

# Assessment of Job Performance of Female Quantity Surveyors in Professional Practices in Contracting and Consulting Firms in Lagos State, Nigeria

Adepeju Nafisat Aransi

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**Abstract:-** Female face adverse situations in the construction industry at large and the participation of female in QS profession has improved although not proportionate to that of male, the adverse situation faced by female QS have a bearing effect on the level of their job performance. This study assessed the performance of female Quantity Surveyors in professional services and factors influencing their performance in Lagos state, Nigeria. Research data were collected through well-structured open ended questionnaires from Quantity Surveyors in consulting and contracting firms in Lagos state, Nigeria, quantitative method was adopted in the study, purposive sampling method was used in selecting firms in Lagos state, due to the relatively small population size of selected firms. Focus of the study was on firms in selected local government areas in Lagos state, which are accessible and more narrowly defined and manageable.

This study establishes that there is an existing relationship between results and researches done in the past on challenges faced by females in Quantity Surveying profession and Construction industry at large, it also established that female Quantity Surveyors are small in proportionate to male in the profession and they participate and perform above average in professional services. This paper concludes that the factors affecting the performance of female Quantity surveyors are numerous. It concludes that the major factor affecting the performance of female QSs in professional services in consulting firm was job restriction practices and factor affecting the performance of female QSs in professional services in contracting firm was limited promotion Opportunity.

## I. INTRODUCTION

### A. Background to the Study

Females are unexploited resources especially in developing countries (Jhabvala, 2017). Statistics has shown that the degree of women involvement in construction sector is minimal (Akomolafe and Mohammed, 2015). In Nigeria, 45.44% of female are engaged in economic activities as compared to men 54.36% even at this, the statistic of female participating in construction is very low (World Bank, 2011). According to Diwakar and Ahmad (2015) women are the most vibrant, dynamic segment and also potentially the most valuable human resources and they still remained untapped.

Construction industry is an important sector of the nation's economy, the construction industry is a major influence of the economy and its activities are important for achieving national and socioeconomic development goals of providing infrastructure, shelter and job opportunities (Anaman, Osie & Amposah, 2007).

It encompasses a wide range of activities, products and skills. It includes building designs, civil engineering, oil and gas, heavy engineering, design and consultancy. (Adeyemi, Ojo, Aina and Olanipekun, 2006) opined that construction industry is the core of Nigeria's economy and major indicator of country's wealth in socio and economic terms. Odediran, Adeyinka, Opatunji and Morakinyo (2012) posited that construction industry in Nigeria is said to be vibrant and one of the leading in Africa. The sector consists of 78% indigenous firms and 22% foreign firms (Aniekwu, 1995). Lopes, Oliveira and Abreu (2011) also observed that construction industry is a vital sector of the economy.

Quantity surveyors (QSs) are construction industry professional with expert knowledge on construction costs and contracts. Some of the services provided traditionally by QSs includes estimating, cost planning, feasibility and viability study for building works, compilation and documentation of contractual issues and tendering monitoring capital projects among others. Construction Industry Board (CIB) (1999) revealed that construction industry is majorly known to promote unfriendly business relationships, environmental insensitive, bad work practice culture and poor performance. Fidden, Davidson, Gale and Davey (2000) opined that construction industry has a general industry problem with image which makes men and women reluctant or uninterested in the industry. Jafar, Othman and Jalali (2014) revealed that in Nigeria, the level of literacy among females has improved but still the gender discrepancy is a major factor for discrimination which originates from household and is significant at all stage of life and construction industry.

Females have to face several adverse situations such as sexual harassment, wage discrimination, injuries and health hazard among others (Arditi, Gluch and Holmdahl, 2013). This unappealing circumstance in the industry makes it crucial to assess the job performance of female QSs in construction industry. Several studies have focused on women who are employed in QS profession but only a limited number of this study have been carried out to investigate the

actual performance of females in QS practice. Performance can be used to describe efficiency, effectiveness, improvements, growth and success. Said, Shafiei and Omran (2010) opined performance involves the ability of pooling the necessary skills in combination with effective behavior in order to achieve a certain task exceptionally. Performance indicator is needed for QSs to provide services that meet client's needs (Ashworth, Hogg and Higgs, 2013).

