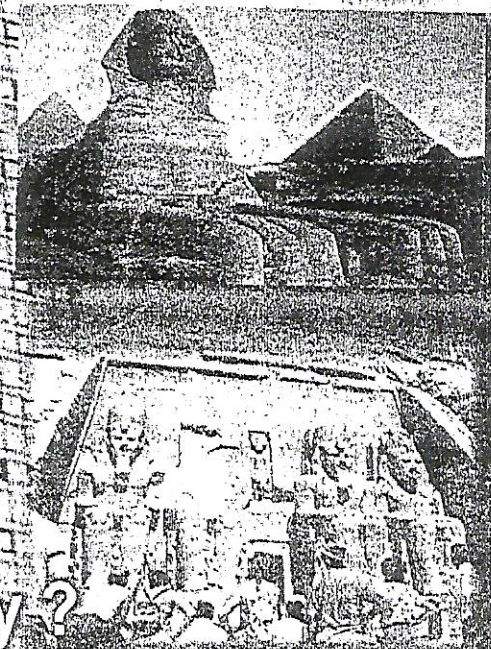


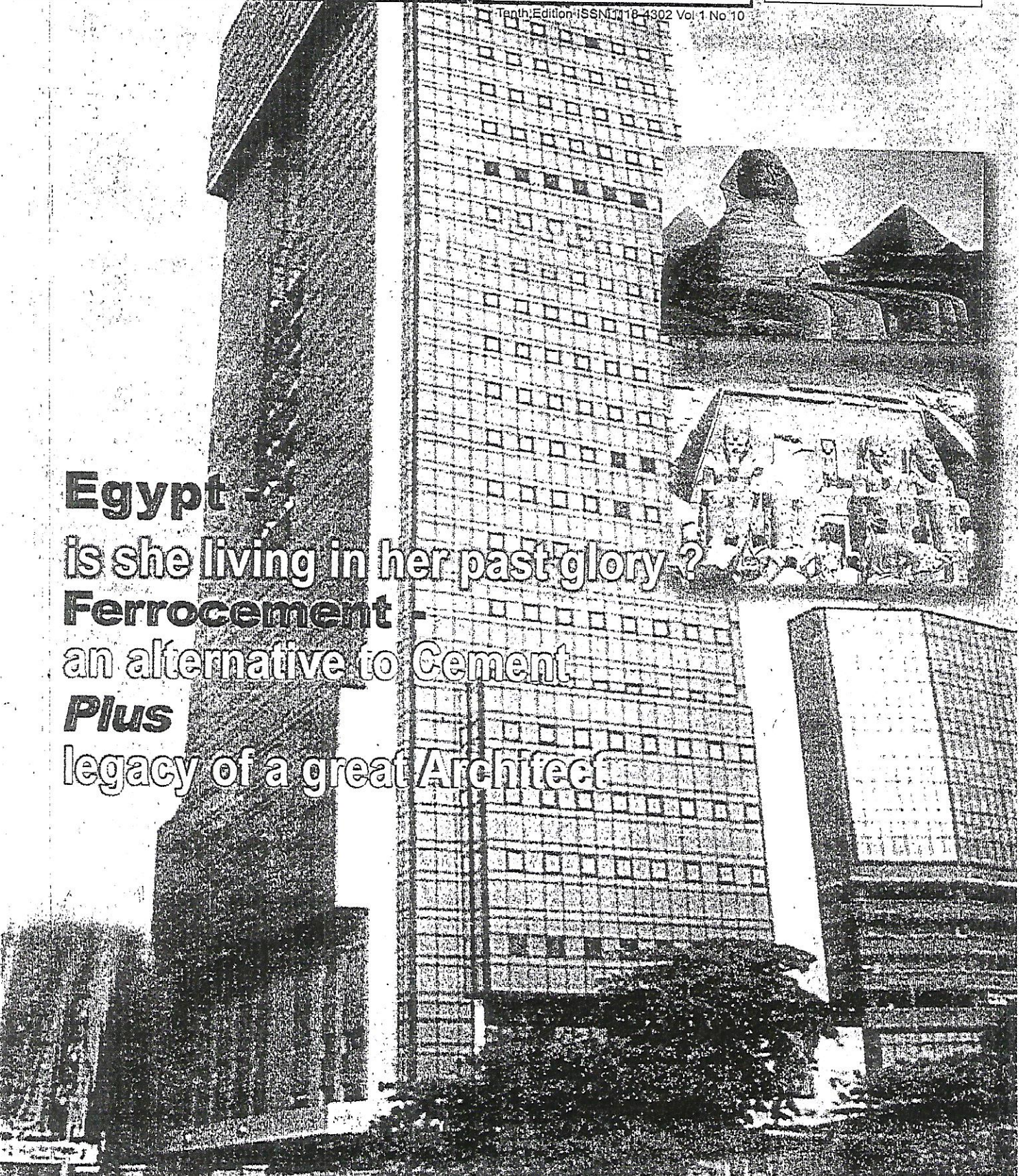
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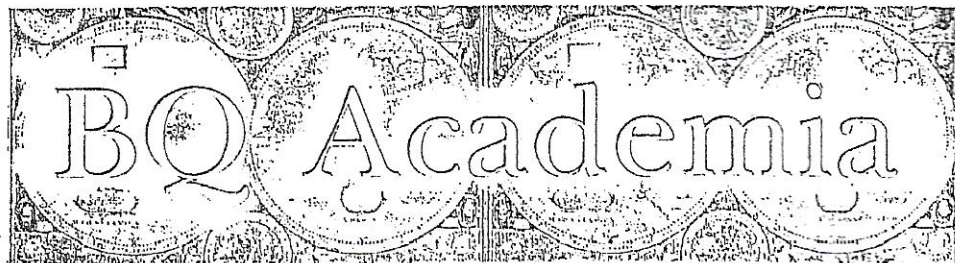
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introduction; experimental methods; results and
discussion; a conclusion; acknowledgements
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It is the beginning of another year and we believe that this year will be better than the last especially for us in Nigeria as the budget was approved early. It is hoped that things will start happening soon and I want to add my voice and say a big Amen to that.

