# An Analysis of the Competitiveness of Local Construction Contractors in Uganda

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#### ABSTRACT

Competitiveness has become a centre of attraction both locally and internationally. It has received close attention from scholars, researchers and practitioners across many industries. In the construction sector alone, many publications contain works on competitiveness but to a great extent concerns large firms with high turnovers. Most of the publications concern only countries where such studies were conducted thus rendering the context of such reports only applicable to countries where the studies were conducted. Due to the unmatched business environments in different countries, its variability is great from nation to nation, industry to industry, and project to project. In the case of Uganda, competitiveness has become paramount for the local construction contractors (LCC) in realizing business growth and continuous improvement in performance. The recent trend in Uganda's construction industry indicates that nearly all big construction projects are not executed by LCC because of their level of competitiveness in the construction industry. An investigation into the competitiveness of LCC was conducted with the aim of providing remedies to the level of competitiveness being observed. This paper, presents the findings of the research effort in analyzing the competitiveness of LCC. Remedies are also suggested for enabling the LCC to become more competitive in the construction industry and improve their performance.

Keywords: Competitiveness; Local Construction Contractors; Performance

#### **1.0 INTRODUCTION**

Uganda has got many (LCC) engaged in the construction business. Some of these LCC change business name and scope within a short time because of the competitiveness pressures within the construction industry. Little is achieved by these struggling LCC due to the level of development of the local construction industry (LCI). Recent studies show that the LCI is not very competitive, undeveloped and faced with many problems. These problems range from lack of management and technical capacity to lack of access to credit facilities and work altogether (Uganda Association of Consulting Engineers (UACE, 2008). This business environment poses a great challenge to the young LCC who may wish to become competitive by improving on their performance. The end result of such struggle is likely to be transferred to the LCI thus rendering the LCI ill-equipped to take on large construction projects. What the LCI continue to witness is total surrender of large construction projects to international construction contractors and consultants rather than to progressively build the local capacity in the construction industry. Factors that bring about changes in growth, competition, improved performance are closely linked to the organizational competitiveness which closely correlates to the composition and practice of the construction industry (Li-yin et al, 2007). If the industry is composed of uncompetitive players, the quest for growth, improvement in performance at the national level becomes a dream. The concept of competitiveness can be integrated into management, economic and operation research when all aspects of performance are embraced. Lu and Alum (2007) link competitiveness to management or economic idea that is superior to the traditional economic indicators such as profitability, productivity or market share, which are seen as being

insufficient to enable continuous improvement of performance. The competitiveness of LCC in Uganda, especially those belonging to Uganda National Association of Building and Civil Engineering Contractors (UNABCEC), the umbrella that brings all construction contractors together, formed the core of this study.

### 2.0 LEVEL OF LCC GROWTH

The level of growth and performance of many LCC is still very low and this has affected their competitiveness in the construction industry (Li-yin *et al*, 2007). The current level cannot offer them good opportunity to compete and equally manage the associated risk at a global scale. The LCI itself is still experiencing constraints that have continued to limit its growth. If this persists for a long time, Uganda may fail to have in place a sustainable civil works contracting capacity to construct and maintain all her infrastructure but to continue relying on foreign companies. A sustainable contracting industry involves having a cadre of contractors with the ability to participate competitively. They should be able to undertake works effectively with continuous growth and improvement on performance to meet the current and future needs of the contracting industry.

With the increasing sophistication and complexity of construction projects, there is need for improved organisation and management structure to overcome the technical complexity and unprecedented scope of works. Increase in globalization has made competitiveness a key factor in the present competitive world. International competition according to Sanjay (2009), is not only very important in realizing growth for both domestic and foreign construction contractors but can no longer be avoided as far as becoming competitive is concerned. However, many of the LCC have been in the construction business for over 10-25 years, but have remained undeveloped and less competitive because of the dynamics of global competitiveness. At the moment a number of LCC are being investigated for non contract performance. Their performances had been questioned by various stakeholders in search for value of money for contracts handled by them. To a great extent, many of them fail to provide technical and financial proposals that pass the litmus test for award of contracts. In general, the growth level of LCC in Uganda is still very low. This has on many occasions given the foreign contractors enormous opportunity in the LCI by scooping nearly all the big construction contracts.