Regardless, the Nigerian construction industry has also been challenged to improve its performance. Performance assessment is used to investigate into activities or services rendered up to the client satisfaction, it is a vital tool for evaluating job performance and formulating strategies to improve it. Gyandu and Asiedu (2009) revealed that in developing countries, the problems of performance are worsened by lack of adequate resources and bodies to address them. Darryl (2007) adjudged that the most important issue in performance improvement is not the intervention but the diagnosis because effective diagnosis results in success in performance improvement. Measurement triggers and enhances improvements because it is impossible to improve what is not assessed (Osman, 1999).

Performance measurement provides timely and accurate feedback on efficiency and effectiveness of operations and aimed at focusing on improvements (Amaratunga and Baldry, 2002). Cascio (2006) revealed that performance is level at which individual undertakes an assignment or task. Individual job performance is used to establish performance expectations and evaluation of each individual service rendered. The job assessment will include performance on office administration, feasibility and viability studies, cost modeling, contract documentation and procurement, contract administration and management, monitoring capital projects, preparation of cost reports, pricing bill of quantities, project management, facility management, expert witness and arbitration and fire insurance assessment. Hence, this research seeks to assess the performance of female QSs in carrying out professional services, factors affecting the performance and how it can be improved to get the best performance from female QSs in professional practices.

#### A. Statement of the Research Problem

Female face adverse situations in the construction industry at large and the participation of female in QS profession has improved although not proportionate to that of male, the adverse situation faced by female QS have a bearing effect on the level of their job performance. This research is focused on assessing the performance of female quantity surveyors in professional services. With the advent of development around the globe, the level of female participation in QS profession in the construction industry has improved over the years, although they are still under-represented, faced with challenges of gender bias and face a lot of difficulties resulting from the harsh nature of the construction industry. Many studies have been carried out by various researchers on females in QS profession and construction industry at large but focus have been on the engagement, participation, involvement and challenges of female in QS profession and construction industry.

Ojo and Adeyinka (2014) studied involvement of female in QS profession and discovered that there was a low level of female QSs participation in the practice. Olojede and Oyawole (2017) investigated the female engagement in QS profession. Findings revealed that there was low level engagement of female QSs. Female mostly engage in office administration, contract documentations and procurement which is as a result of some challenges faced by female quantity surveyors although it was observed that female representation is witnessing a progressive trend. Jimoh, Bajere, Adamu and Oyewobi (2016) examined the current level of women participation it was discovered that construction industry is mainly dominated with male while female face a lot of difficulties in the industry.

Adogbo, Ibrahim and Ibrahim (2015) investigated the barriers faced by female it was concluded that the barriers faced by female such as culture and working environment are similar around the globe. Amaratunga, Haigh, Shammgam, Lee and Elvitigala (2006) examined the barriers faced by women which includes nature of the industry, career knowledge, culture and working environment and commitment to family. It was inferred that they are the major cause of low female participation in the industry. Baruah (2010) studied challenges and opportunities of female managers and it was observed that women are not fully represented due to the working conditions and environment, sexual harassment to mention a few and concluded that female are competent in dealing with people and their needs.

Having gone through related studies, what remained unknown is the performance of female Qss in carrying out professional services. Hence, the focus of this research is to assess the performance of female QSs in undertaking professional services and to determine the factors affecting the performance of female QSs in carrying out professional services.

➤ *Based on these, this Research will Provide Answers to the Following Research Questions;*

- What is the level of participation of female QSs in the construction industry?
- How do female QSs perform in carrying out professional services?
- What are the factors that affect the level of performance of female QSs in professional services?

#### B. Aim and Objectives of the Study

The aim of this research is to assess the performance of female QSs in professional services with a view of enhancing their performance.