On Places we go all the way to Egypt. For most of us what we know about her is her ancient civilization. But has she changed or is it basking in her past glory?

On 'Spotlight' we speak to Safetrust Savings and Loans. What roles are they playing in the provision of houses in the country?

We have a special story on the life of the slain Architect Layi Balogun. One message worthy of note here is to do the good we can today knowing that we shall not pass this way again.

Of course the old regulars Pricelist and Contract rates also made this edition.

Time they say flies. Come November Building Quarterly will be five years old and we intend to celebrate it; starting with a change in our logo. Hope you like it.

In that same light we are asking for information on buildings minimum of 10 years old that were constructed with local materials such as mud, wood. The approximate year of construction, the location, the use to which it was put, the present state, photographs and possibly the type of construction and the name of the builder (Artisan). The names of the winners shall be published in the anniversary edition of Building Quarterly in November 2001. The prizes include two years free subscription of BQ, Gift Items, free Dinner, as well as the opportunity to contribute to the heritage column in BQ.

What more is there to say than do enjoy this quarter and I promise we shall be back very soon.

Jemi Ogisi

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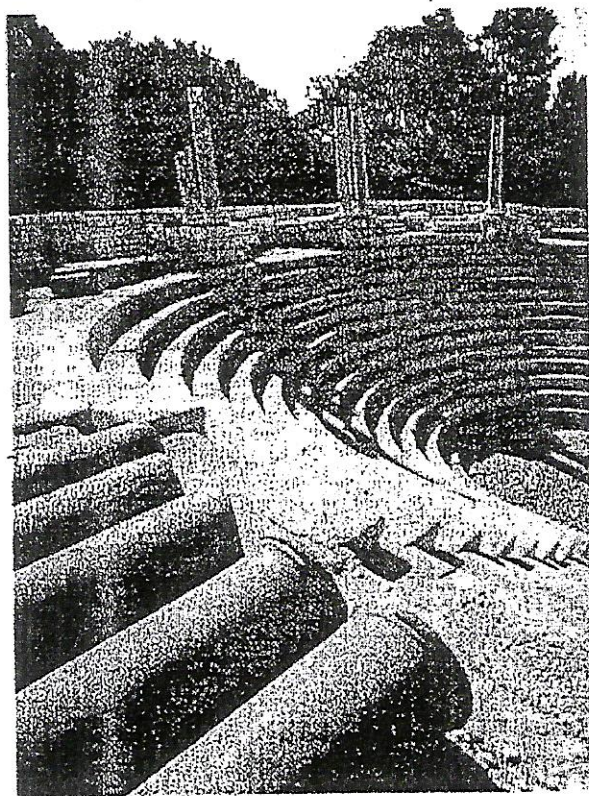
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By