### **3.0 METHODOLOGY**

The presentation in this paper gives the findings of a research effort that analyzed the competitiveness of local construction contractors (LCC) in Uganda. The study also considered an appropriate remedy to the problems surrounding the LCC in the construction industry. The specific objectives were to identify the factors limiting the competitiveness of LCC, analyse the key factors contributing to low competitiveness of LCC, and to propose ways of improving the competitiveness of LCC. The following were done to achieve the aforementioned objectives:

- (i) Inventory. An inventory establishing the LCC and their location was carried out in Kampala.
- (ii) Data capture. The data required were obtained through the use of structured questionnaires. This type of study demanded the use of structured questionnaires (Kothari, 2004). The questionnaires were distributed to all the study subjects in Kampala. All primary data were from registered members of UNABCEC. Issues considered in the primary data included management, capabilities, as well as industrial image.
- (iii) Analysis of the available data contributing to low competitiveness of LCC in the construction industry. Relative index (RI) technique was used in the computation and the formula applied was as below;

$$RI = \sum (1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5)$$
(1)  
$$5(n_1 + n_2 + n_3 + n_4 + n_5)$$

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Where,  $n_x$  = the number of respondents agreeing with the x variable.

1,2,3,4 and 5 are numbers of the ordinal scale measuring the degree of agreement.

The computation of RI using this formulae yielded the value of RI ranging from one to zeropoint two, where one represent the maximum strength and zero-point two the minimum strength (Lim *et al* 1995).

(iv) Software used in the analysis was a combination of Microsoft Spread sheet and SPSS, a statistical package for social sciences.

The study was limited to only LCC registered with UNABCEC and are engaged in formal construction works which included among others; road construction, construction of water and sewerage facilities and construction of buildings.

### 4.0 ANALYSIS OF RESULTS

# **4.1 Insignificant Factors**

Conceptual factors with low degree of agreement to a particular factor were dropped. Relative Index (RI) technique was useful in dropping the insignificant factors and selecting the significant factors. The frequency of variables considered was on a Likert scale (Kothari, 2004) from "highly agree" to "highly disagree" in relation to competitiveness.

# 4.2 Significant Factors

Factors with high degree of agreement were carried forward for further analysis. The significance score for each case assessed by each respondent based on the questionnaire was calculated by multiplying the score by the total number of responses per variable. 94 questionnaires were distributed and the valid response rate was 70.8% suggesting the degree to which people considered this study appropriate and aimed at finding a solution. A total of 40 significant factors were selected and carried forward for further analysis.

# 4.3 Correlation

Inter-item correlation matrix for significant factors was generated using a statistical package-SPSS and the results therein reflected a correlation coefficient of more than zero point two. Most of the inter-item correlations were close to one, testifying that the items included in the study were closely related to each other. A perfect match between dependent variables in the study occurred with a correlation coefficient of one. The correlation matrix was useful because the variables were measured on different scales (5-point rating).

# 4.4 Factor Analysis

Factor analysis was used in data reduction to identify a small number of factors that explain why LCC are less competitive. With factor analysis, it is possible to investigate the number of underlying factors and, in many cases; one can identify what the factors represent conceptually (Kothari, 2004). Additionally, one can compute factor scores for each respondent, which can then be used in subsequent analyses. The method used in Factor analysis was the principal component method of extraction. A scree plot (Figure 1) of the factors guided the selection of optimal number of components in the analysis. It is a plot of variance associated with each other and was used to determine how many factors should be kept. Typically, the plot shows a distinct break between steep slope of the large factors and the gradual trailing of the rest (the scree).