➤ *The Specific Objectives are to;*

- To investigate the level of participation of female QSs in professional service in Lagos state, Nigeria;
- To assess the performance level of female QSs in carrying out professional services in the study area;

- To assess the factors affecting the performance of female QSs in professional services in the study area; D. To identify and examine the strategies to improve the performance of female QSs in professional practices.

It is important to assess performance so as to improve the factors affecting female QSs in carrying out their professional duties and sustain female in quantity surveying (QS) profession. Lopes et al (2011) opined that construction industry is an important sector of the economy and it is crucial enhancing socioeconomic development. The industry is a vital sector of the economy and female QSs constitute a percentage of the population. It is important to assess the various factors that possibly affect the performance of female QSs in the course of carrying out their duties and responsibilities in professional services results of which will be used to improve females in carrying out their services and encourage the upcoming students in delving into quantity surveying profession. Mattis (2000) opined that in the context of construction industry the component barriers that hinder females from holding executive positions are portrayed as failure to have the contributions recognized, taking seriousness, neglected and having other gender promoted above them.

Hence, assessing the performance of female QSs and addressing the factor affecting rendering professional services will create more awareness for young female QSs and also encourage more young female surveyors to develop interest in choosing a career in QS profession and also assist female QSs in decision making on either delving into consulting firms or contracting firm.

It is important to assess the level of performance of female QSs to establish the level of adaption the female QSs in the industry and the various factors that affect their level of performance so as proffer a possible solution to the factors affecting their level of performance to get the best possible output from the respective duties and responsibilities assigned to them while improving the level of representation of female QSs in the industry. This will enable young females to be interested in developing a career in the QS profession knowing that there are no constraint that will hinder them participating fully in carrying out their professional duties.

### C. Scope of the Study

The scope of the study is limited to Lagos state, Nigeria. The choice of Lagos state is based on the fact that Lagos is fast growing city with infrastructural development taking place. Major firms are headquartered in Lagos state and it also has the highest number of consulting and contracting firms and employs a large percentage of QSs in the country. Lagos state is a major economic center of Nigeria and it is a flagship state in terms of infrastructural growth and development and it has more participants in the construction industry sector in Nigeria. The state is divided into three geographical regions which are Lagos east, Lagos West and Lagos central. The geographical region is further divided into 20 local government areas. This research will focus on two local governments each from Lagos west, Ikeja and Mushin, Lagos

Central, Surulere and Yaba. The choice of this area is based on the fact that they represent the major central business district of the city with firms and construction companies concentrated in the area. Also, the research is focused on consulting and contracting firms in Lagos state, Nigeria.

### D. Summary

This chapter reviewed background to the study, statement of research problems, summary of related past project works, research questions which states clearly the problem the topic will be used to address, aims and objectives of the research and the scope of the research work.

## II. LITERATURE REVIEW

### A. Preamble

Service is a major factor for improving value and can influence an individual or organization success positively (Berry, 1995). The need for the provision of a quality performance in professional services is very important because all organization rely on it for success and survival. The quality of professional services rendered by QS is an important factor and it is paramount for client satisfaction. Female QS also constitute member of the professional body of Nigerian Institute of Quantity surveying in Nigeria (NIQS). Research has made it known over the years that they are faced with a lot of challenges in construction sector.

None the less, females' participation in the industry over the years has improved. Hence, it is therefore of essence to assess the performance of female QSs in professional services in light of huge adversary challenges they face in the industry and the quality of service they render in meeting the expectations of construction clients and the society at large in terms of cost economy and value for money.

### B. Nature of Construction Industry

Construction industry is an important sector of a country's development and growth (Barnabas, Anbarasu and Clifford, 2009). In Nigeria, Construction industry is a major influence of economic growth and development (Babalola and Odediran, 2013). Aje and Awodele (2006) posited that globally construction Industry is a constituent of professionals, operatives, technicians, artisans, client and contractors contributing joint quota towards the realization of a common goal. The industry is regarded as the highest employer of labour. However, women employed in the industry are mostly involved in managerial, technical and specialized works with a minimal involvement of women in professional department (Clarke, Pedersen,

Michielsens and Susman, 2005). Construction industry is the major propeller of the economic sustainability (Uguchukwu and Tobeckukwu, 2014).