Timothy Olugbenga Nubi

Abstract

This paper commences with enumerating the importance of the construction industry to national economy. It argues that such an all-important sector should be dynamic enough to accommodate the rhythm of changes in the world economy which is almost a big village. The paper went further to establish that traditional method of construction procurement dominates the industry with its attendant problems. The forces that make change inevitable are highlighted. Alternative approaches are put forward. The paper emphasised that there is no room for isolation in the present economy. Hence, the need to realign the procurement system in order to enjoy the dividend of globalisation.

1.0 Introduction

The importance of the construction industry in the economy of any nation, be it developed or emerging had been established by many researchers. Wells (19), Ofori (1990), Ofoegbu (1997), Odusanmi (2000) agreed that construction outputs form a significant share of capital formation in developing countries. This share typically lies between 45-65%. According to Wahab (1987), starting from a proportionate share of 53% of capital formation in 1970/71, Building and Construction rose to 67% in 1973/74. Ofoegbu (1997) asserted that the annual growth of 269.4 recorded by the construction industry in Nigeria in 1974, saw a corresponding growth of 131.2% in the GDP while a decline of 27% recorded in the industry in 1984 saw a decline of 11% of GDP. Similarly, an annual growth rate of 3.89% in building and construction sector in 1995 correspondingly reflected in an increased 4.10% growth of the GDP. It is generally agreed, Ofoegbu concluded, that the size of the industry reflected the size of the nation's economy.

The industry provides predominantly investment goods while, government is the major client. In Nigeria, the bulk of the construction work falls within the portfolio of government. Unfortunately the procurement system in use is characterised with abandoned projects, inflated contract, building collapse, trade dispute among players. Static industry that lacked organisation learning. Produced players that cannot compete favourably with players in other nations. The problems facing today's generation of government and infrastructure planners. Miller (1997) include:

- Getting infrastructure development started or reinvigorated to improve economic efficiency and raise the standard of living;
- Starting and sustaining private sector entities such as architectural and engineering consulting firms, construction companies, design and build firms, manufacturers of supplies and equipment and developers of new technology;

- Building public sector institutions which facilitate economic activities, encourage competition and increase the transparency of government regulation and legislation;
- Producing steady technological refreshment of infrastructure, including replacing 'dumb' with 'smart' systems, 'dirty' with 'green' systems;
- Attracting both public and private sector investment of capital.

There is no doubt that achieving the above require a procurement system which let new ideas, new technologies, new capital and new firms into the country.

2.0 Procurement Methods in Use in Nigeria.

Procurement is a strategy to satisfy client's development and / or operational needs with respect to the provision of construction facilities for a discreet life-cycle (Lenard and Mohsini, 1998) 79). It is the framework within which construction is brought about, acquired or obtained (Mc Dermott et al, 1994). Studies carried out by Odusanmi (2000), Nubi (2001) showed that construction management and management contracting are not common both in the public and private sector in Nigeria. Though Ogunsanmi (1997) claimed that 65% of the projects he studied were realised through the use of traditional procurement method. 15% of these projects were procured by Design and Build Method, while 18% of the projects used the package deal method. None of the projects he studied were procured through the project management or management construction method. One can therefore state categorically that traditional system of procurement dominates the construction industry in Nigeria. Table 1 shows that other African countries like Egypt and Ghana, even South Africa have embraced these modern approaches

Table 1: Commonly used procurement methods and their ranking.

