



ASSESSMENT ON PROCUREMENT PROCESS AND EVALUATION CRITERIA
SETTING PRACTICES IN BUILDING CONSTRUCTION: THE CASE OF SELECTED
SNNPR BUILDING PROJECTS.

MSc. THESIS

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HAWASSA UNIVERSITY, HAWASSA, ETHIOPIA

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THESIS SUBMITTED TO HAWASSA UNIVERSITY
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ADVISORS' APPROVAL SHEET

This is to certify that the thesis entitled “**Assessment on Procurement Process and Evaluation Criteria Setting Practices in Building Construction: The Case of Selected SNNPR Building Projects.**” submitted in partial fulfilment of the requirements for the degree of **Master of Science** with specialization in **Construction Technology and Management**, the Graduate Program of the **Faculty of Civil engineering and Built Environment**, and has been carried out by **Tamirat Ashuro**, (ID. No. PG CoTMR/041/11), under our supervision. Therefore, we recommend that the student has fulfilled the requirements and hence hereby can submit the thesis to the department.

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LISTS OF ABBREVIATIONS AND ACRONYMS

BC	Building Contractor
BD	Bidding Document
BDS	Bid Data Sheet
BOQ	Bill of Quantities
DB	Design Build
DBB	Design-Bid-Build
EQC	Evaluation and Qualification Criteria
FDRE	Federal Democratic Republic of Ethiopia
FPPA	Federal Public Procurement Agency
GC	General Contractor
GCC	General Conditions of Contract
FIDIC	International Federation of Consulting Engineers
ICB	Internationals Competitive Bidding
ITB	Instructions to Bidders
ISO	International Organization for Standardization
MUDC	Ministry of Urban Development & Construction
NCB	Nationals Competitive Bidding
PE	Procuring Entity
PPA	Public Procurement Agency
PPD	Public Procurement Directive
RFP	Request for Proposal
RFQ	Request for Quotation
SBD	Standard Bidding Document
SCC	Special Conditions of Contract
SNNPR	South Nation Nationalities and Peoples region
SOR	Schedule of Requirements
WBPGGL	World Bank Procurement Guide Line
WBPM	World Bank Procurement Manual

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ABSTRACT

The procurement process for building construction work starts from procurement planning and then follows preparation of tender document, advertising the tender, submission of bids by the tenderers, evaluation of the submitting tender and award of the contract. This study assessed procurement process and tender evaluation criteria setting practices in selected SNNPR governmental building projects. The study were conducted on selected SNNPR governmental building projects by which their tender floated for grade BC-5/GC-5 and above contractors for building construction works for the last five fiscal years at selected level or “Ferji” (I) One 4 (four) zones. The result of the study indicates that 76.56% of participants agreed that technical qualifications, competence, and experience requirement of the bidder during bidding document were prepared by respective professionals but 60.94% participants agreed that there was no review of prepared technical requirements criteria’s and documents by second party professionals before tender floating. General & specific work experience and professional qualifications requirement with respect of minimum requirement from participants 60.93% for general & specific work experience and 62.5% for professional qualifications requirement of them agreed that the request was more than the projects minimum requirement stated at directives. Under financial criteria financial resource and annual turnover requirements did not aligned to the project demand. 67.19% of respondents agreed that equipment request was more than the projects minimum requirement and bidders were restricted not to propose leased or rented equipment for the project implementation. 54.69% of respondents agreed that current open NCB system in SNNPR governmental building project gives equal chance to participate at bid for all eligible bidders and 64.06% of them also agreed that contractors awarded as lowest responsive bid selected on this system are not effective at their project implementation. Procurement plan have been given lower attention at SNNPR governmental building projects during the overall procurement process. The study identifies that the most and common challenges and problems during procurement process and evaluation criteria setting at SNNPR governmental building projects for construction parties were unfair selective restriction and setting subjective criterions, inappropriate procurement plan in procurement processes and forgery document preparation and submission by contractors.

Key words: *Bid, evaluation criteria, procurement process, tender*

CHAPTER ONE: INTRODUCTION

1.1. Background of the study

Construction project must be managed in an effective manner. The demands from clients and competition have been growing rapidly. Few of these demands directly contribute to the physical construction of the project. The selection of a proper construction contractor increases chances of successful completion of a construction project. It can also fulfill the client goals, and keep the schedule of the cost, time and quality. So it is extremely critical to select an appropriate contractor in the process of construction management. The selection of construction contractors are very often conducted during tendering.

Tendering is the process of selecting the most suitable contractor for a construction project. The tendering process involves two distinct mutually exclusive activities. The first activity, according to Moselhi & Martinelli (1990), involves the preparation of tender estimates by contractors for the purpose of submitting a bid. The second activity deals with the evaluation of the bids submitted by contractors to enable the best contractor to be selected and is normally carried out by owners and/or their professional advisors such as quantity surveyors and project managers.

Procurement means obtaining goods, works, consultancy or other services through purchasing, hiring or obtaining by any other contractual means (SNNPRS Procurement and Property Administration Proclamation No 146/2012).

The construction industry and its clients are widely associated with Bid and Procurement issues in the construction industry. Due to time and cost overruns associated with construction projects, so many projects fail to accomplish their targets and objectives. Unmanaged or unmitigated bidding and procurement procedures are one of the fundamental causes of these overruns (Alan, 2004).

In today's construction environment, construction parties are finding themselves under increasing pressure to improve project performance, complete projects faster and reduce the cost of administering their construction programs. In response to these current construction industry pressures especially at SNNPR regional building construction the researcher tries to come up with alternative procurement process and effective tender evaluation criteria practices to mitigate this pressure and to deliver a proposed building project to the society at the right quality, at the right time and at the right cost.

1.2. Statement of the problem

The Ministry of Urban Development and Construction, Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013 states minimum requirement to be requested at a time of bidding procedure for different categories and grade of contractors about different issues like beginning project size, substitution rules for qualification equivalence between professionals , professional requirement, equipment requirement, staff requirement and etc. but in SNNPR governmental building projects tender evaluation criteria setting practice professionals were not use this directive appropriately.

Construction procurement is different from the procurement of general goods and services and legally cannot be treated in the same way. When organs of state contract for goods, works or services they should do so in accordance with a system that is fair, equitable, transparent, competitive and cost effective.

Building construction procurement process includes many activities like bid document preparation, technical and financial evaluation and contract award, the construction industry control mechanisms and guide lines for the procurement process are not developed well. The industry is challenged by several problems related to procurement process by which not well planned in an integrated manner, but operates with fragmented, unrelated, unfair and illegal ways (Anthony, 2018).

According to SNNPR construction bureau ethics in construction industry training module report (2016), the most common challenges during tendering and procurement in the construction sector of SNNPR includes general lack of transparency in procurement processes, unfair selective restriction of access to advance information about bidding opportunities, sale of tender documents deliberately delayed or advertisement limited to benefit favored bidders given advance notice, manipulation of the tender evaluation process unfairly to favor a specific contractor, deliberately misleading unsuspecting bidders by including irrelevant items in the bill of quantity, client pressure to modify the engineering estimate to benefit favored bidders and approach to bidders by intermediaries claiming (falsely) to be client's staff seeking incentives in return for manipulation of bid evaluation. This SNNPR construction bureau ethics in construction industry training module report simply list out challenges during tendering and procurement but the findings were not researched just reported by common understanding.

From researchers literature reviews many scholars have conducted a research on different construction procurement issues but no one conducted to address procurement process and

tender evaluation criteria setting practices in selected SNNPR governmental building projects. Due to this gaps and different facts that the researcher had to carry on such kind of research through investigating the current procurement process and evaluation criteria setting practices in SNNPR governmental building projects and at the end researcher can avail conclusion and recommendations for future work.

1.3. Objectives of the Study

1.3.1. General objective of the study

General objective of the study was to assess procurement process and tender evaluation criteria setting practices in selected SNNPR governmental building projects.

1.3.2. Specific objectives of the study were:

- To assess the current technical and financial tender evaluation criteria setting practices in SNNPR building projects.
- To identify challenges and problems during procurement process & evaluation criteria setting practices in SNNPR building projects.
- To investigate the procurement process and methods currently used in SNNPR building projects.

1.4. Research questions

This research tries to answer the following questions.

- 1) What procurement process and methods are currently being used by SNNPR governmental building projects?
- 2) What are the current technical and financial tender evaluation criteria setting practices in SNNPR building projects?
- 3) What are the challenges and problems during procurement process & evaluation criteria setting practices in SNNPR building projects?

1.5. Significance of the Study

The study would provide suggestion for the problems of national competitive procurement practices of the region. It would be serve as a tool to decision makers of the procurement practitioners and officers involved in the regional and another levels.

The study helps clients to select the right contractor to execute a project with respect of time, cost and quality. The study also benefits contractors and consultants by giving information about procurement process and tender evaluation criteria setting with respect of different regional and national regulations. The study will identify and recommend efficient mechanisms of procuring process which would help to save significant amount of resources and used as a springboard for other academicians and or researchers, who focuses on similar topics and issues.

1.6. Scope and delimitation of the study

The study focused on procurement process and tender evaluation criteria setting practices in selected SNNPR governmental building Projects only.

It covers those tenders floated for grade BC-5/GC-5 and above contractors for governmental building construction works for the last five fiscal years. Tenders floated time is restricted for the last five fiscal years due to construction bureau at regional level was established five years ago and tenders floated before this time were not well planned, operated with fragmented and illegal ways by the clients and it is difficult to have adequate information.

From the total of 13 zones at SNNPR, level or “Ferji” (I) one 4 zones according to SNNPR urban development land administration urban plan institute directive (2017) were selected. According to this directive this zone were zones with high number of building construction and economic activity from other level zones of the region, due to this the researcher selected this level zones to conduct the study. Zones selected to conduct the research were Gedeo, Wolayita Soddo, Gamo and Hadiya.

1.7. Organization of the Thesis

The thesis were organized with five chapters. The first chapter begins the basic research information as an introduction part of the research. The literature review is dealt in chapter two followed by the third chapter which covers research design and methodology in order to achieve the objectives of the study. The fourth chapter encompasses the analysis of findings and discussions part. The last chapter comprises the conclusions made and recommendations forwarded based on the major findings of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 General

Project cycles are understood as the processes at which projects are formulated, implemented and completed. Projects go through a life cycle of phases between their beginnings and end initiation, planning, design, construction, commissioning, and close out (Alan, 2004).

As part of project cycle, clients undergo a procurement process to select a contractor to carry out the construction using predetermined selection variables. The process of selecting the most competitive tender offer and appointing the most suitable contractor for the construction works is a complicated and risk-related task. The correct appointment of a competent and suitable contractor may have a positive impact on the outcomes of the works and result in lowering construction cost, increased quality of delivered work, shorten the project realization time, have higher number of qualified and competent workers increased the safety and lower number of accidents (Hatush, 1996).

The project procurement plan describes how the project will be executed, what delivery system will be utilized, who and what organizations (including the owner) will perform what tasks and what forms of procurement and contracting will be used. The procurement process for construction is a multi-step process which starts from procurement planning and then follows preparation of tender document, advertising the tender, submission of bids by the tenderers, evaluation of the submitting tender and award of the contract (Alan, 2004).

Procurement planning also involves consideration of whether to procure, how to procure, what to procure, how much to procure, and when to procure. Hence, from the above definition the procurement plan will set strategy and helps guide project execution through the project life cycle. The strategy evolves over time and should continuously reflect the current status and desired end point of the program. The strategy must be flexible enough to accommodate oversight decisions (Baily, 2005).

Procurement Process is the whole Procurement lifecycle that starts with the identification of a need and continues through planning, preparation of specifications/ requirements, budget considerations, selection, contract award, and contract management. It ends on the last day of the warranty period (WBPG, July 2016).

If the procurement planning is not incorporating as part of the scope definition, it will have an impact in selecting the best delivery strategy, bidding method, managing risks and selection of the suitable contractor for the project. For instance as part of the procurement process setting the qualification criteria is one of the basic process for selecting a competent contractor to

perform the work and setting such criteria is dependent on the project scope definition like cost of project, duration and type of the project. Hence, if the procurement plan is not addressed in the scope definition it will also have an impact in selection of the right contractor for the specific project required (Banaitienè, and, Banaitis, 2006).

Generally, it is found that the procurement process in selection of contractors basically contains setting strategies of the procurement through procurement plan and packaging, selecting the best project delivery method, means of bidding, forms of contract, bid evaluation and contract awarding procedures and setting qualification requirements for selection a contractor based on the specific project scope.

The Ethiopian construction sector consists of different types of firms. These operate in different sub-markets characterizing the construction industry.

The Ministry of Urban Development and Construction, in accordance with the powers and duties conferred register and issue certificates of professional competence to engineers and architects, determine the grades of contractors and consultants, and issue certificates of competence to those operating in more than one regional states under Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013.

This directive states minimum requirement for different categories and grade of contractors about different issues like beginning project size, Substitution rules for qualification equivalence between professionals , professional requirement, equipment requirement, staff requirement and etc.

Construction firms must be registered and licensed by the Ministry of Urban Development and Construction in order to undertake any construction work. There are different requirements that need to be fulfilled by qualified professionals before getting a license to undertake construction projects;

According to Ministry of urban development and construction directives the firms are classified based on their size, expertise and financial capability. The professional services sector consists of architects, civil engineers, electrical engineers, sanitary engineers, mechanical engineers, quantity surveyors and surveyors who provided the design expertise.

Construction firms are broadly classified based on trend of work as General Contractors, Building Contractors, Road Contractors and Specialized Contractors. The first three categories are again divided into ten grades with different resource capacities.

Consultancy firms are broadly classified as CA – Consultancy Architects, CAE – Consultancy Architects and Engineers, HBC – Consultancy Highway and Bridge, CE – Consultancy

Engineers and SC – Specialized Consultancy.

All of the above consultancy firm categories are divided into six grades with different resource requirements. In most cases consultancy firms are responsible for preparing designs, specifications and tender documents for building procurement (MUDC, Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013)

2.2 International Procurement Practice

The evolution of public procurement accelerated since the last three decades as governments at all world levels came under increasing pressures to do more with less. Certainly, all governmental entities of rich and poor countries are struggling in the face of unrelenting budget constraints, government downsizing, public demand for increased transparency in public procurement and greater concerns about efficiency, fairness and equity. Furthermore, public procurement professionals have faced a constantly changing environment typified by rapidly emerging technologies, increasing product choice, environmental concerns, and the complexities of international and regional trading agreements. Further, policy makers have increasingly used public procurement as a tool to achieve socioeconomic goals (Thai, 2007).

Public Procurement is the process by which governments and other public-funded entities acquire goods, works and services needed to implement public projects. The focus for the subject is due to that it accounts for at least 15% of World's gross domestic product and even more in African countries. Public procurement is an integral function of governments in both developed and developing countries as the huge financial outflows has a great impact on their economies that needs practical management (Thai, 2007). Thus prudent handling of public procurement functions is fundamental to achieving economic, socio-political and other government objectives. For this be actualized the major process of procurement that is, bid evaluation process need to get due attention in selecting and awarding contracts.

Classification of tendering methods is very different from scholar to scholar and country to country and another some related the tendering method to project delivery system and categorize tendering for instance, according to Ogunsanmi, (2013) tendering methods categorized as competitive tendering, open tendering, selective tendering, open selective tendering, design and build tendering method, turnkey tendering method, serial tendering, negotiated tendering and two stage tendering methods.

ISO 1048-1 standard procurement tendering procedures categorized into four main categories and each have subdivisions i.e. negotiation procedure, competitive selection

procedure, competitive negotiation procedure and electronic auction procedure. ISO 10485-1 also provides guidance on the selection of standard procurement procedures and note that the use of this method of procurement and suggests that its use might not be appropriate in high value contracts. The standard also elaborates their equivalence with the procedures advocated by international bodies, such as the World Bank, the world trade organization, the United Nations commission on international trade law and the European commission. According to Australian Constructors Association, (2006) classification of tendering procedures categorized into five considering projects type and complexity, they are open tenders, selected or approved tenders, pre-qualified tenders, invited tenders and direct negotiation.

To look Ethiopian practice with respect of international Article 33 of Procurement and Property Administration Proclamation No. 649/2009 (Federal Negarit Gazeta, 2009) stated as " the following methods shall be used in public procurement " and those six types of methods discussed on the proclamation are; open bidding, request for proposals, two stage tendering, restricted tendering, request for quotation and direct procurement.

World Bank SBD (2006) master bidding documents for procurement of works and user's guide, prepared by the multilateral development banks and international financing institutions also one of well-organized tender document prepared manual to follow, which contains three sections; bidding procedure, works requirement and conditions of contract and contract forms; which is more or less similar to FDRE PPA's SBD. World Bank (2006) SBD recommends in special conditions of contract and bid data sheet forms where as PPA's SBD left blank to be filed by the user. World Bank SBD uses FIDIC as standard conditions of contract on other hand PPA SBD present's its own standard conditions of contract to be adopted.

Evaluation Criteria

Evaluation criteria are the standards against which bids are evaluated. Generally, evaluation criteria can be categorized into three categories including (i) mandatory criteria, (ii) weighted criteria and (iii) weighted criteria with mandatory elements (UNDP, 2016). Mandatory criteria are used in straightforward bid evaluation methods where they are rated as pass/fail, responsive/non-responsive or comply/non-comply. They are usually used in evaluation for goods procurement, but may also be used for the procurement of services and infrastructure works. The mandatory criteria are the first criteria against which bids are

evaluated in order to eliminate bids that do not conform to these requirements (UNDP, 2016).

Weighted criteria are criteria which can be measured in terms of degree of responsiveness. The scale used to measure the degree of responsiveness depends on the procurement method and category of procurement. Usually this applies to the evaluation of services.

Weighted criteria with mandatory elements are criteria that have mandatory minimum requirements defined and are measured above that minimum requirement (UNDP, 2016); for example, a requirement may be set for a consultant to be fluent in at least two international languages and a rated score may be assigned for persons with additional international language capabilities, if the additional language adds value to the requirement.

Stages of the Bid Evaluation Process

Stages of the bid evaluation process for construction projects were categorized in to four basic stages including (1) preliminary examination for responsiveness to formal qualification requirements, (2) evaluation for compliance with technical requirements, (3) price/financial evaluation and (4) post qualification/due diligence (UNDP, 2016).

Next the researcher is going to review some studies of African countries including Ethiopian to look at countries experiences in procurement laws and regulations.

Yonas (2014) conducted a study on procurement process of Addis Ababa Water and Sewerage Authority. The study used descriptive research design and quantitative and qualitative data analysis. The findings of the study showed that the authority has no any procurement strategy and policy. As a result, the researcher recommended that senior managers should protect the department staff from the misperceptions of the procurement department and assist the department to avoid the corruption process with little adverse effect. He also noted the need to revise the unnecessary stage & bureaucratic steps and the internal controlling system to make the organization material flow effective.

Yirga (2011) conducted a study on public procurement reforms in Ethiopia. The objectives of the study were giving a better insight about the challenges and prospects of the public procurement system and assess the nature and system of public procurement practices and the underlying factors that hinder public procurement activities in Ethiopia. The study was designed as descriptive interviews with different stakeholders and used different secondary

data. Consequently, the results of this study showed that a significant achievement has been made in reforming the Federal Government's procurement system.

Musnzikwa (2013) conducted a study on public procurement system challenges in developing countries: the case of Zimbabwe with the objectives to provide an overview of the public procurement system challenges in developing countries identified a number of challenges in public procurement that included delays in decision making, corruption, political interference, incompetence, and a high level of corruption activities in the public procurement.

Amemba et.al (2015) on identifying the challenges facing public procurement performance in the Kenyan public sector study found that the most prevalent challenges in the public procurement process are the selection of the most suitable procurement methods, with appropriate justifications and record keeping. The paper recommend that public procurement performance in Kenya can only be improved through review of existing legislations to encourage extensive use of technology in the management of the procurement process, fostering of long term buyer supplier relations and stakeholder involvement through trainings and sensitization on practicing ethical behavior when conducting procurements.

In Ghana, two types of evaluating bid methods are widely used in the building construction industry. One is the lowest evaluated tender price, and the other is multi criteria quantitative method. However, the selection of the contractor based on the lowest tender which is supposed to be used for selection of contractors for government projects as requirement contained in the Public Procurement Act may be one of the major reasons causing project delivery problems, as Contractors often quote low prices and subsequently attempt to reduce the quality of work and hope to be compensated by submitting claims (Hatush, 1998).

Public procurement units should follow the approved procurement method listed on (PPD, art. 33), open tendering, restricted tendering, requests for quotations, single source or direct procurement, requests for proposals, and two-stage tendering. Except, as otherwise provided in the proclamation, and on the directive, public bodies shall use open bidding as the preferred procedure of procurement. Public bodies may use a method other than open bidding only where conditions for use of such other method stipulated in the proclamation and on the directive are satisfied. Bid type has a significant contribution to the success of projects in the construction industry, it should be the process of inviting and evaluation depends on the type of project and financial capability. Selection of the most appropriate

bidder for a project is a crucial challenge faced by the construction industry Laychluh, (2012). It is more important to identify and use a suitable bid evaluation method that considers contractors' performance to ensure successful completion of projects that will have the best performance during and after construction.

2.3 Ethiopian Procurement practice

This section gives an overview about legal framework of the Ethiopian public procurement system. Ethiopia historically uses procurement related laws and specific construction works related standard tender document prepared previously by (MOC, and MoWUD) and nowadays by financial and economic development (FPPAA) authorities in order to administer construction service and works procurements. Construction industry involves many activities from beginning to end. It's a systematic process with many inputs and outputs and through this process Procurement or tendering process is amongst the prime important elements. The Procurement process has been an issue in the construction world among many others as it is directly or indirectly related to the usual time and cost overruns associated with construction projects Laychiluh, (2012).

Public procurement in Ethiopia dates back to 1940s. According to a report prepared by the Ethiopian Procurement and Property Administration Agency quoted in Tesfahun, (2011), public procurement was started in 1940 EC. Furthermore, according to Admasu, (2008) quoted in Tesfahun, (2011), it was established to procure military equipment's and supplies for soldiers. According to the report, the improved procurement services were started in 1942 EC. During the time, other public organizations didn't like to be subordinated to the Ministry and they felt dominated. In addition, the ministry didn't have skilled and qualified man power that it couldn't perform its function efficiently and effectively as expected. Then an independent agency (Ministry of Public Property Organization and Distribution) were established in 1950. Under proclamation 19/1950, this independent agency was responsible to procure and distribute materials such as military uniforms, equipment's and supplies; public vehicles, capital equipment's and stationeries; materials which are crucial for development and industrialization, air, water and inland transportation equipment's and spare parts.

Until 2005, there was no comprehensive procurement law at a national level. There were only few articles in the civil code regulating the procurement procedure. Having the objective to achieve better transparency, efficiency, fairness and impartiality in public procurement and to enable the utilization of the large sum of public money spent on procurement in a manner that ensures greater economy and efficiency, the Federal Democratic Republic of Ethiopian

(FDRE) government established a public procurement proclamation. In 2005, the federal government enacted a law providing a detailed procedure of public procurement (providing the procedures of public procurement and establishing its supervisory agency proclamation No.430/2005.) This law also establishes a federal agency empowered with regulating the procurement of works, goods and services by federal (Abrham, 2012).