Construction projects are generally complex and incorporated with many activities. The construction industry is mainly dominated with male and makes it a very challenging situation to women for equal opportunities (Fiedden et al., 2000). The industry is majorly seen as one

that portrays hoarse business relationship, bad working practices and compromised performances (Construction Industry Board, 1996). Construction industry in Nigeria is large, complex and people intensive, it is the key employer of quantity surveyors who play a major role to ensure that projects are carried out on time, good quality and they are cost effective.

In Nigeria, women participation in construction industry is significantly low these is because they are mostly engaged in occupational works such as banking, health and education. Construction industry covers different work types ranging from projects for private individuals to commercial property development. The various types of construction works are Industrial which has to do with construction of factories, industrial workshops, industrial estates and industrial units. Residential which includes, private houses, flats, apartments, housing association properties and social housing.

Commercial which includes retail units, shops offices and business parks. Retail which includes shop refurbishment or renovation, public houses refurbishment or renovation, shopping parks and retail centers. Health which includes construction of hospitals, community care centers, retirement homes, clinic and medical center development. Education which includes construction of new schools, provision of education facilities, construction of higher institutions and training center. Leisure and recreation which includes construction of cinemas, sport facilities, all weather facilities and football stadium.

Civil engineering which encompasses the construction of public infrastructure such as: the construction improvement and maintenance of railways; the maintenance and construction of roads, bye passes, trunk roads and new housing estate side road; the construction of road bridge and railway bridges; construction of runways and airport terminals; construction of sea and flood defenses; the construction of port facilities; the construction of resources such as wind turbines, wave powers and tidal power plants.

### C. Participants in Construction Industry

The participant in the construction project works are those that are mainly concerned with overseeing that the project is successfully carried out. The participants are the Client, the consultant whose primary aim is to protect the interest of the client while ensuring that the contractor is not cheated and the contractors.

#### ➤ The Client

The client is the main advocate of construction works from the inception to the completion stage, Kano (2005) revealed that if the client does not exist the project also cease to exist. The construction industry client majorly finances construction projects. Onwusonye (2002) opined that the client desires for a building to be constructed and finances its execution. Clients to construction industry may be categorized into two which are;

- *Public Sector Client*

They are mainly comprised of the public authorities or government bodies, these bodies' acts as agent for the government who oversee the execution of capital buildings projects and expenditures. Examples of public sector client are Ministry of housing, local and state government, some health authorities such as Red.

Cross society which are responsible for hospital buildings and lastly public housing cooperation's.

- *Private Sector Client*

They are mostly private Organization that undertakes construction works for leasing, renting, sale or private occupation.

The consulting teams are composed of the professionals that will be involved in various activities in ensuring the feasibility of the proposed construction work. The consulting team is composed of; **2.3.2.1 The Architect**

The Architect is responsible for the aesthetic function of a project, he sees to the production of drawings and building designs (Antoine, 2014). An Architect is a professionally trained individual who reproduces the clients brief into a specific design or scheme. He is majorly concerned with the appearance composition, proportion, structure and functionality of a building.

#### ➤ The QS

The Qs is professionally trained or qualified individual responsible for handling economical and financial implications of construction project, he gives necessary cost implications of various schemes and designs which are aimed at attaining the clients' goal and objectives which is getting the value of money expended on a project. QS is a cost expert in civil, building and engineering works (Onwusonye, 2002).

#### ➤ Engineers

Engineer is general name for structural or civil engineers, mechanical engineers and electrical engineers (Owunsonye, 2002). The mechanical and electrical engineer collectively can be called service engineers. The structural engineer assists the architect on structural work problems such as structural stability and loading of structures. Service engineers are concerned with all works including plumbing, electrical, ventilating, waste transportation and disposal among others.

#### ➤ The Project Managers

Onwusonye (2002) revealed that the project manager coordinates the overall construction and generally oversees a project work. He supervises, plans, control the general project work from site acquisition till the project is completed.

