ASSESSING THE ADEQUACY OF CONTINGENCY SUM PROVIDED BYPRACTICING QUANTITY SURVEYORS:A STUDY OF KADUNA STATE, NIGERIA

BY

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ABSTRACT

Contingency sum is usually provided in the project budget to cater for unforeseen events during project execution. This paper assessed the adequacy of contingency sum provided by practicing quantity surveyors in Kaduna State, Nigeria. Studies have shown that contingency provision has been seen to be an inadequate mechanism with which to protect clients against risk. This study utilizes a qualitative approach through the review of existing literature and semi-structured interviews to collect data. Data obtained, were analyzed using constant comparative analysis method. The research found that, the use of percentage is the most common method in determining contingency allowance which is largely based on the practitioners' intuition and past experience, and has been considered inadequate. The study therefore recommended the application of formal risks analysis techniques in the calculation of contingency sum in order to improve its adequacy.

Keywords: *Adequacy, Contingency Sum, Practicing Quantity Surveyors*

INTRODUCTION

Contingency sum is the amount allowed in a budget in order to meet the cost of risks and uncertainties in a project (Chitkara, 2011).Ashworth, Hogg and Higgs (2013),reported that contingency sum has been seen to be an insufficient mechanism with which to protect clients against risk, this has made several clients dissatisfied with project cost overrun and critical of the level of cost advice offered by the quantity surveyor.Clients have queried contingency sums in budget provisions seeking to know what it is meant for, and how it is calculated (Cartlidge, 2011). The assessment of the contingency sum is carried out by the quantity surveyor based on his experience, usually at the estimation stage. Traditionally, the contingency is calculated as a percentage figure over the estimated final cost of the project (Chitkara, 2011).The most common and simple method of calculating contingency sum is to consider a percentage addition on the estimated cost based on a similar project experience (Touran, 2003). According to Hogg (2003), contingency sum can be calculated in different ways, depending on the organization and complexity of the project. Some of the methods used include:

1. Advice from the Architect
2. Addition of standard percentage on the estimated cost based on previous similar projects experience.

3. Addition of a lump sum reflecting intuitive perception of risk.
4. Addition of a lump sum based on formal risk analysis.

Buertey, Abeere-Inga and Adjei Kumi (2012) cited in Odesola and Otali (2014), reported that lack of basis for determining adequate contingency sum can lead to project cost overruns, difficulty in contingency administration, abandonment of projects due to insufficient funds and delay in projectexecution. This has characterized the construction industry as a high-risk industry. Another major challenge of contingency is that most times it is expended even before the project completion period therefore requiring additional funds from clients. This has contributed to cost overrun of construction projects in Nigeria (Bello and Odusami, 2013).

Review of Related Literature

Dada and Jagboro (2007) opined that practitioners in Nigeria allow contingency sum in the bill of quantities to cover for risk without any basis. This tradition has no objective, logic or scientific reasoning; instead it is based on intuition. Odesola and Otali (2014),held that contingency allowed for projects in Niger Delta region of Nigeria are based on the discretions of the consultants and contractors, not a function of the estimated contract value and it is inadequate. Akintoye and MacLeod, (1997); Shen, (1997); Smith, Merna and Jobling(2006); Dada, (2010) also argued that the use ofthis informal approach to risk management has been viewed as highly subjective and largely utilizes experience, intuition and use of contingency sums in the management of project risks. The methods in this approach are usually found to be inadequate and fall short of dealing with risks that occur during the project. Perry and Hayes (1985) cited in Dada and Jagboro (2007) criticized this tradition of allowing contingency sum to take care of risk and uncertainties, the practice should be redefined in order to make it logical and realistic.

Chapman (1990) advised against the use of contingency sum arbitrarily for risk, stating that unspecified contingency provision only tempt people to use these for other reasons. He however, recommended that a study on pre-construction risk contingency allowance be carried out in order to determine how it is calculated and its application in the management of contracts. Ashworth *et al*., (2013) recommended the utilization of aspects of risk analysis in order to improve its accuracy, since the contingency provision is seemingly the only attention given to risk in several projects. There have been several researches in the area of contingency sum provision, the basis of which has been largely survey based questionnaires. For example, the work of Akinradewo and Awodele (2015) looked into the adequacy and utilization of contingency in building projects in Nigeria; Musa, Zubairu and Bala (2011) studied the performance of contingency cost provision for building projects in Nigeria; Bello and Odusami (2012) considered the effectiveness of the construction contingency; Odesola and Otali (2014) studied the effectiveness of contingency sum as risk tool for construction projects in Niger Delta, Nigeria.

All these aforementioned studies use questionnaires and tend to focus on quantitative analysis of results. The adequacy and appropriateness of such method has been questioned, methodological weaknesses can undermine the validity and usefulness of the findings. However, greater use of qualitative techniques using the real experience project participants to examine important soft system issues has been advocated (Edwards and Bowen, 1998).Therefore, this paper responds to this challenge by exploring the attitudes and experiences of practicing quantity surveyors in Kaduna State, Nigeria.

RESEARCH METHODOLOGY

This study captured the opinions of practicing quantity surveyors working in private consultancy firms within Kaduna State, Nigeria on the adequacy of contingency sum provision. A qualitative research approach was employed for this research. According to Miles and Humberman (1994) qualitative research is conducted through an intense and/or prolonged contact with a 'field' or life situation. These situations are usually normal, reflective of the day-to-day life of people, groups, societies, and organizations. Purposive sampling technique was used in the selection of the sample from the population. According to Creswell and Plano Clark (2011) it involves the identification and selection of persons or groups of persons that are competent and abreast of a situation of interest. The sampling frame was drawn from the data base of the Quantity Surveyors Registration Board of Nigeria (QSRBN). Thirty (30) registered quantity surveyors licensed to practice quantity surveying by the Board were selected for the interview. The sample size was limited to thirty (30) because of the relative advantage of the researcher's accessibility to them. An interview was used in this research to collect the views of these participants. Data obtained from the interviews were analyzed using a constant comparative analysis method, this involves comparing data with others that are similar or different (one interview, one statement, one subject matter) this is to enable conceptualizations of the possible relations through different pieces of data (Thorne, 2000).

