit to fund his current liabilities shortfall.

Other challenges of working capital management facing Nigerian indigenous contractors

Common challenges facing Nigerian indigenous contractors in the area of working capital management as obtained from oral interviews conducted by the researchers could be traceable to the following factors which are by no means exhaustive.

- Low awareness of the need for working capital management.
- Usually a one man business and in most cases with poor technical skill, inadequate manpower with no corporate organization.
- Undercapitalization
- Poor funding and cash flow problems
- High cost of construction finance
- Indiscipline and reckless spending by indigenous contractors, diversion of contract funds by uses other than the project.
- Poor project planning and control.

Data presentation

Table 2. Nigerian federal executive council awarded road contracts (above ₦1 billion) from April – June, 2009.

S/N	Project	Contractor's Name	Remark *(Frn= Foreign, Ind=indigenous)*
1	Rehabilitation of Hadejia-Nguru road, Jigawa state.	Setraco Ltd.	Frn
2	Ditto, Ifon-Uzebba Iruekpen road, Edo state	Piccolo-Brunelli Ltd	Frn
3	Ditto, Nguru-Gashua-bayamari road, Yobe state.	Gerawa Global Ltd	Ind
4	Ditto, Akungba-ikare-omuo-kabba road, Ekiti state	Philko Ltd	Frn
5	Alignment and construction of dangerous curves between akwanga and lafia road, Nasarawa State.	ENL consortium	Ind
6		Kopec Construction	Ind
7	Rehabilitation of Efon Alaaya-Erinmo-Iwaraja road, Osun state.	Setraco Ltd.	Frn
8	Strenghtenening of river Niger bridge, Onitsha, Anambra State.	CCC ltd	Frn
9		Setraco Ltd.	Frn
10	Rehabilitation of Enugu bound carriageway of Onitsha-Enugu road, Anambra State.	Bi-courtney consortium	Ind
11	Dualization of east-west road, Kaiama, Bayelsa state.	Setraco Ltd	Frn
12	Reconstruction, expansion & modernization of Lagos-Ibadan expressway.		Frn
13		Julius Berger Plc.	Frn
14	Dualization of east-west road, Porthacourt-Eleme junction to Ahoada		Ind
15		Julius Berger Plc.	Frn
16	Rehabilitation and expansion of Airport Expressway(Lot i)	Dantata and Sawoe ltd.	Ind
17			Frn
18	Ditto, (Lot ii)	C.G.C Ltd..	Frn
19			Frn
20	Rehabilitation & expansion of Murtala Mohammed expressway- North (Lot i)	Dantata & Sawoe Ltd	Frn
21		Mothercat Ltd.	Frn
22	Ditto, (Lot ii)		Ind
23	Kaura-Namoda Jibia road	Triacta Ltd	Ind
24		Borono Prono Ltd	Ind
25	Kaura-Namoda Gusau road		Ind
26	Kano-Kazaure-Daura Maiadua road	Triacta Ltd.	Frn
27		CGC Ltd.	Frn
28	Kano-Kastina state border		Frn
29	Numan-Gombe road	Standard Construction	Frn
30		Moulds Ltd.	Frn
31	Bama-gwoza road		Frn
32	Maiduguri-Bama Banki road	Kopec Ltd	Frn
33		Kopec Ltd	Frn
34	Wukari-Numbiyo road		Frn
35	Omuo-Ifaki road	Boroni Prono Ltd.	Frn
36			Frn

37	Oyo-Ogbomoso road	RCC Ltd	Frn
38	Shagamu-Ajibandele road, section i	Bulletine Constr. Ltd	Frn
39	Ditto, section ii	Arab Contractors Ltd	Frn
40	Otukpa-Oturkpo road, section ii	PW Ltd.	Frn
41	Mararaba-Pambegua road, section i	Bulletine constr. Ltd.	
	Panbeguwa-Saminaka road, section ii, Jos.	Picollo Brunelli Ltd.	
	Illorin-Jebba road, phase i	CCECC Ltd.	
	Calabar-Ugep road, section i	Enerco Ltd.	
	Ugep-Kastina ala, section ii	CCC Ltd.	
	Yenegwe-okaki—kola	Niger Constr. Ltd	
	9th mile-Enugu-PortHacourt road	CCC Ltd.	
	Enugu-Anambra state border	CCECC Ltd.	
	Oba-Nnewi section	Bulletine Constr. Ltd	
	Abakaliki-Afikpo road, section ii	Niger Constr. Ltd.	
	Ditto, section i	Bulletine constr. Ltd.	
	Aba-Owerri road		
	Oba-Nnewi-Okigwe road, section ii		
	Extent of Indigenous participation		
	Total Number of Contracts = 41		
	Number of indigenous contractors = 10		
	Percentage of Indigenous contractors on total number of projects = 24.4%		