After four years of the issuance of this law, it was revised and replaced by a new law (The Ethiopian Federal government procurement and property administration proclamation No.649/2009.) This second proclamation comes with more detailed and clear procedures. It has also widened its scope by providing for the regulation of public property (Abrham, 2012). As a country public procurement and property administration shall have to comply the principles to ensure value for money in the use of public fund for procurement, nondiscrimination among candidates on grounds of nationality or any other criteria not having to do with their qualification, except in cases of preference specifically provided for in this proclamation, transparency and fairness of the criteria on the basis of which decisions are given in public procurement as well as of decisions in each procurement, accountability for decisions made and measures taken with regard to public procurement and property administration and Careful handling and proper use of public property. (PPAP no. 649/2009)

Ethiopia is making a large investment in infrastructure as one of the key contributions to the country's development plan. About 62% of the annual budget is expended on procurement for infrastructure development in transport, energy, water, agriculture, education, health and other sectors (Quinot and Arrowsmith, 2013). This comprises about 15% of the GDP of the country. Transport alone constitutes 30% of the annual budget expenditure. For example, the Ethiopian roads authority signs a large number of contracts annually committing over ETB 29 billion. However, Ethiopian public procurement system has so far been characterized by the traditional procurement approach (World Bank & Ethiopian Government, 2010), considering price as a main evaluation criterion. Using least cost approach as evaluation criteria avoids having to make judgments on qualitative aspects of bids, thus eliminating one opportunity to bias in the selection process. This, however, results in nothing but buying inferior quality products or works, project performance delays and cost overruns.

Public procurement in developing countries specifically is still contracted out based on input or process specifications which is a traditional approach and employs inefficient procurement practices. In addition, many major public projects in developing countries face cost and schedule overruns and require a huge amount of extra budget to complete. This is a common

practice in Ethiopia in most public projects (World Bank & Ethiopian Government, 2010). One inaccuracy committed here is during the choosing of contractors using open tendering. The process of bid evaluation for awarding a contract in construction projects need to give much emphasis to technical and other capabilities of the bidders so as to safeguard the smooth accomplishment of projects.

According to Letarge, (2016) journal of scientific & engineering research in Jimma, in Ethiopia the major purchaser of construction is the federal government. And the most common procurement method is the competitive low-bid procedure in which contracts are awarded to a responsive contractor who offers the least price, which has inherent flaws of high competition and minimum performance. These incompetent practices pose a serious risk and problems. It is therefore, important to assess the impact of tender evaluation system on performance of public work projects in Ethiopia construction industry.

Now a days from the different tender evaluation methods selecting contractor based on least cost is being used extensively. While the low-bid procurement system has a long-standing legal precedence and has promoted open competition and a fair playing field, a long-standing concern expressed by owners and some of their industry partners is that a system based strictly on the lowest price provides contractors with an incentive to concentrate on cutting bid prices to the maximum extent possible (instead of concentrating on quality enhancing measures), even when a higher cost product would be in the owner's best interest, which makes it less likely that contracts will be awarded to the best performing contractors who will deliver the highest quality projects. As a result, the low-bid system may not result in the best value for money expended or the best performance during and after construction Laychluh, (2012).

Procurement practices in SNNPR

According to SNNPR procurement directive, (2010) at regional level procurement management process can be idealized into three major processes. These include preparation, tendering, and evaluation (including award recommendation).

During preparation phase formation of a procurement team, the preparation of tender documents and their approval for procurement implementations will be done. This SNNPR procurement regulation directive states that a procurement team consisting of a minimum of three members shall be established. If tender evaluation comprises joint technical and financial exercise, the client and finance shall consider that the necessary experts shall be composed in the procurement team.

Tender documents are prepared to instruct bidders on the procedures for the preparation and submissions of bids, inform prospective bidders about the nature of things to be procured, inform bidders about the criteria for evaluation and selection of the successful bidder, and lay down the contract conditions, delivery system, procurement methods and contract types of the project.

Tender documents include form of invitation to tender or request for proposals, instruction to tenderers (standard and / or particular information.) or terms of references, prequalification documents if necessary refer procurement methods based on stages, forms of contract agreement, general and particular conditions of contract, bill of quantities and drawings, technical specifications & methods of measurement

Tendering phase includes invitation, clarification, submission and opening of tenders.

As stated at appendix part of SNNPR procurement directive, (2010) national competitive open bid tenders must be floated for a period between 21 to 31 days based on complexity of project to be implemented, limited and negotiates tenders can be invited between 7 to 15 days. Invitations shall widened opportunities to the project owner by reaching all potential and eligible competitors. The invitation to tender shall clearly states that the owner and his desirous service or works, how long the tender will be floated, eligibility requirements, how should the tender offer be packed, and place to get further information, when and where submission and opening of tender will take place and where to purchase & submit tender documents,

Clarifications can either be requested by interested bidder or carried out using a pre – tender clarification meeting. In both cases, issues clarified shall be sent (written) to all bidders participating for the intended services or works. The bidders shall submit their offer on or before the submission date and time. Late bids are automatically rejected.

During tender opening bids shall be opened in public on the date, at the time and place mentioned in the invitation to tender and stipulated in the tender documents. According to the directive procurement team, representatives and any interested body shall attend during the tender opening ceremony.

At tender opening time, tender attendee members shall take their place and be registered, tender box opened and checked for faulty things, check the tender is the right one, bids will be opened one after the other, all necessary data which deem useful such as project name, name of bidder, bid bond amount, tender price, etc. will be read aloud and recorded at the opening of bids. Bidders and representatives shall sign and register to attest their presence during opening, and tender committee members shall sign on the tender documents. Tender

evaluation phase is made to determine and make award recommendation for the least evaluated bidder using preliminary and detail evaluations. The recommended winner may or may not necessarily be the lowest bidder, factors such as technical qualification, completion time, commercial terms of the offer, etc. are used in determining the least evaluated bidder. Finally, a contract shall be deemed to have been concluded between the public body and the successful bidder only where a contract containing detailed provisions governing the execution of the procurement in issue is signed (SNNPR PPA, (2010)).

2.4 Public procurement

Public procurement is the process of the acquisition, usually by means of a contractual arrangement after public competition, of goods, services, works and other supplies by the public entity. The public procurement process spans the whole life cycle from initial conception and definition of the needs through to the end of the useful life of an asset or the end of a contract (FDRE PPPAA, 2011).

World Bank, (2004) define public procurement as the acquisition of goods, services and works by a procuring entity using public funds.

World Bank (2004), also reiterated that public procurement represents 18.42% of the world GDP. Although several developing countries have taken steps to reform their public procurement systems, the process is still shrouded by secrecy, inefficiency, and corruption and undercutting. In all these cases, huge amounts of resources are wasted. In developing countries, public procurement is increasingly recognized as essential in service delivery and it accounts for a high proportion of total expenditure.

Baily and et al (2005, PP 343) identified proposals for the public procurement sector includes seeking to develop world class professional procurement staff , seeking to introduce best practice in terms of whole-life cost savings ,highest standard benchmarking , co-operative relationship with contractors and supplies within the constraints of competition and the promotion of continuous improvement.

Procurement is the process which creates, manages and fulfils contracts. Procurement can, as such, be described as a succession of logically related actions occurring or performed in a definite manner and which culminate in the completion of a major deliverable or the attainment of a milestone. Processes, in turn, are underpinned by methods (i.e. a documented, systematically-ordered collection of rules or approaches) and procedures (i.e. the formal steps to be taken in the performance of a specific task), which are informed and shaped by the policy

of an organization. Methods and procedures can likewise be documented and linked to processes. Procurement activities commence once the need for procurement is identified and end when the transaction is completed (ISO/DIS 10845).

According to (ISO/DIS 10845) there are six principal activities associated with the procurement process, namely

- 1) establish what is to be procured;
- 2) decide on procurement strategies in terms of contract, pricing and targeting strategy and procurement procedure;
- 3) solicit tender offers;
- 4) evaluate tender offers;
- 5) award contract; and
- 6) Administer contracts and confirm compliance with requirements.

The Public Procurement Authority (PPA) in its effort to make public procurement transparent, efficient, and fair, established five basic pillars of the public procurement. One is the comprehensive transparent legal and institutional framework, two is the clear and standardized procurement procedures and standard tender documents, three is the independent control system, four is the proficient procurement staff and five is the anti-corruption measures. The legal and institutional framework stipulates that the PPA establishes the public procurement board as a legal corporate entity. This entity would comprise of ministries, departments agencies and all parties establishments that utilize public funds. In each entity, one would find a tender committee that is in charge of providing a one-stop shop for concurrent approvals, awards and management of contracts.

2.4.1 Terms related to public procurement process

The Ethiopian Federal Government Procurement and Property Administration Proclamation No. 649/2009 and SBD for Works Prepared by the FPPA (Version 1, August 2011) public procurement manuals states definitions of specific terms that are related to the public procurement.

“Bid” means a stage in the procurement process extending from advertisement of or invitation to bid up to signing of contract.

“Bid Proposal”: a document submitted by bidders to participate in a bid on the basis of the bid document prepared by a procuring body in respect of that procurement.

“Tender/Bidding Document”: a document prepared by the procuring body as a basis for

preparation of bids; which contains the documents and standard tender forms set out.

“Procurement Unit” means a body responsible for procurement within public bodies without prejudice to the particular organizational structure appropriate to the nature of their duties.

"Public Body" means public body, which is partly or wholly financed by the Federal government budget, higher education institutions, and public institutions of like nature which has the powers and duties to conclude a Contract for the supply of Works.

“Public Procurement” means procurement by a public body using public funds.

“Standard Bidding Document” means the document prepared by the Agency to serve as a point of reference in the preparation of bidding documents by Public Bodies.

“Technical Specification” means document describing the quality, type and standard with which the required goods, services, works or consultancy services should comply.

"Works" mean all work associated with the construction, reconstruction, upgrading, demolition, repair, renovation of a building, road, or structure, as well as services incidental to works, if the value of those services does not exceed that of works themselves.

“Pre-qualification” is a means for attracting potential bidders to participate, in which potential bidders are invited by a public body to submit documentation that shows the person/firm is capable of meeting the requirements of a specific future bid.

“Post-qualification” is a process undertaken by a public body at the end of the bid evaluation stage to ascertain the capability of the least evaluated bidder to perform the contract. Post qualification assessment may be done for prequalified bidders. The purpose of the post qualification is to ascertain that the lowest evaluated bidder is still capable to perform the contract.

2.5 Procurement methods

Procurement is essentially a series of considered risks each method has individual strengths and weaknesses, which must be carefully calculated by clients and industry alike. There are a number of different types of procurement routes available for clients to select.

Each different type of procurement has its own advocates and inherent strengths and weaknesses.

Selection of an absolute optimal procurement method is difficult, because even the most experienced client or contractor does not know all the potential benefits or risks for each method. Procurement is, therefore, a succession of ‘calculated risks’. Industry and academia

have consistently focused on reducing this risk through the use of innovative methods of procurement.

The difficulty, and what sets construction industry procurement far apart from anything else, is the complexity of projects. Influences such as ground conditions, topography, logistics, weather, available technologies, finance, labor availability and services, just to name a few, all affect the ability of a project to be completed on time, on budget and to a high quality (Victorian civil construction industry, 2008).

The Federal Democratic Republic of Ethiopia, Public Procurement and Property Administration Agency (2011, PP: 47) Proclamation Article 33: lists open bidding, two-stage bidding, request for quotations, request for proposals, restricted bidding and direct procurement as methods of procurement that shall be used in public procurements.

2.5.1 Open Bidding

The Federal Procurement directive states that except otherwise provided in this Proclamation, the procuring entity shall use open bidding as the preferred procedure of procurement. Even though it is common that each method has its own advantage and drawback, the Ethiopian government prefers the bid way of purchasing especially open bidding way to perceive the advantage gained by such method (FDRE, PPPAA (2011)).

Similarly the Federal Democratic Republic of Ethiopia, Public Procurement and Property Administration Agency (2011, PP: 41) states that all interested firms bidders are given adequate notification of contract requirements and all eligible bidders are given an equal opportunity to submit a tender. The public body must give sufficient public notification of bidding opportunities to potential bidders to determine their interest and prepare bid documents.

2.5.2 Two stage bidding

Public body may use Two-Stage Bidding Method for the procurement of large or complex contracts. In the First-Stage, a public body shall invite through advertisement unpriced technical proposals on the basis of Bidding Documents which shall state the requirements of the public body in general terms and incorporate the necessary description and questionnaires and outline a conceptual design and/or specific performance requirements. A conceptual design would focus mainly upon the presentation of a functional design that provides potential bidders with basic technical information, e.g. stipulated performance specifications, outline technical specifications, visual, operational and economic details of the required procurement object (FDRE, PPPAA (2011)).

2.5.3 Request for quotation

The Federal Democratic Republic of Ethiopia, Public Procurement and Property Administration Agency (2011, PP: 73) a public body may undertake procurement by means of a Request for Quotations (RFQ) for the purchase of readily available, standard, off-the-shelf goods and related services and low value simple works or physical services, provided the estimated value of the contract does not exceed the amount

- a. For works -----ETHB 250,000
- b. For goods----- ETHB 100,000
- c. For consultancy---- ETHB 60,000
- d. For services----- ETHB 75,000

The public body shall request quotations from as many bidders as practicable and shall obtain and compare at least three (3) quotations to establish the competitiveness of the quoted prices. Comparison of two (2) quotations is justified only when there is satisfactory evidence that there are only two sources of supply.

2.5.4 Request for proposal

The Federal Democratic Republic of Ethiopia, Public Procurement and Property Administration Agency (2011, PP: 79) A Request for Proposals (RFP) shall be used by public bodies for procurement of consultancy services. Consultancy services mean a service of an intellectual and advisory nature provided by consultants using their professional skills to study, design, and organize specific projects, advice clients, conduct training and transfer knowledge.

2.5.5 Restricted bidding

Prospective suppliers are invited to compete for a contract that advertising of which are restricted to appropriate technical journals or local newspapers. Likewise the Federal Democratic Republic of Ethiopia, Public Procurement and Property Administration Agency (2011, PP: 43) the total contract value of Procurement made by restricted bidding, in accordance with Article 49.2 of the Proclamation shall not exceed the following:

- a) For procurement of works -----Birr 2,000,000.00
- b) For procurement of goods -----Birr 500,000.00
- c) For procurement of consultancy services ----Birr 300,000.00
- d) For procurement of services -----Birr 400,000.00

2.5.6 Direct procurement

The public body shall, in the first place, ask for a quotation from a single bidder directly and afterwards shall be free to negotiate with the selected sole bidder. There is no requirement for Direct Procurement to be advertised, nor is there a need for a bid security.

The Federal Ministry of Finance and Economic Development (MoFED) has the mandate to issue public procurement rules and regulation. Under the ministry office the Public procurement and Property Administration Agency (PPPAA) administers it. The basic principle of PPPAA falls on ensuring value for money, non-discrimination, transparency and fairness of the tender criteria and accountability (Directive 2010, Part I, article. 4)

The federal proclamation, however, limits public bodies to use open bidding as the preferred procedure of procurement except as otherwise provided in the proclamation to use other options (article 33-(2)). Restricted tendering is allowed only when the required object of procurement is available only with limited suppliers and the cost of the procurement does not exceed the limit in the directive issued by the Ministry; or where a repeated advertisement of the invitation to bid fails to attract bidders in respect of a procurement subject to the directive to be issued by the Ministry (Proclamation No. 649/2009, article 49).

2.6 Procurement and contract delivery systems

Procurement and Contract management has a strong relationship with construction process and stakeholders management. The main and sub tasks that determine procurement and contract management process are; the delivery system chosen, the procurement method adopted and the contract types decided will determine the construction process as well as the relationships between stakeholders involved the process (Alan , 2004). Procurement and contract management involves three major processes contract planning, procurement management and contract management.

Construction projects are components of a certain business or development demands. Contract is a customary tool used to implement formulated programs or projects. As a result, contract planning becomes part of this basic / strategic phase. Contract planning includes decisions on proposed Delivery Systems, Procurement Methods and Contract Types.

Procurement Management is a process of selecting individuals or organizations to carry out the intended services and / or works. Procurement Management is carried out based on the provisions made during the contract planning phase of the Procurement and Contract Process. It involves the preparation of procurement documents, their invitation and submission of

tender proposals, and opening and evaluation of tenders (WBM, 2010). On the basis of results from tender evaluations, the procurement team will recommend the lowest responsive bidder for Contract Management Phase.

Contract Management Is a process of reaching contractual agreement for implementation, its administration and finally concluding the contract. Similar to the procurement management process, it shall be based on the provisions decided during the contract planning phase. It involves negotiation based on tender evaluation recommendations and signing of contractual agreement followed by its administration for contractual implementation, progress tracking, and changes, claim and disputes resolutions.

Every contractor awarded a contract shall complete that contract in accordance with its terms and requirements. In the event that the organization determines that the contractor's performance is unsatisfactory due to circumstances within the contractor's control, the organization may take whatever actions or impose whatever sanctions it deems appropriate in accordance with the terms of the contract.

Procurement and contract delivery system is the way project owners together with project regulators and financiers determine the assignment of responsibilities to project stakeholders along the construction process. Procurement and contract delivery system is often determined during the basic planning phase of construction project. The contract strategy determines the level of integration of design, construction and ongoing maintenance for a given project, and should support the main project objectives in terms of risk allocation, delivery incentives and so on (Wubishet, 2004).

2.7 Tender criteria setting and evaluation

Selecting a construction contractor is one of major decisions which may influence the progress and success of any construction project. Contractor qualification criteria are a commonly used process to identify a qualified, sound and reliable contractor. These criteria are used to score contractors according to their economic, technical aspects, quality standards, past performance and other characteristics. Most of the time criteria setting and evaluation will be conducted by a tender committee.

Any negotiations or discussions with respondents or tenderers shall be conducted in an open, competitive, transparent and fair manner and shall not be used as an opportunity to trade-off one tenderer's financial offer against another tenderer's financial offer in order to obtain lower prices or to provide any tenderer with a second or unfair advantage. An organization shall be justified in rejecting all tender submissions only if such submissions are nonresponsive and are unsuitable

either because they do not fully comply with requirements or involve costs substantially higher than the budget (ISO/DIS 10845).

Among all factors the main evaluation factor is cost or price consideration that may affect the selection of a contractor. Although the lowest bidder system protects the public from improper practices, it has certain disadvantages. These include unreasonable low bids either accidentally or deliberately or unqualified contractor which cause extensive delay, cost overrun, quality problems and increased number of disputes. Over the years some modification to the lowest bidder system were made, such as reasonable bidder, public interest and prequalification list which open the door to other evaluation methods to be adopted instead of the single criterion system lowest bidder system. Agents and contractors that are commissioned to prepare a procurement document or part thereof for a particular procurement may, unless otherwise precluded for doing so in terms of the organization's procurement policy, only submit a tender for that procurement if it is determined that the outputs of their commission and the procurement document is objective and unbiased having regard to their role and recommendations.

Procurement documents shall, as relevant (ISO/DIS 10845),

- a) be prepared in accordance with the organization's procurement policy,
- b) be prepared in the language stated in the organization's procurement policy,
- c) present requirements in a clear, unambiguous, comprehensive and understandable manner,
- d) where a nominated or qualified procedure is used, require respondents to register their interest in undertaking a specific contract or to participate in a project or program and to submit their credentials for the employer to admit them to an electronic database or invite them to submit tenders should they qualify or be selected to do so,
- e) require tenderers to submit particulars sufficient for the employer to evaluate their tenders and to establish their credentials and to assess their capabilities and capacities to perform the contract,
- f) set out in a clear and unambiguous manner the criteria by which tenders are
- g) to be evaluated,
- h) define the risks, liabilities and obligations of the parties to the contract and the procedures for the administration of the contract, and

- i) Define the nature, quality and quantity of goods, services or construction works to be provided in the performance of the contract.

During the formation of tender committee proper care has to be taken. As Boating (2014) stated in his study Ugandan local government regulation permits a contract committee of five members nominated by the accounting officer. Also in South Africa the accounting officer should appoint a bid evaluation committee for the evaluation of bids; where there is a lack of capacity (human resources) to establish the committee structure in a specific municipality it may be agreed upon to share the committee structure of another municipality. In Ghana, the Public Procurement Act 663, (2003) states that tender evaluation panel shall be an ad hoc body of not more than five members constituted for a specific procurement package.

Federal procurement proclamation 649/2009 article 29 states the technical criteria shall be prepared for the purpose of providing a correct and complete description of the object of procurement and for the purpose of creating conditions of fair and open competition between all candidates. It also be inviting open competition and devoid of any statement having the effect of restricting competition.

2010 federal public procurement directive article 7 states procurement endorsing committee should ascertain that the evaluation criteria are non-discriminatory, transparent and achievable.

2011 public procurement manual 2.7.1 label the technical specifications define the characteristics required of a material, supply or service such that they fulfill the use for which they are intended. They are laid out in the contract documents without creating unjustified obstacles to competition. The federal procurement directive and manual do not incorporate all procedures to be followed during turnover, financial resource, key personnel, equipment requirement setting and where to apply must meet criteria related to the project. Furthermore construction audit has not yet started therefore inefficient and corrupt professionals easily set the criteria to favor some contractors with no accountability.

2.7.1 Tender criteria setting

Construction tender criteria focuses on relevant experience ,appreciation of the task, past performance, management and technical skill, resources, management system ,methodology and price.

Banaitiene et al.(2006) described tender criteria as a tool to achieve the aims of a construction project, which is selected, based on pre-determined and appropriate evaluation criteria these evaluation criteria must consider the size and complexity of the project. Procurement rules exist

in most countries and for all international financing agencies and these must be followed. These rules should encourage true and open competition in tendering and contract award, open meetings and equitable and fair distribution of information, effective monitoring and auditing of all processes and implementation activities.

Unfair qualification criteria, lack of accountability and corrupted practice of the awarding contractors has led to delays, disputes and inflated price. Involved parties are also expected to follow standards of behaviors such as honesty and fairness, rule of law and no anti-competitive practices. In the planning stage it is advisable to identify the project resource requirements and correlate the project demand to technical requirements. (Victorian civil construction industry, 2008).

As part of the preparation work, and before any tender is advertised, the procuring agency requires a realistic estimate (based on a good quality design and costing process) of the cost of the structure with a breakdown of significant cost items. To prepare such an estimate, an engineer (The Engineer) should be selected and be appointed to not only carry out this preliminary work but continue to supervise the contractor and ensure all works are carried out according to the design and to the highest quality possible (Alan, 2004).

This estimate must be kept strictly confidential and there should be no links between personnel having this knowledge and the bidders. Should the subsequent bidding result in bids received that vary greatly from this estimate, questions should be raised on the validity of the bids. Underestimates from bidders could lead to poor contract performance and the need for changes and variations as the contract proceeds and overestimates may suggest over pricing, cartel links or other unrealistic bidding.

The federal public procurement manual no. 2.5 (2011) clearly states the need for setting qualification criteria for the respective bids to ensure the contractors professional and technical qualifications and competence to undertake the work/supply/service for which they are bidding. Hence inserting unnecessary and exaggerated criteria reduce the number of bidders and favor a few.

As Selama et al. (2006) stated on their study on the criteria of contractor selection in Egypt defined bid evaluation as a decision-making process that involves the development and consideration of a wide range of necessary and sufficient decision criteria used to assess the contractors capabilities.