Figure 1: Scree plot of eigenvalue (forty variables)

From Figure 1 above, the components contributing significantly to the solution occurred between components 5 and 6 due to the sudden drop. The description of the factors and their numbers are provided in Table 1. The components on the shallow slope, between components 6 and 40 contributed little to the solution. To understand what the components represents, the component matrix was rotated and the selection of the optimal factors (variables) was aided by the score coefficient matrix presented. A higher correlation coefficient per component represented the solution to the study.

# 4.5 Extracted Solution

Table 2 shows the extracted solution with an eigenvalue greater than one. The first twelve principal components formed the extracted solution. This explains nearly 78% of the variability in the original forty variables shown on the scree plot above. Therefore, the complexity of the data set was considerably reduced by using these twelve selected principle components to answer the research questions on competiveness. The large changes in the individual totals suggest that the rotated component matrix will be easier to interpret than the unrotated matrix. It was from this rotation that a scree plot was generated to aid the selection of optimal number of components.

| Variable   | Component | Component   |
|--|-----------|-------------|
|  | number    | coefficient |
| Qualification of Project Key personnel           | 3         | 0.838       |
| Health and safety plans                          | 6         | 0.859       |
| Production of realistic project schedule         | 8         | 0.782       |
| Adequacy of construction plants/equipments       | 12        | 0.631       |
| Company's debt status                            | 5         | 0.833       |
| Ability to access financial credits and loans    | 9         | 0.811       |
| Relationships with clients                       | 7         | 0.853       |
| Increase in capital investment                   | 11        | 0.793       |
| Government policies on the construction industry | 10        | 0.831       |
| Effective coordination of different activities   | 2         | 0.795       |
| Good relationships with employees                | 1         | 0.785       |
| Ratio of technical staff in the company          | 4         | 0.804       |

Table 1: Rotated Component Matrix

| Principal<br>Component | Extra | Extraction Sums of Squared<br>Loadings |         | Rotatio | Rotation Sums of Squared Load-<br>ings |         |  |
|------------------------|-------|--|---------|---------|--|---------|--|
| number                 |       | % of                                   | Cumula- |         | % of                                   | Cumula- |  |
|                        | Total | Variance                               | tive %  | Total   | Variance                               | tive %  |  |
| 1                      | 7.668 | 19.171                                 | 19.171  | 4.556   | 11.391                                 | 11.391  |  |
| 2                      | 3.651 | 9.128                                  | 28.299  | 3.932   | 9.831                                  | 21.222  |  |
| 3                      | 3.276 | 8.189                                  | 36.488  | 2.985   | 7.462                                  | 28.683  |  |
| 4                      | 2.930 | 7.326                                  | 43.815  | 2.728   | 6.820                                  | 35.504  |  |
| 5                      | 2.882 | 7.204                                  | 51.018  | 2.600   | 6.500                                  | 42.004  |  |
| 6                      | 2.189 | 5.473                                  | 56.491  | 2.403   | 6.008                                  | 48.012  |  |
| 7                      | 1.925 | 4.813                                  | 61.304  | 2.178   | 5.445                                  | 53.457  |  |
| 8                      | 1.803 | 4.509                                  | 65.813  | 2.177   | 5.443                                  | 58.900  |  |
| 9                      | 1.469 | 3.674                                  | 69.486  | 2.024   | 5.061                                  | 63.961  |  |
| 10                     | 1.239 | 3.097                                  | 72.583  | 1.977   | 4.944                                  | 68.905  |  |
| 11                     | 1.162 | 2.905                                  | 75.489  | 1.931   | 4.827                                  | 73.732  |  |
| 12                     | 1.031 | 2.577                                  | 78.066  | 1.734   | 4.334                                  | 78.066  |  |

# Table 2: Extracted Solutions

# 5.0 DISCUSSIONS

The following paragraphs summaries the discussions about the major factors that affect competitiveness from the results presented above.