Source: Authors' field work (2013)

Table 2 shows that out of a total of 40 public road contracts of values awarded by the federal government of Nigeria in the year 2009. The year, 2009, was chosen because several projects were awarded at that period, with a number of them still ongoing and stretching as far as 2013. As can be observed, the indigenous contractors accounted for only 24.3%, while their foreign counterparts had a share of about 76%. This represents a very poor participation of indigenous contractors in major public sector projects and may be attributed to undercapitalization, and poor corporate organization of indigenous contractors.

RESULTS OF ANALYSIS AND DISCUSSIONS

The questionnaire was analyzed via contractors' perspectives. In order to identify the most severe challenges in working capital management, the items were ranked accordingly. It was intended that the results obtained would generate some proposals on how better manage working capital in order to actualize projects within the pre-planned cost, time and quality and thus improve efficiency in the Nigerian construction Industry.On the basis of the ranking of the factors by the contractors it was thus possible to identify the most severe factor that prevented contractors from managing their working capital effectively. The summary of all the factors that pose challenges to working capital management and requirements are as shown in table 3.The results show that there are eight major factors that hinder effective management of working capital by indigenous contractors and four factors that affect the level of working capital requirements for indigenous contractors.

Table 3. Severity weighting and Ranking of the factors militating against effective working Capital Management and level of working capital requirements by Indigenous Contractors.

Factors	**Respondents' Ranking**	
	Severity Weight (%)	**Rank**
Hindering proper management of working capital		
Low awareness of the need for working capital management.	0.83	5
One man business setbacks such as: poor technical skills, inadequate manpower, absence of corporate organization.	0.98	1
Undercapitalization	0.62	7
Poor funding and cash flow problems	0.71	6
High cost of construction finance	0.85	4
Economic recession	0.54	8
Indiscipline and reckless spending by indigenous contractors, diversion of contract funds for uses other than the project	0.91	3
Poor project planning and control	0.96	2
Affecting the level or amount of working capital requirement		
Inflation in prices of construction resources	0.87	2
Delays in interim payments and settlement of claims for variations, fluctuations, loss and expense.	0.81	3

Taxation at source (withholding tax and VAT)	0.66	4
Deduction of retention fund	0.91	1

From table 3, the factors affecting working capital management by indigenous contractors is clearly subdivided into two sub factors; factors that hinder proper working capital management and those that affect the amount of working capital requirements.

With respect to issues that hinder proper working capital management, respondents ranked the problems associated with the one man business ideology; poor technical skills, inadequate manpower, absence of corporate organization. It thus behoves on the indigenous contractor to engage competent financial manpower to take charge of the working captial management of the company, preferably under the leadership of a financial manager/director. Their corporate image should also be enhanced, to make them attractive to both clients, who in turn will regard them in high esteem. The Economic recession factor was ranked least by the respondents. This is not entirely surprising, and may be attributed to the fact that the Nigerian economy in recent times has been experiencing a boom in construction activities due to the concerted, focused efforts and political will of the present dispensation.

A closer look at the rankings also indicates that retention fund deduction was ranked highest with respect to the factors affecting the level or amount of working capital requirement, while inflation ranked second respectively. Indigenous contractors are thus of the view that retention fund deductions severely reduces the amount of money available to them as working capital. Hence, they will need to borrow more money to make up the shortfall, and the interest on such monies borrowed will further increase the level or amount of working capital they require. Inflation gives rise to increases in construction resources. It follows therefore that the contractor's working capital requirement to procure those resources will also increase by an amount equal to the increase introduced by the inflation. Taxing the contractor at source (withholding tax) as well as VAT before payment certificate reduces the cash available for his working capital by the value of the tax deducted. This was however not considered a strong factor by the respondents as they have certainly been become used to it and always consider it forgone. Nevertheless, it still affects the level of working capital requirement.