2.7.2 Tender evaluation

Principles of evaluation after the opening of bids, information relating to the examination, clarification, and evaluation of bids shall not be disclosed to bidders or other persons not officially

concerned with this process until the successful bidder is notified of the award of contract. Evaluation of bid technical scores should be done by the evaluation committee as a whole, as opposed to individual evaluation, and based on the scoring scale provided in the bidding documents (PPAD, 2010).

Although an initial review of the offers received is done at the bid opening event, a preliminary examination of the offers is done at the beginning of the evaluation process to determine the responsiveness of the offers. After that, a detailed examination is done only of the offers that complied with (were responsive to) the requirements of the evaluation criteria.

The federal law requires public organizations to award public contracts to the “lowest responsive bidder.” The word “responsive” is inserted to require that a successful bid must also be adequately responding to the requirements of the project as specified. Or to the one which gives the most economic advantage; weighted average of the technical and financial evaluation results. While it is not too difficult to determine whether a bid is responsive because responsiveness is evaluated based on the documents submitted by contractors as per the bid requirement. It takes considerable amount of time and effort to ascertain whether a bid is responsive. “Responsive” means technically and financially qualified. The bidder must also have the requisite judgment, skill, ability, and integrity to perform the contract according to its terms.

For two reasons application of this requirement becomes difficult. First, there is generally a narrow window of time available between a bid opening and the award of the bid. Second, although the law allows public organizations to reject any or all the bids, the rejection cannot be done arbitrarily or in bad faith. In most cases high degree of subjectivity gets involved in the process of determining whether a particular bidder is responsive.

During evaluating contractors offer the technical qualifications are initially assessed. Once the technical qualifications are determined, the contractor obtaining the minimum or above technical qualifying mark will pass to the next financial evaluation.

In recent years the subjectivity of technical criteria has increased dramatically and becomes the cause for inflated price and business malpractice especially on quality based evaluation method. According to Huang (2011) key components that should be examined when conducting a contractor qualification evaluation are:-

- ✚ Financial standing, such as financial stability, turnover, profit, obligations, amounts due, and owned financial funds.
- ✚ Technical ability, such as experience, plant and equipment, and personnel.

- ✚ Management capability, such as past performance and quality, quality control policy, quality management system, project management system, experience of technical personnel, and management knowledge.
- ✚ Quality, safety, senior management, including experience, tenure with firm, and division of responsibilities.
- ✚ Current projects/backlog, including number, size, and location of projects, percent of capacity being utilized, and status and expected completion, past failures in completed projects, number of years in construction, past client relationships and cooperation with contactors.

Huang (2011) stated contractor evaluation is often performed by industry professionals using their accumulated experience and judgment. There are variations in the amount of effort expended in the process, often without an understanding of how such variations influence the project outcome.

Selection of a successful bidder shall be carried out in either of the following two methods, notwithstanding that the bid evaluation criterion varies from one type of procurement to another:-

- ✚ Setting the minimum technical requirement and selecting the bidder with the lowest evaluated bid from among the bidders meeting such minimum technical requirements, or
- ✚ Indicating clearly in the bidding document the criteria to be applied to determine the functional or economic value of the procurement and the relative weight to be ascribed to each criterion and selecting the bidder with the highest cumulative result by conducting evaluation based on these criteria. (PPAD, clause 16.8.2,2010)

According to the methodology defined in the (PPAPD), the public body shall select the successful bid by applying the following method:

- 1) The Bid that is found to be substantially responsive to the professional, technical, and financial qualification requirements, technically compliant in relation to the technical specifications, and with the lowest price.
- 2) The Bid that is found to be substantially responsive to the professional, technical, and financial qualification requirements, technically compliant in relation to the technical specifications, and with the lowest evaluated bid, The lowest evaluated Bid shall be the bid offering better economic advantage ascertained on the basis of factors affecting the economic value of the bid.

2.7.3 SBD for NCB Prepared by the FPPA (Version 1, August 2011).

Standard bid document is a document that can be used by the procuring entity often called an employer for the purpose of defining procuring procedures, intended requirements and contractual conditions for getting a competitive tender.

According to the agency purpose of this standard bidding document were to insure the fundamental principles of public procurement, to provide a standard document containing basic contractual provisions and safeguard the interest and requirements of public procurements, to minimize time for preparation and approval of bidding documents with minimum changes, to enhance transparency in the evaluation of tenders, to provide the same information to bidders, standardize/simplify the drafting of a specific bidding documents, reduces chance of missing necessary information /inclusion of unnecessary information, provides the basis, facilitate and simplify the evaluation and the compression of bids

A. Evolution of SBD in Ethiopia

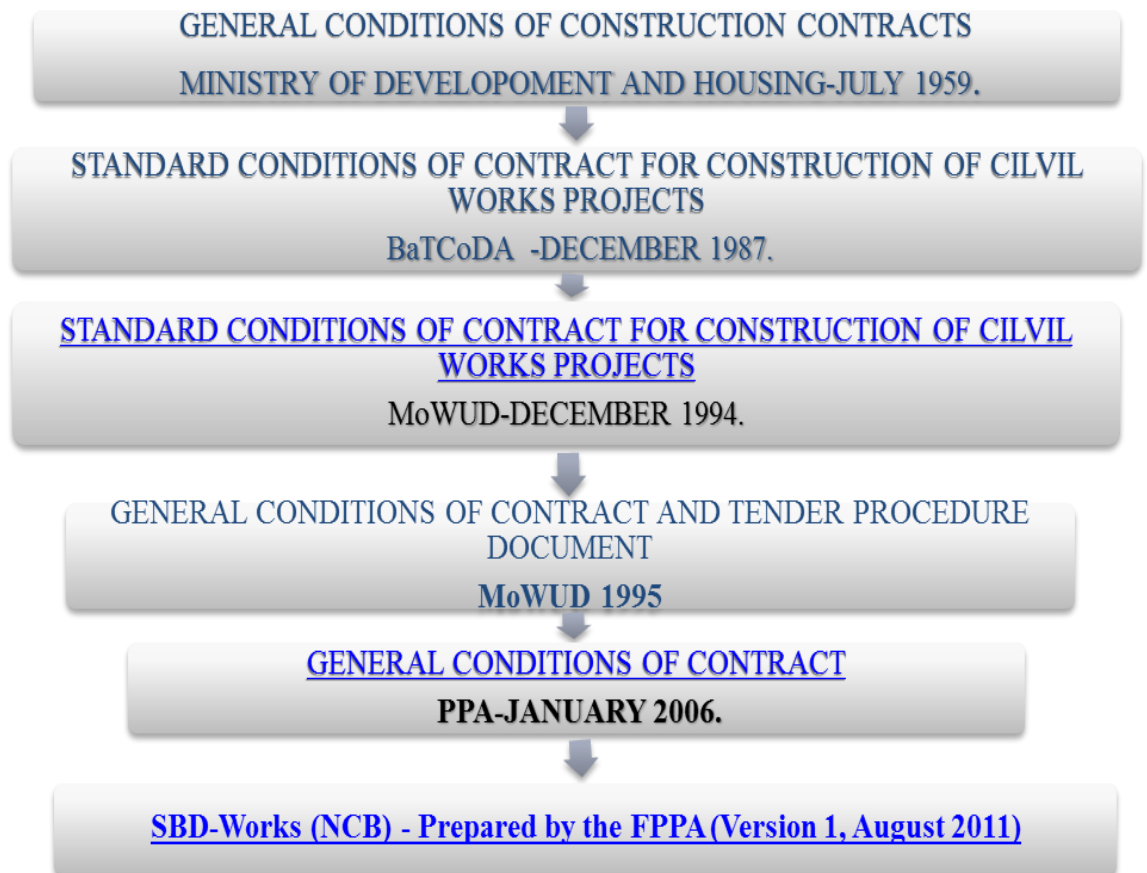


Figure 2.1 Evolution of SBD in Ethiopia (*source, SNNPR finance bureau SBD 2011 User's training manual*)

B. Contents of SBD

According to PPA standard bidding document (SBD) have three parts bidding procedures, schedule of requirements and conditions of contract each part have different components and to further specify by the user.

In first part bidding procedures of PPA standard bidding document (SBD) prepared for works discusses procedure and instruction how the tender shall perform and it includes sub pars; instructions to bidders, bid data sheet, evaluation and qualification criteria, bidding forms and eligible countries. Second part of PPA standard bidding document for works includes only blank forms and tables to be filled by the user. Part two schedule of requirements includes forms and table scope of works, technical specifications, drawings and bills of quantities (or activity schedule). Third part incorporates contracts to be implemented in execution period and special conditions of contract left blank to be filed by the user. It includes general conditions of contract, special conditions of contract and contract forms.

This Standard Bidding Document (SBD) for Procurement of Works for National Competitive Biddings (NCB) Prepared by the FPPA (Version 1, August 2011) at Section 1 Instructions to Bidders states that the Public Body indicated in the bid data sheet (BDS) at section 2 is the Contracting Authority for this procurement process and it is bound by the rules governing public procurement in the Federal Democratic Republic of Ethiopia. It has the powers and duties to conclude a Contract for the provision of Works. Accordingly, this procurement process is being conducted in accordance with the recent editions of the Ethiopian Federal Government Procurement and Property Administration Proclamation and Public Procurement Directive under the procurement method indicated in the BDS.

According to the Ethiopian Federal Government Procurement and Property Administration Proclamation no 649/2009 article 16 (3), Without prejudice to the requirement that in drawing up bidding documents as provided in article 37 of the Proclamation, public bodies have to use the standard bidding document prepared by the Agency, they have to make sure that the bidding document prepared by them incorporates the contents listed in this Directive.

They have to reproduce the part of the standard bidding documents dealing with the instruction to bidders and the general conditions of contracts in the bidding documents they prepare without making any change there to, while making any adjustment to the other parts of the standard bidding documents that they consider appropriate to the type and nature of the procurement.

Also these Proclamation no 649/2009 article 16 (5) states that Public bodies shall be required to draw up detailed technical specification specially for complex and high cost procurements in accordance with article 29 of the Proclamation. A technical specification shall be prepared in accordance with the need of end users and in such a manner that it allows wider competition on the basis of performance, function, technical or design characteristics depending on the type of the procurement.

The technical specification of goods, consultancy service, works or services shall be drawn up by the department which has identified the need or by the staff of the Public Body who have adequate knowledge of the procurement in question. For the procurement of high cost and/or complex goods or services, public bodies may seek the advice and assistance of experts outside the Public Body or higher consultants.

Most of the time tender evaluation criteria settings focuses on relevant experience, past performance, management and technical skill, resources, management system, methodology and price. The federal public procurement Proclamation no 649/2009 article 16 (8) clearly states the need for Setting of criteria for bid evaluation for the respective bids.

The Public Body has to indicate clearly the bid evaluation criteria in the evaluation and qualification criteria section of the standard bidding document.

According to this proclamation selection of a successful bidder shall be carried out in either of the following two methods, notwithstanding that the bid evaluation criteria varies from one type of procurement to another:-

- a) Setting the minimum technical requirement and selecting the bidder with the lowest evaluated bid from among the bidders meeting such minimum technical requirements, or
- b) Indicating clearly in the bidding document the criteria to be applied to determine the functional or economic value of the procurement and the relative weight to be ascribed to each criterion and selecting the bidder with the highest cumulative result by conducting evaluation based on these criteria.

In addition to the basic requirements defined in the proclamations bidders are required to meet the minimum qualifying criteria set at Standard Bidding Document (SBD) for Procurement of Works Prepared by the FPPA (Version 1, August 2011) at section 3 evaluation methodology and criteria. This section read in conjunction with section 1 instructions to bidders and section 2 bid data sheet and contains all the factors, methods and criteria that the public body shall use to evaluate a bid

and determine whether a bidder has the required qualifications. No other factors, methods or criteria shall be used. The Bidder shall provide all the information requested in the forms included in Section 4 bidding forms of SBD.

C. Evaluation of Bids according to SBD

According to PPA 2011 standard bidding document section 3 evaluation methodology and criteria, in order to select the responsive bidder technical and financial evaluations must be done. The most important consideration in the selection of a successful contractor in the procurement of construction works shall be given to the quality of a contractor technical proposal. The cost of the services shall be considered judiciously because, services, quality is the primary concern (Public Procurement Agency, 2011). The public body evaluates the bids on the basis of their responsiveness to the schedule of requirements, applying the evaluation criteria, sub-criteria, and point system specified in the SBD Section 3. No other criteria or methodology shall be acceptable and each responsive bid will be given a technical score.

Bid shall be rejected at this stage if it does not respond to important aspects of the bidding documents and particularly the schedule of requirements or if it fails to achieve the minimum technical score indicated in the section 3 (clause 38(38.2)). The technical score can be given in different arrangement such as point rate, must meet or both. After this the bidder whose technical document is substantially responsive will be forwarded for financial evaluation. Depending on the nature and complexity of assignments, different evaluation methods may be selected. Under section 3, evaluation methodology & criteria of PPA 2011 on sub section B, evaluation of bids, determining the successful bid is stated.

According to the methodology defined in the public procurement proclamation and directive the public body shall select the successful bid by applying the following method:

A. The bid with the lowest price(Price Based)

Low Bid Method in the procurement process, a standard practice for many organizations who are interested in using the competitive nature of bidding is to keep procurement costs low. The competitive bidding process for awarding construction contracts is typically based on the low bid method. According to this method, the construction firm submitting the lowest bid receives the right to the construction contract, i.e. the contract is awarded to the substantially responsive bidder that offered to fulfill the terms of the contract for the lowest bid price. The bids shall be examined to confirm that all documentary evidence establishing the bidders' qualifications requested in ITB Clause 23 have been provided. The public body shall notify bidders on

adjusted calculation errors and request bidders to confirm that they accept the correction of the calculation error within the time limit of three days from the receiving of the notification. The public body shall award of the contract the bidder whose bid has been determined to be substantially responsive to the bidding documents and with the lowest price.

**B. Determining the lowest evaluated bid offering the best economic advantage
(quality and price based)**

The bid that is found to be substantially responsive to the professional, technical, and financial qualification requirements, technically compliant in relation to the technical specifications, and with the lowest evaluated bid .The lowest evaluated bid shall be the bid offering better economic advantage ascertained on the basis of factors affecting the economic value of the bid. Provided all mandatory legal, professional, technical, and financial requirements have been met all technically compliant bids shall be evaluated and scored using the two-stage bid evaluation and scoring method. In accordance with ITB Clause 38.3(f), the public body's evaluation of the bid will take into account, in addition to the bid price. The technical evaluation criteria and their weighting points that indicate their level of importance are determined. Bidders getting score less than specified percent in the technical evaluation shall be rejected

For quality and cost based producer evaluation and comparison of bid price will be in the financial evaluation, the highest point shall be given to the lowest priced bid, and conversely, the lowest point shall be given to the highest priced bid among technically qualified bids. The points given to other bidders shall be determined depending on their price offers. From the total merit points to be given for proposals submitted by bidders in a bid for procurement of works, the share of technical proposal shall be percent and the remaining percent shall be the share of the bid price.

According to SBD the formula for determining the financial score is the following:

$$FS = \left(\frac{LFP}{CFP} \right) 100 \dots\dots\dots \text{equation 2.1}$$

Where:

FS = the Bid Price Score;

LFP = the lowest Bid Price;

CFP = The Bid Price under consideration

The public body shall then add the technical score to the bid price score to determine the aggregated (total) bid score and final ranking of bids by applying the following method.

For each technical proposal its technical evaluation score shall be normalized according to the highest evaluated technical score that will get 100 points according to which other scores of technical criteria shall be proportionally ranked.

Normalization is the transformation that is applied equally to every element in the group of data so that the group has a specific statistical characteristic.

The public body shall apply the following formula (Eq.2.2) for the normalization of values of the technical evaluation results:

$$TSN = \left(\frac{CTP}{HTP} \right) 100 \dots \dots \dots \text{equation 2.2}$$

Where:

TSN = normalized bid technical proposal score;

CTP = the technical evaluation score for the bid under consideration

HTP = the highest evaluated technical proposal score

The public body shall award the contract to the bid that has the highest point in the total sum of results of the technical and bid price evaluation. Prior to expiry of the period of bid validity, the public body shall notify in writing the result of a bid evaluation to all bidders alike at the same time. The letter of notification to be disclosed to the unsuccessful bidders on the technical evaluation shall state the reason why they did not succeed in their bid and the identity of the successful bidder. A letter of award to be sent by the public body to a successful bidder shall not constitute a contract between him and the public body. A contract shall be deemed to have been concluded between the public body and the successful bidder only where a contract containing detailed provisions governing the execution of the procurement in issue is signed (ITB Clause 45 sub clause 45.1 upto 45.3).

2.7.4 Pre-qualification

Prequalification and initial selection are processes used to shortlist Applicants in the procurement of goods, works and non-consulting services. These processes ensure that only those with appropriate and adequate capacity, capability and resources as assessed against the qualification criteria in the standard procurement documents, are invited to submit bids/proposals (WBPG, July 2016).

The evaluation process should begin immediately after opening of the application bid/proposal

with a preliminary examination to verify the overall completeness of the application/bid/proposal received as required by the standard procurement documents before undertaking their detailed examination or evaluation.

All application/bid/proposal should be subjected to a preliminary examination. This action enables evaluation committee to identify and reject applications/bids/proposals that are incomplete, invalid or substantially non-responsive. Since rejection at this stage puts the application/bid/proposal out of any further considerations, it should be ensured that the decision to reject is justifiable.

In the preliminary examination, attention should be directed toward deficiencies that, if accepted, would provide unfair advantages to the applicant/bidder/proposer. Sound judgment must be used: for example, simple omissions or mistakes arguably due to human error should not be grounds for rejection of the application/bid/proposal.

Pre-qualification is a means for attracting potential bidders to participate, in which potential bidders are invited by a public body to submit documentation that shows the person/firm is capable of meeting the requirements of a specific future bid (PPA Proclamation No. 649/2009).Prequalification is normally used with requests for bids and is optional depending on the nature and complexity of the goods, works or non-consulting services.

According to (WBPG, July 2016) evaluation criteria for procurement of goods, works, and non-consulting services in prequalification, minimum requirements are normally assessed on a pass/fail basis against such criteria as:

a) Eligibility

Under this nationality, conflict of interest, bank eligibility and United Nations resolution or borrower's country law will be addressed.

b) Historical Contract Non-Performance

Under this history of non-performing contracts, suspension based on execution of proposal securing declaration by the employer, pending litigation, litigation history will be addressed.

c) Financial Situation and Performance

Under this financial capabilities and average annual turnover will be addressed.

d) Experience

Under this general experience and specific experience will be addressed.

Prequalification is defined as the screening of construction contractors by project owners or their representatives according to a predetermined set of criteria deemed necessary for successful project performance, in order to determine the contractor's competence or ability

to participate in the project bid. Prequalification means that the firm which wants to participate in the tendering needs to be qualified before it can be issued bidding documents or before it can submit a proposal. Prequalification and bid evaluation procedures involve different types of criterion to evaluate the overall suitability of contractors such as general, technical, managerial, and financial criteria. In the simplest meaning prequalification is a before tendering procedure which allows to choose the most appropriate candidates from amongst those declaring willingness to participate in the tendering.

2.8 Challenges and Problems During Procurement Process

Most economic analysis of procurement agree that the challenge of procurement is that of information asymmetry at the start of the transaction. In engineering and construction management, the main problem of procurement has been perceived quite differently. Bajari and Tadelis (2006) found little evidence that either the contractor or the buyer has private information at the onset of a project. Therefore, the main problem faced by procurement is not the information asymmetry related to costs of construction but rather the uncertainty related to the design and execution of the project that burdens the client as well as the supplier (Bajari and Tadelis 2006).

According to SNNPR construction bureau ethics in construction industry training module report (2016) the most common challenges during tendering and procurement in the construction sector of SNNPR includes general lack of transparency in procurement processes, unfair selective restriction of access to advance information about bidding opportunities, sale of tender documents deliberately delayed or advertisement limited to benefit favored bidders given advance notice, manipulation of the tender evaluation process unfairly to favor a specific contractor, deliberately misleading unsuspecting bidders by including irrelevant items in the bill of quantities, client pressure to modify the engineering estimate to benefit favored bidders and approach to bidders by intermediaries claiming (falsely) to be client's staff seeking incentives in return for manipulation of bid evaluation.

For example, design failures, unanticipated site and environmental conditions, and regulatory environments can all cause deviations from what has been agreed in the moment of signing the contract (Bajari and Tadelis 2001). In other words, the problem of procurement is not the ex-ante information asymmetry related to costs but the ex-post adaptation related to the shared uncertainty. Procurement has been identified as the link between a desire by the client for a construction project and the delivery of value products to agreed standards. Thus, it is an

arrangement which define contractual processes, funding patterns, risk allocation, work structure and relationship amongst parties on a project.

According to (Baily, 2005) contractors' problems during procurement process includes, not all requested prices have been submitted, e.g. separate, itemized, unit or alternate prices missing or not properly filled out, not all requested documents have been provided, bid bond missing from bid, receipt of addenda not acknowledged, bid not signed or sealed properly and mathematical errors in bid.

(Baily, 2005) also identifies owners' and architects' problems during procurement process. Owners' problems includes insufficient number of bids, owner wants to manipulate bid result using alternate or separate prices, owner wants to award to low bid that is qualified or non-compliant, two bids received that are identical, owner wants to use non-disclosed criteria to determine award, owner wants to exercise privilege clause to award in accordance with non-disclosed criteria, owner wants to add an uninvited bidder after a prequalification process, owner wants to open a late bid either because too few bids received or owner knows/prefers bidder and owner wants to award contract for same scope to a bidder who submitted outside of the tender process and also architects' problems includes, unit prices not properly specified or evaluated, criteria for determining compliance are not specified or clear, consequences of non-compliance are not clearly specified, methods of remedying informalities in the bid are not specified and an addenda is issued late, e.g. too close to submission deadline. In solving the prevalent problems of construction industry, clients have an integral role to play. By its procurement procedures, the client influences the way a construction project is executed.

2.9 Summary of Literature Review

Procurement planning also involves consideration of whether to procure, how to procure, what to procure, how much to procure, and when to procure. Hence, from the above definition the procurement plan will set strategy and helps guide project execution through the project life cycle. The strategy evolves over time and should continuously reflect the current status and desired end point of the program. The strategy must be flexible enough to accommodate oversight decisions (Baily, 2005). If the procurement planning is not incorporating as part of the scope definition, it will have an impact in selecting the best delivery strategy, bidding method, managing risks and selection of the suitable contractor for the project. For instance as part of the procurement process setting the qualification criteria is one of the basic process for selecting a competent contractor to perform the work and setting such criteria is dependent on the project scope definition like cost of project, duration and type of the project.

According to the literature review different procurement selection factors can assist clients to choose the best procurement method. Client characteristics, project requirements and external environment are the factors that must be considered during procurement selection. Several variables of client requirements were measured under cost, time and quality related factors.

Project characteristics factors also include project type, size, cost, flexibility, complexity, site risk factors and degree of innovative technology. External environmental factors considered market competitiveness, availability of material, natural disasters; industrial actions are amongst other variables.

Cost, time and quality are the three most important parameters of project performance. It has been stressed that in today's highly competitive and uncertain business environment, clients are demanding for better value from their investment. They want their project to be completed on time, within the estimated cost and with the right quality. The use of the various project procurement systems shows that the construction industry is now trying to meet the clients' needs. This is because the different procurement method will have different effect on the cost, time and quality of the project. Each project procurement system has its own peculiarity in terms of the pre-tender and post tender activities and processes, division of risks between client and contractors, and the effectiveness of project monitoring and control.

