

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**

**COLLEGE OF ARCHITECTURE AND PLANNING**

**FACULTY OF ARCHITECTURE AND BUILDING TECHNOLOGY**

**DEPARTMENT OF BUILDING TECHNOLOGY**

**KNUST**

**THE DEVELOPMENT OF PERFORMANCE  
CRITERIA OF TENDER EVALUATION  
PROCESS FOR PUBLIC WORKS IN CHAD**

**BY SAZOULANG DOUH**

***PROJET SUPERVISOR : DR. THEOPHILUS ADJEI-KUMI***

**A THESIS SUBMITTED TO THE BOARD OF POSTGRADUATE STUDIES IN  
PARTIAL FULFILMENT OF THE REQUIEREMENTS FOR THE AWARD OF  
MASTER OF SCIENCE DEGREE IN CONSTRUCTION MANAGEMENT**

**APRIL, 2009**

## **DECLARATION**

I hereby declare that this work is the result of my own original research and this thesis has neither in whole nor in part been prescribed by another degree elsewhere. References to other people's work have been duly cited.

---

**SAZOULANG DOUH**

**(STUDENT)**

**DR. THEOPHILUS ADJEI-KUMI**

**(SUPERVISOR)**

---

**MR. AYIREBI DANSOH**

**(HEAD OF DEPARTMENT)**

## DEDICATION

This work is dedicated to:

- God for his grace, guidance and protection during my studies in Ghana,
- My dear wife, Mrs Rahama Madalé and our children Aimé, Furida and Oda;
- My best Ghanaian friend Emmanuel AKOI-GEYBI.



## ACKNOWLEDGEMENT

I wish to express my sincerest gratitude to my supervisor, Dr. Theophilus Adjei-Kumi for his patience, guidance and helpful suggestions and constructive criticisms, which led to the success of this work. I am highly indebted to him.

I owe special thanks to my sponsor Mr. Mahamat Senoussi, Director of NSCCG and all the workers of BEGRS.

My thanks go to Mr Ayirebi Dansoh, Head of Building Technology Department, to Dr. Baiden, Research Coordinator for Post graduate studies, and to all lecturers and staff of the Department for their encouragements during my training program.

I say big thank you to Mr Kississou Etienne, Pastor A. H. Clement, Sister Erica, G. Guilbert and Mr Emmanuel Adinyira for all their helps in different ways.

I say many thanks to E. Akoi-Geybi and through him all my class mates for their friendship relation during the two years.

Once again, I am very much grateful to my wife and my mother for their prayers and sacrifices endured during my long absence. I don't forget my Pastor and colleague elders of our church for their spiritual support without which this work will not be a success and above all, the Almighty God for his faithfulness towards me.

May God richly bless you all.

## **ABSTRACT**

Works procurement in Chad is governed by the Public Procurement Act 503, 2003. Tendering Procedures take too long without any tangible reasons. For instance, only 25% of the 2005 budget allocated to construction was used due to the delays in the Tender Evaluation Process. As a result, many construction projects experience delays in their execution. The study of Performance criteria for Tender Evaluation Process of Public Works in Chad explores the activities involved in the process and the entities in charge of carrying them out with the aim of establishing the major criteria for use in assessing the performance of tender evaluation. The study's specific objectives were to identify the relevant factors affecting the performance of the tender evaluation process, to establish measurable performance criteria, and to recommend a performance assessment framework using the criteria established.

Data were collected via questionnaires to consultants, procurement officers, contractors and other stakeholders in Chad. Results were analysed statistically using Weighted Mean Rate and Severity Index to rank both major factors and measurable criteria identified through literature search and field survey.

Generally it was identified that there was no established system of performance measurement currently in use in Chad, the mechanisms of verification of documents' authenticity were not well structured and fully implemented, and the legal prescriptions related to time allocated to activities were not applied.

The study further established the following findings :

- Fourteen (14) major factors affecting the performance of TEP were identified and classified in the order of importance under six (6) categories : Tender Documents, Tenders, Members of Tender Committees, Projects characteristics, Client's objectives and role, and External factors.
- Thirteen (13) major measurable performance criteria were established and ranked according to the following areas in the order of significance : Time, Contracts, Invitations to Tender, Tenders, and Costs.
- A performance assessment framework was proposed to help procurement entities in evaluating the effectiveness of tender evaluation process.

The study recommends that :

- Concerted efforts must be made towards the quality of tender documents and the qualification of contractors, and the competence and experience of procurement officers;
- The full implementation of the regulations and provisions related to the approval of reports and contracts provided by the Public Procurement Act 503 of Chad;
- The development of a Comprehensive Computer-based System for Performance Measurement of Tender Evaluation Process in Chad.

## TABLE OF CONTENTS

Declaration	i
Dedication	ii
Acknowledgement	iii
Abstract	iv
Table of Contents	vi
List of Abbreviations	x
List of Tables	xi
List of Figures	xii
<b>CHAPTER ONE - INTRODUCTION</b>	<b>1</b>
1.0 GENERAL	1
1.1 BACKGROUND	2
1.2 PROBLEM STATEMENT	3
1.3 JUSTIFICATION OF STUDY	4
1.4 AIM AND OBJECTIVES	5
1.5 RESEARCH METHODOLOGY	6
1.6 SCOPE OF THE STUDY	6
1.7 ORGANISATION OF CHAPTERS	7
<b>CHAPTER TWO - PROCUREMENT STRUCTURES AND TENDER EVALUATION PROCESS</b>	<b>8</b>
<b>2.0 GENERAL</b>	<b>8</b>
<b>2.1 DEFINITION OF KEY TERMS</b>	<b>9</b>
2.1.1 Procurement	9
2.1.2 Public Procurement Act (PPA)	9
2.1.3 Tendering	10
2.1.4 Tender Evaluation	11

2.1.5	Performance.....	12
2.1.6	Criteria.....	13
2.1.7	Performance Criteria.....	13
2.1.8	Validity Period.....	14
<b>2.2</b>	<b>PROCUREMENT STRUCTURES DESCRIBED BY THE PPA OF CHAD ...</b>	<b>14</b>
2.2.1	Procurement Structures.....	14
2.2.2	Public Procurement Board (OCMP).....	15
2.2.3	Procurement Entity .....	15
2.2.4	Tender Committee (COJO): .....	15
2.2.5	Tender Evaluation Panel (SCTE) .....	16
<b>2.3</b>	<b>TENDER EVALUATION PROCESS .....</b>	<b>16</b>
2.3.1	Main activities of Tender Evaluation Process .....	17
2.3.2	Tender Submission .....	20
2.3.3	Opening of tenders.....	20
2.3.4	Examination of tenders.....	21
2.3.5	Evaluation of tenders .....	22
2.3.6	Reporting .....	22
<b>2.4</b>	<b>PERFORMANCE CRITERIA.....</b>	<b>23</b>
<b>2.5</b>	<b>FACTORS AFFECTING THE PERFORMANCE OF TEP.....</b>	<b>26</b>
2.5.1	Client .....	27
2.5.2	Project.....	28
2.5.3	Tender documents.....	28
2.5.4	Tenders .....	29
2.5.5	Tender committees .....	30
2.5.6	External Factors.....	30
<b>2.6</b>	<b>MEASURABLE PERFORMANCE CRITERIA.....</b>	<b>32</b>
2.6.1	Cost.....	33
2.6.2	Time.....	33
2.6.3	Tender.....	33
2.6.4	Contract .....	34
2.6.5	Invitation to Tender .....	34



<b>CHAPTER THREE - RESEARCH METHODOLOGY .....</b>	<b>36</b>
<b>3.0 GENERAL .....</b>	<b>36</b>
<b>3.1 DATA COLLECTION .....</b>	<b>36</b>
3.1.1 Questionnaire Survey .....	37
3.1.2 Determination of Sample Size .....	37
3.1.3 Questionnaire Development and Administration .....	39
<b>3.2 TREATMENT OF DATA .....</b>	<b>40</b>
3.2.1 Mean Weighted Rating (M) .....	40
3.2.2 Severity Index (SI) .....	41
3.2.3 Strength of a category .....	42
3.2.4 Coefficient of Variation (COV) .....	42
 <b>CHAPTER FOUR - SURVEY RESULTS, ANALYSIS AND DISCUSSION.....</b>	 <b>43</b>
<b>4.0 GENERAL .....</b>	<b>43</b>
<b>4.1 RESPONSE RATES .....</b>	<b>43</b>
<b>4.2 EXPERIENCE OF RESPONDENTS .....</b>	<b>45</b>
<b>4.3 FACTORS AFFECTING THE PERFORMANCE OF TEP.....</b>	<b>46</b>
4.3.0 General .....	46
4.3.1 Tender Documents .....	50
4.3.2 Tenders .....	51
4.3.3 Tender Committees .....	51
4.3.4 Project Characteristics .....	51
4.3.5 Client .....	52
4.3.6 External Factors .....	52
<b>4.4 THE USE OF A SYSTEM OF PERFORMANCE MEASURE OF TEP .....</b>	<b>52</b>
<b>4.5 THE USE OF A MECHANISM OF DOCUMENTS VERIFICATION .....</b>	<b>53</b>
<b>4.6 MEASURABLE PERFORMANCE CRITERIA .....</b>	<b>54</b>
4.6.0 General .....	54
4.6.1 Performance area one : Time .....	58
4.6.2 Performance area two : Contracts .....	60
4.6.3 Performance area three : Invitations to Tender .....	60
4.6.4 Performance area four : Tenders .....	61
4.6.5 Performance area five : Costs .....	62

<b>CHAPTER FIVE - SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>64</b>
<b>5.0 GENERAL.....</b>	<b>64</b>
<b>5.1 SUMMARY OF FINDINGS .....</b>	<b>64</b>
5.1.1 Factors affecting the performance of TEP.....	65
5.1.2 Measurable performance criteria.....	65
5.1.3 Performance assessment framework .....	66
<b>5.2 CONCLUSIONS .....</b>	<b>66</b>
<b>5.3 RECOMMENDATIONS .....</b>	<b>67</b>
5.3.1 Recommended performance assessment framework .....	68
5.3.2 Other specific recommendations .....	71
 REFERENCES .....	 73
APPENDIX 1 – TRANSLATION OF SOME ARTICLES OF PPA OF CHAD .....	76
APPENDIX 2 – QUESTIONNAIRE SAMPLE .....	83
APPENDIX 3 – LISTS OF CONTRACTORS AND CONSULTANTS FIRMS.....	87

## LIST OF ABBREVIATIONS

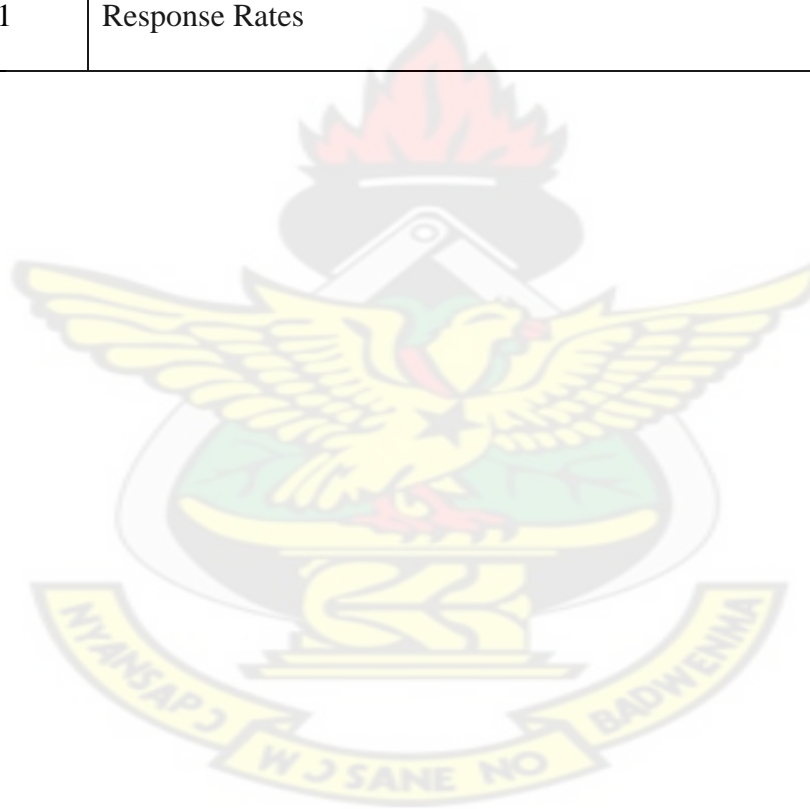
BT	Building Technology
CCSRP	Collège de Contrôle et de Surveillance des Revenus Pétroliers
CIDB	Construction Industry Development Board
CINTERFOR	Inter-American Research and Documentation Centre on Vocational Training,
COJO	Commission d'Ouverture et de Jugement des Offres
CRRA	Comité de Recours et de Règlement Amiable
EBRC	European Bank of Reconstruction and Development
EU	European Union
FAO	Food and Agriculture Organization
ILO	International Labour Organization
NCREL	North Central Regional Educational Laboratory
NCRESST	National Center for Research, Evaluation, Standards, and Student Testing
NSW	Naval Special Warfare
NZQA	New Zealand Qualifications Authority
OCMP	Organe Chargé des Marchés Publics
PP	Public Procurement
PPA	Public Procurement Act
SCTE	Sous-Commission Technique d'Evaluation des offres
SCP	Sous-Commission de Presélection
TE	Tender Evaluation
TEP	Tender Evaluation Process
TETP	Tender Evaluation Training Programme
UNDP	United Nations Development Program
WB	World Bank

## LIST OF TABLES

No	Designation	Page
2.1	Conformance versus performance attributes of Time, Cost and Quality	12
2.2	Factors considered to be relevant in affecting the performance of TEP	31
2.3	Measurable criteria identified as characterizing the performance of TEP	35
4.1a	Responses to questionnaire	44
4.1b	Responses Rates per class	45
4.2	Experience of respondents	45
4.3	Analysis of results and ranking of factors	47
4.4	Ranking of Strength of category of factors	50
4.5	The use of a system of performance measure of TEP	53
4.6	The use of a Mechanism of documents' verification	54
4.7	Analysis of results and ranking of performance criteria	55
4.8	Ranking of Strength of Criteria area	58
5.1	Summary of findings with regard to objectives	66
5.2	Performance Assessment Framework	70

## LIST OF FIGURES

No	Designation	Page
2.1	Procurement structures in PPA of Chad	14
2.2	Tender (Bid) Status	19
2.3	Illustration of Tendering procedure irrespective to time allocated by the PPA	25
4.1	Response Rates	44



# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 GENERAL**

The term 'Procurement' as defined by the Oxford Dictionary is the process of obtaining supplies of something, especially for a government or an organization. In the construction industry, procurement is said to be the process that is used to deliver construction projects (Ashworth and Hogg, 2000).