Table 4. Frequencies and percentages of respondents' perception on the factors that affect the level of indigenous contractors' working capital requirements for construction projects.

Percentage increase in level or amount of working capital required for the project.	**Number of Respondents (Frequency)**	**Percentage response(%)**	**Rank**
Delays in interim payment and claims settlement			
0 – 9%	1	4.3	4
10 – 19%	5	21.7	3
20 – 29%	9	39.1	1
30% +	8	34.8	2
Total	**23**	**100**	
Retention Fund deduction			
0 – 9%	2	8.7	3
10 – 19%	12	52.2	1
20 – 29%	8	34.8	2
30% +	1	4.3	4

Total	**23**	**100**	
Withholding Tax and VAT			
0 – 9%	3	13.0	4
10 – 19%	7	30.4	2
20 – 29%	9	39.1	1
30% +	4	17.4	3
Total	**23**	**100**	
Inflation			
0 – 9%	3	13.0	4
10 – 19%	6	26.1	2
20 – 29%	10	43.5	1
30% +	4	17.4	3
Total	**23**	**100**	

Table 4, firstly, shows the four major factors that affect the level of working capital requirements as earlier established by the study and secondly, the respondents opinions on the effects of these factors with respect to various percentage ranges or degrees of cost escalation. A high frequency (39.1%) of the respondents indicated that delay in interim payments and claims to indigenous contractors gives rise to 20 – 29% cost escalation of their level of working capital requirement and so increases the final cost of the construction project above the initial contract sum. Thus, when interim certificates are not honoured on time and claims payment are delayed for works already completed, the contractor will be expected to borrow money to continue the works, and the interest on the borrowed money will increase the level of his working capital requirement for the project. A low frequency (4.9%) of respondents however, agree that such delays only account for a maximum of 9% cost escalation.

Retention funds deduction leads to 10 – 19% cost escalation on the indigenous contractors' working capital requirement. An appreciable percentage (52.2%) of respondents are of this view. As such, deduction of retention fund before paying a contractor the value of work which he has completed will increases the level of his working capital requirement for the construction project since the retention fund deducted reduces the amount of money available to the contractor. It does not however add to a significant increase (above 30%) on the amount of working capital required.A careful look at the table also indicates that a meager percentage (13.0%) of respondents agree that withholding tax and VAT deductions accounts for a range of 0 – 9% cost escalation on contractors' working capital requirements. However, a high percentage of the respondents (39.1%) are of the opinion that withholding tax and VAT causes an appreciable increase of 20 – 29%. This invariably means that the contractor will need to borrow from financial institutions to make up for the short fall and ensure that he has sufficient working capital to meet his obligations in the contract. The time required to negotiate for the loan, and the cost of the capital (ie. Interest on the loan) will escalate both completion period and level of working capital required for the project, and this will lead to the overall increase in the cost of construction.

Similarly, effects of inflation in the cost of construction resources leads to a high percentage cost increase (20 – 29%) of working capital required by indigenous contractors. This is corroborated by a very high percentage of the respondents (43.5%).

Table 5. Summary of highest extents of percentage increases the factors have on the level or amount of working capital requirements, via respondents' perceptions.

Factors	Percentage increase on working capital	Percentage response of respondents (%)
Delays in interim payment and claims settlement	20 – 29%	39.1
Retention Fund deduction	10 -19%	52.2
Withholding Tax and VAT	20 – 29%	39.1
Inflation	20 – 29%	43.5

From the summary, in table 5, all factors cause appreciable increases on the levels of working capital requirements. Retention fund and inflation factors however, have the highest effects and as such, calls for close attention.

CONTRIBUTION TO EXISTING KNOWLEDGE

One of the contributions of this work is that it will enrich construction literature by isolating in order of significance or severity and details, the factors affecting working capital management and working capital requirements of indigenous contractors in Nigeria, such that greater attention will be paid to it by indigenous contractors and the government respectively, which will further improve indigenous content. In addition to this, findings from the study will drive the need and importance for reduced dependence on foreign contractors. Firstly, because of the challenge of escalating cost of construction which has become common place, especially on most Nigerian public projects. This is as a result of the huge allowances made for profits and overheads by foreign contractors in their contract bids. Secondly, to reduce financial drains or 'capital flight' in the economy. This is because when projects are awarded to indigenous contractors, flow of financial resources out of the country will be minimal. Simply put; proceeds or profits of indigenous contractors are likely to be reinvested within the Nigerian economy. Thirdly, Nigeria's rating among the committee of nations will improve, since international recognition and respect is not measured by the fluency and potency of arguments contained in speeches delivered on the floor of the United Nations. It has been based on performance dictated by capability. Lastly, the pride of Nigerians would be boosted. Nigeria would be able to enjoy the prestige of building her own infrastructure instead of depending on foreign contractors. In line with this, it should be noted that thriving indigenous contractors are likely to employ fresh graduates thereby reducing unemployment amongst the teeming youths.GDP, fixed capital formation will obviously increase and the living standards of average Nigerians will improve.