It is very important at the very outset of the project to carefully consider all factors when selecting the most appropriate procurement approach for a construction project. This is because each system has its own feature and peculiarity that will have effect on the cost, time and quality of the project i.e. the project performance.

Unfair qualification criteria, lack of accountability and corrupted practice of the awarding contractors has led to delays, disputes and inflated price. Involved parties are also expected to follow standards of behaviors such as honesty and fairness, rule of law and no anti-competitive practices. In the planning stage it is advisable to identify the project resource requirements and correlate the project demand to technical requirements (Victorian civil construction industry, 2008). Contractor qualification criteria are a commonly used process to identify a qualified, sound and reliable contractor. These criteria are used to score contractors according to their economic, technical aspects, quality standards, past performance and other characteristics.

2.10 Research Gap

The literature reviews of above confirms that different scholars have conducted several studies to establish the correlation between procurement process and performance of projects.

However, a numbers of gaps have been identified as per the literature reviewed which this research will bridge. Researches are done widely in the rest of the world related to procurement in different construction sector. Most of the studies on the subject are based on developed countries with a well-developed private and public sector yet the proposed study will center on SNNPR in Ethiopia. Most studies were qualitative and do not guide us on the relationship between the study variables. The scholars did not specifically focus on the variables as laid down in this study.

This study differs from previous work in that it focuses on procurement process and tender evaluation criteria setting practices in selected SNNPR governmental building projects. However, there are few studies has been conducted in Ethiopia particularly in procurement management and performance of projects. Due to this, the researcher is interested to investigate procurement process and tender evaluation criteria practice and challenges to get a picture on the gap and potential of in implementation of public procurement legal frameworks. However, it has become apparent from this review that there are a number of significant gaps in the current literature in relation to the uptake and adoption of implementation on procurement practices. Ethiopia is one of the countries where procurement planning is a fundamental function that impacts on effective or ineffective service delivery. There is no part of local government service delivery that does not depend on procurement planning and yet the area remains a neglected field of research. It is expected that compliance to law, better risk assessment and cost effective procurement (Tesfahun, 2011) will lead to improved and effective performance of governmental organization in Ethiopia.

According to Ameyaw et al (2013), tender evaluation stage of the procurement process is the most susceptible to corrupt practices and the evaluation committee as provided by the law should therefore be given a close monitoring to foil any attempt by unscrupulous tenderers to bribe official at this stage.

It is worth noting that a lot of things happen during this stage and evaluation committee are sometimes pressurized to disqualify the most competitive tender and rather recommend favorites of politicians or those in authority. Other times corrupt tenderers pay their way through the evaluation team to use all foul means to disqualify other tenderers to their advantage.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the various methods used in this research. It is the procedure used in gathering data for the study to address the objectives of the research and to arrive at research findings and conclusions. Further, this chapter discusses about research methodology, study area, target population and sampling techniques, method of data collection. It also indicates how data was analyzed and presented.

3.2 Research Approach

At the beginning of study problem identification has been done through a preliminary unstructured literature review and informal discussion with colleagues and professionals in the sector. As an output of this initial phase assessment on procurement process and tender evaluation criteria setting practices in selected SNNPR governmental building projects was identified as a proposed problem to be studied. Contextual and conceptual literature reviews have been done once the problem is identified to have an in depth understanding on the research topic. The review includes relevant bidding documents prepared by consultants, standard bidding document prepared by PPA, public procurement and property administration agency directives, amended directives for the registration of construction professionals and contractor's No. 19 /2013.

According to Kothari (2004), research based on approach can be the classified in to three. These are quantitative approach, qualitative approach, and mixed methods approach. The fundamental issues behind the selection of quantitative, qualitative or combination approaches depend on the research question and constraints. In consideration of the nature of the research, to conduct these study both qualitative and quantitative research methodologies applied. In quantitative methodology questionnaires were used as a data collection tool and under qualitative method different procurement process documents were reviewed.

The study focused on procurement process and tender evaluation criteria setting practices in selected SNNPR governmental building projects only. It covers those tenders floated for grade BC-5/GC-5 and above contractors according to amended directives for the registration of construction professionals and contractor's No. 19 /2013 for building construction works for the last five fiscal years.

The research identified problems with regard to the procurement process and tender evaluation criteria setting practices in selected SNNPR governmental building projects and suggests ways of improvement based on the findings of the study.

3.3 Limitation of the research

This research were limited and focuses on selected SNNPR zones governmental building projects procurement process and tender evaluation criteria setting practices for tenders floated for grade BC-5/GC-5 and above contractors for the last five fiscal years as justified at chapter one scope of the study.

Among the limitations of this study, lack of willingness of organizations to participate and complete the questionnaire and to give archival documents that are related to procurement process and tender evaluation criteria setting practices. Some of the organizations requested to complete the questionnaires were not willing to receive the questionnaire. For this reason, a first brief on the study were to be given to the concerned person in order to motivate them to participate.

Also due to COVID-19 pandemic the industry was disturbed and most of the time professionals were not avail at their working places, even if this has been achieved with frequent follow-up which took longer period of time for collection of the data than expected

3.4 Description of study area

The study were conducted on selected SNNPR governmental building projects by which their tenders floated for grade BC-5/GC-5 and above contractors for building construction works for the last five fiscal years.

Southern Nations, Nationalities, and Peoples' Region often abbreviated as SNNPR is located in the southern and south western part of Ethiopia. Geographically, it roughly lies between 40.43” – 80.58” north latitude and 340.88” – 390.14” east longitude. It is bordered by Kenya in the south, South Sudan in the southwest, and Gambella region in the northwest and surrounded by the Oromia Region to the north and east, and the Sidama Region to the east.. Based on ethnic and linguistic identities, the region is at present divided into 13 zones, subdivided into 126 woredas and 4 special woredas and 28 town administrations. In November 2019, one of the zones, Sidama, voted to become an independent region.

Because of time and budget constraint the study did not covered all SNNPR zones building construction projects, from the total of 13 zones at SNNPR, level or “Ferji” (I) one 4 zones according to SNNPR urban development land administration urban plan institute directive (2017) were selected. According to the directive this zone were zones with high number of building construction and economic activity from other level zones of the region, due to this the researcher selected this level zones to conduct the study. Zones selected to conduct the research were Gedeo, Wolayita Soddo, Gamo and Hadiya.

The following figure illustrates the location of the study areas:

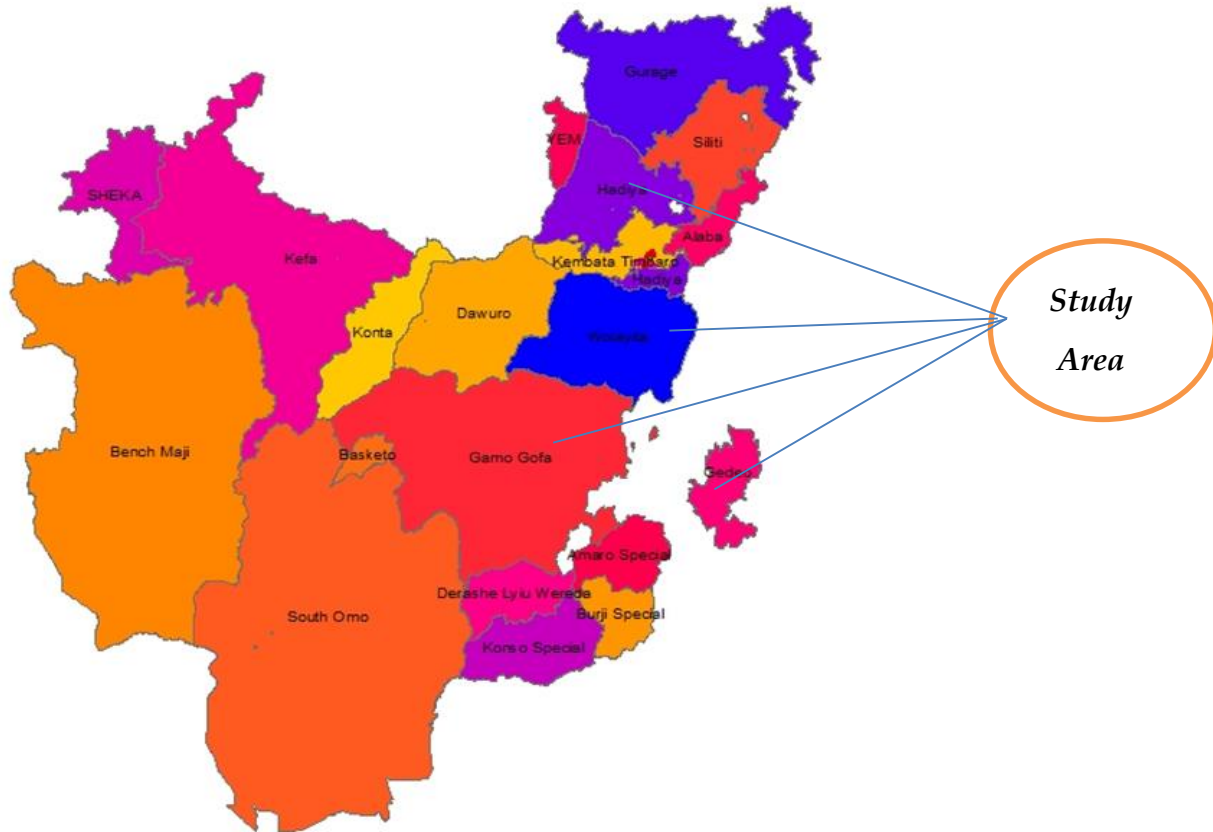


Figure 3.1 research study areas (Source, www.ethiogis map.org)

3.5 Sampling technique and sample size determination

The population for the study includes SNNPR construction authority, South design and construction supervision enterprise, Zonal construction and procurement officers, consultants, contractors who have been directly and indirectly participated on procurement process and tender evaluation criteria setting practices at their respective firms. According to Fellows, (1997) purposive samples normally involve a more deliberate effort to secure a sample that conforms to some predetermined criteria. The researcher uses a non-probability sampling design in the form of a purposive sampling method to adopt and considers to be appropriate to gather the data. The aim of the researcher to use this type of sampling method were to select active projects with respect of contract time and to have enough information from well-known projects with in a study area.

Statistical equations were used in order to calculate the sample size for the participants.

According to the data researcher had from SNNPR construction authority contract administration directorate 200 tenders were floated for grade BC-5/GC-5 and above

contractors for governmental building construction works for the last five fiscal years at the selected study area.

Therefore, the following equation is used to determine the sample size (Al-Moghany, 2006).

$$SS = \frac{(Z^2 * P * (1-P))}{C^2} \dots \dots \dots \text{Equation 3.1}$$

Where SS = Sample size

Z = Z value (e.g. 1.96 for 95% confidence level)

P = Percentage picking a choice, expressed as a decimal (0.50 used for sample size needed).

C = Margin of error (9%)

$$SS = \frac{((1.96)^2 * (0.05) * (1-0.05))}{0.09^2} = 118.57 \approx 119$$

Correction for Finite Sample Population:-

$$SS \text{ new} = \frac{SS}{1 + \frac{SS-1}{POP}} \dots \dots \dots \text{Equation 3.2}$$

Where POP is the proposed study area population i.e 200

$$SS \text{ new} = \frac{119}{1 + \frac{119-1}{200}} = 74.84 \approx 75$$

Based on the sampling method and criteria cited above, for study the researcher selected and distributed 75 questionnaires for different professionals which represents different construction party's i.e. 25 questionnaires to each professionals working for clients, consultants and contractors side. As much as possible attempts have been made to select samples drawn from the population are representatives for the study purpose and sixty four (64) respondents were participated and responses returned back. According to Gorden (2002), a response rate of 85.33 percent is regarded as desirable and preferred for the study purpose.

3.6 Data collection method

The data collection approach adopted for conducting this research includes both primary and secondary sources. Questionnaire and desk study provide the primary data for this thesis while the secondary data sources include journals, internet sources, as well as reviewing related archival documents on procurement process and tender evaluation criteria setting practices for building construction works. These methods of data collection have been used in order that the data or information obtained from one can be supplemented by the others whereby the collected data will give multiple evidences.

Questionnaire were designed and distributed to selected staff members of SNNPR construction authority, south design and construction supervision enterprise, Zonal construction and procurement officers, consultants, contractors on the basis of their responsibility related to the subject matter. Relevant bidding documents prepared by consultants, Standard bidding document prepared by PPA, Public Procurement and Property Administration Agency directives, Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013 and etc. were documents used during desk study time.

3.7 Method of data analysis

A descriptive statistical method has been used for the analysis of the data which provides a general overview of the results in order that some kind of interpretations and discussions can be made on the results. Moreover, reviewed literature was also used as one of the main backbone for the analysis of the findings. Descriptive methods enable researchers to completely describe data using tables, pie charts and summary calculations such relative weight analysis were used when ranking challenges and problems during procurement process. The responses obtained from the respondents were analyzed using Microsoft- excel spread sheet.

Relative weight analysis were a used technique to calculate the relative importance of predictors (independent variables) when independent variables are correlated to each other. It is an alternative to multiple regression technique and it addresses the multi-collinear problem and also helps to calculate the importance rank of variables. It helps to answer which variable is the most important and rank variables based on their contribution.

The Relative Index (RI) is a statistical method which is used to determine the ranking of different determinant factors. As the survey was designed to investigate the relative importance of various determinant factors, the method was adopted in this study within various groups, the five point scale, ranging from 1 (None) to 5 (very high) was adopted and transformed the relative importance indices' for each process factors as follows;

$$RI = \frac{\sum W}{A*5} = \frac{1*n_1+2*n_2+3*n_3+4*n_4+5*n_5}{5*N} \dots\dots\dots\text{Equation 3.3 (Cheung, 2004)}$$

Where;-

Where W is weighting given to each factor by respondents ranging from 1 to 5. (n₁= number of respondents for none, n₂ = number of respondents for neutral, n₃ = number of respondents for moderate, n₄ = number of respondents for high, n₅ = number of respondent for very high).

A is the highest weight (that is 5 in this case), and N is the total number of respondents. The RI value had a range between $0 < RI \leq 1$. The highest value of RI, the more influential process factor and it is the major problem in the process.

Analyzing and ranking the process factors based on their category is essential to take an action on it. The factors under each category were analyzing and ranked by their descending order based on participant's response.

3.8 Validity and Reliability of data

3.8.1 Validity of data

Regarding to validity, validation of questionnaires item was carried out through initial consultation of experts to judge the research instrument. Validity refers to the extent to which an instrument measures what is supposed to measure. Data need not only to be reliable but also true and accurate. If a measurement is valid, it is also reliable (Joppe 2000). The content of validity of the data collection instrument was determined through discussing the research instrument with the researcher experts in the field of study especially the researcher's supervisor. The valuable comments, corrections, suggestions given by the research experts assisted the validation of the instrument.

To increase the validity of the data collected using questionnaires the researcher look for the data based on the objectives of the research. In addition, a pilot study was undertaken to enrich the validity of the questionnaire. So, a preliminary test was undertaken with SNNPR construction authority and finance bureau procurement experts and for final wording and sentence checking given to my advisors.

3.8.2 Reliability of data

Reliability is the extent to which data collection technique will yield consistent findings, similar observations would be made or conclusions reached by other researcher. Reliability of a measuring instrument is its ability to produce consistency measurement each time when we administer an instrument to the same population and contain a similar results we say that the instrument is reliable (Saunders, 2009). This study tested or estimated the reliability of information collected from respondents on procurement process and tender evaluation criteria setting practices through grouping questions in a questionnaire in two groups of respondents being given exactly the same questions of the same concept each group with similar conditions and the findings revealed that similar results were obtained by the study which proves the reliability of the information collected.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter describes the results and discussions of the data gathered from the desk study and questionnaire survey. It investigates the procurement process and methods currently used, assess current technical and financial tender evaluation criteria setting practices, and identify challenges and problems during procurement process & evaluation criteria setting practices in selected governmental SNNPR building projects.

4.2 Distribution and Response Rate of questionnaires

It was aimed to distribute 75 questionnaires for different professionals which represents different construction party's i.e. 25 questionnaires to each professionals working for clients, consultants and contractors side, and accordingly it was distribute for the client, consultants and contractors sides. As much as possible attempts have been made to select samples drawn from the population are representatives for the study purpose. Table 4.1 presents the samples and their distributions, including the response rate of representatives for the study purpose.

Table 4.1 Summary of number and response rate by participants.

No.	Participants	Distributed in Number	Returned in Number	Response Rate in (%)
1	Contractors side professionals	25	20	80
2	Consultants side professional	25	23	92
3	Clients side professionals	25	21	84
	Total	75	64	85.33

As the above summarized table 4.1 shows from the 75 questionnaires distributed a total of 64 responses were received, consisting of 21(84%) from the client side, 23 (92%) from consultants side and 20 (80%) from contractors side. The overall response rate was 85.33%.

4.3 Respondents characteristics

Project managers, site engineers, department heads and business process owner's respondents were participated in their respective firms. From the total of 64 respondents 81.25 % (52 in number) of them have more than five years' experience and 73.44 % (47 in number) of the respondents were participated in more than10 building construction projects procurement process, these participants exposure to the research area helped the researcher to get reliable

and tested answer for the questions. Participants experience in the construction industry, position and number of procurement process they have been participated were summarized in Table 4.2 below.

Table 4.2 Summary for general profile of the participants.

No.	General profile of the participant				
1	Position in the company	Project managers	Site engineers	Department heads	Business process owners
	Number of participants from total	10	15	18	21
2	Total experience in the building construction industry	≤ 5 years	between 5 & 10 Years	> 10 Years	
	Number of participants from total	12	33	19	
3	Total number of building procurement process work participation	≤ 10	between 10 & 25	> 25	
	Number of participants from total	17	28	19	

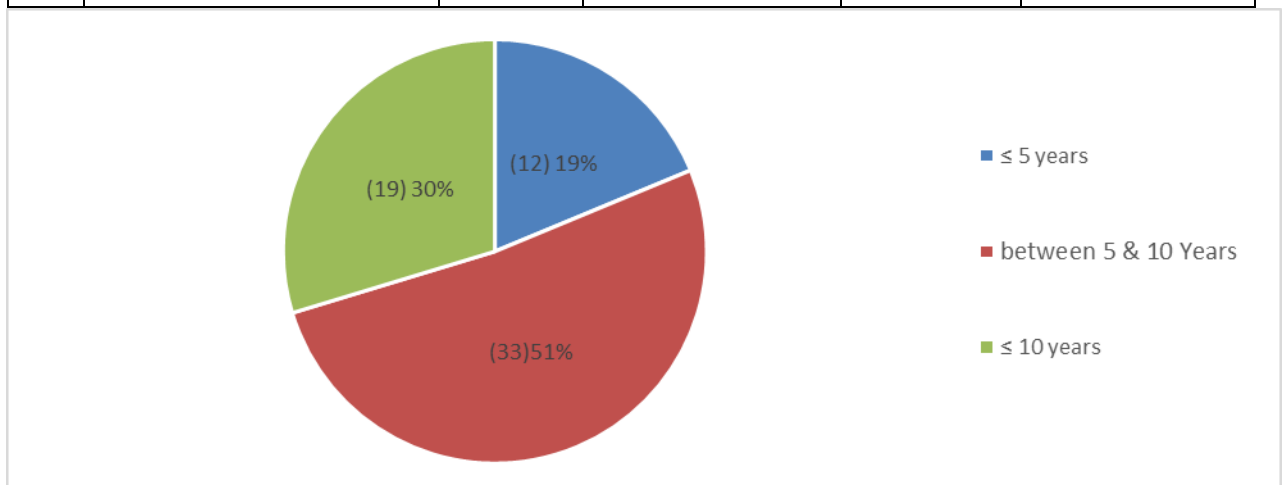


Figure 4.1: Experience of respondents in the construction industry

4.4 Technical and financial tender evaluation criteria setting practices

In addition to the basic requirements defined in the procurement proclamations, bidders are required to meet the minimum qualifying criteria set at Standard Bidding Document (SBD) for procurement of works prepared by the FPPA (Version 1, August 2011) at section 3 evaluation methodology and criteria. This section is to be used in conjunction with section 1 instructions to bidders and section 2 bid data sheet and contains all the factors, methods and criteria that the public body shall use to evaluate a bid and determine whether a bidder has the required qualifications. No other factors, methods or criteria shall be used. The bidder shall provide all the information requested in the forms included in section 4 bidding forms of SBD.

To assess the current technical and financial tender evaluation criteria setting practices in SNNPR governmental building projects, with respect to the projects financial and technical evaluation requirements the questionnaires were sub grouped in to two sections the first one dealt with technical and the second on financial criteria setting practices.

4.4.1 Technical Criteria setting practice.

Standard Bidding Document (SBD) for procurement of works for National Competitive Biddings (NCB) prepared by the FPPA (Version 1, August 2011) were SBD document used by public bodies at the regional level for the procurement of works and referred here in the research.

The Ministry of Urban Development and Construction, in accordance with the powers and duties conferred register and issue certificates of professional competence to engineers and architects, determine the grades of contractors and consultants, and issue certificates of competence to those operating in more than one regional states under amended directives for the registration of Construction Professionals and Contractors No. 19 /2013.

According to PPA 2011 SBS section 3 evaluation methodology and criteria, in order to select the responsive bidder building procurement tender technical qualification criteria includes determination of general experience in the industry, specific experience, non-performing contracts and minimum equipment requirement for the implementation of the project and etc. Technical criteria preparation also comprise understanding the project nature and scope of the work to be executed. Therefore these criteria should be prepared by experienced professionals to have successful project with respect of time, cost and quality. The study discovered that 76.56% of participants agreed that it is prepared by respective professionals.

a) Equipment for the implementation of the contract

Uniform equipment request criteria across nearly similar projects.

Bidders must demonstrate equipment listed during tender evaluation that it will have available for the implementation of the contract. Equipment's may be owned or rented but the point of evaluation will be half of the specified point for rented ones.

Furthermore the regulation allow the bidder to propose equipment's through lease or rent but some tenders accept only owned equipment's proposal. For the question related to the restriction not to propose leased or rented equipment's for the SNNPR governmental building projects tender evaluation 54.68 % of participants agreed that rented or leased equipment's were not proposed.

In SNNPR governmental building projects equipment's are used to transport construction resources, mixing and placing concrete, installing fixtures and mechanical equipment's and etc. work execution. For nearly similar building project constructions human, equipment and financial resources evaluation requirement criteria's are expected to be the same. Hence for nearly similar SNNPR governmental building projects with similar nature conditions equipment requirements are expected to be nearly uniform across different sectors. To address this issue the participants were requested about uniformity on equipment evaluation requirement criteria's among nearly similar building project across different sectors and 51.56% of them disagreed. This result shows that in many SNNPR governmental building projects unreasonable tender evaluation criteria's settings were common. Professionals are not using effectively different directives and regulation to be used at the time of tender evaluation criteria's settings

Table 4.3. Uniform equipment request criteria practice across nearly similar projects.

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	3	8	5	25
2	Disagree	6	7	4	26.56
3	No opinion	2	1	2	7.81
4	Agree	5	4	6	23.44
5	Strongly agree	7	-	4	17.19
Total					100.00

Minimum equipment requirement criteria as per the project.