Many acquisitions funded by public financial resources are governed by a Public Procurement Act (PPA) in many countries. PPA is a law that defines the general procedures to be followed in acquiring goods, works or services. In the construction industry, public procurement usually involves the following steps: development of the brief, sketch design, detailed design, tendering, construction and commissioning of project.

Evaluation of tenders is the process used to assess tenders and comparing them to each other in the frame of tendering. It is a very critical phase in the tendering process involving many activities such as receiving, opening, examination, comparison and classification of bids, reporting and recommendation of the most appropriate contractor. If any of these activities is delayed or not done properly, the tendering duration could be affected even more the project success.

The performance of Tender Evaluation Process (TEP) can be perceived as a measure of the system's ability to produce efficient and satisfactory results to both client and competitors. Performance criteria refer to the expected result of the process and to an assessment statement of the quality of that result (CINTERFOR / ILO, 2007). In other words, performance criteria of Tender Evaluation (TE) expresses the characteristics of the results which are closely related to the objectives assigned to the process. However, some factors upstream and downstream as well as internal and external do affect the performance of tender evaluation.

This research therefore seeks to identify and establish measurable performance criteria that can be used in assessing the effectiveness of the tender evaluation of public works in Chad in order to improve it.

## **1.1 BACKGROUND**

A brief literature survey revealed that much has been written about Procurement Systems and Tendering Methods during the last two decades. Many documents have been published about Tender Evaluation by different institutions. These range from Tender Evaluation criteria to Audit Program for tendering procedures and award of contracts.

The Naval Special Warfare (NSW) Department of commerce, (2006) USA, developed a Tendering Manual and a Tender Evaluation Plan as well as Tender Evaluation Report Frame. International donors such as the European Union (EU) and the World Bank (WB) have also, developed several documents on Tender



Evaluation Process. A Standard Tender Evaluation Format and an Audit Program were published by the European Bank of Reconstruction and Development (EBRD) giving a large view on the procedures (2005).

However in Chad, many amendments were undertaken since 2001 in order to improve public procurement systems and tendering methods. The previous Procurement Law, known as 'Code des Marchés Publics' was reviewed and a new one promulgated on 5<sup>th</sup> December, 2003 known as Public Procurement Act 503 and several other presidential decrees related to the implementation of that Act were issued. The same can be said of Ghana where the PPA of Ghana Act 663, 2003 was promulgated alongside guidelines, manuals and regulations to assist in Public Procurement.

Arguably, it seems that performance criteria of TEP remain a challenge and the research attempts to gain an insight into the problem with respect to Chad.

## **1.2 PROBLEM STATEMENT**

In Chad, tendering procedures take too long to be performed without tangible reasons. Evaluation of tenders takes several weeks, for both big and small projects, delaying the award and approval of contracts. In many cases, tender evaluation durations exceed tender validity periods. As a result, the rate of construction projects execution is very low. For instance, only 25% of the budget allocated to construction projects were used due to the delays in tender evaluation process (rapport 2006 du CCSRP). In addition, some construction projects are purely and simply cancelled because of excessive delays. This is confirmed by the Chadian



Minister of State, in charge of infrastructure, in an interview (Observateur No. 425 du 18 juillet 2007) saying that “Construction projects are not yet visible as expected because of the poor performance of tendering methods which take too long to be performed”.

Therefore, two questions are posed :

- What are the factors that affect the performance of the tender evaluation process?
- Which measurable criteria can one use to assess tender evaluation performance?

The study would try to address the issues mentioned above and more.

### **1.3 JUSTIFICATION OF STUDY**

With the additional financial resources accruing from the exploitation of Chadian petrol since October, 2004, more than CFA 180 billions were allocated to social and economic infrastructures such as roads, water supplies, schools, hospitals, and so on and so forth representing 35% of the 2005 national budget. (Source: Rapport 2006 du CCSRP). The use of these resources is subject to Public Procurement Act 503, 2003.

Since 2004, little infrastructure has been constructed and the expectations of the population seem not to be satisfied. Hence, time factor becomes very important in the procurement of works.

In addition, the construction industry is one of the economic growth pillars in Chad (Tchad et Culture, Rubrique économique 2007) because it is the second

largest employer after the public sector. Thus, the hope of many Chadians is put on the development of the Construction Industry through equitable and transparent public works procurement.

As stated above, majority of the construction projects are developed within the environment of inherent delays. Also, there seems not to be a documented system available for assessing the performance of TE. Discussions with the Public Procurement Officers in Chad revealed that the criterion for the assessment is only time based. However, other criteria such as invitations to tender, costs, contracts, and tenders may characterize the performance of TE. Finally, assessing the performance of evaluation of tenders in public entities is of paramount importance to the construction industry everywhere, especially in Chad where the construction industry is embryonic and public works are the main source of contracts. Another benefit that Chad can gain from getting an assessment procedure in place is that the existence of a nationally recognised assessment method will enable performance to be quickly measured and immediate actions put in place. It is in this respect, the study aims at addressing the issue by identifying and ranking the performance criteria for tender evaluation process of public works in Chad.

#### **1.4 AIM AND OBJECTIVES**

The aim of this work is to establish major measurable criteria that can be used to assess the performance of the tender evaluation process for public works in Chad.

The specific objectives of the study are:

1. To identify major factors affecting tender evaluation process of public works in Chad,
2. To establish measurable criteria for assessing the performance of the tender evaluation process for public works in Chad.
3. To recommend a performance assessment framework of evaluating tenders in Chad.

## **1.5 RESEARCH METHODOLOGY**

Information for the study was obtained from both primary and secondary sources. The primary data was obtained from a field survey using structured questionnaires administered in Chad and interviews conducted in Chad. The secondary data were from literature search mostly on the internet. Data were processed and analysed using statistical tools. Detailed methodology adopted for the work is described in Chapter 3.

## **1.6 SCOPE OF THE STUDY**

The research focused on TEP prescribed by the PPA 503 of 5<sup>th</sup> December, 2003 currently in use in Chad. Eight (8) articles of the said Act are translated into English and attached in Appendix 1. The study is limited to the construction projects funded by the financial resources generated by the Petrol Exploitation used only under approbation of the Collège de Contrôle et de Surveillance des Revenus Pétroliers (CCSRP). The reason is that operations and procedures are well documented and recorded, and award and supervision of contracts are also

monitored. Hence, some data are available and easy to be collected. The targeted population from whom data are collected comprise the public procurement officers, the contractors, and the consultants involved in the development of these construction projects. Opinions of some experts or individuals were also sought.

## **1.7 ORGANISATION OF CHAPTERS**

The final report is organized into five chapters as follows:

- Chapter one introduces the problems and the justifications of the study. It states the aim and specific objectives of the work. The scope of the study and the organization of chapters are also part.
- Chapter two is devoted to procurement structures and the analysis of the tender evaluation process, and definition of key terms. It presents also the preliminary list of factors and criteria identified through field survey and literature search.
- Chapter three describes the methodology developed for collecting data, the questionnaire design and development, the determination of sample size and administration of questionnaires. The second part is devoted to the data process and analysis.
- Chapter four presents the analysis and interpretation of the results of the survey. The discussion of the main results is conducted under this chapter.
- Chapter five presents the summary of major findings followed by the conclusions and recommendations. A proposed performance assessment framework is also fully described in this chapter.

# **CHAPTER TWO**

## **PROCUREMENT STRUCTURES AND TENDER EVALUATION PROCESS**

### **2.0 GENERAL**

This chapter is devoted to the procurement structures, analysis of the tender evaluation main activities and performance criteria concept, and the definition of key terms and technical expressions. It presents also the preliminary list of potential factors and criteria identified through literature search and interviews of experts and procurement officers.

Through the literature search, it appears clear that much has been written about Procurement Systems and Tendering Methods during the last two decades. Many documents have been published about Tender Evaluation by different institutions. These range from Tender Evaluation criteria to Audit Program for tendering procedures and award of contracts.

Before getting into the subject, some definitions are given below for a sound understanding of the topic.

## **2.1 DEFINITION OF KEY TERMS**

### **2.1.1 Procurement**

According to the Oxford Dictionary, Procurement is the process of obtaining supplies of something, especially for a government or an organization. It is also the process that is used to deliver construction projects (Ashworth and Hogg, 2000) in the Construction Industry.

The Procurement Process embraces the following phases: initiation, preliminary design and development, detailed design, contracts and procurement, manufacture and construction, commissioning, operation and maintenance. (McCaffer, 2001).

In the context of the study, procurement is said to be a formal process of acquiring works.

In the acquisition of works, the procurement process is governed by a Public Procurement Act (PPA).

### **2.1.2 Public Procurement Act (PPA)**

PPA is a national law that defines the general procedures to follow in acquiring goods, works or services with the prime goal of gaining value for money. In Chad, the Public Procurement Act is known as ‘Code des Marchés Publics – Loi 503 du 5 décembre 2003 or PPA 503, 2003. It stands on the following five pillars recommended by the World Bank (Aaron & al, 2006) :

- Comprehensive;
- Transparent legal and institutional framework;



- Clear and standardized procurement procedures and standard documents;
- Independent control system;
- Proficient procurement staff and anti-corruption measures.

Public Procurement Act 503, 2003 is constituted by hundred and thirty three (133) clauses distributed into Seventeen (17) chapters which are grouped under Eight (8) parts. This law is more elaborate than the previous and contains the following main provisions: general provisions, public procurement entities, procurement rules and methods for goods, works and services, tendering procedures, review and miscellaneous provisions.

For the construction projects, the public procurement process usually involves: project studies, tendering, construction and commissioning of project.

### **2.1.3 Tendering**

Tendering is a purchasing procedure whereby potential suppliers are invited to make a firm and unequivocal offer of the price (Bus-Eireann, 2007). According to McGeorge & Adams (2003), Tendering is a call for tenders or merely 'Invitation to treat'. In construction, Tendering is a formal and legal procedure of soliciting tender offers in order to select the most suitable contractor (Tasmania, 2006).

There are many tendering systems in use in Chad but what is recommended by the PPA is the Selective or Competitive Tendering System. According to Bus-Eireann (2007), Competitive Tendering is an opportunity given to suppliers to provide

works in competition with others. There are three main types of Tendering Procedures :

- **Open** : Any interested supplier or group of suppliers may tender. No tender negotiation is permitted in this procedure.
- **Restricted** : All interested parties submit requests to participate but only those shortlisted are invited to tender. Here also, no tender negotiation is permitted in this procedure.
- **Negotiated** : It is similar to the restricted procedure but allows for post tender negotiation.

All these selective tendering types can be national or international. Generally, Tendering involves invitation to tender, tender evaluation, and award of contract.

#### **2.1.4 Tender Evaluation**

Oxford Dictionary defines **tender** as a formal offer to carry out work at a stated price. In civil engineer terms, the tender has always been considered to be the offer. When this is accepted by the client (after agreement is reached on any modifications) a contract is formed (McGeorge and Adams, 2003). For the study, we assume that **Tender** is a written technical and financial offer submitted in response to invitation to tender.

According to the Dictionary, **evaluate** something means to form an opinion of that thing after carefully considering it.

In the present context, **Tender Evaluation** is a formal approach of assessing tenders. Thus, it can be defined as a process of assessing competitive offers and comparing them to each other in the frame of tendering. It is also an integral part of any major capital



acquisition process. As such, evaluation of tenders is an important phase in tendering process for it provides a sound basis for source selection decisions by providing a structured approach to the assessment of tenders. When used by government, it must ensure that all tenderers are treated equitably, all bids are evaluated according to stated criteria and the costs of tendering are minimized.

### **2.1.5 Performance**

Performance is the effectiveness of the way of doing something (Encarta, 1999). In the production field, performance level equals the standard time for an activity when directly compared with the actual time spent on the task indicates the level of performance physically achieved (McCaffer, 2001).

According to Harvey Maylor (Project Management, 2003), performance is not conformance. He indicated that the emphasis in many business projects today has shifted to excellence being defined in terms of real performance expressed as:

- What is the shortest possible project duration?
- What is the lowest cost?
- What is the highest level of quality that can be achieved?