#### ➤ The Contractor

Contractor can be a general contractor or a specialist contractor; this is differentiated based on the nature of the service rendered or the business nature. Duties of contractor begins upon invitation to tender, they are majorly concerned



with the execution aspect of the project (Owusonye 2002). The contractor quote for a project and submit priced bill of quantities, he plans and programs the work to be executed, he controls and oversees the smooth running of site work and welfare of operatives on site.

#### D. *QS in the Construction Industry*

QS is an individual saddled with the responsibility of procurement, cost and contract management (Hee & Ling, 2011). QS is a trained professional engaged in the construction sector specialized in managing building cost and contract. QS is a cost expert professionally trained in handling construction cost, construction management and construction communications (Nigerian Institute of Quantity Surveyors, 2004). The role of QS is diverse ranging from procurement and total cost management, finance monitoring and ensuring client gets value for money expended on a project. QSS are specialized in handling estimating and measurement of construction projects, production of bill of quantities, preparing tender and documentation of tender, analyze tenders obtained from contractors, prepare interim and final valuations among other functions.

QSS also carry out traditional role of costing of engineering projects. Olusoga (2006) opined that traditionally QSS are experts in costing, cost monitoring and controlling of building project. It is vital to note that QS face a lot of challenges in the process of carrying out their roles, Jagun (2006) also opined that QS are faced with a lot of challenges in Nigeria. Over the years, QSS roles have evolved, they portray their professionalism in various ways in the industry, diversifying into finance, insurance and various cooperate finance bodies. Construction industry has evolved with more complex and diverse project works being undertaken as a result of conscious efforts towards conservation of environment and sustainability development which has brought about QSS involvement to provide advice in relations to waste reduction, pollution and utmost use of resources

##### ➤ *Client's QS*

These comprises of QSS in consulting firms, they are regarded as client's QS because they work for private practices acting to protect the interest of the client. They provide advice on cost implications of construction works and ensure the interest of the client is protected. Client QSS services are required from the inception of a construction work in which they provide advice on issues such as cost, procurement method and selection of other consultants. Client quantity surveyors can be found in the ministry, public and civil services.

##### ➤ *Contractor's QS*

Bowles and Le Roux (1992) posited that due to influences such as technological, financial and economical there are various methods used for construction works which are complex and requires advice from QSS. Hence the services of QS are required. Contractor QS is majorly responsible for protecting the interest of contractors. The functions undertaken by contractor QS comprises of post

contract administration, claims and carrying out administrative duties (Onovoh, 1997).

#### E. *Women Participation in QS Profession*

QS is a profession that involves the application of art, science, engineering and technological knowledge and skills in ensuring the efficient and effective use of resources in construction industry (Nivagbara, 2008). Woman in QS profession can therefore be said to be a female individual who has the professional qualifications and skills required for practicing QS. The nature of the profession perceives it as a male profession although there are a number of females who have distinguished themselves in the practice. Women are actively participating in the profession in recent times as a result of the conscious effort towards gender equality and equity in the environment. The professional body for female QS; Women Association of Quantity Surveyor of Nigeria (WAQSN) was also established. The association is aimed at ensuring that women form 30% of the total members of Nigerian Institute of Quantity Surveyor (NIQS) and are involved in their activities. Powell, Bagilhole and Dainty (2009) revealed that the female participation in QS profession has increased lately in developing countries. Women are getting more involved in traditionally male dominated works which is as a result of changes in working environment and other economic factors (Lin, Chen & Luo, 2011). Women first participation in QS profession was in 1920 after the sex disqualification ACTS of 1919 permitted them to qualify as surveyors with Irene Martin and Evelyn Perry as the pioneer women (Howard, 2016). From 1980-1989 the total member of female chartered surveyor increased from 1% to 3%, by 2012 13% of Global Chartered surveyors and 27.1% of QS students in the UK were females. The Nigeria Institute of Quantity surveyor (NIQS) as founded in 1969.

#### F. *Barriers to Women Participation in QS Profession*

Women in QS profession face some major barriers which prevent or serve as hindrance to them in the course of performing professional services. The barriers include the nature and image of construction industry, career knowledge, procedure for recruitment, sexual harassment, and working environment.