As stated above equipment's mainly used for transport construction resources, mixing and placing concrete, installing fixtures and mechanical equipment's and etc. work execution.

To do this the minimum type, number and capacity of equipment's were determined by respective professional and included in tender evaluation criteria as shown at Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013. To analyze the relationship between minimum equipment requirement and the project requirement participants were asked and 67.19% of them agreed request was more than the projects minimum requirement. As the result shows consultants during tender evaluation criteria's settings were not associate minimum equipment requirement and the project requirement with respect of different directives and regulation.

Table 4.4. Minimum equipment requirement criteria

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	5	1	2	12.5
2	Disagree	5	1	3	14.06
3	No opinion	2		2	6.25
4	Agree	6	7	6	29.69
5	Strongly agree	5	11	8	37.5
Total					100.00

b) Bid proposal documents Verification.

Contractors can submit a wide variety of false statements and forgery documents during bidding document submission. According to SNNPR construction bureau ethics in construction industry training module report (2016), there was a practice of preparing fake documents by contractors to qualify and get involved in different construction projects through bidding process. Therefore to investigate the verification practice of copy bid proposal documents submitted by bidders to participate in a bid with the originals on the basis of the bid document prepared by a procuring body participants were requested and 54.7% of them said that there was no verification practice of copy bid proposal documents with the originals

ones. Because of this incompetent contractors might get chance to execute the projects and this cause poor performance at the construction sites.

Table 4.5. Verification practice of copy bid proposal documents with the originals.

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	5	6	7	28.13
2	Disagree	6	4	7	26.57
3	No opinion	2	3	1	9.4
4	Agree	5	4	2	17.19
5	Strongly agree	5	3	4	18.71
Total					100.00

c) Approval of tender document by second party.

While the task of drawing up bidding documents is principally that of the procurement unit or team, a bidding document prepared in respect of procurement subject to the approval of the procurement endorsing committee has to be approved by the committee before being put to use.

According to (SNNPR PPPAD, article 1 clause 7.1, 2010) as stated under duties and responsibilities of a procurement endorsing committee, technical criteria should be commented by second party professionals who didn't participate before, so that necessary requirements will be incorporated, check and balance work will be done and then fair competition could be attained. Participants were asked about review of technical requirements by second party professionals before tender floating and 60.94% said there was no review of prepared criteria.

Table 4.6. Approval of tender document by second party.

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	7	8	7	34.37
2	Disagree	6	4	7	26.57
3	No opinion	2	1	1	6.25
4	Agree	4	4	2	15.63
5	Strongly agree	4	3	4	17.19
Total					100.00

d) General and specific work experience requirement

To have experienced bidders during bid, it is better to invite bidders with better past experience as a main contractor or subcontractor in general and specific work experience within the specified years, each project with a value of at least the same or similar to the proposed works. While preparing this experience requirement criteria during bid document preparation time, professionals must consider minimum requirements of project size with respect of contractor's grade as stated at amended directives for the registration of construction professionals and contractors No. 19 /2013 To analyze the relationship between general and specific work experience requirement and the proposed works participants were asked and 60.93% of them agreed request was more than the projects minimum requirement.

Table 4.7. General and specific work experience requirement

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	5	5	9	29.68
2	Disagree	6	10	4	31.25
3	No opinion	1	0	2	4.67
4	Agree	6	3	4	20.30
5	Strongly agree	5	2	2	14.1
Total					100.00

e) Professional qualifications requirements

Bidders must demonstrate listed staff to work for the bidder during tender evaluation that it will have available for the implementation of the contract. The professional qualifications requirements must be according to amended directives for the registration of Construction Professionals and Contractors No. 19 as stated for issues like substitution rules for qualification equivalence between professionals and scope of the contract. To analyze the relationship between professional qualifications requirements criteria at tender document with proposed works and directive, participants were asked and 62.5% of them agreed number and type requested at professional qualifications requirements criteria at tender document was more than the scope of the project and minimum requirements stated at amended directives for the registration of Construction Professionals and Contractors No. 19.

Table 4.8 Professional Qualifications requirements

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	4	3	2	23.44
2	Disagree	7	1	4	39.06
3	No opinion	0	2	1	4.69
4	Agree	7	10	8	18.75
5	Strongly agree	5	4	6	14.06
Total					100.00

4.4.2 Financial criteria setting practice

The Procuring body has to indicate clearly the bid evaluation criteria in the evaluation and qualification criteria section of the standard bidding document.

In addition to the basic requirements defined in the proclamations bidders are required to meet the minimum qualifying criteria set at Standard Bidding Document (SBD) for procurement of works at section 3 evaluation methodology and criteria.

This section read in conjunction with section 1 instructions to bidders and section 2 bid data sheet and contains all the factors, methods and criteria that the public body shall use to evaluate a bid and determine whether a bidder has the required qualifications. No other factors, methods or criteria shall be used. The bidder shall provide all the information requested in the forms included in section 4 bidding forms of SBD.

According to SBD to demonstrate the soundness of the bidders financial position financial standing of the bidder shall be determined based on its historical financial performance, average annual turnover, and access to or availability of financial resources such as liquid assets, lines of credit, overdraft facility and other financial means to meet the project cash flow requirement.

a) Professional consultant participation practices.

The financial standing requirements of the bidder for works shall be drawn up by the department which has identified the need or by the staff of professional consultants who have adequate knowledge of the bidding document preparation.

These financial standing requirements criteria should be prepared by those who have the required financial knowledge with respect of building construction. A financial standing requirements criteria has to be prepared to meet minimum project requirement so that many eligible contractors can participate in the tender. To review the involvement of professional consultants during financial standing requirements criteria preparation questionnaires were prepared and the findings of the study revealed that 67.19% of participants agreed that financial criteria were prepared and determined by respective professionals which have knowledge about construction.

Table 4.9. Professional’s involvement on financial standing requirements criteria setting.

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	1	2	-	4.69
2	Disagree	5	4	4	20.31
3	No opinion	2	1	2	7.81
4	Agree	7	7	7	32.81
5	Strongly agree	8	6	8	34.38
Total					100.00

b) Average annual turnover request.

The regional public procurement directive (SNNPR PPPAD, 2010) states the importance and the minimum amount of the average annual turnover to be requested during bidding document preparation. According to the directive the two considerations to fix amount of average annual turnover were engineering estimation and proposed time duration for the completion of the new project to be executed. As stated at this directive the amount of average annual turnover

to be requested will be calculated by dividing proposed project engineering estimation by proposed completion time in years and during tender evaluation time amount of average annual turnover will be calculated by summing all payment certificates paid and dividing by requested experience years. From participants response 64.06% of them agreed that this average annual turnover requirement criteria was fixed as stated at PPPAD directive by considering engineering estimation and proposed time duration for the completion of the new project to be executed.

Table 4.10 Average annual turnover financial standing requirements criteria setting.

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	3	4	2	14.06
2	Disagree	3	4	4	17.19
3	No opinion	-	1	2	4.69
4	Agree	7	5	6	28.13
5	Strongly agree	10	6	7	35.93
Total					100.00

c) Financial resource or credit facility request.

The bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet the specified cash amount during project execution time. The required credit facility may avail from bank or insurance companies as specified by procuring body at bidding document and the requested amount must be also according to engineering estimation of the project to be constructed. From researchers desk study projects evaluation criteria data and researchers experience at SNNPR building projects procurement process unconditional bank guarantee credit facility request was common. From participants response 64.06% of them disagreed that financial resource or credit facility request requirement criteria were fixed by considering engineering estimation of the new project to be executed.

Table .11. Financial resource or credit facility request

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	7	8	7	34.37
2	Disagree	6	4	7	26.57
3	No opinion	2	1	1	6.25
4	Agree	4	4	2	15.63
5	Strongly agree	4	3	4	17.19
Total					100.00

d) Historical Financial Performance report request.

During bid evaluation time a bidder is requested prepare and submit audited balance sheets and other financial statements as stated at SDB for works and PPA directive as required at section 4 of BDS Clause 17, for the last specified years at bidding document to demonstrate the current soundness of the bidder's financial position and its prospective long term profitability. This audited balance sheets and other financial statements must be audited and licensed by certified or chartered external auditor according to SNNPR procurement directive but in some cases illegally it is common to see when audited by accountants. To assess the practice of contractors while auditing and professionals during bidding document preparation from participants response 57.82% of them agreed that audited balance sheets and other financial statements were audited by accountant and bidding documents did not properly showed to audited by certified or chartered external auditor. According to the directive's regulation contractors whose financial statements done by accountants must score zero for allocated mark at this criteria and precede with another criteria's to pass or fail.

Table 4.12. Balance sheets and other financial statements audited by accountant.

No	Response rate	Consultant (number)	Contractor (number)	Client (number)	Total (%)
1	Strongly disagree	4	3	3	15.63
2	Disagree	7	4	4	23.44
3	No opinion	-	2	-	3.10
4	Agree	7	7	8	34.38
5	Strongly agree	5	4	6	23.44
Total					100.00

To summarize the above results, the study discovered that 76.56% of participants agreed that technical qualifications, competence, and experience requirement of the bidder during bidding document were prepared by respective professionals but 60.94% participants agreed that there was no review of prepared technical requirements criteria's and documents by second party professionals before tender floating. To analyze the relationship between general & specific work experience and professional qualifications requirement with respect of minimum requirement as stated at amended directives for the registration of Construction Professionals & Contractors No. 19 /2013 and procurement directives from participants 60.93% for general & specific work experience and 62.5% for professional qualifications requirement of them agreed that the request was more than the projects minimum requirement stated at directives.

The study also showed that 67.19% of participants agreed that financial standing of the bidder requirement during bidding document were prepared by respective professionals. 64.06% of participants agreed that average annual turnover requirement criteria were fixed as stated at regional public procurement directive by considering the importance and the minimum amount of the average annual turnover to be requested during bidding document preparation. To analyze the relationship between financial resource request and historical financial performance report with respect of SNNPR procurement directive from participants response 57.82% of them agreed that audited balance sheets and other financial statements were audited by accountants bidding documents also not properly shows how this financial statements audited and submitted to evaluation time and from respondents 64.06% of them agreed that financial resource or credit facility request requirement criteria were fixed by without considering engineering estimation of the new project to be executed.

As the above findings of study shows in many SNNPR governmental building projects unreasonable tender evaluation criteria's settings were common. This shows that the professionals were not using different directives and regulation to be used at the time of tender evaluation criteria's settings.

The Ministry of Urban Development and Construction, Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013 states minimum requirement for different categories and grade of contractors about different issues like beginning project size, substitution rules for qualification equivalence between professionals, professional requirement, equipment requirement, staff requirement and etc.

This Standard Bidding Document (SBD) for procurement of works for National Competitive Biddings (NCB) prepared by the FPPA (Version 1, August 2011) at section 1 instructions to

bidders states that the public body indicated in the Bid Data Sheet (BDS) at section 2 is the contracting authority for this procurement process and it is bound by the rules governing public procurement in the Federal Democratic Republic of Ethiopia. It has the powers and duties to conclude a contract for the provision of works. Accordingly, this procurement process is being conducted in accordance with the recent editions of the Ethiopian Federal Government Procurement and Property Administration Proclamation and Public Procurement Directive under the procurement method indicated in the BDS.

According to the Ethiopian Federal Government Procurement and Property Administration Proclamation no 649/2009 article 16 (3), without prejudice to the requirement that in drawing up bidding documents as provided in article 37 of the proclamation, public bodies have to use the standard bidding document prepared by the agency, they have to make sure that the bidding document prepared by them incorporates the contents listed in this directive.

They have to reproduce the part of the standard bidding documents dealing with the instruction to bidders and the general conditions of contracts in the bidding documents they prepare without making any change there to, while making any adjustment to the other parts of the standard bidding documents that they consider appropriate to the type and nature of the procurement.

Also these Proclamation no 649/2009 article 16 (5) states that public bodies shall be required to draw up detailed technical specification specially for complex and high cost procurements in accordance with article 29 of the Proclamation. Specification shall form part of the bidding document and shall be sufficiently detailed and comprehensive to provide a complete and exact basis for the formulation of bids by those contractors wishing to participate in the bid. A requirements specification shall be prepared in accordance with the need of end users and in such a manner that it allows wider competition on the basis of performance, function, technical or design characteristics depending on the type of the procurement.

The requirements specification should be prepared in such a manner that it incorporates use values needed to satisfy the current and future demand of the public body in question and should avoid the inclusion of non-value adding features during bid.

When preparing requirements specification, authorized bodies especially consultants may incorporate standards set by EBCS, Ethiopian quality and standard authority or by other similar institutes depending on the type of procurement and as appropriate regulations & directives.

In SNNPR tender evaluation practice as stated at Standard Bidding Document (SBD) for procurement of works for National Competitive Biddings (NCB) prepared by the FPPA (Version 1, August 2011) ITB clause 4 all legal requirements were must met criteria's but as ITB clause 38.2 38.2 states the public body shall evaluate the bids on the basis of their responsiveness to the schedule of requirements, applying the evaluation criteria, sub-criteria, and point system specified in the Section 3.

During bid evaluation if a bidder misses any legal criteria automatically will rejected and another criteria will be evaluated according to their allocated point and evaluated out of 100 i.e. criteria's other than legal were flexible.

As stated at SBD section 3 and PPPA directive (2010), individual weighted scores for all evaluation criteria shall be weighted according to the set proportional weighting factors. The weighted result shall be calculated by multiplying the score by the proportional weighting point of the individual criterion. Bidders getting score less than 70% seventy percent in the technical evaluation shall be rejected.

4.5 Challenges and problems during procurement process & evaluation criteria setting Practices.

Factors that cause challenges and problems during procurement process and tender evaluation criteria setting practices at SNNPR governmental building practices were identified and questionnaires developed to rate these factors for degree of impact. For questionnaire preparation challenge and problem causing factors at the region were fall into three major categories i.e. client related factor, consultant related factors and contractor related factor as shown below.

Under this three categories preparation of procurement plan, involvements of technical personnel in the evaluation team, time allotted to bid evaluation process, bidding document preparation works, capability to lead or guide the procurement process, attention given to the selection of appropriate contractor, favoritism in providing influential information, (bidder get criterion information before the bid float, so that he will get sufficient time to fulfil the criterion at the time of bid submission), understand project scope and submit responsive offer, confidentiality of submitted document, submission of consistent price quotation, continuous improvement on reasonable and comprehensive tender document preparation and etc. factors which causes challenges and problems during procurement process and evaluation criteria setting practices were addressed.

The basic principle of public procurement procedures and regulation lays on good business ethics with fair and transparent competition between bidders. Through the questionnaire the researcher has addressed the challenges and problems during procurement process and tender evaluation criteria setting practices which rise from different determinant factors which were grouped into three categories as discussed previously.

Analyzing and ranking the process factors based on their category is essential to take an action on it. The factors under each category were analyzing and ranked by their descending order based on participant's response by relative weight analysis technique.

4.5.1 Challenges and problems associated with clients

Clients have a major role in the tender document preparation, implementation and process management until contractor selection concluded and project execution.

Table 4.13 shows client side response to rank challenges and problems during procurement process and tender evaluation criteria setting practices at SNNPR governmental building practices

Table 4.13 Client side responses on challenges and problems associated with clients

No.	Factors	Degree of Challenges and problems during procurement process & evaluation criteria setting Practices.					RI	Rank
		5	4	3	2	1		
1	Inappropriate procurement plan and general lack of transparency for bidders in procurement processes at the stage from bid invitation to evaluation.	8	6	3	1	2	0.78	2 nd
2	Price fixing, including collusion between contractors	4	6	4	5	1	0.69	4 th
3	Sale of tender documents deliberately delayed or advertisement limited to benefit favored bidders given advance notice	2	2	8	6	2	0.58	8 th
4	Less assignment of technically capable personnel in the bid evaluation team.	3	3	4	3	7	0.54	10 th
5	Less or insufficient time allotting to bid Evaluation.	7	3	1	2	7	0.63	5 th
6	Manipulation of the tender evaluation process unfairly to favor a specific contractor	4	3	5	3	5	0.6	6 th
7	Deliberately misleading unsuspecting bidder by including irrelevant items in the bill of quantities.	3	5	1	6	5	0.57	9 th
8	Client pressure to modify the pre estimated engineering estimation during tender evaluation time to benefit favored bidders.	2	3	7	6	2	0.59	7 th
9	Unfair selective restriction and setting subjective criterions out of minimum criteria stated at directives and proposed project scope.	9	5	3	2	1	0.8	1 st
10	Fake or forgery document preparation and submission by contractors.	6	8	2	3	1	0.76	3 rd

The following table shows the three most challenges and problems during procurement process & evaluation criteria setting at SNNPR governmental building practices rated by client side respondents

Table 4.14 the three most challenges and problems associated with clients

No.	Factors	Degree of Challenges and problems during procurement process & evaluation criteria setting Practices.					RI	Rank
		5	4	3	2	1		
1	Unfair selective restriction and setting subjective criterions out of minimum criteria stated at directives and proposed project scope.	9	5	3	2	1	0.8	1 st
2	Inappropriate procurement plan and general lack of transparency for bidders in procurement processes at the stage from bid invitation to evaluation.	8	6	3	1	2	0.78	2 nd
3	Fake or forgery document preparation and submission by contractors.	6	8	2	3	1	0.76	3 rd

4.5.2 Challenges and problems associated with consultants

Table 4.15 shows consultants side response to rank challenges and problems during procurement process and tender evaluation criteria setting practices at SNNPR governmental building practices.

Table 4.15 consultant side responses on challenges and problems associated with consultants

No.	Factors	Degree of Challenges and problems during procurement process & evaluation criteria setting Practices.					RI	Rank
		5	4	3	2	1		
1	Inappropriate procurement plan and general lack of transparency for bidders in procurement processes at the stage from bid invitation to evaluation.	9	7	4	2	1	0.86	1 st
2	Price fixing, including collusion between contractors	5	7	2	2	7	0.67	6 th
3	Sale of tender documents deliberately delayed or advertisement limited to benefit favored bidders given advance notice	5	1	9	6	2	0.67	6 th
4	Less assignment of technically capable personnel in the bid evaluation team.	6	3	5	3	6	0.66	8 th
5	Less or insufficient time allotting to bid Evaluation.	6	3	4	5	5	0.66	8 th
6	Manipulation of the tender evaluation process unfairly to favor a specific contractor	4	5	6	5	3	0.68	5 th
7	Deliberately misleading unsuspecting bidder by including irrelevant items in the bill of quantities.	6	4	2	6	5	0.66	8 th
8	Client pressure to modify the pre estimated engineering estimation during tender evaluation time to benefit favored bidders.	6	6	4	6	1	0.75	4 th
9	Unfair selective restriction and setting subjective criterions out of minimum criteria stated at directives and proposed project scope.	10	4	4	3	2	0.82	2 nd
10	Fake or forgery document preparation and submission by contractors.	8	8	3	2	2	0.83	3 rd

The following table shows the three most challenges and problems during procurement process & evaluation criteria setting at SNNPR governmental building practices rated by consultant side respondents.

Table 4.16 the three most challenges and problems associated with consultants

No.	Factors	Degree of Challenges and problems during procurement process & evaluation criteria setting Practices.					RI	Rank
		5	4	3	2	1		
1	Inappropriate procurement plan and general lack of transparency for bidders in procurement processes at the stage from bid invitation to evaluation.	9	7	4	2	1	0.86	1 st
2	Unfair selective restriction and setting subjective criterions out of minimum criteria stated at directives and proposed project scope.	10	4	4	3	2	0.82	2 nd
3	Fake or forgery document preparation and submission by contractors.	8	8	3	2	2	0.83	3 rd

4.5.3 Challenges and problems associated with contractors

Contractors are main stakeholders in participation of bidding along the evaluation process until the project comes to realization.

Table 4.17 shows contractors' side response to rank challenges and problems during procurement process and tender evaluation criteria setting practices at SNNPR governmental building practices.

Table 4.17 contractor's side responses on challenges and problems associated with clients

No.	Factors	Degree of Challenges and problems during procurement process & evaluation criteria setting Practices.					RI	Rank
		5	4	3	2	1		
1	Inappropriate procurement plan and general lack of transparency for bidders in procurement processes at the stage from bid invitation to evaluation.	7	6	3	4	0	0.72	2 nd
2	Price fixing, including collusion between contractors	7	4	4	4	1	0.69	4 th
3	Sale of tender documents deliberately delayed or advertisement limited to benefit favored bidders given advance notice	6	4	5	3	2	0.66	6 th
4	Less assignment of technically capable personnel in the bid evaluation team.	4	5	4	3	6	0.53	10 th
5	Less or insufficient time allotting to bid Evaluation.	5	6	2	2	5	0.61	9 th
6	Manipulation of the tender evaluation process unfairly to favor a specific contractor.	6	6	2	2	4	0.65	8 th
7	Deliberately misleading unsuspecting bidder by including irrelevant items in the bill of quantities.	5	6	4	3	2	0.66	6 th
8	Client pressure to modify the pre estimated engineering estimation during tender evaluation time to benefit favored bidders.	6	6	3	3	2	0.68	5 th
9	Unfair selective restriction and setting subjective criterions out of minimum criteria stated at directives and proposed project scope.	8	6	5	0	1	0.76	1 st
10	Fake or forgery document preparation and submission by contractors.	8	5	3	2	2	0.71	3 rd

The following table shows the three most challenges and problems during procurement process & evaluation criteria setting at SNNPR governmental building practices rated by contractor side respondents.

Table 4.18 the three most challenges and problems associated with contractors

No.	Factors	Degree of Challenges and problems during procurement process & evaluation criteria setting Practices.					RI	Rank
		5	4	3	2	1		
1	Unfair selective restriction and setting subjective criterions out of minimum criteria stated at directives and proposed project scope.	8	6	5	0	1	0.76	1 st
2	Inappropriate procurement plan and general lack of transparency for bidders in procurement processes at the stage from bid invitation to evaluation.	7	6	3	4	0	0.72	2 nd
3	Fake or forgery document preparation and submission by contractors.	8	5	3	2	2	0.71	3 rd

As the above Tables 4.14, 4.16 and 4.18 shows the three most and common challenges and problems during procurement process & evaluation criteria setting at SNNPR governmental building construction for client, contractor & consultant were unfair selective restriction and setting subjective criterions, inappropriate procurement plan and general lack of transparency in procurement processes and forgery document preparation and submission by contractors.

A procurement plan spells out intended works to be executed, proposes the procurement method to be used, and shows different phases of the procurement process to delivery of the goods, works or services as necessary. Any public body accountable for the preparation of procurement plan shall be required to prepare a procurement plan supported by action plan enabling them to execute in due time, the procurement necessary to implement their work program. The procurement plan shall be incorporated into the project performance. For procurement under the recurrent budget a public body shall prepare an annual procurement

plan. Hence, problem on the planning of procurement will affect the overall performance of the project. If there is no appropriate plan to execute a proposed project it is difficult to manage the overall process and the outcome is not as expected.

To avoid subjective criteria setting procuring bodies must use different directives and during bidding document preparation professional consultants must participate. Based on PPA 2011 standard bidding document section 3 evaluation methodology and criteria, in order to select the responsive bidder technical and financial evaluations must be done according to SBD in effective way to minimize subjective criteria's.

The Ministry of Urban Development and Construction, Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013 states minimum requirement for different categories and grade of contractors about different issues like beginning project size, substitution rules for qualification equivalence between professionals, professional requirement, equipment requirement, staff requirement and etc. To minimize subjective criteria setting at SNNPR building project it is better to use this directive.