RESULTS AND DISCUSSION

Results

The results of the interview as discussed with the respondents centered on the method of determining contingency allowance, adequacy of contingency sum allowance, consideration for formal risk analysis and the challenges for the determination of adequate contingency provision by practicing quantity surveyors in Kaduna State, Nigeria.

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i. Method of Determining Contingency

The interviews focused on the identification of the method of determining contingency allowance.

The response from the practicing quantity surveyors revealed that the most common method used is the percentage addition on the base estimate. Commonly cited values ranges between 3 to 10 percent. However, few of them stated that they make use of lump sum amount in determining contingency fund.

ii. Adequacy of Contingency Sum

The interviews focused on the adequacy of contingency allowance.

Majority of the respondents revealed that the amount is inadequate because most times additional funds have to be sourced from clients in order to execute unforeseen additional works. Few of the respondents differ in opinion, affirming that the contingency allowance is always adequate, mentioning instances where it was never utilized; as a result, savings were declared at the end of the project.

iii. Consideration for Formal Risk Analysis

The interview focused on the consideration for formal risk analysis when allocating contingency sum by practicing quantity surveyors.

All the respondents reported that they do not make use of formal risk analysis in dealing with cost of risk during the preparation of their estimates or bill of quantities. This is because most times the clients are in a hurry to award contracts without any due regards to the quantity surveyor's input. They also stated that lack of detailed information from the designers (architect and engineers) contributes to the non-utilization of the formal approach.

However, the respondents stated that they usually utilize the informal approach to take care of risk in their estimates or bill of quantities. They usually rely on their past experiences in providing contingency sum in their base estimate to cover for general risk in case it eventuates.

iv. Challenges for the Determination of Adequate Contingency Provision

The discussion made here are on the challenges for the determination of adequate contingency provision.The response from the interviewees revealed that design risk is the major challenge; this is because very few practices develop details before going to tender, and a lot of details are still yet to be issued well into the construction stage. Designs are usually prepared hurriedly which affects the level of details and usually leads to all kinds of variations resulting in cost and time overrun, and sometimes site abandonment.

Discussion of Results

Methods of Determining Contingency

Touran (2003) reported that the most common and simple method of calculating contingency sum is to consider a percentage addition on the estimated cost based on a similar project experience. Findings from this study indicate that practicing quantity surveyors in Kaduna State, Nigeria use the percentage method in determining contingency sum, thus conforming to what the literature has revealed.

Adequacy of Contingency Sum

The responses from the practitioners indicate that contingency provision by practicing quantity surveyors in Kaduna State, Nigeria is always inadequate and fall short of dealing with risks that occur during the course of the project. This is in agreement with the findings of past researches that reported that most times the contingency sum is expended even before the project completion period therefore requiring additional funds from clients. This has contributed to cost overrun of construction projects in Nigeria (Bello and Odusami, 2013).

Consideration for Formal Risk Analysis

The study found that the use of informal approach to risk management has been the common practice by quantity surveyors in Kaduna State, Nigeria. This finding supported the assertion by Akintoye and MacLeod (1997); Shen, (1997); Smith *et al*.,(2006); Dada (2010) that the use of informal approach to risk management has been viewed as highly subjective and largely utilizes experience, intuition, judgment and use of contingency sums in the management of project risks. The methods in this approach are usually found to be inadequate and fall short of dealing with risks that occur during the project

Challenges for the Determination of Adequate Contingency Provision

This study found out that design risk is the major challenge faced by practicing quantity surveyors in dealing with contingency sum.This conforms with Buertey, Abeere-Inga and Adjei Kumi (2012)cited in Odesola and Otali (2014) studythat the challenges for lack of basis for the determination and provision of adequate contingency results in cost overruns in the project, difficulty in contingency management, abandonment of project due to lack of adequate funds, delay in the use of the project for downstream business or social benefit and characterization of construction industry as a high risk industry due to loan defaulting by contractors and clients.

CONCLUSION AND RECOMMENDATION

This paper investigated practicing quantity surveyors' views on the adequacy of contingency sum provision in Kaduna state, Nigeria. Using an interview method, the study found that contingency sum allowed by practitioners is inadequate and fall short of addressing the risks associated with construction projects. This means that the use of informal approach to risk management by practicing quantity surveyors in determining contingency sum has been the normal practice in Nigeria. Also, the study revealed that design risk has been considered as the major challenge in determining adequate contingency provision, this is because of the way and manner designs are hurriedly prepared which gives rise to all sort of variations that can result to cost and time overrun.

Based on the findings the following recommendations are made:

i. For an adequate contingency sum provision, an effective application of risk analysis techniques should be used to serve as a basis for the determination of the contingency fund.

ii. Continuing Professional Development should be provided by The Nigerian Institute of Quantity Surveyors (NIQS) through continuous educational programmes to ensure that quantity surveyors are up to date with the latest risk management techniques.

iii. Designers should always carry out preliminary site investigations to ensure that detailed designs are always prepared and can be relied upon by quantity surveyors during the preparation of bill of quantities in order to provide a realistic budget.

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