PROCUREMENT METHODS	Nigeria		Egypt		Ghana	
	Govt. projt.	Private projt.	Govt. projt.	Private projt.	Govt. projt.	Private projt.
1. Traditional	1	1	1	1	1	1
2. Design & Build/ turn-key or Package Deal	3	4	2	4	2	3
3. Mgt contracting	-	-	4	-	4	5
4. Const. Mgt.	-	-	3	-	3	2
5. Labour only	-	2	5	2	-	-
6. Direct labour	2	3	6	3	5	4
7. Build-(own)operate transfer.	-	-	7	5	6	6

Source: Odusanmi (2000) and Nubi (2000).

Traditional system: Traditionally in the construction industry it has been the architects who have taken the clients' brief and advised on the appointment of other consultant and con-

tractors and subcontractors and these other participants rarely meet with the client. Hence, the architect has become a surrogate client. He designed and manages the project. Other consultants will join the design and administration team (such as structural engineers and quantity surveyor) through the life of the project and the contractor will be selected from a competition tendering process on a fixed price bid. The contractor input to the design process will be minimal, often not. Most of the production works on site are subcontracted to other organisations. The design and construction process and their subtasks are seen as sequential and independent.

Among the claim of the protagonist of traditional methods is cost certainty but this according to Rowlinson (1999) is a fallacy. Adopting the traditional approach based on full drawing and bills of quantities should give the client a firm, fixed price for construction but in practice very few projects are actually completed within the tender price. Indeed, the crux of the matter is that full drawings and a complete bill are often not available when the project goes to tender.

The dominating effect of traditional method of procuring construction project had not been too palatable to the clients. There are endless cases of litigation as a result of dispute, total abandonment of projects and use of inferior building materials that leads to severe defect in construction. There are many houses in Nigeria today that cannot pass a simple safety test nor score a pass in Quality Assurance (QA). There are also regular cases of total collapse as shown in table 2

Table 2: Class interval (5 years) and frequency of occurrence of collapse of building.

Class interval	Frequency (f)
1980-1984	1
1985-1989	19
1990-1994	4
1995-1999	18
	$\Sigma f = 42$

Source: Bamisile A. (2000)

Table 3: Dispute in Construction Works.

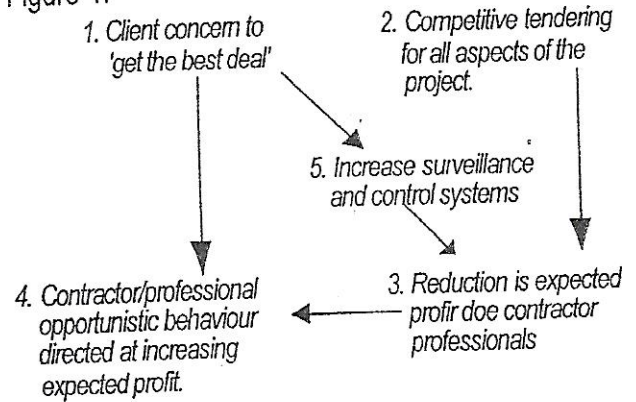
Reasons	Very common	Common	Not common	Total no. of respondents
Change in design	10	8	2	20
Client no understanding design until structure is built	15	4	1	20
Cost over-run	13	3	-	20
Increase in cost of material	10	4	6	20
Delay	14	5	1	20

Source: Field survey (2001).

These problems occur because under the traditional approach, there is reward consciousness and thrive to attain a given level of project cost. This leads to claim conscious be-

haviour. The client always responds to this behaviour by exercising greater surveillance over the contract to minimise the effect of this behaviour. (See figure 1).

Figure 1:



Vicious circles in construction procurement
Source: Curtis et al 1991.