The table 2.1 illustrates the above assertion with regard to objectives assigned:

**Table 2.1 : Conformance versus performance attributes of Time, Cost and Quality**

Terms	Time	Cost	Quality
Performance	Shortest possible	Cheapest possible	Highest level
Conformance	As planned	As budgeted	As specified

Source: (Project Management, 2003, p 61).

For a system, Performance can be perceived as a measure of the system's ability to produce efficient and satisfactory results compared to standards set out prior to its implementation (CINTERFOR, 2007).

Hence, performance can be equaled to the actual results on the standard expected results; otherwise,

$$\text{Performance} = \frac{\text{Actual results}}{\text{Standard result expected}}$$

#### **2.1.6 Criteria**

A criterion is an accepted standard used in making decisions or judgments about something (Encarta, 1999). According to the NCRESST (1996), a criterion is defined as “guidelines, rules, characteristics, or dimensions that are used to judge the quality of student performance. Criterion therefore indicates what we value in student responses, products, or performances”. In the present study, criteria indicate a set of standard characteristics used in making judgment about Tender Evaluation Process.

#### **2.1.7 Performance Criteria**

Performance Criteria is a description of the quality requirements of the result obtained in labour performance. When defining Performance Criteria, reference is being made to the expected result of the element of competency and to the

assessment of the quality that such result is supposed to show (CINTERFOR / ILO).

Performance criterion in this regard, is the measure of the ability of a process to produce the satisfactory results to both client and contractor. In other words, performance criteria are the results' characteristics of the process near to the objectives assigned.

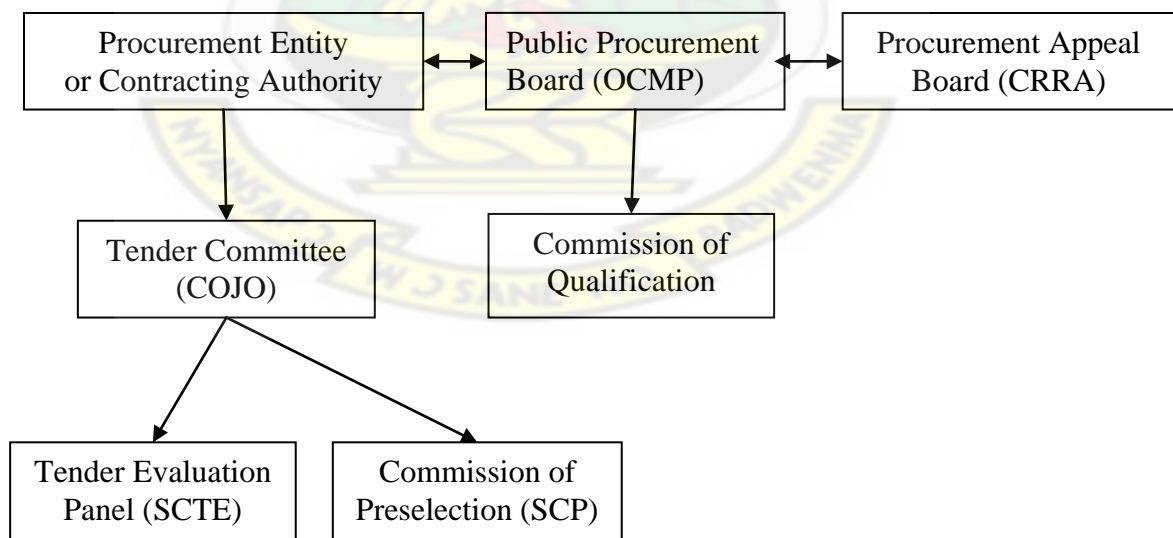
### 2.1.8 Validity Period

It is the period during which all tenders submitted remain valid. No change in bid is allowed during this period.

## 2.2 PROCUREMENT STRUCTURES DESCRIBED BY THE PPA OF CHAD

### 2.2.1 Procurement structures

Procurement structures, as described by the PPA of Chad, can be summarized in the chart below (Fig. 2.1).



**Figure 2.1 Procurement structures in Chad**

### **2.2.2 Public Procurement Board (OCMP)**

According to the article 23 of the PPA, the main mission of OCMP is to ensure that at every stage of the procurement activity, procedures prescribed by PPA had been followed, and its approval is needed at all levels of the tendering procedures. The object of the Board is to harmonise the processes of public procurement to secure a judicious, economic and efficient use of the state resources and to ensure that public procurement is carried out in a fair, transparent and non-discriminatory manner.

### **2.2.3 Procurement Entity**

It is the contracting authority, in charge of the contract award and approval process. Each Procurement Entity establishes an independent Tender Committee as well as a Tender Evaluation Panel and other sub-committees if need be.

The entity directly responsible for tender evaluation is the Tender Committee (COJO) which appoints the Tender Evaluation Panel according to the provisions of PPA 503 as described below in section 2.2.4. However, the evaluation of tenders is actually performed by the panel which can change from one project to another.

As shown in the figure 2.1 above, there are three levels of entities involved in the tender evaluation process: Contracting authority, tender committee, and tender evaluation panel.

### **2.2.4 Tender Committee (COJO)**

The mission of any COJO is to ensure that at every stage of the procurement activity, procedures prescribed by PPA had been followed. It shall exercise a sound judgment in

making procurement decisions. It is the main entity responsible for the TE and oversees all related activities.

The membership of the COJO consists of at least 7 people :

- A chairperson who is the General Secretary of the Ministry
- A representative of the final user
- A representative of Ministry of Finance
- A representative of Ministry of Economic Planning
- An independent person appointed by the Procurement Entity
- A representative of Government General Secretariat
- A representative of OCMP

#### **2.2.5 Tender Evaluation Panel (SCTE)**

It performs the evaluation of tenders up to the report. The membership of the Tender Evaluation Panel consists of at least 5 people :

- A chairperson who is the a representative of Ministry of Finance
- Project Manager or Representative of the project beneficiary
- A representative of Consultant
- A representative of Government General Secretariat
- A representative of OCMP

### **2.3 TENDER EVALUATION PROCESS**

In Chad as in Ghana, public works procurement is generally governed by a PPA with the main aim of gaining Value for Money and construction in a short time and at the right price. From then, whatever tendering system selected, tender evaluation becomes capital

to the client. An efficient TEP gives satisfaction to both client and contractor. It helps to improve bidding strategies and gain good reputation to the procurement practices.

Evaluation of tenders involves many activities such as receiving, opening, examination, comparison and classification of bids, and reporting. These processes are carried out by Tender Committee and are fully described and discussed below. If there is any delay in any of these activities, the success of project gets affected.

### **2.3.1 Main activities of Tender Evaluation Process**

As stated earlier, tender evaluation starts from submission of tenders to the approval of Tender Evaluation Report. According to CIDB, Evaluation of Tenders is the fourth among seven activities. These seven sub-activities involved in the evaluation process as observed by the CIDB (pp 12&13) are as follows:

- Open and record tender offers received
- Determine whether or not tenders offers are complete
- Determine whether or not tenders offers are responsive
- Evaluate tender submissions
- Perform a risk analysis
- Prepare a tender evaluation report
- Confirm recommendation contained in the tender evaluation report.

In developing a Standard Tender Evaluation Format, the EBRD (2005) indicated that to perform successfully tender evaluation process, the panel has to fill the following standard forms :

- Record of tender prices at opening
- Examination of tenders
- Substantially non-responsive tenders
- Correction, conversion and adjustment of tender prices
- Tender subject to detailed evaluation
- Evaluation of tenders
- Comparison of tenders
- Post qualification

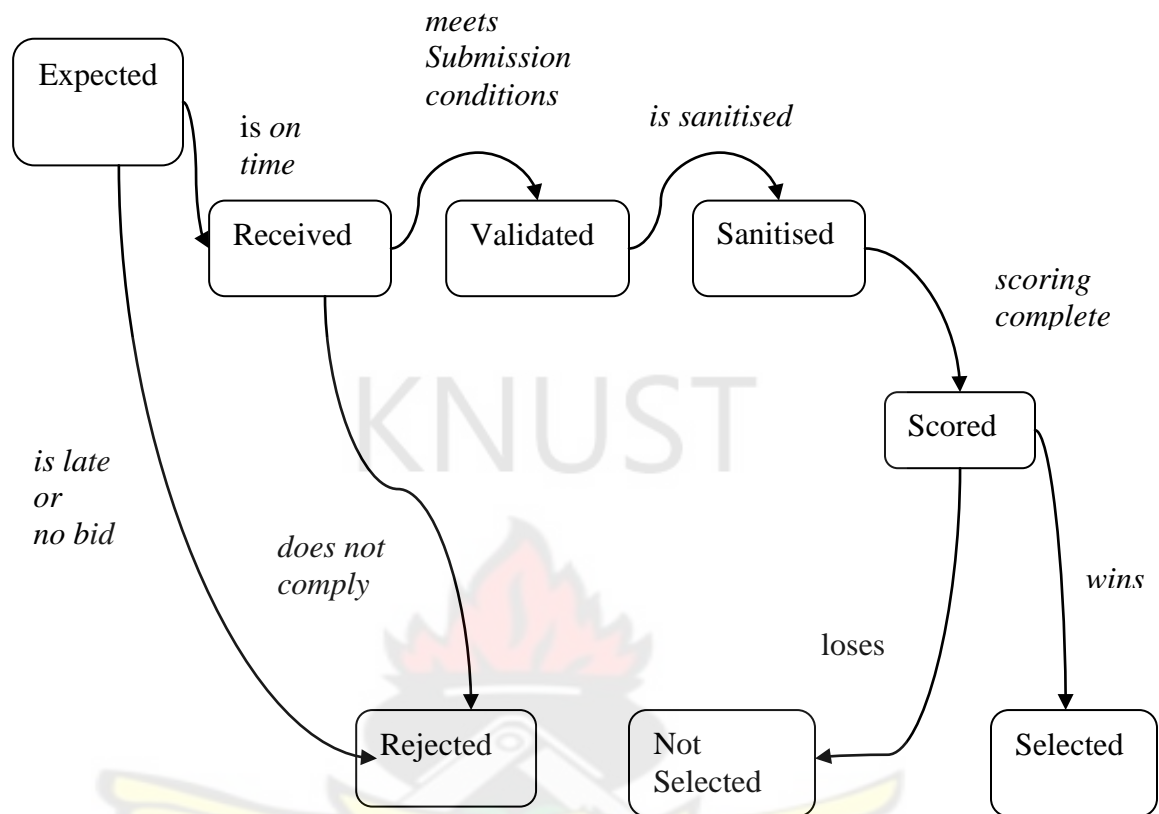
Besides, nine others forms of appendices are added to help in auditing all procedures and administrative decisions to approve the effectiveness of the process; meaning that the process is complex and needs to be performed carefully by qualified, competent and experienced team.

Jackson (2000), describes the Tender Status throughout the process as follows :

- At start, if the **Expected** tender is on time, it is received; if not, it is rejected.
- If a **Received** tender meets submission conditions, it is validated. If it does not comply, it is rejected.
- The **Validated** tender is sanitized (examined).
- Tender **Sanitized** is scored.
- When a **Scored** tender wins, it is **Selected**. If it loses, it is not selected.

The Figure 2.2 below illustrates the process.





**Figure 2.2 : Tender (Bid) Status** (Source : © 2000 Quality Systems & Software, Inc. www.qssinc.com).

In the Chadian PPA, tender evaluation stages are fully described in articles 51 and 52 translated into English in the Appendix 1. Compared to the PPA 663 of Ghana, it appears that the following six steps form the structure of tender evaluation process :

- Submission of tender
- Opening of tenders
- Examination of tenders
- Responsiveness of tenders



- Evaluation of tenders
- Tender evaluation report

These steps are very similar to those proposed by European Bank of Reconstruction in its Tender Evaluation Audit Program.

In the light of the above descriptions or propositions of steps or activities, it could be concluded that TE varies little from one country to another and from one institution to another. But, in essence, TEP performs the five following main steps described with detail below in a chronological order: Submission, opening, examination, evaluation, and reporting.

### **2.3.2 Tender Submission**

In a competitive selection, expected tenders must be submitted on time fixed, at the indicated venue and according to the bids presentation conditions specified in tender documents. Tenders that do not comply with the requirements are rejected while those that comply are received. All tenders received must be registered with the following information: name and address of bidder, date and time of submission. Then, a tender shall be in writing, signed and be submitted in a sealed envelope. Lastly, the procurement entity shall provide the tenderer with a receipt showing the date and the time when its tender was received.

### **2.4.3 Opening of tenders**

Only received tenders are opened in the presence of bidders or their representatives. Tender opening aims to verify publicly the completeness of bids in order to eliminate

those that are not complete. Only complete tenders are also validated while others are rejected. The name and address of each contractor whose tender is opened and the tender price shall be announced to the present and the absent tenderers. The tender price shall be recorded immediately in the record of tendering proceedings. Minutes of the meeting must be signed by the attendance and the full list is attached. This activity is usually effected by the COJO or an appointed team and the documents handed over to the Tender Evaluation Panel for detailed evaluation. The original of each opened bid is kept by the OCMP for control purposes.

#### **2.3.4 Examination of tenders**

The goal of the examination is to verify the responsiveness of tenders. Only satisfactory or validated bids are subject to detailed examination according to tender evaluation criteria and other instructions to bidders clearly defined in tender documents. Generally, the criteria are intended to assess the competence of the tendering organizations to achieve the required project outcome and are used to rate each of the tenders. The criteria must be relevant to the project, they must be able to be evaluated in a meaningful way and they must be able to be used to allocate a score to the tender submissions. The criteria are usually selected from the following:

- relevant experience;
- appreciation of the task through a proposed methodology;
- past performance;
- management and technical skills;
- resources (personnel, plant, financial, ...)