##### ➤ *The Nature and Image of the Industry*

Fielden et al., (2000) adjudged that construction industry is characterized as one having industry wide challenges with image. It is generally noted that females find it very challenging to delve into the professions in construction industry which makes the industry a male dominated one requiring strength, ability to tolerate harsh weather conditions and foul languages (Agapiou, 2002). Bagilhole, Dainty and Neale (2000) also revealed that the industry portrays a manly characteristic, where interactions are characterized with arguments, conflicts and crisis which exposes stakeholder to an unfriendly environment and results to gender differentiated career opportunities.

##### ➤ *General Lack of Knowledge and Information*

The image problem of construction industry is compounded by general lack of knowledge and information about the industry, career opportunities it holds and

qualifications required to participate in the industry by members of the society. Construction Industry Training Board (CITB) (2003) that professionals in construction industry perform below expectation as a result of lacking sufficient knowledge and information about the profession as at when required.

#### ➤ *Job Restriction Practices*

Women are more often prevented or excluded from carrying out jobs in the industry. This is evident with employers carrying out informal recruitment procedures, and job restrictions to masculine characteristics and interest, unstructured interviews and discriminatory choice selection criteria in interviews (Davey, Davidson, Gale, Hopley and Jones, 1999). Also the industry has general believe that women are physically and mentally incapable to execute the tasks that the position requires and may be disinclined to assign them to the task based on that erroneous idea (Enciso, 2009).

#### ➤ *Sex Discrimination*

It has been reported by female QSs that they are being appointed tasks aimed at evaluating their ability to perform in a male environment by clients and technicians (Davey et al., 1999). Females are assigned tasks such as inspection of high-rise buildings, inspection of unsafe buildings, subjection to rude and unacceptable behavior and when they refuse to carry out those tasks they might be seen as incompetent and it may result in the females being a subject of intentional target. Also, the cost accrued to women for poor performance is greater than that of men though an outstanding performance can result in female acceptance by their male counterparts. Bad performance can strengthen gender segregation, making it difficult for women to have chances to display their ability (Davey et al., 1999). Women are exposed to sex discrimination in hiring and employment or have suffered from harassment on the job, they are not treated with respect and the environment of the workplace is adapted only to male needs (Enciso, 2009).

#### ➤ *Sexual Harassment*

Women are more likely to be hired in low levels of management which are sometimes as a result of approval of male senior or superior, this can hence result in sexual harassment they occupy low ranking positions. (Chigamba and Chilipunde (2015) opined that females are employed in inferior job positions and they still sacrifice and work to keep them in the positions.

#### ➤ *Limited Promotion Opportunities*

Women are regularly neglected when it comes to promotions even in situations where they are qualified and capable for a post (Wells, 2004). The higher a post is the less likely a woman is engaged. Women constitute half of the population of construction workers as semi-skilled (Ayarkwa and Anyekum, 2012). They are employed majorly at the lower managerial level and administrative roles, they not always involved in professional services. 49% of female who are employed in higher levels of professional services in the industry have an attitude of hindrance by male counterparts

and colleagues who make their work difficult eventually forcing them to quit the industry (Amaratunga, 2002).

#### ➤ *Unfavorable Working Environment*

Women perform unsafe jobs to avoid being stereotyped by their male counterparts. They have been reported to be in conditions of low control over jobs which are highly demanding. HESA (2009) study indicated that the total culture of workplace in the industry poses a great threat to workers on site. Some of which are sanitary places or stations are usually unisex without privacy for the female workers and not properly maintained in terms of hygiene. Female workers also have issues about ill-fitting personal protective clothing and personal protective equipment that are not to size and may at the long run compromise health and safety.

#### ➤ *Maternity and Family Commitments*

Enciso (2009) opined that one of the main issues where women have been discriminated in the field is for raising children. Many of the positions are not part-time and raising a family also requires an amount of hours. The construction field tends to change locations, which resolves in travelling substantial distances and for long periods of time, this is where women are forced to make a very tough decision. Many women in construction get their salaries reduced as a result for being pregnant, or are taken off site, this leads to a disadvantage for women in every aspect, personal or professional.