# 5.1 Relationship with Employees

There was a missing link between the LCC and their employees. Lack of Good and harmonious relationship between the LCC and the employees affected the level of competitiveness of LCC in the construction industry.

# **5.2 Effective Coordination**

Coordination gaps exist within the LCC setup and this has resulted in poor performance as well as slow growth and development of LCC. Site activities don't start as planned but late due to the coordination gaps. These gaps have continued to reflect the failure of LCC in achieving the organizational targets. Implying weak teams are being developed that cannot promote a common front in tackling the needs of the contracts or projects.

# 5.3 Qualification of Key Project Personnel

Lack of qualified project personnel deployed at project levels is partly to blame for the low competitiveness of LCC. Their inability to interpret project documents, plan for works, and procure relevant materials cannot make them deliver on any part or the entire contract requirement. A big percentage of the personnel are trained on job employees rather than professional workers. This has continued to lower the chances of improving on the performances and further enhancing growth of the LCC.

# 5.4 Ratio of Technical Staff

The ratio of technical staff to none technical staff is important in evaluating the manpower capacity of LCC. However, this is not treated with caution as it impacts on the technical capability. LCC have a higher ratio of none technical staff to technical staff and this suggests why the LCC has remained in their current position in the construction industry.

# 5.5 Debt Status

Liabilities are dangerous in achieving and maintaining the competitiveness. LCC are faced with the burden of settling their debts with creditors, suppliers, and tax bodies and this has continued to affect their operation and performances.

# 5.6 Health and Safety

The issues surrounding health and safety of workers at site are still being neglected by most LCC. Simple health and safety kit are not made available at sites which makes it difficult to administer injuries that may arise in the cause of work execution. Because workers treat themselves whenever they get injuries on site, this has created a mindset on such LCC who don't care about her workers. The end results is massive migration to other companies that would give due attention to the health and safety of its workforce.

# 5.7 Relationship with Clients

This was found lacking on the part of most LCC. Keeping of long track record with clients both in the public and private sector does not only build good reputation with them but also help in winning their hearts. This approach has helped most Asian businesses whether in the construction sector or dealing in other forms of business to successively grow, expand and become very competitive (Sanjay, 2009). If the LCC could borrow this approach and apply it in their construction businesses, it could help them rejuvenate their competitiveness level which is currently regarded as low.

# 5.8 Production of Realistic Project Schedule

Production of accurate project schedule is becoming a major requirement for all competitive projects and this is a basis for monitoring the progress at a later date. Strangely, most LCC cannot develop accurate plans to aid the preparation of project time table. The end result is failure of projects to be completed within the anticipated time frame. This failure has continued to shrink the performance of LCC in the construction industry.

### 5.9 Access to Funds

Lack of finance is the major blow to competitiveness. Without funds, an investment is not possible yet it is the lifeblood for upgrading competitiveness. Investment accelerates the so-phistication with which companies compete for the purpose of strengthening their competitiveness in the business. Because of lack of funds, LCC find it difficult to start the actual construction works by providing materials, equipments, labour and manage the associated risk. Because of this difficulty, most foreign companies have taken up the construction industry, especially in areas where the scale of operations, financing, and level of technology is beyond the capacity of LCC.

### **5.10 Government Policies**

There is lack of government policies for the construction industry. This has affected the competitiveness of LCC and kept the LCI in a lukewarm position for decades. Positive government policies towards the construction industry help in building local capacity and sustaining the competition. However, this missing policy towards the construction industry is partly to blame for low competitiveness of LCC.

### 5.11 Increase in Capital Investments

Increase in investments enables upgrade and improvement in the sophistication of competitiveness. All is geared towards strengthening the company's competitiveness in the construction industry. Decrease in capital investment results in decrease in capital output ratio; hence decrease in profits which ultimately should be channeled to capital formation. LCC cannot create more capital because of no increases in their investments and this has affected their performance and competitiveness.