- management systems; and
- price.

### **2.3.5 Evaluation of tenders**

Following the examination, evaluation of tenders consists of assessing or scoring, comparing and ranking bids. Each examined bid is scored, compared to others and finally ranked in order of merit. Tenders are scored according to the information provided. In an evaluation of tenders using weighted criteria, the evaluation is performed in three major phases :

- scoring non-price criteria : According to McGeorge and Adams, assessing the non-price attributes of the tenderers is the heart of the TEP and is where the Experience, Skills and Judgment of the Tender Evaluation Team are put to the best (TETP, 2003). Generally, a weight in percentage is assigned to each relevant non-price criteria and an overall score is allocated to the phase. The highest non-price total score is given the high mark.
- scoring price : Scores for price are based on the following method : the lower the price, the higher the score. The other are scored accordingly in proportion.
- total score : It is the sum of non-price score and the price score.

### **2.3.6 Reporting**

Any tender evaluation process is ended by a report, written by the panel. The report must recommend the suitable contractor with regard to the legal rules and principles; then the

report is submitted to tender committee for approval. Generally, the tender with high total score is recommended as winner.

Briefly, Tender Evaluation Process starts from the submission of tenders and ends with the approval of tender evaluation report.

## **2.4 PERFORMANCE CRITERIA**

Three key factors must be kept in mind when achieving construction projects' objectives: time, cost and quality. The PPA provides some measures, essentially time based, to ensure the timely performance of the tendering processes. These are :

- Time for tender preparation; a minimum of eight (8) weeks are allocated in the normal circumstances for the big projects and can be shortened to four (4) weeks for the smaller.
- Validity period must be less or equal to 90 days depending on the tendering method chosen. This period could be extended if necessary. In case of extension, the written agreement from tenderers is solicited. If the TEP delays beyond the validity period, tenders are no more valid and the whole process must be canceled or restarted.
- Tender evaluation duration is the maximum time legally granted to perform the whole process. In Chad, thirty (30) days are allocated to this.
- Time for approval of tender evaluation report; seven (7) days are allocated to this.

- Period to enter to contract is the maximum time granted to the procurement entity to perform the whole contract's approval process. Thirty (30) days is also allocated to this. Concerning the approval of contracts, the PPA provides three levels/capacities of approval according to the amount of the project as follows:

- Contracting Authority when the amount of the contract is less than CFA 10,000,000 ;

- Minister of Finance when the amount is less than CFA 50,000,000 ; and

- President of the Republic when the amount is above CFA 50,000,000.

The tendering procedure can be illustrated in fig. 2.3 in the next page with regard to the time set for each main activity.

The goal of such provisions is to motivate all procurement entities involved to perform tender evaluation and gain approval of the report on time. Thus, an efficient Tender Evaluation Process results in the following outputs: timely report considering the validity periods set by the invitations to tender; and selection of competent contractor for the purposes of the current assignment.

As a conclusion, Tender Evaluation Process of works procurement would be considered as effective if the process is performed on legal time, the contract is awarded within the validity period and selected contractors executing the works according to contractual specifications, within the budgeted costs, and commissioned on contract period.

# KNUST



## **2.5 FACTORS AFFECTING THE PERFORMANCE OF TEP**

As stated earlier, the performance of TE can be influenced by some factors upstream and downstream, internal or external to the process.

According to Tasmania (2006), the following are required in achieving value for money when procuring work:

- clear project definition ;
- Selection of the best procurement method.

These considerations, related to the project characteristics and the procurement methods, are reflected normally in Tender Documents.

Tam and Harris (1996) identified the following key influential factors likely to impact on time, cost and quality:

- Complexity of the project: A complex project in term of sophistication or hugeness does affect the time of study and the quality of Tender Documents. Nature, Type, Size, and Cost are other project's characteristics to be taken into consideration when establishing tender evaluation criteria.
- Experience of the contractor in tendering: This is an important factor that influences the quality of bids.
- Contractor's past performance: It is one of the main evaluation criteria and do affect TEP for its reputation is based on it.



These above assertions have suggested the following key words and expressions: Project's nature and project team responsible for the development of tender documents, Client experience or familiarity with tendering procedures, Contractor's experience and past performance through bids submitted. Added to the results of discussions and interviews with some experts, several factors are identified and fall into six categories as follows:

### **2.5.1 Client**

According to Tam and Harris (1996), another key influential factor related to the client is the Supervision of quality and progress by Client's project leader. Adjei Kumi, (2007), mentioned that the degree of involvement and the role of the client are determinant in the project success. These factors depend on:

- The structure of the client's organization
- Client's knowledge and experience of the construction process
- Authority vested in the various levels of the client's organization
- Personal characteristics of the client's people who have the responsibility for the project.

Concerning public clients, Chadian PPA classifies them into the following five groups:

- Presidency;
- Great State Institutions;
- Ministries;
- Regional Governments; and



- Other public institutions.

It appears obvious that client does influence strongly the performance of the TE in the sense that its status, objectives, and role must be considered at any level of the process.

Therefore, factors needing consideration are:

- Category or type of the client;
- Client experience in public procurement;
- Client procurement plan.

### **2.5.2 Project**

Under Project, it was identified that the following factors are essential:

- type and nature of project in terms of complexity;
- the cost of the project ;
- the size of project in terms of quantity of works;
- project timeframe and risks in case of delay.

### **2.5.3 Tender documents**

The influence of tender documents on TE can be manifested at different levels. The following factors are identified as relevant in this regard:

- method of procurement (competitive or negotiation);
- tendering procedures (opened or restricted) ;
- clarity of evaluation procedures / requirements ;
- price of tender documents ;

- eligibility (qualification) criteria of tenderers ;
- tender evaluation criteria;
- validity period of tenders;
- time for preparation of tenders ;
- time for evaluation of tenders;
- pre-tender estimates.

#### 2.5.4 Tenders

They are the raw materials for the TE and can generate the following internal factors that can influence the decisions when performing the process:

- the origin or nationality of tenderer;
- the classification into different categories of tenderers;
- the qualification into different domains of constructions;
- the experience of tenderer in bidding strategies ;
- the quantity of bids submitted ;
- the quality of bids evaluated;
- the official price list;
- the tender securities ;
- the reputation of tenderer.

For instance, less number and good quality of tender offers can facilitate evaluation.

Now, good quality of bids depends on contractors' qualification, classification and past

experience, and tender documents quality; for an offer presented exactly in conformity with the instructions would be easy to evaluate.

### **2.5.5 Tender committees**

It is under this Tender Committees that human factors are identified. These factors can be divided into the following to be considered as determinant in the implementation of tender evaluation process:

- the number of tender committee members ;
- status and profile of members ;
- experience of tender committee members;
- motivation of tender evaluation panel members ;
- deadline for approval of Tender Evaluation report;
- work load of tender committee;
- number of approvals prior to final award of contract ;
- capacity of contract approval authority.

### **2.5.6 External Factors**

Preliminary survey based on the interviews conducted by the author reveals that there are some external factors that do influence sensibly the process. The relevant ones were:

- moral pressure such as corruption and conflict of interest ;
- political pressure in awarding contracts only to the party members ;
- relation with other external public services (duties, tax, insurance, VAT).

Table 2.2 below gives the full list of potential factors obtained from literature search and interviews the researcher conducted.

**Table 2.2 Potential Factors considered being relevant in affecting the performance of TEP**

No.	Code	Potential factors
	<b>1</b>	<b>The Client :</b>
1	11	Category and type of the client
2	12	Experience of the client in tender procedures
3	13	Procurement Plan of the client (work load)
	<b>2</b>	<b>The Project :</b>
4	21	Type and Nature of project (complexity)
5	22	Cost of project
6	23	Size of project in terms of quantity of works
7	24	Project Timeframe and Risks in case of delay
	<b>3</b>	<b>Tender Documents :</b>
8	31	Method of Procurement (competitive, negotiate)
9	32	Tendering procedure (open, restricted, ...)
10	33	Clarity of evaluation procedure / requirements
11	34	Price of tender documents
12	35	Eligibility criteria of tenderers
13	36	Tender evaluation criteria
14	37	Validity period of tenders
15	38	Time for preparation of tenders
16	39	Time for evaluation of tenders
17	310	Pre-tender Estimates
	<b>4</b>	<b>Tenders :</b>
18	41	Origin or nationality of tenderer
19	42	Qualification of tenderer
20	43	Classification of contractors firms
21	44	Experience of tenderer
22	45	Quantity of bids to be evaluated
23	46	Quality of bids to be evaluated
24	47	Official price list
25	48	Tender securities
26	49	Reputation of tenderer
	<b>5</b>	<b>Tender committees :</b>
27	51	Number of tender committee members
28	52	Status and profile of members
29	53	Experience of tender committee members
30	54	Motivation of tender evaluation panel members
31	55	Deadline for approval of tender evaluation reports
32	56	Work load of tender committee
33	57	Number of approvals prior to final award of contract
34	58	Capacity of contract approval authority
	<b>6</b>	<b>External factors :</b>
35	61	Political pressure
36	62	Moral pressure
37	63	Relation with other external services (tax, insurance, duties,)

## 2.6 MEASURABLE PERFORMANCE CRITERIA

Talking of performance in construction, the first consideration is to determine the nature of the three key objectives: Time, Cost and Quality (Maylor, 2003).

Among the key principles of good practice to be adopted when appointing contractors in competition set out by the Construction Industry Board (CIB), 1997, UK in Code of Practice for the Selection of Main Contractors, there are two related to the time and the stakeholders of the project:

- a sufficient time should be given to the preparation of tenders. A minimum of 8 weeks is recommended as time to return tender;
- there should be a commitment to teamwork from all parties. (Practice and Procedure for the Quantity Surveyor, Procurement pp 180 – 182).

As fully explained in the section 2.4, time is a well defined criterion in the PPA because time sections are allocated to the various activities involved in the procurement cycle. The same can be seen in the PPA of Ghana even if the times set are different. In spite of these measures, time limit set for the signature of contracts especially those that are to be signed by The President of the Republic, is scarcely respected.

Besides time, other criteria cannot be neglected. For instance, the quality of works depends on the quality of contract which derives from bids that reflect generally tender documents quality. Hence, the following performance areas are considered to characterize the tender evaluation performance in Chad: cost, time, contract, tender, and Invitation to tender.

### **2.6.1 Cost**

Cost is one of the essential elements in construction industry confirmed by many sources cited in this document. Depending on the client's objectives, the following criteria could be indicators of performance for cost:

- Percentage of savings ;
- Rate of execution of Procurement Plan ;
- Ratio of riders or amendments to contracts.

### **2.6.2 Time**

Time is the unique criterion clearly defined in PPA to enhance the efficiency of the procurement entities to timely perform the procurement process. The determinant criteria are as follows:

- Time for evaluating tenders,
- Time for approving tender evaluation report,
- Time for awarding contracts,
- Time for approving or signing contracts.

### **2.6.3 Tender**

Tenders are the main inputs in TEP. Every bid is assessed and its results are compared to others. Hence, the performance can be related to the following criteria:

- Number of bids received;
- Number of bids rejected;
- Number of evaluated tenders;

- Number of protests or litigations generated;
- Number of disputes resolved.

#### **2.6.4 Contract**

Contract is the final target of the TEP, making it an essential performance domain. In practices, it appears very difficult to know how long it would take to get approval of contract since the submission of tender evaluation report. Therefore, the following criteria were identified to measure the performance with regard to contracts:

- Number of contracts' proposals submitted;
- Number of contracts' proposals rejected;
- Number of contracts awarded;
- Number of successful contractors;
- Number of contracts awarded on legal time;
- Number of contracts awarded within the validity period;
- Number of contracts approved on legal time;
- Number of contracts performed on contract's period.

#### **2.6.5 Invitation to Tender**

As a base and a frame of the TEP, the success of the process depends highly on both the quality and the quantity of invitations to tender launched. Under this area, the following measurable criteria are identified:

- Number of invitations to tender launched;
- Number of invitations to tender declared unsuccessful;



- Number of requests for clarification received and treated;
- Number of notifications issued to unsuccessful tenderers;
- Number of tender evaluation reports written;
- Number of tender evaluation reports rejected and redrafted.

Potential criteria identified are listed in the Table 2.3 below.

**Table 2.3 Measurable criteria identified as characterizing the performance of TEP**

Order No.	Code	Potential measurable performance criteria
	<b>1</b>	<b>Costs</b>
1	11	Percentage of savings on the budget
2	12	Rate of execution of Procurement Plan
3	13	Ratio of amendments or riders to contracts
	<b>2</b>	<b>Time</b>
4	21	Time for evaluating tenders
5	22	Time for approving tender evaluation report
6	23	Time for awarding contracts
7	24	Time for approving or signing contracts
	<b>3</b>	<b>Tenders</b>
8	31	Number of bids received
9	32	Number of bids rejected before evaluation
10	33	Number of evaluated tenders
11	34	Number of protests or litigations generated
12	35	Number of disputes resolved
	<b>4</b>	<b>Contracts</b>
13	41	Number of contracts' proposals submitted for approval
14	42	Number of contracts' proposals rejected
15	43	Number of contracts awarded
16	44	Number of successful contractors
17	45	Number of contracts awarded on legal time
18	46	Number of contracts awarded within validity period
19	47	Number of contracts approved on legal time
20	48	Number of contracts performed on contract's period
	<b>5</b>	<b>Invitation to tender</b>
21	51	Number of invitations to tender launched
22	52	Number of invitation to tender declared unsuccessful
23	53	Number of requests for clarification received and treated
24	54	Number of notifications issued to unsuccessful tenderers
25	55	Number of tender evaluation reports written
26	56	Number of tender evaluation reports rejected and redrafted

The questionnaire was essentially based on tables 2.2 and 2.3.