#### *G. Professional Services Rendered by QS*

QS duties comprise of preliminary cost advice, cost planning and value management contractual methods, tendering, choice of contractor, valuation of construction works and project management (Chung, 2000). Traditionally, QS is majorly concerned with contractual arrangement, construction cost implications of design decision of construction projects and also control construction by effective planning of construction work. This however covers a range of activities which include; value management, tendering, valuation, variation or change control, management of claims and cost estimation. QS enhance the design process through the systematic application of cost management to maintain a reasonable and economical balance between costs, quality, utility and aesthetic appearance to give clients value for money invested on the project within a predetermined budget.

The QS roles and responsibilities are now beyond traditional QS duties such as measure materials and trade works, these responsibilities include financial, contractual and commercial management of construction project that span through the entire lifespan of the project. Also, the general trends towards sustainable development pose a major challenge for quantity surveyors, the quantity surveyor responsibilities towards sustainable development include; green costing, life cycle costing/life cycle assessment, carbon footprint, property performance reporting, green building rating assessment, building information modeling.

According to RICS (1999) some of the services provided by QS at pre-contract stage are; Preparation and developing preliminary cost estimates, advise on cost of design team's proposals, monitors the cost implication of detailed design, develops cost plan. At the tendering stage is; advise on contractual documentations to the client, preparation of recommendation for interim payments, post contract cost control, preparation of final account, preparation of priced bill of quantities, preparation of cost analysis, advice on financial cost implications and advice on contractual matters.

According to RIBA plan of work QS roles and responsibilities are; at feasibility stage; preliminary cost advice, project feasibility study, cost planning and budget estimation. Design stage; budget cost control advice on contractual methods and tendering procedures. Tender stage QS duties includes advice on contractor's selection, preparation of expenditure budget statements for tax and accounting, technical auditing. At construction stage, contract documentations, project control, interim payment, evaluation of variations. Other QS duties are; assessment of building replacement and value for insurance, expert evidence in Arbitration and mediation, represent employer or client in design and build contract, life cycle costing. QS duties and responsibilities are summarized as follows; preparation of cost analysis based on the drawings provided, preparation of cost plan to enable design team produce feasible designed for construction projects, preparing tender and contractual documents including bills of quantities, project control at all stages of construction works within predetermined cost limits and expenditures, monitors project progress and measures and values variations in the project work during the contract period for preparing agreement of interim payments and final account, provision of advice on contractual and commercial matters including reviews and correspondence drafting, certification of contractors valuation.

Hence, QSs duties and responsibilities are categorized into eight groups (Nnadi and Abel, 2016) namely;

#### ➤ *Feasibility and Viability Analysis*

This process is undertaken to ascertain that a project idea is realistic and should be carried out and to ensure the project is economically viable. It is the responsibility of the QS in conjunction with other stakeholder that is client and other consultants to carry out feasibility study and viability study assessment. The result of the feasibility assessment helps the client in making a decision as to accept, reject or modify the project idea. The QS also makes recommendations on the viability of a project idea to the client and gives professional advice on available alternatives. Feasibility study activities are; identification of available alternatives, identification of reasons not to adopt the project, identification of other opportunities, provision of information for making decision, preparation of initial estimate from feasibility proposals, assist in sourcing for cash flow that will be needed for actualizing the project idea from financial institutions or other institutions, identification of target cost

parameters, preparation of overall project cost calculations and preparation of pre-contract cost control.

Ashworth (1999) adjudged that Cost modeling is a method used in predicting likely cost of a proposed construction project. It encompasses all the techniques, methods and procedures adopted by the QS for cost estimation of proposed project which includes preparation of probable cost estimates, cost planning, cost studies and cost research of construction work.