According to the Ethiopian Federal Government Procurement and Property Administration Proclamation no 649/2009 article 16 (3), without prejudice to the requirement that in drawing up bidding documents as provided in article 37 of the Proclamation, public bodies have to use the standard bidding document prepared by the Agency, they have to make sure that the bidding document prepared by them incorporates the contents listed in this directive. Also these Proclamation no 649/2009 article 16 (5) states that Public bodies shall be required to draw up detailed technical specification specially for complex and high cost procurements in accordance with article 29 of the Proclamation. A requirements specification shall be prepared in accordance with the need of end users and in such a manner that it allows wider competition on the basis of performance, function, technical or design characteristics depending on the type of the procurement.

During bid evaluation time it is common to see financial and technical forgery documents prepared by bidders. Contractors can submit a wide variety of false financial statements and forgery documents during bidding document submission .There is a practice of preparing fake documents to qualify and get involved in different construction projects through bidding process. To limit this forgery document preparation challenges and problems during procurement process & evaluation criteria setting at SNNPR governmental building the

procuring body must develop culture to verify copy bid proposal documents submitted by bidders to participate in a bid with the originals during bid opening and evaluation time.

4.6 Procurement process practice

The Federal Ministry of Finance and Economic Development (MoFED) has the mandate to issue public procurement rules and regulation, under the ministry office the Public procurement and Property Administration Agency (PPPAA) administers procurement process. The basic principle of PPPAA falls on ensuring value for money, non-discrimination, transparency and fairness of the tender criteria and accountability according to (Directive 2010, Part I, article. 4)

Through the questionnaire respondents were asked to express their agreement, disagreement and neutral or no option on the following hypothesized questions. The respondents were also asked to give their opinion as to how the problems are mitigated if they are disagreeing with the hypothesized questions and responses for each of the questions are compared as presented herein below.

The main aim of the questions was to address the issues related to procurement process and methods currently used and to show the direction how to manage the in order to increase the performance each parties involved in SNNPR governmental building projects.

a) Procurement planning

A procurement plan spells out intended purchases, proposes the procurement method to be used, and shows different phases of the procurement process to delivery of the goods, works or services as necessary. It also provides a guideline for monitoring procurement implementing over the period (FDRE PPPAA, 2011).

Question # 1: Public body or construction party prepares projects procurement plan considering scope of the project, time for procurement, what type procurement method to be used and grade of contractors to participate.

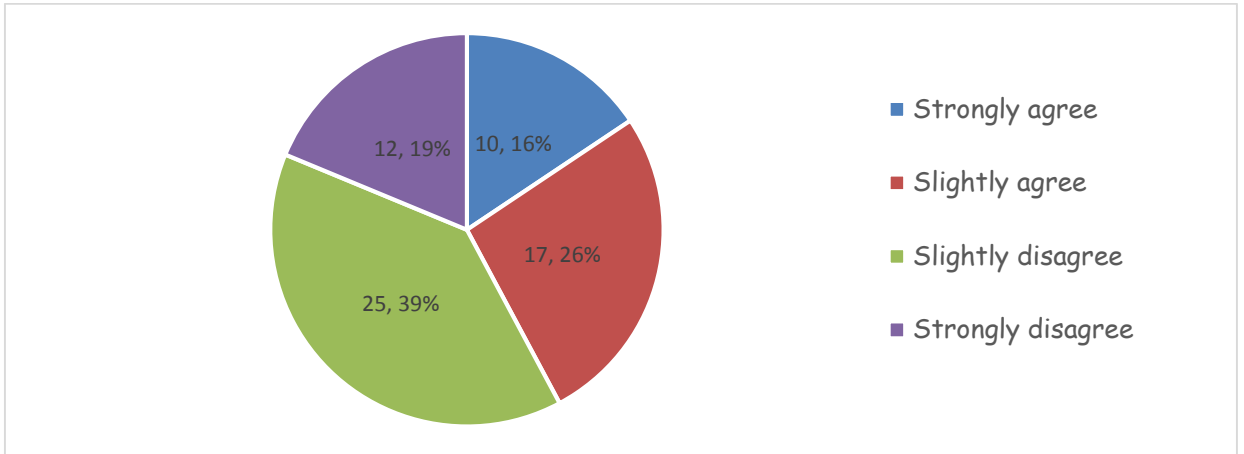


Figure 4.2: Procurement planning related issue response of respondents.

Among the respondents 57.81% (37 in number) of them disagreed to the above hypothesis showing that preparation of SNNPR governmental building projects procurement plan by public body or construction party is efficient and appropriate. This question is aimed to look at the views of the respondents with respect to whether Public body or construction party involved in SNNPR governmental building projects prepares procurement plan considering scope of the project, time for procurement, what type procurement method to be used and grade of contractors to participate.

According to the respondents any public body and other entities accountable to such public body shall be required to prepare a procurement plan supported by action plan enabling them to execute in due time, the procurement necessary to implement their work program. The procurement plan shall be incorporated into the project performance of the capital project. For procurement under the recurrent budget a public body shall prepare an annual procurement plan. Hence, problem on the planning of procurement will affect the overall performance of the project.

The procurement plan to be prepared by public bodies accordingly shall contain the following (FDRE PPPAA, 2011) the procurement number, description of the procurement, quantity of the procurement, procedures to be followed in the execution of the procurement, the schedule of main activities to be carried out to complete the procurement, budget and source of finance of the procurement, type of contract appropriate to the procurement, roles of main parties involved in the procurement and other matters which are important depending on the nature of the public body.

b) Choice of open NCB procurement method

A procurement method is the technique that public body uses to acquire goods, works and services (consultancy and non-consultancy). The method selected depends on a number of factors including the type of goods or service being procured, the value of the good or service being procured, the potential interest of foreign bidders and even the cost of the procurement process itself.

The proclamation and directive and the manual assumes that the public body is able to exactly spell out the object of procurement and can specify it in detail in the bidding documents and the technical specifications. Otherwise, procurement proceedings shall not begin until such time as the public body has been assisted to prepare a satisfactory technical specification against which bids shall be invited.

Question # 2: The current national competitive open bidding method with post qualification (financial & technical evaluation) system in SNNPR Governmental Building projects is better to have good performance of the project implementation and to give equal chance to participate at bid for all eligible bidders.

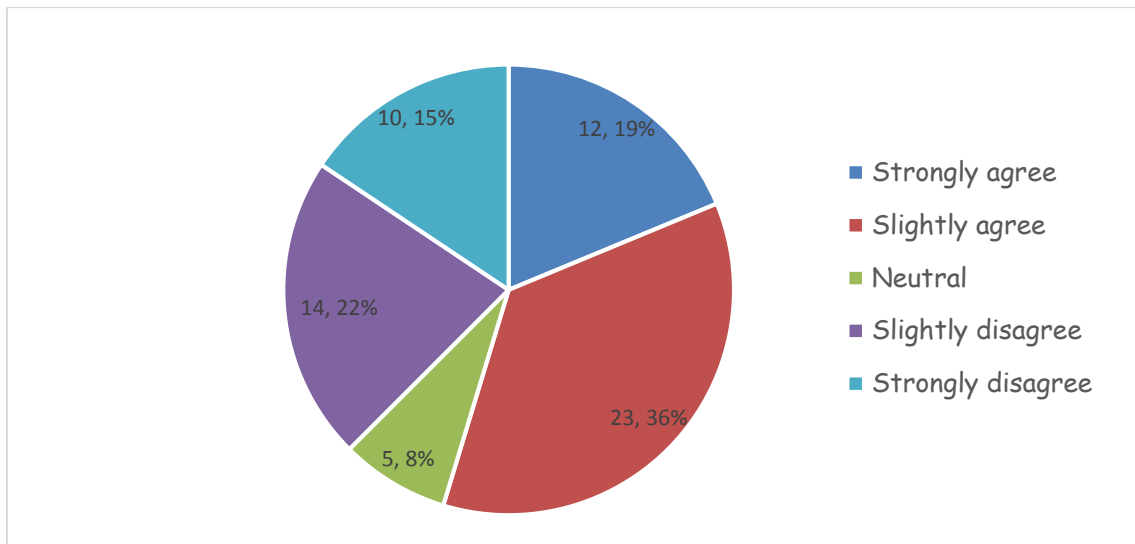


Figure 4.3: Procurement method related issue response of respondents.

Among the respondents, 54.69% (35 in number) of them agree, 37.5% (24 in number) disagree and 7.81% (5 in number) has no option about the issue. The above hypothesis showing that the current national competitive open bidding method with post qualification (financial & technical evaluation) system in SNNPR governmental building projects is better to have good performance of the project implementation and to give equal chance to participate at bid for all eligible bidders.

According to the respondents under open bidding method, all interested firms bidders are given adequate notification of contract requirements and all eligible bidders are given an equal opportunity to submit a tender. The public body must give sufficient public notification of bidding opportunities to potential bidders to determine their interest and prepare bid documents.

At some occasions public body may use a procurement method other than open bidding method only in accordance with the requirements set out in proclamation and directive. These methods cover restricted bidding method, direct procurement method, two-stage bidding method and request for quotations method. The selection of any procurement method other than open bidding should be recorded in the records of procurement, stating the reasons and justification for the method selected, in compliance with the conditions specified in the relevant proclamation and directive. The procurement method applicable for a work to be executed shall be indicated in the procurement plan.

Question # 3: Contractor awarded as lowest responsive bid selected based on open bidding system in SNNPR Governmental building projects are considered as effective with appropriate project cost and can deliver the required works with respect of time, quality and cost.

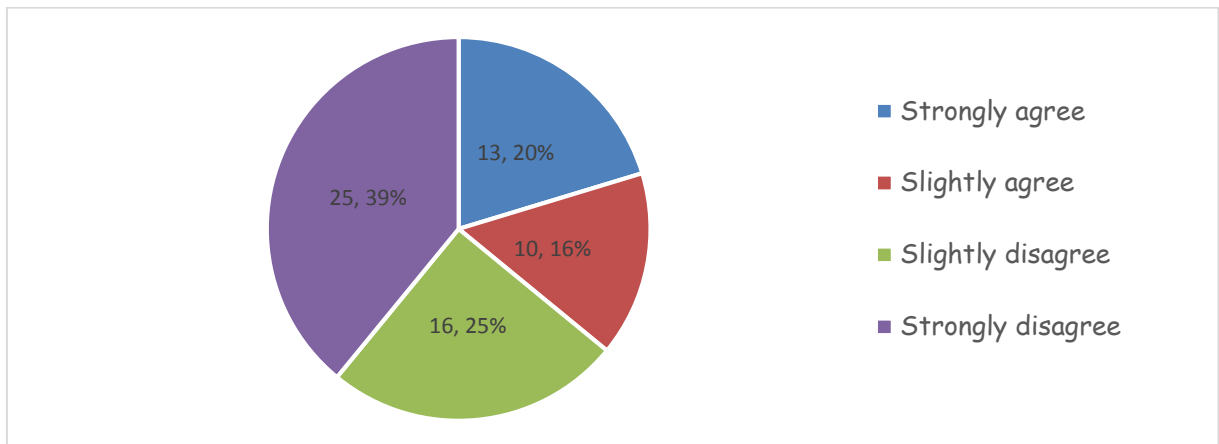


Figure 4.4: Lowest responsive bid award related issue response of respondents.

Among the respondents, 64.06% (41 in number) of them disagreed to the above hypothesis showing that contractor awarded as lowest responsive bid selected based on open bidding system in SNNPR governmental building projects are successful to deliver the required works with respect of time, quality and cost.

Open competitive bidding is one method of determining the least cost for performing work defined by the construction documents. The bid states the price that the bidder will contract for to perform the work based on the work shown and described in the bidding documents. Bids are prepared in confidence by each bidder. They are usually sealed when submitted to the client (or, in the case of subcontractors, to the bidding contractors). At a specified time and date, all bids are opened, competitively examined, and compared.

According to the respondents it is very common practice in SNNPR governmental building projects that the employer often selects the contractor with the lowest bid criteria. In fact, it's most critical task for the employer to take decision. However, selection by lowest bid will not necessary reflect the true cost of the project, that's why prequalification criteria to select a consultant or a contractor should be based on skill, experience and previous performance, rather than automatically accepting the lowest bid in all cases.

c) Engineering estimation and arithmetic check procedure

Engineering estimating is the predictive process used to quantify, cost and price the resources required by the scope of the project, to better manage budgets and deliver projects that do not exceed the identified scope, and that are on time throughout the development process.

Question # 4: Clients pressure to modify the engineering estimation estimated at bidding document preparation time in SNNPR Governmental Building projects will not affect overall performance of the projects.

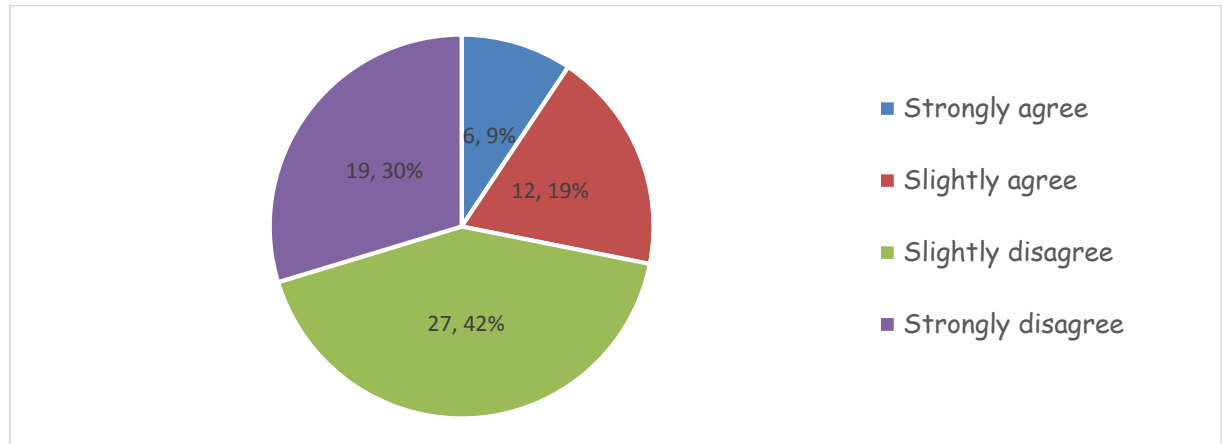


Figure 4.5: Engineering estimation modification related issue response of respondents.

Among the respondents, 71.88% (46 in number) of them disagree to the above hypothesis showing that client's pressure to modify the engineering estimation estimated at bidding document preparation time in SNNPR governmental building projects will not affect overall performance of the projects.

According to the respondents during development of a project the client normally looks to the consultant for construction cost estimates. It is advisable to provide a probable cost of construction at completion of the schematic design, design development, and construction document phases. At completion of the construction documents, the consultant prepares a final and most accurate estimate of construction cost, which can be used for comparison with the bids submitted to perform the work. Value engineering may be performed by consultants and construction managers during the development of the construction documents.

The initial estimate of the costs involves making an initial cost calculations based on the resources identified in the resource planning stage. Apart from resources, the starting point in the cost estimates is the work breakdown structure.

Generally overestimation can result to higher tender estimates being tendered by a contractor thereby leading to the rejection by the client. While on the other hand, underestimation of tender estimates could equally result to the incurring of loss on the part of the contractor. Either way, over estimation and underestimation of tender estimates can create serious consequence.

Question # 5: Application of +15% upper limit and - 15% lower limit rule from engineering estimation during financial evaluation judgment time according to SNNPR public procurement and property administration amended proclamation no. (28/2010) in SNNPR governmental building projects is good decision mechanism for overall performance of the projects.

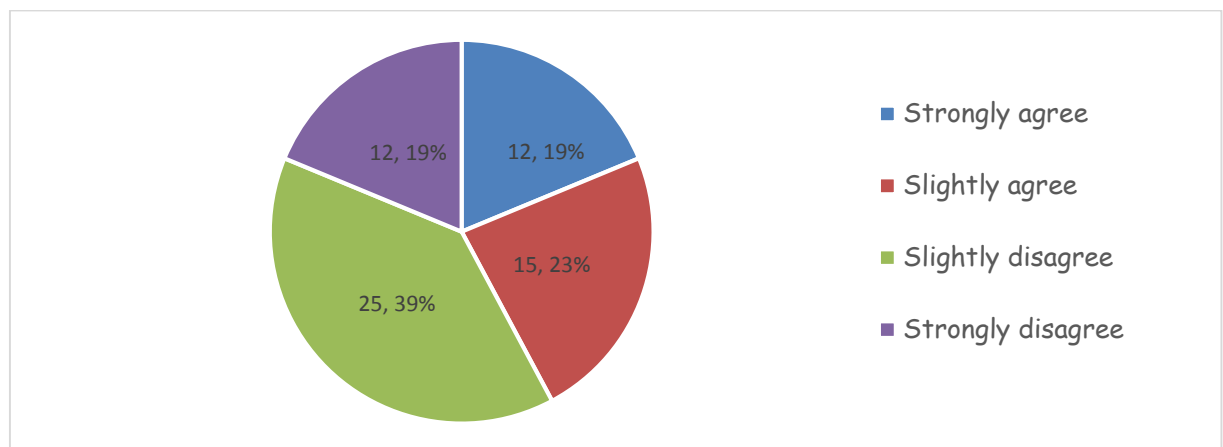


Figure 4.6: Engineering estimation limit related issue response of respondents.

Among the respondents, 57.81% (37 in number) of them disagree to the above hypothesis showing the application of +15% upper limit and - 15% lower limit rule from engineering estimation during financial evaluation judgment time according to SNNPR public procurement and property administration amended proclamation no. (28/2010) in SNNPR governmental building projects is good decision mechanism for overall performance of the projects.

As stated at SNNPR public procurement and property administration amended proclamation no. (28/2010) evaluated least bid offer $\geq 15\%$ from engineering estimation will be rejected due to economic purpose which is to favor government and it is not good approach to contractors and performance of the project. On another side evaluated least bid values $< 15\%$ from engineering estimation will not be rejected. Now a days the number of licensed contractors is too much compared to projects to be executed due to this contractors are lowering the project cost to have the work. This system affects the overall project performance negatively and causes termination of the contract most of the time. So it is better to decide to reject evaluated bid offer $< 15\%$ from engineering estimation to have successful projects with respect of time, cost and quality.

Question # 6: Application of $\pm 2\%$ difference arithmetic error rejection rule from value during bid opening time according to SNNPR public procurement and property administration amended proclamation no. (28/2010) in SNNPR governmental building projects was good decision mechanism for overall performance of the projects.

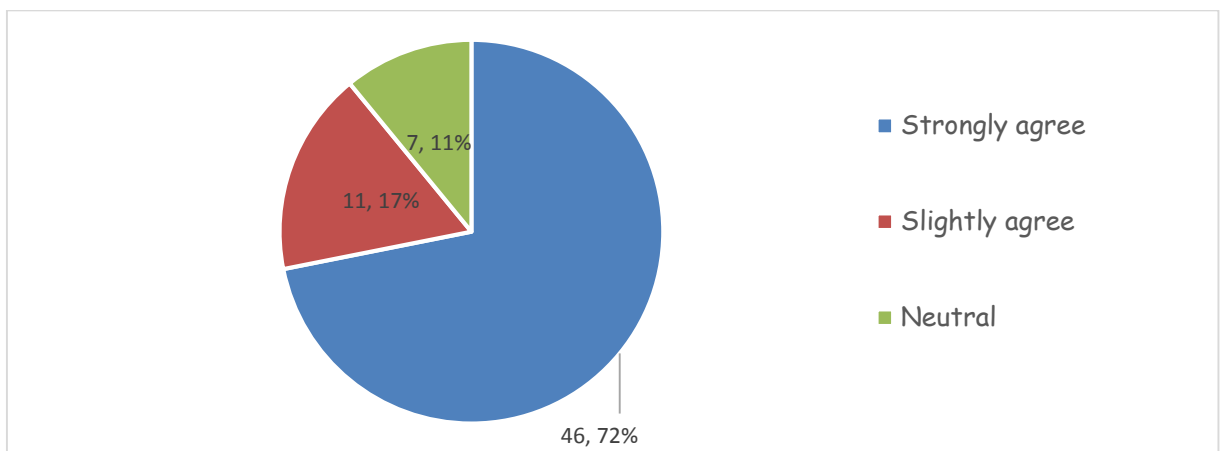


Figure 4.7: Arithmetic error rejection rule related issue response of respondents.

Among the respondents, 89.06% (57 in number) of them agree and 10.94% (7 in number) has no option about the issue. The above hypothesis showing the application of $\pm 2\%$ difference arithmetic error rejection rule from value during bid opening time according to SNNPR public procurement and property administration amended proclamation no.(28/2010) in SNNPR governmental building projects is good decision mechanism for overall performance of the projects.

Arithmetic error limit rule is very interesting decision mechanism which tackles corruptive attitudes during financial evaluation time to favor selected contractor and relatively gives an equal opportunity to all eligible bidders.

d) Ethics during the procurement

The government of the federal democratic republic of Ethiopia represented by the public procurement and property administration agency (PPA) requires public bodies, as well as bidders to observe the highest standards of ethics during the procurement and the execution of contracts.

Question # 7: During procurement process in SNNPR governmental building projects the ethical issue like corrupt, fraudulent, collusive or coercive practices by any public body or construction party are not major on their effects on performance of the project.

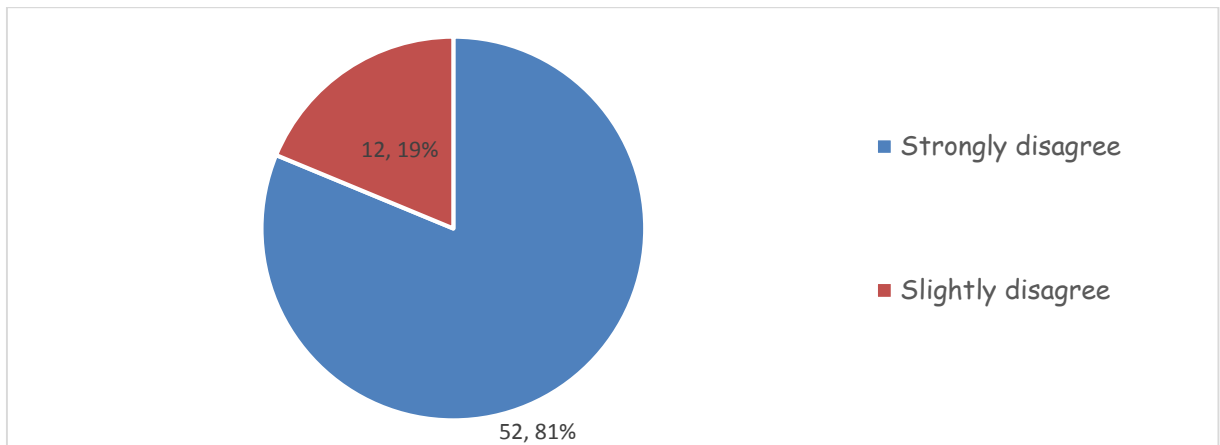


Figure 4.8: Ethics during the procurement related issue response of respondents.

Among the respondents, all of them disagree to the above hypothesis showing that during procurement process in SNNPR governmental building projects the ethical issue like corrupt, fraudulent, collusive or coercive practices by any public body or construction party are not affecting overall performance of the projects.