3.0 Change Motivators

During the 1980's the technical and academic press reflected clients' concerns of project performance in construction, with much debate concerning international comparability and standardisation of contract and contract procedure. Privatisation in its many guises had been effected not only in Europe and North America, but also in Africa through structural adjustment policy. Complexity and size of projects and other forces are enumerated in this section

Client: Client generates construction product. The word client today is diverse. It embraces the stakeholders, even the end users. Client can be as simple as a person or as complex as United Nations. It depends on the magnitude of the project. Today's client is a complex multiorganisation with a whole range of stakeholders bringing their vested interest to the table. They insist on time, cost, quality and satisfaction of end users and the overall effect of the project on the environment. According to RICS (2001), in the past client could take on board the majority of the risk and most contracts resulted in claims. Clients are now tapping into the wealth of knowledge and experience which contractors can give at all stages of delivery of a scheme.

- Client pass on design responsibility to contractors more frequently
- Lump sum or target contracts are more widely used
- The word 'partnering' is used for 70% of tenders now received
- Incentive arrangement for all parties
- Value engineering options are studied carefully and the technique is now seen as essential.

Today's clients are versatile. They insist on Time, Cost, Quality and organisational learning for future projects.

Construction Procurement... *Continued from Page 18*

Globalisation: Globalisation has progressed with development in the world economy. The phenomenon has benefited immensely from the multilateral trading and investment arrangements, advance in technology and communication, and the opening up of trade and investment through liberalisation of current and capital account of transaction. The promotion of trade as the bedrock of the wealth of nations was first espoused in the "mercantilist" doctrine before the emergence of Adam Smith and David Ricardo's theses. The radical theorists and the early proponents of development economics were of the view that growth can be internalised. However, recent developments in the world economy have shown that it is futile for countries to isolate themselves in a rapidly integrating world. (Obaseki 1999). It is now a common thing to see capital being moved from one region of the globe to the other. Example is the proposed private electricity project in Lagos, the GSM in Nigeria, mineral exploration in different parts of the world. These involving huge human and material resources, mobilised from different parts of the world into a complex network made possible by advancement in Information Technology – Internet or website or E-commerce. Localising product or services at rudimentary level is suicidal.

Information Technology: The potential for traditional industries including the construction sector, to participate is better understood. In particular, the Internet provides the construction sector with the tools and infrastructure to overcome the recurrent problems of project delay and cost over-runs while also giving better services to client. According to Build-Online.com, the Turkish e-commerce site for the construction industry, lost paper work and poor communication adds 20-30% to construction cost. They claimed that the use of internet can save 14 billion ponds from 62.4 billion ponds yearly in UK construction market due to higher productivity through the use of website with completion times being cut by 15%. USA – based Bidcom and Buildnet both claim they can save 30-35% of project cost by bringing construction into the internet (RICS 2000).

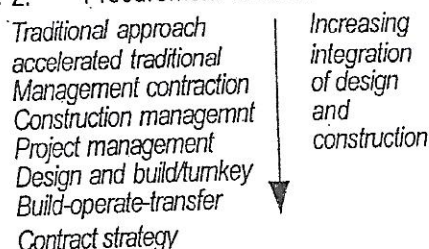
The capability of Internet in transforming construction procurement was demonstrated by Stow (2000). His firm, Denis Rooney Association has three UK offices. They bided for a large E U job, which involved their establishing contact with 460 consultants in 40 countries through Internet. This is after they had successfully worked on the Channel Tunnel Rail link that involved working totally by electronically co-ordinating their three offices in different parts of U.K. Nigeria's experience in this regard is nothing to write home about. Though there is no data to confirm the use of simple computer by professionals in the industry, survey revealed that 90% of estate surveyors use computer for typing and desktop publishing, (Omirin 2000). A visit to Local Planning Authorities tells the architect's story about the use of computer. Most of the drawings submitted for approval are still from drawing tables. Few quantity surveyors have come to grasp with the inherent opportunities in the use of computer. E-mail is becoming popular but the use of Internet is still strange even to those in academics.

Environmental Impact Assessment (EIA): In the recent times, the role players in construction industry have begun to accept the wider implication of construction on society and the environment. The role of pressure groups and public opinion in ensuring sustainability cannot be ignored particularly in the pursuit of sustainable construction. The awakening of the public conscience is forcing investors to consider 'Cost-Benefit-Analysis' of their project on the environment. Projects that are obnoxious to existing land use will receive public wrath. This new wave does not accommodate the traditional procurement method. The emphasis is now on 'external' and not 'internal' consideration alone.