## **CHAPTER FOUR**

### **SURVEY RESULTS, ANALYSIS AND DISCUSSION**

#### **4.0. GENERAL**

This chapter presents survey results, data analysis and interpretation. The results are displayed according to the order of questions from questionnaire. The main findings are briefly presented and discussed accordingly. The different sections are as follows:

- responses rates ;
- experience of respondents ;
- determination of relevant factors affecting the performance of tender evaluation;
- the use or not of any system of performance measurement ;
- the use or not of any mechanism of documents' verification ;
- the establishment of pertinent performance measurable criteria of tender evaluation process.

#### **4.1 RESPONSES RATES**

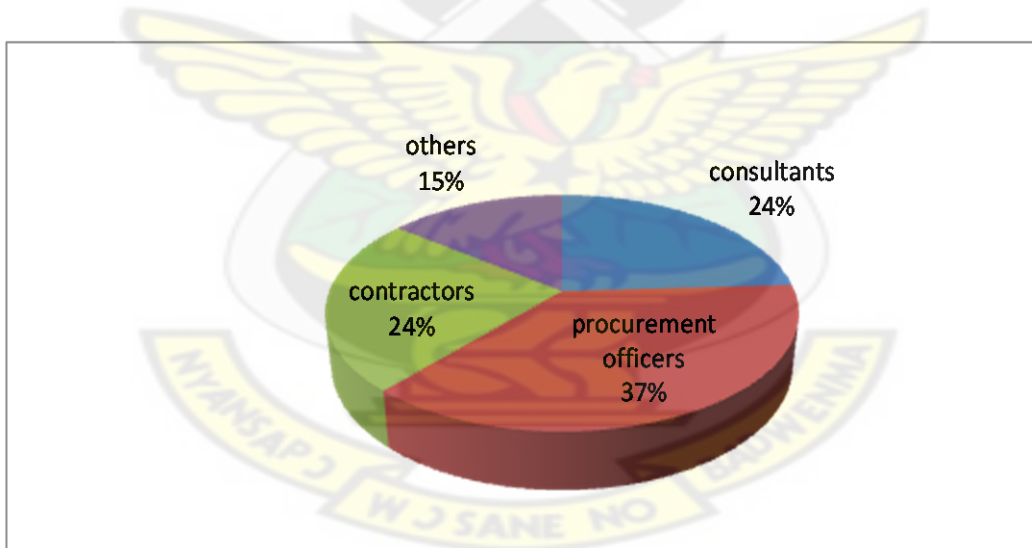
A total of 106 questionnaires were issued and a total of 62 valid questionnaires representing 58.5 % were returned. One was not fully completed and was declared non valid. The general score of 58.5 % is due to the fact that the questionnaires were administered during the end of year when top managers of firms are on holidays and under the threat of civil war.

Responses rates are tabulated below:

**Table 4.1a : Response to questionnaire**

Classes	Questionnaires issued	Questionnaires returned	%
Consultants	29	15	24.2
Procurement Officers	30	23	37.1
Contractors	34	15	24.2
Others	12	9	14.5
<b>Total</b>	<b>106</b>	<b>62</b>	<b>100</b>

Graphical representation is also shown below to illustrate the results.



**Figure 4.1 Response Rates**

Responses rates per class of respondents are shown in the Table 4.1.b below. The class of contractors has the lowest score with 44.1 %. The reason is that most of the construction

firms' managers are not interested in such study or are not able to answer correctly the questionnaires. Some did not even understand the questions.

**Table 4.1b: Responses rates per class**

<b>Classes</b>	<b>Questionnaires issued</b>	<b>Questionnaires returned</b>	<b>% per class</b>
Consultants	29	15	51.7
Procurement Officers	30	23	76.7
Contractors	34	15	44.1
Others	12	9	75.0

#### **4.2 EXPERIENCE OF RESPONDENTS**

The majority of respondents (56.4 %) had more than 5 years of experience in the Public Procurement practices. This means that the results represent the point of view of experienced people. The details are shown in the Table 4.2 below.

**Table 4.2: Experience of respondents**

<b>Experience</b>	<b>Number of valid questionnaires returned</b>	<b>Percentage to the expected</b>
< than 3 years	10	16.2 %
3 to 5 years	17	27.4 %
5 to 10 years	18	29.0 %
> than 10 years	17	27.4 %
<b>Total</b>	<b>62</b>	<b>100 %</b>

### **4.3 FACTORS AFFECTING THE PERFORMANCE OF TEP**

#### **4.3.0 General**

Out of the 37 factors identified and distributed, one factor was added by three respondents: The margin of preference.

The results analysis of responses returned were processed and tabulated in the Table 4.3 in the next pages. The table contains the following information for each item : Item number, item code, description of factor, response frequencies, weighted mean rate, severity index, standard deviation, coefficient of variation, overall ranking, strength of category.

Note that, the following are scale of rating:

- 1 = not important
- 2 = fairly important
- 3 = very important

As assumed in the methodology above, a factor indicating a Severity Index (SI) of 67 % or more (Elhag and Boussabaine, 2002) is considered as relevant in affecting the performance of TEP in Chad. Thus, the 30 factors considered to be relevant are listed below in order of significance.

# KNUST



# KNUST





Overall	Factors affecting performance	Severity
Rank		Index
1	Tender evaluation criteria	95.16
1	Experience of tender committee members	95.16
3	Clarity of evaluation procedure / requirements	93.55
4	Experience of the client in tender procedures	92.47
4	Experience of tenderer	92.47
6	Qualification of tenderer	88.71
7	Motivation of tender evaluation panel members	88.17
8	Project Timeframe and Risks in case of delay	87.63
9	Time for evaluation of tenders	86.24
10	Quality of tenders to be evaluated	86.02
11	Eligibility criteria of tenderers	84.95
12	Capacity of contract approval authority	81.18
13	Type and nature of project (complexity)	80.65
14	Status and profile of tender committee members	80.11
15	Deadline for approval of tender evaluation reports	79.57
15	Size of project in terms of quantity of works	79.57
17	Classification of contractors' firms	79.19
18	Cost of project	78.49
18	Time for preparation of tenders	78.49
18	Tendering procedures (open, restricted, )	78.49
21	Political pressure	75.96
22	Number of approvals prior to final award of contract	74.73
22	Method of procurement (competitive, negotiation)	74.73
24	Reputation of tenderer	74.19
25	Quantity of bids to be evaluated	73.12
26	Procurement Plan of the client (work load)	72.04
27	Work load of tender committee	71.51
27	Moral pressure	71.51
29	Relation with other services: tax, insurance, duties	69.89
30	Category and type of the client	68.28

From the list above, the classification by strength of category of factors gives the following ranking:

**Table 4.4: Ranking of Strength of category of factors**

Categories of factors	SI Score in %	Rank
Tender Documents	91.65	1 <sup>st</sup>
Tenders	89.07	2 <sup>nd</sup>
Tender Committees	88.17	3 <sup>rd</sup>
Project	82.62	4 <sup>th</sup>
Client	77.60	5 <sup>th</sup>
External factors	72.45	6 <sup>th</sup>

Table 4.4 above indicates clearly that the top three categories of factors are: Tender documents, Tenders and Tender Committees. This is confirmed by the fact that eleven top factors with SI more than 83 % are grouped under them. These categories are discussed below.

#### **4.3.1 Tender Documents**

Tender Documents is the highest ranked category scoring 91.65 %. There are 10 factors included in this category. Their Coefficients of variation range between 0 % and 9 % which are low indicating a good agreement level among the respondents. These variables achieved Severity Indices ranging between 50 % and 96 % (Table 4.4). Their overall ranking ranges between 1 and 37 but only seven factors have SI exceeding 67 %. It

shows therefore that the seven factors are actually crucial in affecting the performance of TEP.

#### **4.3.2 Tenders**

This is the second ranked category with a score of 89.07 %. Included in this category are 9 factors. Their severity indices range between 58 % and 89 %. Out of these, six factors gained SI above 67 % which indicate their importance and can therefore be considered as significant in affecting the performance of TEP. They have very low coefficients of variation ranging between 0 % and 6 %. This is an indication of high level of agreement among the respondents. Their overall ranking ranges from 4 to 36.

#### **4.3.3 Tender Committees**

It holds the third position with 88.17 %. Included in this category are 8 factors. Their severity indices range between 59 % and 96 %. Out of these, 7 factors gained SI above 67 % which indicate their importance and can therefore be considered as significant in affecting the performance. They have very low coefficients of variation ranging between 0 % and 5 %. This is an indication of high level of agreement among the respondents. Their overall ranking ranges from 1 to 35.

#### **4.3.4 Project Characteristics**

Project Characteristics scored 82. 62 %. Under this category fall four factors with SI more than 67 % and very low coefficients of variation (0 % to 2%). Their overall ranking ranges from 8 to 18. All these factors are therefore rated as significant in affecting the TEP performance of works procurement in Chad.

#### **4.3.5 Client**

Client is ranked fifth with 77.60 %. Under this category fall three factors with SI more than 67 % and very low coefficients of variation ranging from 1% to 3%. Their overall ranking ranges from 4 to 30. All these factors are therefore rated as significant in affecting the TEP performance of procurement works in Chad.

#### **4.3.6 External Factors**

This is the least ranked category with a score of 72.45 %. This category has 3 factors included in it. They maintained SI ranging from 69 % to 76 %. Their COV range from 0 % to 2 %, which is low indicating high level of agreement among respondents. They are however, ranked from 21 to 29. All factors are considered to be relevant in affecting TEP performance.

In conclusion, to gain good performance from tender evaluation process, the emphasis must be put on:

- the quality of tender documents which must be the highest possible ;
- the quality of tenders which mostly depend on tenderers' experience and Tender Documents quality ; and
- the requisite and relevant experience of the tender committee members.

#### **4.4 THE USE OF A SYSTEM OF PERFORMANCE MEASURE OF TEP**

To this issue, survey results are shown in the Table 4.5 below:

**Table 4.5: the use of a system of performance measure of TEP**

Answers	Number of responses	Percentage (%)
YES	6	9.7
NO	56	90.3
<b>Total</b>	<b>62</b>	<b>100</b>

The overwhelming majority of responses (90.3 %) show that there is no formal system to measure the performance of TE currently in use in Chad. Though, 9.7 % have suggested Internal Control System and External Auditing Procedures, those practices are usually used to assess the procedures in compliance with the manuals of procedures on one hand and with the PPA instructions on other hand; but are not specifically used to assess the performance of TEP. A framework for performance assessment is proposed in the next chapter to address this issue.

#### **4.5 THE USE OF A MECHANISM OF DOCUMENTS VERIFICATION**

The results of the survey are shown in the Table 4.6 below: The 33.9 % positive responses mentioned the following two mechanisms:

- The Certification by a Solicitor or Notary: It means that all particulars submitted in the bids must be attested by a Solicitor to be correct and valid.
- Verification from the source of issuance of the document: Normally, every official document regularly issued by an official must be recorded.

**Table 4.6: The use of a Mechanism of documents' verification**

Answers	Number of responses	%
YES	21	33.9
NO	41	66.1
<b>Total</b>	<b>62</b>	<b>100</b>

The high proportion of negative responses (66.1%) can be explained by the following:

- These mechanisms are not legally established ;
- These mechanisms are not very important in the selection ; and
- Tender Evaluation Panel members ignore or misuse them.

This problem deserves a particular attention because authentic documents are helpful for the evaluation process and give credit to the tenderers.

## **4.6 MEASURABLE PERFORMANCE CRITERIA**

### **4.6.0 General**

On the 26 potential performance criteria identified and circulated, one criterion was added by two respondents: the number of negotiated contracts. The results analysis of responses returned were processed and tabulated as shown in Table 4.7 in the next pages using the same format and scale of rating described above in paragraph 4.3.0.

As assumed in the methodology in chapter three, a criterion indicating a Severity Index (SI) of 67 % or more (Elhag and Boussabaine, 2002) is considered as significant in characterizing the performance of TEP in Chad. Thus, the 24 relevant measurable criteria are listed below.

# KNUST





# KNUST



<b>Overall Rank.</b>	<b>Measurable performance criteria</b>	<b>Severity Index</b>
1	Time for approving or signing contracts	93.01
2	Time for evaluating tenders	91.94
2	Number of contracts approved on legal time	91.94
4	Number of contracts awarded on legal time	91.40
5	Number of contracts performed on the period of contract	87.63
6	Number of tender evaluation reports written	85.48
7	Number of contracts awarded	84.95
8	Time for awarding contracts	84.41
9	Number of evaluated tender offers	83.87
10	Time for approving tender evaluation report	82.26
11	Number of contracts awarded within validity period	81.72
12	Rate of execution of procurement plan	80.65
13	Percentage of savings on the budget	77.96
14	Number of tender evaluation reports rejected and redrafted	74.73
15	Number of protests or litigations generated	73.66
16	Number of requests for clarification received and treated	72.04
17	Number of successful contractors	71.51
18	Number of notifications to unsuccessful tenderers	70.97
19	Number of contracts proposals submitted for approval	69.89
20	Number of disputes resolved	68.28
20	Number of invitation to tender declared unsuccessful	68.28
22	Number of tenders received	67.74
23	Number of invitations to tender launched	67.20
23	Number of contracts proposals rejected	67.20

The classification by strength of performance area gives the following ranking:

**Table 4.8: Ranking of strength of performance areas**

Performance area	SI Score in %	Rank
Time	89.78	1 <sup>st</sup>
Contracts	88.17	2 <sup>nd</sup>
Invitations to tender	77.42	3 <sup>rd</sup>
Tenders	75.27	4 <sup>th</sup>
Costs	73.12	5 <sup>th</sup>

This classification reveals that all the performance areas have scored Severity Indices more than 67 %, indicating that all are relevant to characterize the performance of TEP. Time and Contracts are the most significant with 89.78 % and 88.17 % respectively. This is confirmed by the fact that the top nine criteria are grouped under these two groups.