According to the respondents the above mentioned and any another ethical issues has direct and indirect effect on the successful implementation works with respect of time, quality and cost.

The authorized body must debar a bidder from participation in public procurement for a specified period of time if it at any time determines the bidder has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract. According to PPA August 2011 section 7 Clause 5 version of SBD under fraud and corruption provisions defined as follows.

Corrupt practice is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the action of a public official in the procurement process or in contract execution. Fraudulent practice is any act or omission, including misrepresentation that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation. Collusive practices is a scheme or arrangement between two or more parties, with or without the knowledge of the Public Body, designed to establish prices at artificial, non-competitive levels. Coercive practices is harming or threatening to harm, directly or indirectly, parties or their property to influence their participation in a procurement process, or affect the execution of a contract.

e) Evaluation methodology and criteria setting

Selecting a construction contractor is one of major decisions which may influence the progress and success of any construction project. Contractor qualification criteria are a commonly used process to identify a qualified, sound and reliable contractor.

Question # 8: SNNPR Governmental Building projects bidding document evaluation methodology and qualification criteria settings consider objective and measurable factors.

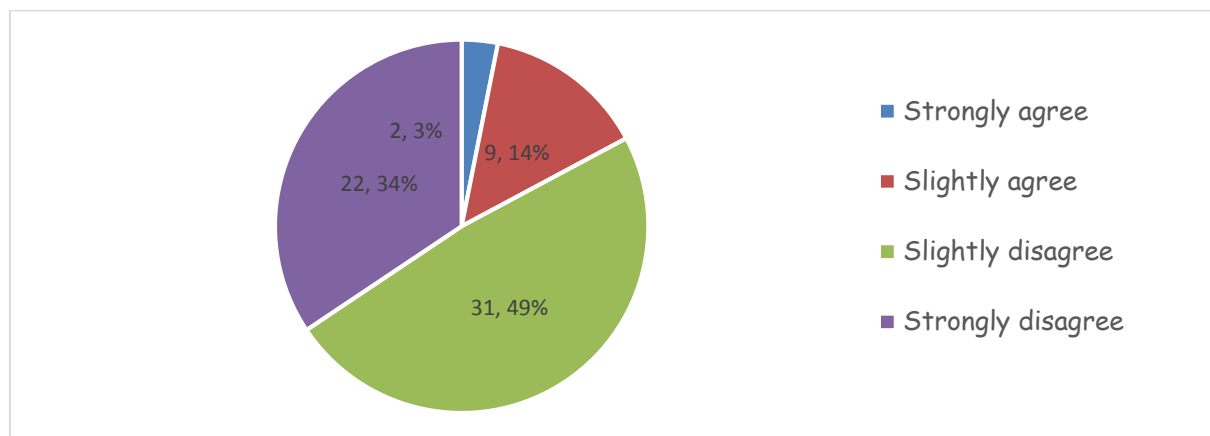


Figure 4.9: Evaluation methodology and criteria setting related issue response of respondents.

Among the respondents, 82.81% (53 in number) of them disagree to the above hypothesis showing that SNNPR Governmental Building projects bidding document evaluation methodology and qualification criteria settings consider objective and measurable factors. Based on PPA 2011 standard bidding document section 3 evaluation methodology and criteria, in order to select the responsive bidder technical and financial evaluations must be done in effective manner but now a days it is common to see subjective criteria's.

As the respondents agreed that the procurement directive and manual do not incorporate all procedures to be followed during turnover, financial resource, key personnel, equipment requirement setting and where to apply must meet criteria related to the project. Furthermore construction audit has not yet started therefore inefficient and corrupt professionals easily set the criteria to favor some contractors with no accountability.

According to the Ethiopian federal government procurement and property administration proclamation no 649/2009 article 16 (19) evaluating and comparing bids, a public body may find a bid complete and qualify that bid for detailed evaluation only if the bid document submitted by the bidder is opened during the bid opening proceeding and complies with the prerequisites and essential requirements stated in the bidding document. Construction tender criteria focuses on relevant experience, appreciation of the task, past performance, management and technical skill, resources, management system , methodology and price.

4.7 Case Study of Selected Project

The aim of this case study was to check whether or not the proposed procurement process and evaluation criteria settings were according to the standards for the projects to be implemented.

One of the most difficult decisions to be taken by the client in the construction industry is selecting the contractor. Every construction project faces adversity and uncertainty and an inappropriate contractor increases the chances of delays, cost overruns, sub-standard work, disputes, or even bankruptcy Hatush et al (1997). Complexity of construction opens to create different qualification criteria to select and award one best contractor.

Qualification criteria categorized in to two parts one pre-qualification criteria and post qualification criteria. According to Hatush et al (1997) prequalification is a pre-tender process used to investigate and assess the capabilities of contractors to satisfactorily carry out a contract if it is awarded to them. This involves a screening procedure based on a set of prequalification criteria to select the best contractor among tenderers. Past performance of

contractors as a means of assessing likely quality to be achieved, and past accidents records as a means of assessing safety performance levels, the values of both these criteria values again being converted into cost terms to simplify comparison between bidders.

PPA have standard bidding document (SBD) for procurement of different items every public body shall adopt. SBDs can be adopted for any procurement system and it give a chance to the user to specify according to project nature.

G+3 Araka Administrative building construction work which is located at Wolayita Soddo Zone.

The bidding documents used by public bodies for the procurement of work was standard bidding document for procurement of works for national competitive biddings (NCB) prepared by the FPPA (Version 1, August 2011).

According to this bidding document section two for legal qualification purpose all the invite bidders for the project procurement shall amend the evidence of their continued eligibility with the following documents:

- A) Contractor's registration certificate from ministry of urban development and construction category BC/GC-3 and above renewed for the fiscal year.
- B) Renewed trade license for the fiscal year.
- C) VAT registration certificate.
- D) Clearance from Inland Revenue, valid within the bid process time.
- E) Registration certificate in the supplies list under public procurement & property administration agency.

The following table shows evaluation methodology and criteria settings for the construction of G+3 Araka administrative building work as prepared by Wolayita soddo zone construction department.

Table 4.19 Point distribution and evaluation criteria setting for G+3 Araka administrative building construction work

No.	Description	Allotted point	Score
1	Experience of the bidder	<u>25.00%</u>	
	General experience		
1.1	The Bidder must successfully complete at least one contracts of any construction project within the last three years, with a project cost of at least 55,000,000.00 Ethiopian Birr.		
a	Project-1	10.00	
	Specific experience		
1.2	The Bidder must successfully completed at least two contracts similar to the proposed work (building construction projects) within the last three years, with a project cost of at least 40,000,000.00 Ethiopian Birr.		
b	Project-2	7.50	
c	Project-3	7.50	
	Total Point for criteria 1		
2	Qualifications and Experience of the key professional	<u>17.00%</u>	
2.1	Project Manager (Professional Engineer III)	6.00	
2.2	Site Engineer (Professional Engineer II)	6.00	
2.3	Construction Forman (AE V, JAT VII)	5.00	
	Total Point for criteria 2		
3	Equipment	<u>20.00%</u>	
3.1	Dump Truck, Capacity (14m ³) and above for each(2Pcs.)	5.00	
3.2	Excavator, 1.5m ³ and above with Jack hammer (1 Pcs.)	4.00	
3.3	Loader, 2.0m ³ and above (1 Pcs.)	4.00	
3.4	Pick-up of capacity 6qts and above (1 Pcs.)	3.00	
3.5	Concrete Mixer (750 liter) (2 Pcs.)	1.00	
3.6	Vibrator (2 Pcs.)	1.00	
3.7	Hand Compactor (2 Pcs.)	1.00	
3.8	Form work(500 m ²)	1.00	

	Total Point for criteria 3		
4	Bidders Financial Position and site visit	<u>28.00%</u>	
4.1	Average annual turnover not less than 45 million for last Three yrs.	12.00	
4.2	Audited Balance	10.00	
4.2.1	Audited balance sheet in last Three yrs. in Eth cal.	6.00	
a	2008.....	2	
b	2009.....	2	
c	2010.....	2	
4.2.2	Profitability	4.00	
a	2008.....	1.5	
b	2009.....	1.5	
c	2010.....	1	
4.3	Unconditional credit facility not less than 10(ten) million (If the facility is conditional it loses 50% of the point)	6	
	Total Point for criteria 4		
5.0	Work Methodology and scheduling	<u>10%</u>	
a	Site visit report and site organization	5	
b	Technical approach and methodology	1	
c	Work plan and scheduling	1	
d	Organization and staffing	1	
e	Safety, Health and Environmental measures to be applicable during the project implementation	2	
	Total Point for criteria 5		
	TOTAL WEIGHT 1+2+3+4+5	<u>100%</u>	

Legal Status and Grade of Contractors

Legal requirements are main eligible criteria that able the bidder to participate.

FDRE Proclamation 649/2009 article 28 in qualification of candidates' states that the bidder have to present renewed trade license and fulfilled their obligations to pay taxes according to Ethiopian tax laws.

Under this proclamation in article 16.4 instruction to bidders sub article 16.4.2 b) the criteria that bidders are expected to fulfill including a statement of requirement that domestic bidders

submitting bids for a contract value of Birr 100,000.00 and above must present value added tax registration certificate and foreign bidders must as appropriate submit business organization registration certificate or trade license issued by the country of establishment, accordingly at this case study project renewed trade license for the fiscal year, VAT registration certificate, clearance from Inland Revenue valid within the bid process time and registration certificate in the supplies list under public procurement & property administration agency were requested based on stated proclamations and standards.

The grade of contractor to be invited at this bid must be fixed according to the Ministry of Urban Development and Construction, Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013, which is based on estimated project cost. Ministry of Urban Development and Construction amended directive no 19/2013 divided contractors in four categories i.e. General Contractors (GC), Building Contractors (BC), Road Contractors (RC) and Special Contractors (SC), this directive also defines scope of each contractor categories.

Table 4.20 Contractors grade and project size

Categories	Grade	Construction Cost (Birr)		
		BC	RC	GC
(GC,BC,RC)	1	Above 210,000,000	Above 300,000,000	Above 350,000,000
(GC,BC,RC)	2	Up to 210,000,000	Up to 300,000,000	Up to 350,000,00
(GC,BC,RC)	3	Up to 160,000,000	Up to 225,000,000	Up to 270,000,000
(GC,BC,RC)	4	Up to 110,000,000	Up to 154,000,000	Up to 185,000,000
(GC,BC,RC)	5	Up to 54,000,000	Up to 76,000,000	Up to 100,000,000
(GC,BC,RC)	6	Up to 27,000,000	Up to 38,000,000	Up to 45,000,000
(GC,BC,RC)	7	Up to 11,000,000	Up to 15,000,000	Up to 18,000,000
(GC,BC,RC)	8	Up to 5,400,000	Up to 7,500,000	Up to 9,000,000
(GC,BC,RC)	9	Up to 3,000,000	Up to 4,200,000	Up to 5,000,000
(GC,BC,RC)	10	Up to 1,000,000	Up to 1, 500,000	Up to 1,800,000

Source: MUDC Amended Directive 19/2013 P: 13

According to the data gained from Wolayita Soddo construction department design and contract administration directorate estimated project cost for the project was 48,520,000.00 ETH BIRR and based on this engineering estimation contractors to be invited were GC/BC-5 and above but during bid invitation advertisement time as shown above GC/BC-3 and above contractors were invited.

Unfair selective restriction and setting subjective criterion was done without considering minimum requirement as stated at Amended Directives for the registration of Construction

Professionals & Contractors No. 19 /2013. Contractors' grade must be selected according to the directive based on estimated project cost which is prepared during bid document preparation time.

General and specific work performance

The performance of an organization and its long-term effectiveness are impacted by organizational culture. Culture is a key factor in the success of organizations in many different industries, including the public sector (Baily P., 2005). There are different ways to measure organizations long term effectiveness one and best way is general construction experience of the contractor with unit of years and type of works executed in those years. To have experienced bidders during bidding it is better to invite successfully participated bidder as contractor or subcontractor in general and specific work within the specified years, each with a value of at least that have been successfully and substantially completed and that are similar to the proposed works.

As shown above at section 3 evaluation criteria setting part the required amount of project experiences were 40 million and 55 million ETHBIRR for specific and general experiences respectively for this case study project tendering.

While preparing this requirement professionals must prepare as stated at amended directives for the registration of construction professionals and contractors no. 19 /2013 and SNNPR procurement directive (2010) based on project size to be constructed, at this project specific experience requirement was accordingly but general experience was not as per the directives.

Proposed Equipment

In the tender document at evaluation and qualification criteria section there are number of equipment the bidder expected to propose as owned, hire or lease for the execution of this project. The amount, type and quality of equipment's to be proposed to execute this project must be based on stated minimum equipment requirement at Amended Directives for the registration of Construction Professionals and Contractors No. 19 /2013. By comparing the request and directive the requested equipment's for this project was according to the directive. If the bid invitation where to GC/BC-5 and above contractors as justified above the requested equipment's for this project was not according to the directive above the minimum requirement.

Proposed Personnel

Where the tender document request to present personnel requirements the contractor should demonstrate the qualification and competence of the personal proposed for the subject project,

the bidder should show for every required position education level, general experience and experience in similar works and position. For this project under qualifications and experience of the key professional requirement criteria project manager (Professional Engineer III), site engineer (Professional Engineer II) and construction Forman (AE V, JAT VII) were required. The professional qualifications requirements must be according to Amended Directives for the registration of Construction Professionals and Contractors No. 19 as stated for issues like substitution rules for qualification equivalence between professionals and scope of the contract. The above listed personnel's were requested according to the minimum requirements stated at the directives.

Proposed Work Methodology and scheduling

The bidder shall demonstrate technical capability, full knowledge how each activity shall be execute, time required for each activities, how crew formed and managed, site condition and safety measure to be taken in contract execution period. These ideas can be demonstrate in two forms; firstly work program which indicated time line to project execution, start and finish date of project, relation between each activity, project closer, items delivery time and critical activates.

Secondly; construction methodology, includes crew formation, camp and site organization, activates detail description, required manpower and equipment for every activities.

To demonstrate all this activities as stated at SBD evaluation and qualification criteria section and procurement directives, this project bidding document evaluation criteria have included, Site visit report and site organization, technical approach and methodology, work plan and scheduling, organization & staffing and safety, health and environmental measures to be applicable during the project implementation.

Average annual turnover

The SNNPR (2010) procurement directive states minimum amount of the average annual turnover to be requested during bidding document preparation. According to the directive the two considerations to fix amount of average annual turnover were engineering estimation and proposed time duration for the completion of the new project to be executed. According to the data from Wolayita Soddo construction department design and contract administration directorate estimated project cost for the project was 48,520,000.00 ETH BIRR and expected project completion time was 4 years. Based on directive evaluation system minimum average annual turnover must be $(48,520,000.00/12*4)*12=12,130,500$ ETH BIRR but the minimum requested amount at bidding document was 45 million and this was too much. It is better to

give attention during tender evaluation criteria preparation time to request minimum requirements based on standards to invite more bidders.

Audited balance sheet preparation

Bidder is requested to prepare and submit audited balance sheets and other financial statements as stated at SDB for works and PPA directive for the last specified years at bidding document to demonstrate the current soundness of the bidder's financial position and its prospective long term profitability. At G+3 Araka Administrative building construction work bidding document for the years 2008,2009 and 2010 balance sheet report were requested as shown above. This audited balance sheets and other financial statements must be audited and licensed by certified or chartered external auditor according to SNNPR procurement directive but the evaluation criteria document didn't stated this issue so the balance sheet may be audited by accountants. To have genuine data about the bidders it better to be audited and licensed by certified or chartered external auditor as stated at SNNPR (2010) procurement directive.

As discussed on literature review under SNNPR procurement for this project the procuring entity uses all the procurement management process, includes preparation, tendering, and evaluation (including award recommendation).

The preparation of tender documents includes form of invitation to tender, instruction to tenderers or terms of references, prequalification documents, forms of contract agreement, general and particular conditions of contract, bill of quantities and technical specifications & methods of measurement.

Tendering Phase includes invitation (Invitation to bidder are posted in Ethiopian Herald Newspaper), clarification, submission and opening of tenders. Tendering phase includes invitation, clarification, submission and opening of tenders. As stated at SNNPR procurement directive, (2010) the bid was floated for 31 days based on complexity of project to be implemented.

Bidding documents opened in public on the date, at the time and place mentioned in the invitation to tender and stipulated in the tender documents at BDS section two. In addition to the procurement team, client representative, consultant, contractors and representatives attended during the tender opening. At the time of opening tender attendee members took their place and registered, tender box opened and checked for faulty things, documents opened one after the other, all necessary data which useful such as project name, name of bidder, bid bond amount, tender price, etc. recorded at the opening of bids. Bidders signed to attest their presence during opening, and committee members also signed on the tender documents.

During evaluation phase as stated at SBD section two the procuring body used quality and price based evaluation system. The procuring body awarded the contract to the bid that has the highest point in the total sum of results of the quality based evaluations and bid price evaluation. Prior to expiry of the period of bid validity, the public body notified by writing the result of a bid evaluation to all bidders at the same time.

4.8 Summary of Desk Study Findings

As observed during desk study review time the bidding documents used by public bodies at study zones for the procurement of building constructions were standard bidding document for procurement of works for national competitive biddings prepared by the FPPA (Version 1, August 2011), SNNPR public procurement and property administration proclamation and directives and ministry of urban development and construction directives for the registration of construction professionals and contractors No. 19 /2013. At the time of desk study, from floated tender documents at selected study area and research study time the researcher has reviewed the applicability of different proclamations, directives and any governing regulations at regional and national level which are compatible with standard bidding documents used by public bodies at the regional level.

The reviewed projects from the specified study area includes 5(five) TVET, 5(five) hospital, 5(five) OR, 5(five) 2nd generation health post and 5(five) administrative purpose building projects.

All the above 25 selected projects procurement processes were used PPA 2011 standard bidding document section 3 evaluation methodology and criteria, in order to select the responsive bidder.

The criteria's used to evaluate the competent bidder includes:-

- **Legal qualification of the bidder**

Under this criteria Nationality in accordance with ITB Clause 4.2, no conflict of interest as described in ITB Clause 6, having been registered in the public procurement and property administration agency's suppliers list in accordance with ITB Clause 4.7, not having been debarred by decision of the public procurement agency from participating in public procurements for breach of its obligation under previous contracts in accordance with ITB

Clause 4.3, having been submitted valid trade license or business organization registration certificate issued by the country of establishment in accordance with ITB Clause 4.6, having been submitted VAT registration certificate issued by the tax authority (in case of contract value of Birr 100,000.00 and above) in accordance with ITB Clause 4.6 and having been submitted valid tax clearance certificate issued by the tax authority (domestic bidders only) in accordance with ITB Clause 4.6 issues were checked.

- **Professional qualifications and capability of the bidder**

Under this criteria number of staff (staff currently work for the bidder) and personnel for the key positions for execution of proposed project were observed.

- **Technical qualifications, competence, and experience of the bidder**

Under this criteria general experience, specific experience, history of non-performing contracts, pending litigation and equipment for the implementation of the contract issues were checked.

- **Financial Standing of the Bidder**

Under this criteria, historical financial performance, average annual turnover and financial resources issues were checked.

Based on the above criteria's all the selected 25(twenty five) projects bidding documents were reviewed and all the findings summarized as follows.

Under legal qualification of the bidder the researcher has checked whether the bidder's above listed legal qualifications were requested or not. The assessment results show that all (100%) legal qualifications of the bidder were requested.

Under professional qualifications and capability of the bidder the researcher has checked whether the bidder's above listed qualification criteria's were requested or not based on minimum requirement for different categories and grade of contractors stated at MUDC directives for the registration of Construction Professionals and Contractors No. 19 /2013 and SBD. The assessment results show that (64%) tender documents have requested according to the directives requirement.

Under technical qualifications, competence, and experience of the bidder the researcher has checked whether the bidder's above listed qualification criteria's were requested or not based on minimum requirement for different categories and grade of contractors stated at MUDC directives for the registration of Construction Professionals and Contractors No. 19 /2013, SNNPR PPPA proclamation and directives and SBD. The assessment results show that (56%) tender documents have requested according to the directives requirement.

Under financial standing of the bidder the researcher has checked whether the bidder's above listed qualification criteria's were requested or not based SNNPR PPPA directives and SBD. The assessment results show that (72%) tender documents have requested according to the directives requirement.

Generally the desk study also investigated:-

The inclusion of additional subjective criterion in the bidding documents prepared by consultants for the implementation of the projects. The assessment results show that to the average (24%) additional subjective criterion in the bidding documents prepared by consultants for the implementation of the projects out of minimum requirements stated at different regulations and directives.

All the criteria's under legal qualification of the bidder were must meet criteria and if bidder loose one criteria from legal qualification automatically rejected. Also for another qualifications criteria's listed as 2-4 above there is no proportional point allotted. Subcontractor's experience and resources will not be taken into account in determining the bidder's compliance with the qualifying criteria.

For all projects a two stage procedure were adopted for evaluating bids, with technical qualification document evaluation being completed prior to any cost bid offer proposal being opened and compared.

Only technical proposals for firms scoring 70 and above point out of 100 will be considered responsive (pass) and their cost proposal will be opened. Bidders getting score less than (70%) seventy percent in the technical evaluation shall be rejected.

During desk study the researcher also reviewed one contract administration issues which were summarized as follows.

Public procurement is the process of the acquisition, usually by means of a contractual arrangement after public competition, of goods, services, works and other supplies by the public entity. The public procurement process spans the whole life cycle from initial conception and definition of the needs through to the end of the useful life of an asset or the end of a contract (SNNPR PPPAA, 2012). SBD for works prepared by the FPPA (Version 1, August 2011) public procurement manual which is currently used as contract document between contracting parties at SNNPR governmental building projects is well formulated and organized document to solve if claims like price escalations happened but on the other side as

the above projects file review shows that implementation according to the contract document is poor. Contract means the binding contract agreement entered into between the public body and the contractor, comprising contract documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.

SBD for works prepared by the FPPA (Version 1, August 2011) public procurement manual which is currently used as contract document between contracting parties at SNNPR governmental building projects stated about price adjustment at article 62 as follows.

Adjustments of contract prices shall be allowed after twelve (12) months from the effective date of the contract where it is verified that the performance of the contract requires more than 18 months.

Request for price adjustment in relation to a particular work items under this contract may be filed by the contractor after twelve (12) months from the effective date of the contract where it is verified that the performance of the contract requires more than 18 months, which adjusted price takes effect as the new contract price in relation to that work item on the expiration of 30 days from the date on which the public body receives notification of that adjusted price from the contractor, unless another date is agreed in writing between the parties.