CONCLUSIONS

From findings of the field survey, oral interviews conducted and results of data analysis of the study, the following conclusions were drawn:

- There is still very little involvement of indigenous contractors in major public construction works in Nigeria.
- Effective and efficient working capital management is affected by 8 factors, namely: low awareness of working capital management, one-man business setbacks, undercapitalization, poor funding and cash flow problems, high cost of construction finance, economic recession indiscipline and reckless spending, poor planning and control while the level of working capital requirements is affected by 4 factors, comprising; inflation, delays in interim payment, taxation at source, deduction of retention fund.
- From respondents' ranking, the one-man business setbacks was the most severe factor hindering proper working capital management, while economic recession ranked least. With respect to level of working capital requirements, deduction of retention fund was considered the most severe, while taxation at source (withholding tax and VAT) ranked least.

It would appear therefore, that the appropriate step to take in search for a solution to the problem of working capital management is for indigenous contractor to identify those factors which maximise his awareness on the gains of proper working management and minimize incidences that will lead to cost escalation of his working capital requirement. By extension, and with appropriate measures implemented and adhered to, the indigenous contractor will be able better equipped to manage working capital efficiently and have it in sufficient quantity to deliver projects within a reasonable or pre-planned cost, time and quality, which in turn will curb project abandonment. It will also enable them compete favourably with their foreign contractors or expatriates in achieving project success. This way, they become more competitive, more efficient and maximize their profits, and reduce the high incidence of bankruptcy facing them. The Nigerian construction industry will thus increase its contribution to Gross Domestic Product and gross fixed capital formation, improve the living standards of Nigerians and enhance her economic activities.

RECOMMENDATIONS

Based on the findings of the study and in order to find a realistic solution to the problem of poor working capital management by indigenous contractors in Nigeria and increasing levels of working capital requirements, the following recommendations are advanced:

- Clients should pay contractors certificates and claims as and when due to avoid their being forced to borrow huge amounts with the attendant high cost of capital which increase his working capital requirement on a project. Delayed payment should attract a penalty equal to interest on loan.
- Establishing a "National Construction Bank" where indigenous contractors can get loans at subsidized interest rates to meet their working capital requirement that will enable them complete projects on time and so be able to compete with their foreign counterparts.
- The Government should initiate policies that will stabilize national minimum wage, prices of petroleum products, value of naira against major foreign currencies, and other fiscal and monetary measures that will stabilize the prices of construction resources so that both inflation and fluctuations in prices of construction materials, labour and plant will be curbed.
- Due process should always be followed in award of contracts to ensure that the indigenous contractors chosen for the execution of projects are properly investigated to ascertain that they have the capacity to execute such projects in terms of solid financial base, technical ability, staffing, administrative capability, etc. This way, there will be more confidence that they will manage their working capital better.
- The National Construction Policy should be strengthened by government to enhance the technological development of indigenous contractors' capacity.
- There is need for stakeholders in the construction industry such as clients and professionals institutions to create more awareness among indigenous contractors on the need for working capital management as a tool for efficient project delivery through education in form of organizing seminars, workshops and training programmes.
- Indigenous contracting firms should be encouraged to build a credible corporate image, instead of the 'one-man business' or sole proprietorship ideology. Indigenous contractor must eshew the "know all', "have all" sole proprietorship mentality, which is restrictive, and embrace the corporate status. By opening up or converting to a private or public company, the indigenous contractor will have access to more working capital unlike a one man business which faces enormous challenges in an environment where competition is stiff. Misuse of monies paid to them as mobilization fee or advanced payments, certificates and claims for personal gains should also be shelved. They must recognize the importance of working capital management for construction and recruit qualified and experienced managerial, financial and technical personnel for this purpose.

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