# 5.12 Adequacy of Construction Plants/Equipment

Insufficient construction plants and equipment erodes the capability for better performance. Adequacy of construction plants and equipment goes beyond having numerous plants/equipment at the back yard but plants/equipment that is capable of performing the tasks. However, this is different with most of the LCC in the construction industry. The plants/equipment at their disposal is first of all inadequate and at the same time aged plants/equipment that work for barely less an hour. This jeopardizes their chances of improving their performances as well as growth.

# 6.0 FACTORS AFFECTING COMPETITIVENESS IN UGANDA

Management factors included, poor relationship with employees, ineffective coordination, and poor career development of the employees. On the other hand, the organizational structure was affected by the ratio of technical staff. Meanwhile, the factors that affected capabilities included, poor financial position (debt status, and inability to access financial credits); poor commercial and technical position (inability to produce realistic project schedules, and lack of adequate construction plants/equipment), market position (bad relationships with clients, lack of government policies, low capital investments) that reduced the capabilities of LCC. Lack of professional personnel, lack of health and safety plans remained a key factor affecting the commercial image.

# 7.0 CONCLUSION

From the foregoing analysis and discussion, it is concluded that management gaps exhibited by the LCC are partly to blame for the low level of competitiveness of the LCC. Inadequate capacities of LCC do not help them play the competition game perfectly. As a result, there is little growth and no improvement on performances thus rendering them less competitive in the construction industry. The general image of the LCC in the construction industry could not help them succeed in their businesses.

Basing on the study conducted, LCC in their current state are still less competitive in the local market thus making their operations in the global market even difficult. It is recommended that the governments of developing countries should encourage and enable LCC to build capacity and competitiveness through waiving taxes on imported construction materials and plants, giving tax credits to enable training, forcing joint ventures with international contractor.

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# Value Management in the Nigerian Construction Industry: Militating Factors and the Perceived Benefits

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### ABSTRACT

In recent times in Nigeria, value management has become part of academic curriculum of quantity surveying in most institutions of higher learning either as a course or as a topic under cost control or project management. This is mainly to prepare these students for a new era of value management that is about to be witnessed in the Nigerian construction industry and this research aim at determining factors militating against the exercise as well as the perceived benefits if fully incorporated into construction works. Data were collected via interview of construction professionals that are eligible to be a member of value management team. The study found out that value management has not been fully embraced in the country and it will enhance good quality of construction works and standard delivery if fully incorporated. Government policy and incompetent professionals were the two major factors identified as militating factors. The study finally recommends a need for Nigerian construction clients to adopt value management on their projects.

Keywords: Benefits, Construction Industry, Militating factors, Nigeria, Value Management.

### **1.0 INTRODUCTION**

Construction industry all over the world has not been static and the reasons for this include clients' growing demand, complexity of construction projects, advancement in technology and introduction of new innovations amongst others. Demand for value management all over the world is on the increase as noted by Morrison (1984) and Nigeria will soon be a part of it. The discipline of value management, which was first applied to construction projects in the United States in 1970s (over four decades ago) according to The College of Estate Management (1995), is receiving an increasing amount of attention within the international project management community (Stuart, 1994). In South Africa, Sigle, *et al* (2000) observed that clients are insisting that value management should be applied to their construction projects and such could probably be attributed to the effectiveness of value management as a tool for ensuring value for money.

Value management has not been fully embraced in Nigerian construction industry as only very few number of value management workshops have been organised so far according to investigation and the workshops were even concluded prematurely. This may be a good start for the practice in the country and probably, one will expect it to gain ground in the next couple of years. The concept of value management is also gaining ground among Nigerian construction professionals as revealed by Olanrewaju and Khairuddin (2007) where about 36%, 30%, 11% and 19% of the research population that are familiar with value management are quantity surveyors, engineers, architects and estate mangers respectively. It is to be noted at this point that familiarity with the practice of value management does not necessarily connote competencies to function as a value manager neither is it enough to ascertain the number of professionals that has been involved in value management workshop at one time or the other. This study therefore examined the various impediments to the practice of value