According to SBD for works prepared by the FPPA (Version 1, August 2011) section seven general conditions of contract article 62 to adjust on each item any such price variation shall be calculated in accordance with the following formula by applying the combination of above said criteria.

$$PA = \left[NV + A \frac{(MLI - BLI)}{BLI} + B \frac{(MMI - BMI)}{BMI} + C \frac{(MEI - BEI)}{BEI} + D \frac{(MFI - BFI)}{BFI} \right] (BC)Q$$

Where:

PA =the amount of the Price adjustment to be paid to, or recovered from, the Contractor, in currency specified in SCC;

NV=the fraction which represents Non Variable element of the Contract Price that is free of contract price adjustment, as specified in the Contractor's Bid;

A = the fraction of the Contract Price subject to adjustment in accordance with movements of the selected Average Labor Category Earnings Index;

MLI =the most recently available selected Average Labor Category Earnings Index on the date on which the Public Body received notification of the proposed increased price from the Contractor;

BLI = Benchmark Average Labor Category Earnings Index applicable to the Works either:

- (a) At the bid closing date, or
- (b) If the Contract Price has been adjusted previously, the date on which the Public Body received notification from the Contractor in respect of the last adjustment to effect the current Contract Price;

B = the fraction of the Contract Price subject to adjustment in accordance with movements of the selected Material Price Index

MMI = the most recently available selected Material Price Index on the date on which the Public Body received notification of the proposed increased price from the Contractor;

BMI = Benchmark selected Material Price Index applicable to the Works either:

- (a) At the bid closing date, or
- (b) If the Contract Price has been adjusted previously, the date on which the Public Body received notification from the Contractor in respect of the last adjustment to effect the current Contract Price;

C = the fraction of the Contract Price subject to adjustment in accordance with movements of the selected Equipment Price Index

MEI = the most recently available selected Equipment Price Index on the date on which the Public Body received notification of the proposed increased price from the Contractor;

BEI = Benchmark selected Equipment Price Index applicable to the Works either:

- (a) At the bid closing date, or
- (b) If the Contract Price has been adjusted previously, the date on which the Public Body received notification from the Contractor in respect of the last adjustment to effect the current Contract Price;

D = the fraction of the Contract Price subject to adjustment in accordance with movements of the Average Fuel Price Index

MFI = the most recently available Average Fuel Price Index on the date on which the Public Body received notification of the proposed increased price from the Contractor;

BFI = Benchmark Average Fuel Price Index applicable to the Works either:

- (a) at the bid closing date, or

- (b) if the Contract Price has been adjusted previously, the date on which the Public Body received notification from the Contractor in respect of the last adjustment to effect the current Contract Price;

BC = Current Contract Price applicable to the Works

Q = Quantity;

And where: $NV+A+B+C+D$ are equal to 1.00

Currently it is known that there is price escalation or devaluation at construction raw materials but no any contracting parties solve this issues according contract document.

Surprisingly from the beginning as this SBD used at SNNPR construction industry this price adjustment clause was part of contract, but without any justified reason price was not adjusted according to the contract even if devaluation at construction raw materials happened. According to the data from SNNPR construction authority contract administration directorate at regional level still now only one building project price adjustment due to construction material devaluation was done i.e. SNNPRG administrative council building project.

So it is better to use the above stated clause as a base to adjust price according to contract by any contracting parties to have successful projects completion with respect of time, cost and quality.

4.9 Discussion on findings

Banaitienė, N. and, Banaitis, A., (2006) concluded that if the procurement planning is not incorporating as part of the scope definition, it will have an impact in selecting the best delivery strategy, bidding method, managing risks and selection of the suitable contractor for the project. For instance as part of the procurement process setting the qualification criteria is one of the basic process for selecting a competent contractor to perform the work and setting such criteria is dependent on the project scope definition like cost of project, duration and type of the project. Hence, if the procurement plan is not addressed in the scope definition it will also have an impact in selection of the right contractor for the specific project required.

Accordingly this research paper points out that procurement plan have been given lower attention at SNNPR governmental building projects during the procurement process and these have major negative effect on success of procurement process and tender evaluation criteria setting practices in SNNPR governmental building projects. According to the respondents any public

body and other entities accountable to such public body shall be required to prepare a procurement plan supported by action plan enabling them to execute in due time, the procurement necessary to implement their work program. The procurement plan shall be incorporated into the project performance of the capital project. For procurement under the recurrent budget a public body shall prepare an annual procurement plan. Hence, problem on the planning of procurement will affect the overall performance of the project.

Generally, it is found that the procurement process in selection of contractors basically contains setting strategies of the procurement through procurement plan and packaging, selecting the best project delivery method, means of bidding, forms of contract, bid evaluation and contract awarding procedures and setting qualification requirements for selection a contractor based on the specific project scope.

According to (Baily, 2005) the problems during procurement process of different construction stake holders includes not all requested prices have been submitted, bid not signed or sealed properly, mathematical errors in bid, owner wants to manipulate bid result using alternate or separate prices, owner wants to award to low bid that is qualified or non-compliant, owner wants to exercise privilege clause to award in accordance with non-disclosed criteria, owner wants to open a late bid either because too few bids received or owner knows/prefers bidder, criteria for determining compliance are not specified or clear, methods of remedying informalities in the bid are not specified and etc. issues were addressed.

This study also shows that the three most and common challenges and problems during procurement process and evaluation criteria setting at SNNPR governmental building projects for client, contractor and consultant were unfair selective restriction and setting subjective criterions, inappropriate procurement plan in procurement processes and forgery document preparation and submission by contractors. Client pressure to modify the engineering estimate to benefit favored bidders, favoritism in providing influential information to bid participant and collusive practice between participants are influential ethical problems. According to the respondents the above mentioned and any another ethical issues has direct and indirect effect on the successful implementation works with respect of time, quality and cost.

Hatush, (1996) conducted that the process of selecting the most competitive tender offer and appointing the most suitable contractor for the construction works is a complicated and risk-related task. The correct appointment of a competent and suitable contractor may have a positive impact on the outcomes of the works and result in lowering construction cost, increased quality of delivered work, shorten the project realization time, have higher number

of qualified and competent workers increased the safety and lower number of accidents.

Accordingly this research paper points out that among the respondents, 64.06% (41 in number) of them agreed that contractor awarded as lowest responsive bid selected based on open bidding system in SNNPR governmental building projects are not successful to deliver the required works with respect of time, quality and cost.

Open competitive bidding is one method of determining the least cost for performing work defined by the construction documents. The bid states the price that the bidder will contract for to perform the work based on the work shown and described in the bidding documents. Bids are prepared in confidence by each bidder. They are usually sealed when submitted to the client (or, in the case of subcontractors, to the bidding contractors). At a specified time and date, all bids are opened, competitively examined, and compared.

According to the respondents it is very common practice in SNNPR governmental building projects that the employer often selects the contractor with the lowest bid criteria. In fact, it's most critical task for the employer to take decision. However, selection by lowest bid will not necessary reflect the true cost of the project, that's why prequalification criteria to select a consultant or a contractor should be based on skill, experience and previous performance, rather than automatically accepting the lowest bid in all cases.

Huang, (2011) stated contractor evaluation is often performed by industry professionals using their accumulated experience and judgment. There are variations in the amount of effort expended in the process, often without an understanding of how such variations influence the project outcome.

Accordingly this research paper points out that technical qualifications, competence, and experience requirement of the bidder during bidding document in SNNPR building projects were prepared by respective professionals but there was no review of prepared technical requirements criteria's and documents by second party professionals before tender floating.

Alan, (2004) described that as part of the preparation work, and before any tender is advertised, the procuring agency requires a realistic estimate (based on a good quality design and costing process) of the cost of the structure with a breakdown of significant cost items. To prepare such an estimate, an engineer should be selected and be appointed to not only carry out this preliminary work but continue to supervise the contractor and ensure all works are carried out according to the design and to the highest quality possible

Accordingly this research study points out that from the respondents, 71.88% (46 in number) of them agree that client's put pressure to modify the engineering estimation estimated at bidding document preparation time in SNNPR governmental building projects and this practice affects overall performance of the projects.

According to the respondents during development of a project the client normally looks to the consultant for construction cost estimates. It is advisable to provide a probable cost of construction at completion of the schematic design, design development, and construction document phases. At completion of the construction documents, the consultant prepares a final and most accurate estimate of construction cost, which can be used for comparison with the bids submitted to perform the work. Value engineering may be performed by consultants and construction managers during the development of the construction documents.

Generally overestimation can result to higher tender estimates being tendered by a contractor thereby leading to the rejection by the client. While on the other hand, underestimation of tender estimates could equally result to the incurring of loss on the part of the contractor. Either way, over estimation and underestimation of tender estimates can create serious consequence.

Banaitienė, N. and, Banaitis, A. (2006), and Victorian civil construction industry (2008), conducted that tender criteria as a tool to achieve the aims of a construction project, which is selected, based on pre-determined and appropriate evaluation criteria these evaluation criteria must consider the size and complexity of the project. Procurement rules exist in most countries and for all international financing agencies and these must be followed. These rules should encourage true and open competition in tendering and contract award, open meetings and equitable and fair distribution of information, effective monitoring and auditing of all processes and implementation activities. Unfair qualification criteria, lack of accountability and corrupted practice of the awarding contractors has led to delays, disputes and inflated price.

Accordingly this research paper points out that among the respondents, 82.81% (53 in number) of them agree that SNNPR governmental building projects bidding document evaluation methodology and qualification criteria settings consider objective and measurable factors. Based on PPA 2011 standard bidding document section 3 evaluation methodology and criteria, in order to select the responsive bidder technical and financial evaluations must be done in effective manner but now a days it is common to see subjective criteria's.

As the respondents agreed that the procurement directive and manual do not incorporate all procedures to be followed during turnover, financial resource, key personnel, equipment requirement setting and where to apply must meet criteria related to the project. Furthermore construction audit has not yet started therefore inefficient and corrupt professionals easily set the criteria to favor some contractors with no accountability.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter includes the conclusions and recommendations of this research. A number of literatures had been reviewed, desk study of selected projects procurement process and tender evaluation criteria setting practices reviewed and a questioner survey were conducted to attain the objectives of the study.

5.2 Conclusions

Based on the results and discussion from the previous chapter, the following major conclusions were derived and summarized:

- I. Procurement plan have been given lower attention at SNNPR governmental building projects and these causes major negative impact on success of procurement process and tender evaluation criteria setting practices in SNNPR governmental building projects.
- II. The bidding document used by procuring bodies for the procurement at SNNPR building projects was NCB standard bidding document for procurement of works prepared by the FPPA (Version 1, August 2011). This SBD have three parts & nine sections and can be adopted for any procurement system and it gives a chance to the user to edit according to project nature.
- III. The MUDC amended directives for the registration of construction professionals and contractors no. 19 /2013 was not used appropriately in SNNPR building projects tender evaluation criteria preparation, this directive states minimum requirement for different categories and grade of contractors about different issues like beginning project size, substitution rules for qualification equivalence between professionals, professional requirement, equipment requirement and staff requirement to be used by public procuring entities.
- IV. Biding document in SNNPR building projects were prepared by respective professionals but there was no review of prepared technical requirements criteria's and documents by second party professionals before tender floating. Under financial criteria credit facility and annual turnover requirements did not aligned to the project demand. Also bidders were restricted not to propose leased or rented equipment for the project implementation.

- V. Project procurement system has its own peculiarity in term of the pre-tender, post tender activities and processes. The current open NCB system in SNNPR governmental building project gives equal chance to participate at bid for all eligible bidders but contractors awarded as lowest responsive bid selected on this system are not effective at their works with respect of time, quality and cost.
- VI. SBD for NCB prepared by the FPPA (Version 1, August 2011) at section 1 ITB states that any authorized public body used this document for procurement process is bound by the any rules governing public procurement in the federal democratic republic of Ethiopia. But in SNNPR building projects procurement process procuring bodies are not implementing accordingly.
- VII. As this study shows the three most and common challenges and problems during procurement process and evaluation criteria setting at SNNPR governmental building projects for client, contractor and consultant were unfair selective restriction and setting subjective criterions, inappropriate procurement plan in procurement processes and forgery document preparation and submission by contractors.
- VIII. As the respondents agreed that the procurement directives and manuals did not incorporate all the procedures to be followed by procuring body during procurement process. Furthermore construction audit has not yet started therefore inefficient and corrupt professionals easily set the subjective criteria to favor some contractor's illegally.
- IX. As the study shows modification of the engineering estimation during bid evaluation to benefit favored bidders, favoritism in providing influential information to bid participant and collusive practice between bidders are influential ethical problems.

5.3 Recommendations

The following recommendations were drawn based on the assessment.

- I. Any public body accountable for the preparation of procurement plan at SNNPR building projects shall be required to prepare a procurement plan supported by action plan enabling them to execute in due time, works to be executed, proposed procurement method to be used, and shows different phases of the procurement process to delivery works.
- II. To avoid subjective criteria setting at SNNPR building projects procuring bodies must use different regional and national standard directives. In order to select the responsive bidder technical and financial evaluations must be done according to SBD in effective way to minimize subjective criteria's.
- III. At regional level capacity building efforts should be applied by providing effective procurement process training and seminars to stake holder staffs for client, contractor and consultant side professionals.
- IV. The authorized body must exclude a bidder from participation in public procurement for a specified period of time if the bidder has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing a contract.
- V. To minimize subjective criteria settings at SNNPR building project it is better to use MUDC, amended directives for the registration of construction professionals and contractor's no. 19 /2013 as a base during procurement process and evaluation criteria settings.
- VI. As a government it is better to apply web based contractors back history record management system in public procurement process to easily avail sufficient and appropriate information to any concerned body for previous performance records of contractors to tackle forgery document preparation and submission to qualify and get involved in construction.
- VII. Further studies should be conducted to advance the procurement process and contractor selection criteria settings at regional level.

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APPENDICES

Appendix 1

HAWASSA UNIVERSITY INSTITUTE OF TECHNOLOGY DEPARTMENT OF CIVIL ENGINEERING

THESIS TITLE: - Assessment on Procurement Process and Evaluation Criteria Setting Practices in Building Construction: The Case of Selected SNNPR Governmental Building Projects.

Questionnaire Survey

General Information

Dear Participant

This research survey is designed to fulfil an academic research paper requirement for the partial fulfilment of M.Sc. degree in Construction Technology and Management at the Hawassa University. I can assure you that the research data will only be used for academic purposes. Particular mentioning of names will not be required anywhere. Your open and prompt response is highly grant value of the survey. Your experience and educational background in the construction industry will greatly contribute to the success of my study and I believe this kind of study will be an input for the development of Ethiopian construction industry. So, I am kindly requesting you to respond each and every question. For any clarification on this questionnaire, please contact the researcher on:-

Thank you!!

Name: TAMIRAT ASHURO

Phone no: +251-910321905

E-Mail: tamiratratt@gmail.com

Part 1: General Background Information

Questionnaire to respondents', which help to see experience and exposure of the respondent that makes the research data confidential or qualifying to analyze further.

The questions below are related to your organization and yourself. Please indicate your response by ticking (X or √) the appropriate box (es), and also filling the blank spaces provided as appropriate.

1. Name of organization: _____

2. Type of organization:

Client Contractor Consultant
Other (Please specify) _____

3. Grade and category of your firm (for Contractor only).

GC/BC 1 GC/BC 2 GC/BC 3
GC/BC 4 GC/BC 5

4. Your total experience in the building construction industry?

≤ 5 years between 5 & 10 Years ≥ 10 Years

5. Total number of building procurement process work you have participated?

≤ 10 projects between 10 & 25 projects

≥ 10 projects

6. Your Name, Position and Contact address:

Name (optional): _____

Job Title: _____

Phone no. /email: _____

Part 2: Questionnaire to client, contractor and consultant side professionals, to assess the practice of technical and financial tender evaluation criteria setting practices in SNNPR Governmental Building Projects.

To what extent do you agree with the following issues?

1-Strongly disagree, 2-Disagree, 3-No opinion, 4-Agree, 5-Strongly agree

1. How does public procuring institutions set financial and technical criteria in SNNPR Governmental Building Projects tender?

1.1 Technical evaluation criteria settings.

NO.	Technical evaluation criteria setting related issues.	5	4	3	2	1
1	Technical tender evaluation criteria were prepared by respective professionals.					
2	Equipment requirements criteria for similar buildings projects were uniform across all government sectors.					
3	During tender evaluation criteria preparation equipment requirements were according to the project minimum requirement					
4	There were no restriction to propose leased or rented equipment's for the project implementation.					
5	All technical tender evaluation criteria were reviewed and verified by another professionals before tender floating.					
6	During tender evaluation criteria preparation general and specific work experience requirements were according to the project minimum requirement.					
7	Tender evaluation criteria preparation for professional qualifications requirements were according to project scope and minimum requirement.					
8	During tender evaluation all copy bid proposal documents submitted by bidders were verified with the originals ones by evaluation committee.					

1.2 Financial evaluation criteria settings.

NO.	Financial evaluation criteria setting related issues.	5	4	3	2	1
1	Financial tender evaluation criteria were prepared by respective professionals.					
2	During tender evaluation criteria preparation average annual turnover request requirements were according to the project minimum requirement.					
3	Tender evaluation criteria preparation financial resource or credit facility requirements were according to project scope and minimum requirement.					
4	During tender evaluation time evaluation committee check that all submitted audited balance sheets and other financial statements were audited by certified or chartered external auditor.					

Part 3: Questionnaire to client, contractor and consultant side professionals, which help to assesses degree of Challenges and problems during procurement process & evaluation criteria settings in SNNPR Governmental Building Projects.

To what extent do you agree with the following factors?

5- Very High, 4- High, 3- Moderate, 2- Low, 1- None

1. At what extent does the following issues cause challenges and problems during procurement process & evaluation criteria settings?

No.	Factors	Degree of challenges and problems during procurement process & evaluation criteria setting Practices.				
		5	4	3	2	1
1	Inappropriate procurement plan and general lack of transparency for bidders in procurement processes at the stage from bid invitation to evaluation.					
2	Price fixing, including collusion between contractors					
3	Sale of tender documents deliberately delayed or advertisement limited to benefit favored bidders given advance notice					
4	Less assignment of technically capable personnel in the bid evaluation team.					
5	Less or insufficient time allotting to bid Evaluation.					
6	Manipulation of the tender evaluation process unfairly to favor a specific contractor					
7	Deliberately misleading unsuspecting bidders by including irrelevant items in the bill of quantities.					
8	Client pressure to modify the pre estimated engineering estimation during tender evaluation time to benefit favored bidders.					

9	Unfair selective restriction and setting subjective criterions out of minimum criteria stated at directives and proposed project scope.					
10	Fake or forgery document preparation and submission by contractors.					

Part 4: Questionnaire to client, contractor and consultant side professionals, which help to assesses procurement process and methods currently used in SNNPR Governmental Building Projects.

The following hypothesized questions indicate the direction how to assesses and manage procurement process and methods currently used in order to increase the performance of the projects by the parties involved in in SNNPR governmental building projects. Please respond by clicking the box representing your selection. If your rating was slightly disagree or strongly disagree, please indicate your proposed solutions in the space provided.

Question # 1: Public body or construction party prepares projects procurement plan considering scope of the project, time for procurement, what type procurement method to be used and grade of contractors to participate.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

Question # 2: The current national competitive open bidding method with post qualification (financial & technical evaluation) system in SNNPR Governmental Building projects is better to have good performance of the project implementation and to give equal chance to participate at bid for all eligible bidders.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

Question # 3: Contractor awarded as lowest responsive bid selected based on open bidding system in SNNPR Governmental Building projects are considered as effective with appropriate project cost and can deliver the required works with respect of time, quality and cost.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

Question # 4: Clients pressure to modify the engineering estimation estimated at bidding document preparation time in SNNPR Governmental Building projects will not affect overall performance of the projects.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

Question # 5: Application of +15% upper limit and - 15% lower limit rule from engineering estimation during financial evaluation judgment time according to SNNPR public procurement and property administration amended proclamation no. (28/2010) in SNNPR governmental building projects is good decision mechanism for overall performance of the projects.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

Question # 6: Application of $\pm 2\%$ difference arithmetic error rejection rule from value during bid opening time according to SNNPR public procurement and property administration amended proclamation no. (28/2010) in SNNPR governmental building projects was good decision mechanism for overall performance of the projects.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

Question # 7: During procurement process in SNNPR governmental building projects the ethical issue like corrupt, fraudulent, collusive or coercive practices by any public body or construction party are not major on their effects on performance of the project.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

Question # 8: SNNPR Governmental Building projects bidding document evaluation methodology and qualification criteria settings consider objective and measurable factors.

Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree

Proposed solutions (if) _____

END!!

Thank you very much for your time and cooperation!

Appendix 2

Sample tender evaluation criteria's used at SNNPR governmental building projects.

FACTOR	CRITERIA		Documentation Required
	Requirement	Bidder	
		Single Entity	Relevant attachments
Legal Qualification of the Bidder			
1.1. Nationality	Nationality in accordance with ITB Clause 4.2.	Must meet requirement	
1.2. Conflict of Interest	No conflict of interest as described in ITB Clause 6.	Must meet requirement	
1.3. Registration in the FPPA's Suppliers List	Having been registered in the Public Procurement and Property Administration Agency's Suppliers List in accordance with ITB Clause 4.7.	Must meet requirement	Bid Submission Sheet with attachments of suppliers registration certificate
1.4. Debarred by decision of the FPPA	Not having been debarred by decision of the Public Procurement Agency from participating in public procurements for breach of its obligation under previous contracts in accordance with ITB Clause 4.3.	Must meet requirement	Vat clearance certificate for the year 2011 E.C and PPA confirmation certificate
1.5. Valid trade license or business organization registration certificate	Renewed trade license for 2011 E.C	Must meet requirement	Valid and Renewed trace license for the year 2011 E.C
1.6. VAT registration certificate	Contractors must have VAT Registration Certificate.	Must meet requirement	Vat clearance certificate for the year 2011 E.C and PPA confirmation certificate
1.7. Valid tax clearance certificate	Contractors Shall submitted Tax Clearance certificate of 2011 E.C issued by the tax authority	Must meet requirement	Vat clearance certificate for the year 2011 E.C and PPA confirmation certificate
1.8. Government Owned Entity	Contractors grade should be GC-5 and/or BC-4 & above from minister of federal construction and urban development.	Must meet requirement	Bidder Certification of Compliance with

Point Distribution of Technical Evaluation Criteria

Item	Description	Allocated Point	Cont's Score	Remark
1	General Experience	20		
1.1	Experience as prime contractor in two project with a contract price not less than 30,000,000 birr each over the last five years (2009,2010 ,2011EC)			
a	Project-1.....	10.0		
b	Project-2.....	10.0		
	Total.....			
2	Personal Capability	15.00		
2.1	Project Manager(Professional Engineer I)	5.00		
2.2	Project Engineer (Professional Engineer II)	5.00		
2.3	Site Engineer (Professional Engineer I)	5.00		
	Total.....			
3	Equipment	30.00		
3.1	DUMP TRUCK-1-----	5.00		
3.2	DUMP TRUCK-2-----	5.00		
3.3	CONCRETE MIXER (2) 750Lit	5.00		
3.4	VIBRATOR (TWO)	5.00		
3.5	HAND COMPACTOR(TWO)	5.00		
3.6	Loader or Excavator (capacity 1.2m3 and above)	5.00		
	Total.....			
4	Bidders Financial Position	35.00		
4.1	Average annual turnover not less than 25 million for last five yrs.(2009,2010 ,2011EC)	8.00		
4.2	Audited Balance			
4.2.1	Audited balance sheet in last five years. in Eth cal.	6.00		
a	2011.....	2.00		
b	2010.....	2.00		
c	2009.....	2.00		
4.2.2	Profitability	6.00		
a	2011.....	2.00		
b	2010.....	2.00		
c	2009.....	2.00		
4.3	Unconditional credit facility not less than 8 million. (If the facility is conditional it loses 50% of the point)	10.00		
5	Site visit	5.00		