New Paradigm

The fundamental changes above call for modern approach in procurement (see figure 2). The figure shows different procurement approaches. There have been problems of definition or how to draw a distinction between the approaches. As shown in the figure, one obvious thing is that as the approaches move further down, there is more integration between design and construction.

Figure 2: Procurement Methods

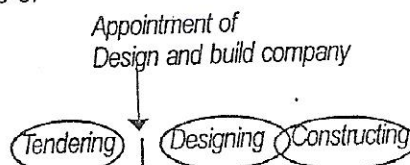


Source: Austen and Neal 1984

Design and build / turnkey

In this approach, the contractor takes full responsibility of design and production of working drawing, as well as obtaining the necessary approval. While package deal or turnkey involves that the contractor should provide design and build services and in addition to this, he selects site, recruit staff and fund project. His early involvement in design according to Ogunsanmi (1997) endures buildability. See figure 3. These are simple points responsibility, fixed price bills are used, client involvement in the process can be minimised. Nevertheless, the system has some shortcoming among which are, lack of independent advice, restriction on client control of quality. It may not produce well throughout bids, as client involvement is usually limited to the initial stage of conception.

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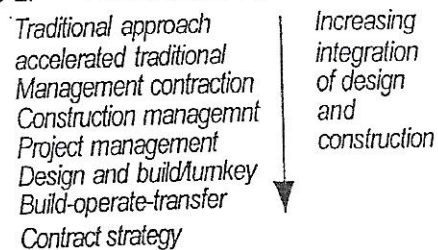
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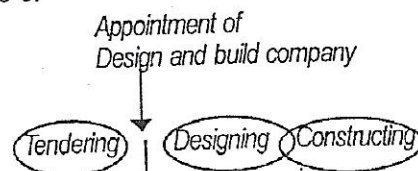


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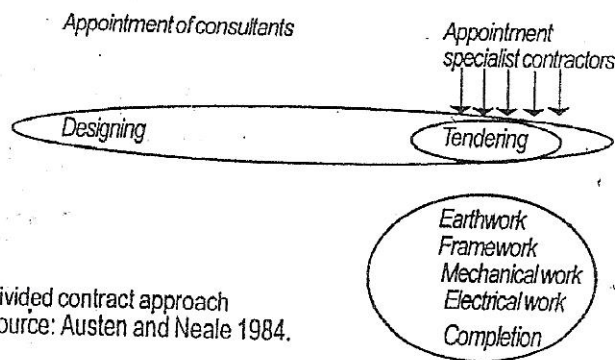
Management Contracting and Construction: These two approaches can be classified as a packaged deal, with design and construction under same roof. The only difference between the approaches is that the management contractor enters into direct contractual relationship with the trade contractor. Those approaches involve the client right from design stage. It reduces cost over-run and produces high satisfaction of end product. Management construction is similar to construction management except that the management contractor is lured into direct contractual relationship with the trade contractor. Modern procurement not only emphasise what the traditional approach claims to offer but also appreciate the place of end users, clients, and environment.

Project Management: This approach is an attractive procurement solution sweeping through the construction industry in different parts of the world. It is the introduction of an independent person into the construction process to 'weld' both the architect and the contractors together. In this, the project manager and the Architect or Engineer is the team leader. He is expected to be versatile in modern management techniques and well grounded in the act of designing and construction. His effort is to deliver the project that does not only meet the cost and time, but gives the best satisfaction to the end user.

Build-Operate and Transfer (BOT): As stated earlier, government lacks sufficient fund to provide the level of infrastructure required in a specific timeframe. As a result procurement system which allows partnering between government and industry are opted for. Among these approaches are Build-Operate-Transfer (BOT) and Build-Own-Operate-Transfer (BOOT). This method is popular in Egypt and South Africa. Lagos state government indicated willingness to embrace such approach to construct major highways in the state. University of Lagos recently advertised for developers to build campus accommodation based on these approaches.