The establishment of Performance criteria being the aim of the study, major measurable criteria are discussed below under their respective performance area.

#### **4.6.1 Performance area one : Time**

From the list above, the top two criteria fall under Time and therefore make it the highest ranked measurement of TEP performance with a SI of 89.78 %. Included in this area are 4 criteria. Their SI range between 82 % and 94 % which are above 67 %. They have very low coefficients of variation ranging between 1 % and 4 % indicating high level of agreement among the respondents. Their overall ranking ranges from 1 to 10.

This high score of Time confirms the fact that delays in tendering are manifest in Chad. It also expresses the hope of stakeholders to have the process performed in the shortest time possible. Indeed, value of money is like value of time because time is money.

We can infer from this result that every activity in the process must be timely effected to ensure a good performance. In that words, what concerns Time deserves high consideration. The three relevant performance criteria under Time are as follows in the order of significance:

**- Criterion 1 : Time for approving contracts**

This measures the length of time within which a contract proposal is approved. Although the legal time granted by the PPA for the approval of a contract is 30 days, this period is never respected; meaning that, even in instances where the tender evaluation activity is timely effected, the contract approval stage would take several weeks.

**- Criterion 2 : Time for evaluating tenders**

This measures the duration of the evaluation process up to its end. For instance, when it is less or equal to the legal period set by the Public Procurement Act, it indicates that the process is efficient.

**- Criterion 3: Time for approving tender evaluation reports and provisional award of contracts**

This measures the length of time within which a tender evaluation report and contract proposal are approved.

#### **4.6.2 Performance area two: Contracts**

The second top performance area is Contracts with a SI of 88.17 %. Included in this area are 8 criteria. Their SI range between 67.2 % and 92 % which are all above 67 %. They have very low coefficients of variation ranging between 1 % and 4 % indicating high level of agreement among the respondents. Their overall ranking ranges from 2 to 23.

The contract being the final target of TEP, ranked very high expressing the hope of respondents to have as many as possible contracts approved within the legal time. The relevant performance criteria under Contracts are as follows in the order of significance:

- **Criterion 4 : Number of contracts approved within legal time and within validity period**

This measures the quantity of contract's proposals that are approved within 30 days.

- **Criterion 5 : Number of contracts awarded on legal time**

This measures the quantity of contracts effectively awarded within the legal time.

- **Criterion 6 : Number of awarded contracts performed on time**

This measures the quantity of awarded contracts which are executed on contractual period without delay.

#### **4.6.3 Performance area three : Invitations to tender**

Invitations to tender scored a SI of 77.42 %. Six (6) criteria are included in this area. Their SI range between 67.2 % and 86 % which are all above 67 %. They have very low

coefficients of variation ranging between 0 % and 3 % indicating high level of agreement among the respondents. Their overall ranking ranges from 6 to 23.

The relevant performance criteria under this area are as follows in the order of significance :

- **Criterion 7 : Number of tender evaluation reports written**

This measures the total number of tender evaluation reports written and submitted within the legal period. If there is no rejection, this number will be equal to the number of invitations to tender launched; meaning there was no unsuccessful invitation to tender.

- **Criterion 8 : Number of requests for clarification received and treated**

This measures the number of requests for clarification received and attended to within the process period and according to the PPA provisions.

- **Criterion 9 : Number of notifications issued to unsuccessful tenderers**

This measures the number of notifications issued to unsuccessful tenderers after the award of contracts and according to the prescriptions of PPA.

#### **4.6.4 Performance area four : Tenders**

Tenders scored a SI of 75.27 %. Five (5) criteria are included in this area. Their SI range between 55 % and 84 %. One has a SI below 67 %. They have very low coefficients of

variation ranging between 0 % and 8 %. This is an indication of high level of agreement among the respondents. Their overall ranking ranges from 9 to 26.

The relevant performance criteria under tenders are as follows in the order of significance:

- **Criterion 10 : Number of tenders received and evaluated**

It measures the total number of competitive tenders received and evaluated by the COJO.

- **Criterion 11 : Number of disputes generated and resolved**

This measures the total number of disputes generated by the results of TEP and resolved.

#### **4.6.5 Performance area five : Costs**

Cost is the last but relevant criteria area with a SI of 73.12 %. Three (3) criteria are included in this area. Their SI range between 60 % and 81 %. One has a SI below 67 %. They have very low coefficients of variation ranging between 0 % and 6 % indicating high level of agreement among the respondents. Their overall ranking ranges from 12 to 25. The relevant performance criteria under Costs are as follows in the order of significance:

- **Criterion 12 : Rate of execution of procurement plan**

This criterion measures the percentage of the procurement plan achievements compared to the initial plan.

- **Criterion 13 : Percentage of savings on the budget**

This criterion indicates the amount of savings on the awarded contracts compared to the initial budget.



This chapter has therefore identified the relevant factors that affect the TEP in Chad and with further analysis identified the major measurable performance criteria for the evaluation of the TEP. The summary of findings is in the chapter.

KNUST



## **CHAPTER FIVE**

### **SUMMURY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0 GENERAL**

This chapter presents the summary of findings followed by the conclusions of the study and recommendations made to address the main results from the analysis in the light of the specific objectives.

The first part is devoted to the summary of main findings with regard to the objectives assigned to reaffirm the reader of the achievements of the objectives. The second part deals with the conclusions of the study including a brief description of the challenges.

A recommended performance assessment framework and other specific recommendations made are also presented in the chapter.

#### **5.1. SUMMARY OF FINDINGS**

The objectives of the study were to identify major factors that affect tender evaluation performance of public works in Chad, to establish measurable criteria for assessing the performance of the tender evaluation process of public works in Chad and finally to recommend a methodology of assessing the performance of TEP in Chad.

From the analysis of the data obtained from the survey, the following main findings were revealed and are presented below.

### **5.1.1 Factors affecting the performance of TEP**

From the study, it can be concluded that the following major factors were identified as relevant in affecting the performance of tender evaluation process in the acquisition of works in Chad : Tender evaluation criteria; Experience of tender committee members; Clarity of evaluation procedure / requirements; Experience of the client in tender procedures; Experience of tenderer; Qualification of tenderer; Motivation of Tender Evaluation Panel members; Project Timeframe and Risks in case of delay; Time for evaluation of tenders; Quality of bids to be evaluated; Eligibility criteria of tenderers; Capacity of contract approval authority; Type and Nature of project (complexity); Status and profile of Tender Committee members. See section 4.3 above for more details.

### **5.1.2 Measurable Performance Criteria**

The study has also established the following major measurable criteria ranked as relevant in characterizing the performance of Tender Evaluation Process in Chad : Time for approving or signing contracts; Time for evaluating tenders; Number of contracts approved on legal time; Number of contracts awarded on legal time; Number of contracts performed on contractual period; Number of tender evaluation reports written; Time for awarding contracts; Rate of execution of Procurement Plan; Percentage of savings on the budget; Number of requests for clarification received and treated; Number of notifications issued to unsuccessful tenderers; Number of disputes generated and resolved; Number of tenders received and evaluated. The details are in section 4.6 above.

### 5.1.3 Performance assessment framework

From the above findings, the study recommended an administrative and technical approach to assess the performance of tender evaluation in respect of the major criteria established with the sole target of guiding decision makers when assessing the performance of TE. The framework is fully described in section 5.3.1 below.

The findings are summarised in the table below.

**Table 5.1: Summary of findings with regard to objectives**

Item	Specific Objectives	Responses to Objectives
1	To identify major factors affecting tender evaluation performance for public works in Chad.	14 major factors are identified and ranked in order of significance (see section 4.3)
2	To establish measurable criteria for assessing the Performance of the tender evaluation process for public works in Chad.	13 measurable criteria are identified and ranked in order of significance (see section 4.6)
3	To recommend an administrative and technical methodology of assessing the performance of TEP in Chad.	A performance assessment framework is recommended (see section 5.3.1)

## 5.2. CONCLUSIONS

In Chad, tendering procedures take too long to be performed without any tangible reasons even though procurement of works are governed by the Public Procurement Act 503, 2003. As a result of this, many construction projects register considerable delays.

At the end of the study, it was established that :

- There was no formal system to measure the performance of tender evaluation process currently in use in Chad.
- The categories of factors such as the quality of tender documents, the quality of tenders, and the experience of the tender committee members were identified as the most significant in affecting the performance of TE. Therefore, if any of these factors is not handled with care when performing tendering process, there is a great likelihood of it influencing the performance.
- From the established list of measurable criteria, indicators related to time and contracts were the most relevant indicating that efficient tender evaluation process is the one which generates as much as possible contracts in the shortest possible time.
- The existing mechanisms of checking the authenticity of the documents submitted by the tenderers are not fully implemented as well as the provisions of the PPA 503 related to the approval of contracts.

Finally, the results of the study could have been far better if unfavourable social and political environment were not prevalent when collecting data. This was due to the civil war that was ongoing in the country and as such brought about the low rate of response. Furthermore, the big challenge was the English language that the researcher did learn for this very purpose.

### **5.3 RECOMMENDATIONS**

The following recommendations are made.

### **5.3.1 Recommended performance assessment framework**

The present approach is based on the following key activities : Planning, monitoring, and assessing and reporting.

#### **i. Planning**

The following actions are recommended at this stage before the real assessment commences:

- Set out a realistic procurement plan with clear specific objectives;
- Mobilize all resources : human, material and financial ;
- Appoint the assessor ;
- Establish clear standard indicator for each performance criterion ; and
- Establish the standard periodical and systemic report plans that are easy to be completed by each entity when performing TE.

#### **ii. Monitoring**

The following actions are recommended at the monitoring stage:

- Collection of data based on the standard report forms established. The following inputs are necessary for the assessment : procurement plan, tender documents, tender evaluation reports, contract award minutes, and approved contracts copies ;
- Monitoring all operations along side for every procurement entity using the periodical report forms ;

- Documenting and recording of all tender evaluation activities ; participants to the process should make sure that their records are complete and properly organised so that each tender committee could be connected to database and could access it at any time; and
- Developing a database of all information related to the implementation of TE.

### **iii. Assessing and reporting**

Using the framework proposed below to guide the computation of the performance of a particular tendering procedure, the assessment process is as follows.

- The performance of each criterion is measured as a ratio of actual results on the standard expected results set by the PPA.
- The ratio is compared to the indicators labelled in the column of indicators.
- A report is written on the TE of the project in question in conformity with the form provided.
- All reports are appropriately filed/compiled in the database.

It is suggested that an institutional framework must be put in place and the mission of the assessor well defined prior to the implementation of the methodology. An assessor can be an independent body or an individual at the level of each procurement entity. Then, the specific tasks of collecting and submitting data that can be assigned to current procurement entities must be defined. Finally, the body should be mandated to evaluate the actual performance of the process.



**Table 5.2 Performance Assessment Framework**

No	Measurable performance criteria	Standards expected (a)	Actual Results (b)	Performance indicators $C = \frac{b}{a}$
1	Time for approving or signing contracts	30 days		$\leq 1$
2	Time for evaluating tenders	30 days		$\leq 1$
3	Number of contracts approved on legal time	As submitted		$= 1$
4	Number of contracts awarded on legal time	As expected		$= 1$
5	Number of contracts performed on contract's period	As awarded		$= 1$
6	Number of tender evaluation reports written	As planned		$= 1$
7	Time for approving reports and awarding contracts	7 days		$\leq 1$
8	Rate of execution of procurement plan	100 %		$\geq 1$
9	Percentage of savings on the budget	$\geq 0$		$\geq 0$
10	Number of requests for clarification received and treated	100 %		$= 1$
11	Number of notifications issued to unsuccessful tenderers	$\geq 2 \times$ Invitations to tender		$\geq 1$
12	Number of disputes generated and resolved	$\approx 0$		$\approx 0$
13	Number of tenders received and evaluated	$\geq 3 \times$ Invitations to tender		$\geq 1$

### **5.3.2 Other specific recommendations**

#### **1. Procurement Entities :**

It is suggested that emphasis should be put on the major factors that affect the performance to minimize their effects at the earliest stage and concerted efforts should be made towards the constant supervision of the following points:

- the full enforcement of the regulations set by the PPA 503, 2003; to achieve this, stakeholders should adhere to the provisions made under different clauses of the code;
- care and diligence when dealing with issues related to time and contracts;
- training of procurement officers on the establishment of realistic and clearly defined procurement plans and its follow up ; and on tendering procedures;
- the appointment of requisite and skilled personnel as tender committees members;
- the close monitoring of time allocated to each tendering phase; and
- the organisation of seminars and workshops with the aim of the popularisation of the Public Procurement Act 503 including regulations, manuals, guidelines, etc...