Divided Contract Approach: This approach is illustrated in figure 4. The key principle in this form is the separation of the management from operation. Specialised consultants handle their design, while the construction of different parts are awarded to specialised contractor. The management contractor helps to coordinate these efforts. This approach is useful in developing countries. It allows for splitting contract into different parts thereby spread the return on investment over a wide spectrum of the society.

Figure 4:



Divided contract approach
Source: Austen and Neale 1984.

Conclusion and Implications

If the construction industry is agreed to be pivot of economic growth and national development, then, efforts should be made to ensure its survival. This paper has evaluated the present traditional procurement approach and has submitted that, it is not inefficient. Among the identified change motivators: Client that are now versatile and sophisticated, Globalisation, Information Technology, and the complexity of projects itself.

The solution to the retardation in the industry is by embracing modern procurement methods discussed. The infrastructural facilities required therefore should be put in place. Nigerian professionals in the industry possess skills that could be marketed on the website without 'checking out the country. Government should therefore expedite action on the Global telephone facilities (GSM). Privatisation should be pursued to a logical conclusion without further delay. It is the responsibility of the players in construction industry to follow consciously the world economic trend, imbibe the new culture and enlighten the government of these new procurement approaches. This will open up the country to foreign investors to help develop our slumping infrastructure and generate jobs for players in the construction industry. The nation will benefit immensely as this all-important industry can be used to revive the economy depression.

REFERENCE

- Austen, A.D and Neale, R.H (1984) "Managing construction projects - a guide to process and procedures, Geneva. International Labour office.
- Bansilo (2000): "The need for building regulation to curb incessant collapse of building in Nigeria". A paper presented at the workshop on Building Collapse, Organised by Nigeria Institute of Building (NIB), Lagos.
- Lenard, D and Mohsin, R. (1998) "Recommendation from the organisational workshop" In C. H Davidson (ed) Procurement - the way forward. CIB publication 203, 79-81.
- Miller J. B. (1997) "The fundamental elements of sustainable procurement strategies for public infrastructure" First International Conference on Construction Industry Development, Singapore, 364-71.
- Mc Dermott et al (1994): "Construction procurement system" What choice for the third world? CIB publication University of Hong Kong, Hong Kong, 175,2034.
- Mc Dermott (1999) "Issues in construction procurement" in Ron and Mc (ed) Procurement system: A guide to best practice in construction. Published by N SPON, New York.
- Nubi T. Olu (2001): "Comparative Study of Construction Industries in Nigeria and Egypt (Accept for publication) Construction - the Journal of Federation of Building and Civil Engineering Contract in Nigeria.
- Ogunsanmi and Bamisile A. (1997). "Factors affecting the selection of Construction Procurement methods" Builders Magazine April/May 1997
- Okegbu C. O. (1997) "Revitalising the construction industry for sustainable national development. Journal of National Association of Housing Corporations. Vol. 6 No. 1 Page 10-17.
- Omirin (2000) "The practice of Estate Management in the 21st century" being paper presented at Continuous Professional Development (CPD) organised by Institution of Estate Surveyors and Valuers, Lagos.
- Odusami (2000): "Comparative Study of Construction Industries in Nigeria and Ghana Construction - the Journal of Federation of Building and Civil Engineering Contract in Nigeria. Page 17-29.
- Obaseki (1999) "Policies and strategies for dealing with the problems of globalisation" A paper presented at a seminar on globalisation and economic development in Nigeria, organised by Nig. Economic Society, Lagos.
- Ofori G. (1990) "The construction industry" Aspect of its economics and management. Singapore University Press, Singapore.
- Rowlinson S. (1999) "A definition of procurement system" in Rowlinson and Macdonald (ed). Procurement system - A guide to best practice in construction. Published by E, F N SPON, New York.
- RICS (2000) "Construction industry hit the internet" April 2000 page 15.
- Slow (2000) "Internet offers surveying firms business opportunities" Chartered Surveyors Magazine- January 2000, Page 26.
- Wahab K. A. (1987): "Alternative strategies for project execution" Construction - the Journal of Federation of Building and Civil Engineering Construction in Nigeria Vol.5 Nos. 8
- Wells J. (1986) "The construction in developing countries" Alternative strategy for development. Published by Crown Helm, London. Page 11-38.
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