#### **2. Tender Committees :**

It is also recommended that much attention is given to the following points:

- the quality of tender documents by selecting the appropriate consultants; it is important that the procurement officers in conjunction with the consultants exercise the utmost care when preparing the tender documents;
- the enhancement of qualification requirements in order to select only capable contractors; it will be made possible by the registering and qualifying bodies which should streamline the classification and the qualification of contractors;

- the appointment of qualified and competent people as tender evaluation panel members.

With the framework proposed and the specific recommendations made, when adhered to, will enable procurement officers and others stakeholders to address the problem of delays, thus allowing tender evaluation processes to be performed with minimum delay.

### **3. Future research :**

The following are some areas that could be explored for future research:

- the development of a Comprehensive Computer-based System of Performance Measurement for Tender Evaluation Process in Chad ;
- Research into the causes and consequences of delays in tendering procedures in Chad.



## **REFERENCES**

1. Aaron Anvuur and Mohan Kumaraswamy, and Steven Male, (Jan 2006), *CIW 107 Construction in Developing Economies Symposium* in Taking Forward Public Procurement in Ghana, Santiago, Chile.
2. Ashworth, Allan and Hogg, Keith, (2000), *Willis's Practice and Procedure for the Quantity Surveyor*, in Procurement
3. Chad Public Procurement Act (Act 503), 2003
4. Collège de Contrôle et de Surveillance des Revenus Pétroliers (CCSRP), *Rapports annuels 2004, 2005 et 2006, Tchad*.
5. Construction Industry Development Board (CIDB), (March 2004), *Best Practice Guidelines #A1*, The procurement cycle, Edition 1 of CIDB document 1001, Pretoria, pp 12- 13
6. EBRD, Procurement and Technical Unit, (2005), *Standard Tender Evaluation Format & Standard Tender Evaluation Audit Program*, in Standard Tender Documents
7. Elhag, T.M.S. & Boussabaine A. H. (2002), *Factors affecting Cost and Duration of Construction Projects*, EPSRC Research Report, University of Liverpool
8. Francis Patrick, K. N. (2004) *Factors Affecting the Implementation Success of Road Projects in Ghana*, MSc. Thesis in Construction Management, KNUST, Kumasi
9. Frank Harris and Ronald McCaffer, (2001), *Modern Construction Management*, 5th Edition, pp 64, 167 - 168

10. Ghana Public Procurement Act (Act 663), 2003
11. Harvey Maylor, (2003), *Project Management*, Third Edition, pp 60 – 63
12. Hohoabu, E. K. (1999) *Factors Influencing Project Selection Decisions of Contractors in Ghana*, KNUST, Kumasi
13. Inter-American Research and Documentation Centre on Vocational Training, CINTERFOR / ILO, (18/05/2007), *What is a Performance criterion?* website:  
[www.ilo.org/public/english/region/ampro/cinterfor/temas/complab/xxxx/16.htm](http://www.ilo.org/public/english/region/ampro/cinterfor/temas/complab/xxxx/16.htm)
14. John McGeorge & Jonnette Adams, (August 2003) *Tender Evaluation Training Programme*, TRANSIT, New Zealand
15. Ken Jackson, (2000), *Tender Assessment Solution*, Quality Systems and Software, Inc. [www.qssinc.com](http://www.qssinc.com), Tender (Bid) Status, p 25
16. Kish, Leslie 1965, *Survey Sampling*, New York, John Wiley and Sons, Inc.
17. Legal Services Corporation (LSC), (April 2006), Performance criteria, US.
18. Legislative Council Panel on Transport, (14 Nov 2002), *LC Paper No. CB(1)342/02-03(2)*, Kowloon-Canton Railway Corporation
19. Minister of State in Charge Infrastructures, (July 2007), Observateur No. 245 du 11 juillet 2007, in an Interview
20. National Architectural Accrediting Board, (august 2002), *1998 Guide to Student Performance Criteria*, New-York, US
21. Naval Special Warfare (NSW) Department of Commerce, (October 2004), *Tendering Manual and its Appendix 7F (iii)*, Edition 2 – Version 4.00

22. Naval Special Warfare (NSW) Department of commerce, (October 2004), *Tender Evaluation Plan & Tender Evaluation Report Frame*, Edition 2 – Version 4.00
23. Naygotimti Bambe, (2006), *Analyse du Rapport annuel 2005 du CCSRP*, Journal Tchad et Culture, Rubrique Economie, Tchad.
24. New Zealand Qualifications Authority (NZQA), (2004), Civil Engineering – Asset Management, *Compare and Select tender evaluation methods in compliance with competitive pricing procedures*, 18926 version 2. New Zealand
25. North Central Regional Educational Laboratory, Learning Point Associates, (18/05/2007) *Performance Criteria*, [www.ncrel.org/sdrs/areas/issues/methods/assment/as81k31.htm](http://www.ncrel.org/sdrs/areas/issues/methods/assment/as81k31.htm)
26. Organe Chargé des Marchés Publics (OCMP), (2004), *Liste des Entreprises de Bâtiment et Travaux Publics et Répertoire des Bureaux d'Etudes des BTP agréés*
27. Osei Tutu Prempeh, (2004), *Transparency and Accountability in Government Financial Management*, paper, United Nations (UN) publications.
28. Oxford Advanced Learner's Dictionary, 6<sup>th</sup> Edition
29. State Government of Victoria, Department of Human Services, Capital Management Branch, (June 2007), *Capital Development Guidelines*, Australia
30. TASMANIA, (Sept 1999), Department of Treasury and Finance, *Guidelines on Tender Evaluation using Weighted Criteria for Building Works and Services*, Amended August 2006 – version 2.0 New-Zeeland
31. Taylor and F. (2006), *Procurement in Construction Industry*
32. World Bank, (2003), *Standard Tender Documents*



## **APPENDIX 1:**

### **TRANSLATION INTO ENGLISH OF SOME ARTICLES OF CHADIAN PUBLIC PROCUREMENT ACT 503, (2003)**

#### **ARTICLE 9**

Are not authorized to tender for Public Procurement the persons or entities which have failed to fulfil their obligations to pay taxes and social security contributions during the last three months.

#### **ARTICLE 14**

For every Public Procurement, the Contracting Authority must carry out the following operations in conformity with the provisions of this Code:

- The planning and the definition of its needs;
- The publication of the annual procurement plan and publication if necessary of a notice of pre-selection for the part of this program likely to be subject to restricted tendering;
- The preparation of tender documents;
- The tendering process;
- The participation in the tender evaluation and the provisional award of the contract;
- The conclusion of the provisional contract;
- The final notification of the contract;
- The follow-up of the execution and commissioning of the project;
- The final report on the achievement of the project.

#### **ARTICLE 22**

The COJO, an independent body vis a vis of the Authority in Charge of Public Markets (OCMP), is responsible for opening of tenders, the evaluation of tenders and the award of contract in accordance with the regulations of this code.

The participation of the COJO to the tender evaluation is made possible through Tender Evaluation Panel (SCTE) justifying technical skills and competence, and required abilities to perform that tender evaluation in good conditions within the time allowed in the present regulations. The SCTE is made up of representative of the contracting authorities, board members, and independent persons appointed by the COJO or the Consultant if necessary.

The participation of the COJO in the establishment of the shortlist, in case of restricted tendering, is done by a Pre-selection Sub-Commissions (SCP).

The attributions, the composition, and operation procedures of the COJO, SCTE, and SCP and their by laws are abundantly defined by decree.



## **ARTICLE 23**

The Authority in charge of Public Markets (OCMP) is to control the regularity of the preparation and award of contracts and to issue, in conformity with the provisions of this code, a preliminary notice at the various key stages of the preparation and award of contracts.

The OCMP is responsible of the following activities :

- to take part in all the meetings of opening of tenders by the COJO in the capacity of observer;
- to recover the originals of the tenders for purposes of control;
- to carry out and diffuse an Official Bulletin of the Advertisements of the Public Markets on paper media and electronics;
- to promote the diffusion of the regulation concerning the Public Markets;
- to set up and develop statistical and data-processing tools promoting transparency in the process of tendering;
- to make any recommendation on the improvement of the regulation and its implementation in particular by proposing all standard documents and forms;
- to advise Contracting Authorities for the preparation of the tender documents ;

The OCMP also carries out the examination of the annual procurement plan prepared by each Contracting Authority.

The OCMP writes each year a detailed report of its activities which it submits to the Accounts Chamber within the first quarter of the following year.

The attributions, composition and operation procedures and regulations of the OCMP are laid down by decree.

## **ARTICLE 51**

Tenders are opened at a public meeting by the COJO on a fixed time specified in the Tender Documents as the deadline for the submission of tenders. At this meeting, the name and address of each tenderer, tender price and eventual reduction suggested are announced out aloud.

Opening of the tenders meeting can be deferred only for cause beyond control and causes duly justified.

If the meeting of tenders opening is postponed, tenders are preserved by the Contracting Authority in a place offering all guarantees of good security and respect of the confidentiality.

Tenders received by the Contracting Authority after the deadline for the submission of tenders shall be returned without being opened to the contractor or supplier which submitted it. The same applies to tenders of which the mentions on the envelope do not comply with the obligatory mentions laid down to this end in the Tender Documents.

The Tender documents can specify that the financial offer should be placed in one second interior envelope entitled “financial offer” which will be opened only once the technical

evaluation completed by the tender evaluation panel. In this case the opening of the financial offer will be done at a public and plenary meeting by the COJO.

The COJO writes the minutes of the opening meeting, which is countersigned by all the attendance and is published by the Contracting Authority. A copy of the official report is given to all the participants.

Tenders which satisfy all the conditions of this article are transmitted to the Tender Evaluation Panel (SCTE) which meets in closed door and performs the technical evaluation and classification of the tenders.

## **ARTICLE 52**

The SCTE analyzes the tenders in accordance with the follows process.

First, it determines if the tenderers are eligible and if their tenders are complete and substantially in conformity with the instructions to tenderers specified in the Tender Documents.

It then carries out the evaluation of tenders which meet all the conditions set out in tender documents without appreciable divergence, by applying exclusively the criteria made available to the tenderers in the invitation to tender. These criteria, as far as possible, are expressed in monetary terms for the goods and works and related services, except for the consultant services for which the quality of the technical offer must take precedence.

For goods and works, the tender with the lowest price is classified first, and the other tenders are classified in increasing order. The SCTE makes sure finally that the tenderer classified at the head satisfies the criteria of qualification indicated in the Tender Documents. In the contrary case, this tenderer must be eliminated, and the tenderer classified next is checked through the same criteria of qualification.

In the case where the Tender Documents provide that the financial offer and the technical offer are placed in distinct envelopes, and that the financial offers are opened after the evaluation of the technical offers is completed, the SCTE must carry out the control of qualification of all the tenderers at the moment of the evaluation of the technical offers, before the opening of financial offers.

For the contracts of consultants, the most advantageous offer according to qualitative and financial criteria's appearing in the Tender Documents is classified at the head.

If at the end of this process an offer appears abnormally low, the SCTE is to ask in writing to the tenderer concerned the details which it considers convenient and to check the provided justifications. Justifications concerning the manufacturing process of the products, the methods of realization of the services, the processes of construction, the exceptionally favourable character of the conditions for implementation benefitting the tenderer and the originality of the project will be taken into account. The SCTE draws up in all the cases a special report summarizing the explanations provided by the tenderer. This report is attached to the minutes foreseen in the following paragraph.

The SCTE writes a detailed report of the operations carried out which it transmits to the COJO at a plenary meeting behind closed doors.

### **ARTICLE 53**

The evaluation of the tenders within the framework of the invitation to tender in two stages is organized according to rules' applicable to the other invitations to tender subject to the following provisions.

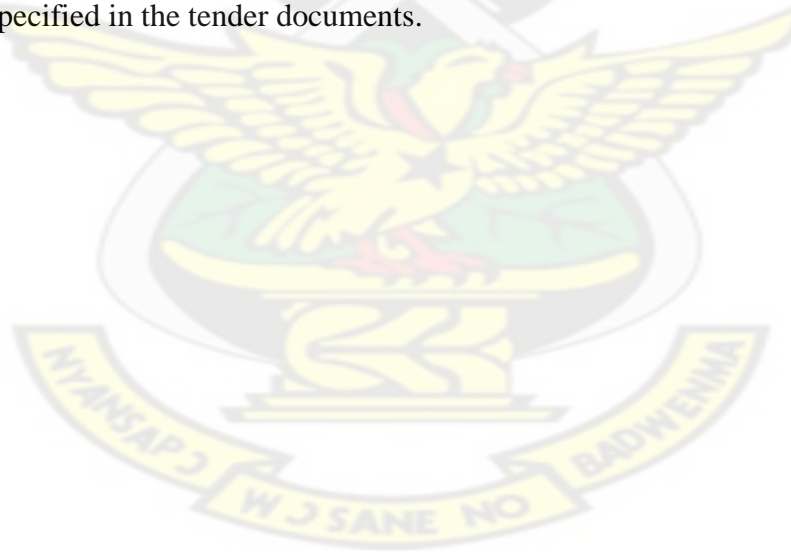
At the time of the first stage, only technical offers are evaluated by the SCTE. At the end of this evaluation, the tenderers can be invited in writing to improve their technical offers, and the tender documents can be amended for the second stage.

The tenders of the second stage are submitted and evaluated in the same way as in the tendering at one stage. These tenders can no more be modified nor negotiated.

### **ARTICLE 54**

The COJO at a plenary meeting and in closed doors awards the contract to the tenderer whose tender is evaluated as the lowest offer, but satisfies the criteria of qualification specified in the tender documents for goods and works.

For the contracts of services, the COJO declares beneficiary of contract the tenderer whose offer is evaluated most advantageous according to qualitative and financial criteria's specified in the tender documents.



## **FRENCH VERSION (ORIGINE)**

### **ARTICLE 9**

Ne sont pas admises à soumissionner aux Marchés Publics les personnes physiques ou morales qui ne sont pas en règle vis-à-vis des Services des impôts, des douanes, du trésor général et de la caisse nationale de prévoyance sociale (C.N.P.S.) .

### **ARTICLE 14**

Pour tout Marché Public, l'Autorité Contractante doit réaliser les opérations suivantes en conformité avec les dispositions du présent Code :

- La planification et la définition de ses besoins ;
- La publication du programme prévisionnel annuel des besoins et la publication le cas échéant d'un avis de présélection pour la partie de ce programme susceptible de faire l'objet d'appels d'offres restreints ;
- La préparation des dossiers d'appels d'offres ;
- Le processus de consultation ;
- La participation à l'évaluation des offres et à l'attribution provisoire du Marché ;
- La conclusion provisoire du Marché ;
- La notification définitive du Marché ;
- Le suivi de l'exécution et la réception du Marché ;

### **ARTICLE 23**

L'Organe Chargé des Marchés Publics (OCMP) est chargé de contrôler la régularité de la préparation et de la passation des Marchés Publics et d'émettre, conformément aux dispositions du présent Code, un avis préalable aux différentes étapes clés de la préparation et de la passation des Marchés.

L'OCMP est chargé en outre :

- de participer à toutes les séances d'ouverture des plis par la COJO en qualité d'observateur ;
- de récupérer les originaux des offres aux fins de contrôle ;
- de réaliser et de diffuser un Bulletin Officiel des Annonces des Marchés Publics sur supports papier et électronique ;
- de promouvoir la diffusion de la réglementation encadrant les Marchés Publics ;
- de mettre en place et de développer des outils statistiques et informatiques facilitant la transparence dans le processus de la passation des Marchés Publics ;
- de faire toute recommandation sur l'amélioration de la réglementation et de sa mise en œuvre notamment en proposant tous documents types et formulaires ;

- de conseiller les Autorités Contractantes pour la préparation des dossiers de consultation ;

L'OCMP procède également à l'examen du plan de passation annuel préparé par chaque Autorité Contractante.

L'OCMP rédige chaque année un rapport détaillé de ses activités qu'elle transmet à la Chambre des Comptes dans le premier trimestre de l'année suivante.

Les attributions, la composition et les modalités de fonctionnement de l'OCMP ainsi que son règlement intérieur sont fixés par décret.

## **ARTICLE 51**

Les plis sont ouverts en séance publique par la COJO le jour de la date limite fixée pour le dépôt des offres et dans l'heure qui suit l'heure limite indiquée au DAO : lors de cette séance le nom de chaque candidat, le montant de chaque offre et le cas échéant des rabais proposés sont lus à haute voix.

La séance d'ouverture des plis ne peut être reportée que pour des raisons de Force Majeure dûment justifiées.

En cas de report de la séance d'ouverture des plis, les plis sont conservés par l'Autorité Contractante dans un endroit offrant toutes garanties de bonne garde et de respect de la confidentialité.

Les plis remis ou reçus postérieurement à la date et l'heure fixées par l'Autorité Contractante pour la remise des plis sont retournés à leurs expéditeurs sans être ouverts. Il en va de même des plis dont les mentions sur l'enveloppe extérieure ne respectent pas les mentions obligatoires prévues à cet effet dans le dossier d'Appel d'Offres.

Le dossier d'Appel d'Offres peut préciser que l'offre financière sera placée dans une seconde enveloppe intérieure intitulée « offre financière » qui ne sera ouverte qu'une fois l'évaluation technique achevée par la sous-commission technique d'analyse des offres. Dans ce cas l'ouverture de l'offre financière se fera en séance publique et en plénière par la COJO.

La COJO dresse un procès-verbal de la séance d'ouverture, lequel est contresigné par toutes les personnes présentes et publié par l'Autorité Contractante. Une copie du procès-verbal est remise à tous les participants.

Les offres qui respectent toutes les conditions du présent article sont transmises à la Sous-commission technique d'évaluation des offres (SCTE) qui se réunit à huis clos et procède à l'évaluation technique et au classement des offres.

## **ARTICLE 52**

La SCTE analyse les offres selon le processus suivant.

Elle détermine tout d'abord si les soumissionnaires sont éligibles et si leur offre est complète et substantiellement conforme aux prescriptions du DAO.

Elle procède ensuite à une évaluation des offres qui répondent à toutes les stipulations et conditions du dossier de consultation sans divergence sensible, en appliquant exclusivement les critères portés à la connaissance des candidats dans les DAO. Ces critères sont, dans toute la mesure du possible, exprimés en termes monétaires pour les marchés de fournitures, travaux et



services, à l'exception des marchés pour prestations intellectuelles pour lesquels la qualité de l'offre technique doit primer.

Pour les marchés de fournitures, travaux et services y afférents, l'offre la moins-disante est classée première, et les autres offres sont classées par ordre de rang croissant. La SCTE s'assure enfin que le soumissionnaire classé en tête satisfait aux critères de qualification indiqués dans le DAO. Dans le cas contraire, ce soumissionnaire doit être éliminé, et le soumissionnaire classé au rang suivant fait l'objet de ce même contrôle de qualification. Dans le cas où le DAO prévoit que l'offre financière et l'offre technique sont placées dans des enveloppes intérieures distinctes, et que les offres financières sont ouvertes après que l'évaluation des offres techniques est achevée, la SCTE doit procéder au contrôle de qualification de tous les soumissionnaires au moment de l'évaluation des offres techniques, préalablement à l'ouverture publique des offres financières.

Pour les marchés de prestations intellectuelles, l'offre la plus avantageuse selon les critères qualitatifs et financiers figurant dans le DAO est classée en tête.

Si à l'issue de ce processus une offre apparaît anormalement basse, la SCTE est tenue de demander par écrit au soumissionnaire concerné les précisions qu'elle juge opportune et vérifier les justifications fournies. Peuvent être notamment prises en compte les justifications concernant le mode de fabrication des produits, les modalités de réalisation des prestations, les procédés de construction, le caractère exceptionnellement favorable des conditions d'exécution dont bénéficient le soumissionnaire et l'originalité du projet. La SCTE dresse dans tous les cas un rapport spécial résumant les explications fournies par le soumissionnaire. Ce rapport est annexé au procès-verbal prévu au paragraphe suivant ;

La SCTE dresse un compte-rendu détaillé des opérations réalisées par elle qu'elle transmet aux membres de la COJO réunis en séance plénière et à huis clos.

### **ARTICLE 53**

L'évaluation des offres dans le cadre de l'appel d'offres en deux étapes est organisée selon les règles applicables aux autres appels d'offres sous réserve des dispositions suivantes.

Lors de la première étape, les soumissionnaires soumettent seulement une offre technique, qui est évaluée par la SCTE. A l'issue de cette évaluation, les soumissionnaires peuvent être invités par écrit à améliorer leur offre technique, et le dossier de consultation peut être amendé pour la deuxième étape.

Les offres de la seconde étape sont remises et évaluées comme dans les appels d'offre à une seule étape. Ces offres ne sont plus susceptibles de modifications ni de négociations.

### **ARTICLE 54**

La COJO réunie en séance plénière et à huis clos déclare attributaire du projet de marché le soumissionnaire dont l'offre est évaluée la moins-disante, et qui satisfait aux critères de qualification figurant dans le DAO pour les marchés de fournitures et de travaux et services y afférents. Pour les marchés de prestations intellectuelles, la COJO déclare attributaire du projet de marché le soumissionnaire dont l'offre est évaluée la plus avantageuse selon les critères qualitatifs et financiers figurant dans le DAO.

## APPENDIX 2: QUESTIONNAIRE SAMPLE

KNUST – KUMASI

DEPARTMENT OF BUILDING TECHNOLOGY

### QUESTIONNAIRE

Dear Madam / Sir

This questionnaire forms part of a study on **Performance criteria of tender evaluation process in Public Works in Chad** undertaken by SAZOULANG DOUH, a Msc. Student in Construction Management II at KNUST.

Literature review has identified some factors that can influence the performance of tender evaluation process and some measurable criteria that would characterize the performance. Your participation by filling this questionnaire will help to confirm the factors and also to help arrange them in order of importance.

Your input therefore will be very appreciated for the successful completion of this exercise.

Thank you.

Please tick the appropriate option and specify where necessary

1. Please indicate the type of agency or firm you work in:

- |   |                                     |
|---|-------------------------------------|
| <input type="checkbox"/> Procurement Entity | <input type="checkbox"/> Consultant |
| <input type="checkbox"/> Contractor         | <input type="checkbox"/> Other      |

2. Please indicate your years of experience in procurement practices

- |   |  |
|---|--|
| <input type="checkbox"/> Less than 3 years      | <input type="checkbox"/> between 3 and 5 years |
| <input type="checkbox"/> Between 5 and 10 years | <input type="checkbox"/> More than 10 years    |

3. Below are some factors considered to be relevant to affect the performance of tender evaluation process? Please rate these factors by ticking the appropriate box below as



- (a) Not important

- (b) Fairly important

- (c) Very important

N°	Code	FACTORS AFFECTING PERFORMANCE	(a)	(b)	(c)
	<b>1</b>	<b>The Client :</b>			
1	11	Category and type of the client			
2	12	Experience of the client in tender procedures			
3	13	Procurement Plan of the client in terms of work load			
	<b>2</b>	<b>The Project :</b>			
4	21	Type and Nature of project in terms of complexity			
5	22	Cost of project			
6	23	Size of project in terms of quantity of works			
7	24	Project Timeframe and Risks in case of delay			
	<b>3</b>	<b>Tender Documents :</b>			
8	31	Method of Procurement (competitive, negotiation, ...)			
9	32	Tendering procedures (open, restricted, ...)			
10	33	Clarity of evaluation procedure / requirements			
11	34	Price of Tender Documents			
12	35	Eligibility criteria of tenderers			
13	36	Tender evaluation criteria			
14	37	Validity period of tenders			
15	38	Time for preparation of tenders			
16	39	Time for evaluation of tenders			
17	310	Pre-tender Estimates			
	<b>4</b>	<b>Tenders :</b>			
18	41	Origin or Nationality of tenderer			
19	42	Qualification of tenderer			
20	43	Classification of contractors firms			
21	44	Experience of tenderer			
22	45	Quantity of bids to be evaluated			
23	46	Quality of bids to be evaluated			
24	47	Official price list			
25	48	Tender securities			
26	49	Reputation of tenderer			
	<b>5</b>	<b>Tender committees :</b>			
27	51	Number of tender committee members			
28	52	Status and profile of members			
29	53	Experience of tender committee members			
30	54	Motivation of Tender Evaluation Panel members			
31	55	Deadline for approval of tender evaluation reports			

32	56	Work load of tender committee (Procurement plan)			
33	57	Number of approvals prior to final award of contract			
34	58	Capacity of contract approval authority			
	<b>6</b>	<b>External factors :</b>			
35	61	Political pressure			
36	62	Moral pressure			
37	63	Relation with other services (tax, insurance, duties, ....)			
	<b>7</b>	<b>Others (to be provided by the respondent if any exist)</b>			
38	71				
39	72				
40	73				

4. Do you operate currently a performance measurement system for tender evaluation ?

Yes ☐

No ☐

5. If yes, please describe briefly how it works.


6. Do you use currently any mechanism of systematic verification of the authenticity of the legal and administrative particulars submitted by bidders ?

Yes ☐

No ☐

7. If yes, please describe briefly how it is used.


8. Below are some criteria considered to be relevant to characterize the performance of tender evaluation process. Please rate these criteria by ticking the appropriate box below as

- (a) Not important

- (b) Fairly important

- (c) Very important

N°	Code	MESEASURABLES PERFORMANCE CRITERIA	(a)	(b)	(c)
	<b>1</b>	<b>Performance area one : Costs</b>			
1	11	Percentage of savings on the budget			
2	12	Rate of execution of Procurement Plan			
3	13	Ratio of amendments or riders to contracts			
	<b>2</b>	<b>Performance area two : Time</b>			
4	21	Time for evaluating tenders			
5	22	Time for approving tender evaluation report			
6	23	Time for awarding contracts			
7	24	Time for approving or signing contracts			
	<b>3</b>	<b>Performance area three : Tender Offers</b>			
8	31	Number of bids recieved			
9	32	Number of bids rejected before evaluation			
10	33	Number of evaluated tender offers			
11	34	Number of protests or litigations generated			
12	35	Number of disputes resolved			
	<b>4</b>	<b>Performance area four : Contracts awarded</b>			
13	41	Number of contracts' proposals submitted for approval			
14	42	Number of contracts' proposals rejected			
15	43	Number of contracts awarded			
16	44	Number of successful contractors			
17	45	Number of contracts awarded on legal time			
18	46	Number of contracts awarded within validity period			
19	47	Number of contracts approved on legal time			
20	48	Number of contracts performed on contract's period			
	<b>5</b>	<b>Performance area five : Invitation to tender</b>			
21	51	Number of invitations to tender launched			
22	52	Number of invitation to tender declared unsuccessful			
23	53	Number of requests for clarification received and treated			
24	54	Number of notifications to unsuccessful tenderers			
25	55	Number of tender evaluation reports written			
26	56	Number of tender evaluation reports rejected and redrafted			
	<b>6</b>	<b>Others (To be provided by the respondent if any exist)</b>			
27					
28					

# KNUST