#### ➤ *Contract Documentations*

Seeley and Winfield (2005) opined that QSs are majorly responsible for the preparation of contract documentations. Some of the contract document QS provide are, conditions of contract which states and explains the terms under which the project work will be carried out, it states the relationship that exist between the client and consultants, and the payment terms. The specification which describes in details the work nature, quality of the materials, describe the workmanship and components. It amplifies information provided in drawings and bill of quantities.

#### ➤ *Contract Administration*

QS provide contract administration services which are; cost planning and management from inception to completion of a project work, value engineering, advice on procurement method and assistance during tendering process.

#### ➤ *Risk Management Analysis*

Risk in the context of construction can be seen as a hindrance to the successful completion of a construction work. It is a critical factor to success of a project because of the complexity of the construction industry and level of competition. It is employed to assess the uncertainties that may arise as a result of decisions on cost. Risk that may arise in construction work includes, project build-ability, design, construction, political risks among others.

Project management is process of planning, designing, managing, scheduling and controlling construction work. It involves development of project plan and defining project goal and objectives considering time, budget and quality. QSs are qualified to carry out project management roles because they are trained in economics, financial analysis, management, legal and contract aspects of construction. QSs also advise on appointment and choice of design team, monitoring work progress to achieve goals and objectives, ensuring project work completion on time and providing assistance in planning operational maintenance policies at completion of work.

#### ➤ *Evaluation of Direct Labour Projects*

Direct labour is a method of contractual arrangement in which the client personally oversees the project work with assistance of his in-house professionals without the involvement of contractors (Ogunsanmi et al., 2003). The QS should therefore be available to assist the client in ways such as preparation of labour and materials schedule for construction work, supervision of procurement of the materials, cost control at construction stage and coordination

of different activities to ensure and enhance proper running of the work for best result.

➤ *Arbitration and Expert Witness*

Arbitration is a method of resolving disputes that may arise in the course of a project work. These resolutions are done outside of the court by an Adjudicator whose award the parties involved has agreed to be final and binding. QS can act as an arbitrator, the activities of QS are sitting as an arbitrator, preparation of evidence of proof, preparation of award or judgment and they provide expert witness or opinion.

*H. An Overview of Job Performance Assessment*

Performance assessment can be seen as a way of measuring and analyzing the efficiency and effectiveness of previous actions (Neely, 2005). According to Santa et al (2006) it is the way of measuring actions which includes activities to be measured, the performance quality and benchmarks. It involves the determination of the level of an organization or individual towards attaining objectives and strategic goals (Kagioglou, Cooper, and Aouad 2001).

Performance assessment is a systematic method of evaluating inputs or contributions and outputs or results in construction activities and it is a means for individual and organizational improvement (Mbugua, Holt, Holt and Harris, 1999). Hence, performance assessment can be said to be a process of identifying the effectiveness and efficiency of work by carrying out a critical analysis of all aspect of management which includes leadership, planning, human resources among others.

Performance can be assessed through evaluation of competency, the Royal Institute of Chartered Surveyors (RICS)(1971) and Male (1990) adjudged that the outstanding competencies and skills of a quantity surveyor are related to measurement and valuation which provide basis for effective and efficient cost management of construction works in the view of forecasting, planning, analyzing and controlling. RICS (1998) points out the requirement and competencies required of a QS in performance of professional services in three categories which are basic competencies, core competencies and operational competencies as shown in Table 1.

Table 1: The Competencies QSs require in Professional Practices

<b>Mandatory Competencies</b>	<b>Core Competencies</b>	<b>Optional Competencies</b>
Conduct, ethics rules professional and practices	Commercial management of Capital allowances	Contractual administrations
Care for the client needs	construction economics and cost planning	Insolvency and corporate recovery
Health and safety	Contractual practices	Risk management
Negotiation & communication	Financial control of project insurance and reporting	
Planning and Teamwork	Costing of construction works	
	Construction technology services	

Source: RICS Requirements and Competencies Guide

Basic competencies involve personal and inter personal skills, business skills, data information and information technology, professional practice, law, measurement and mapping. Core competencies are construction contract practice, construction technology and environmental services, economics of construction, procurement and financial management. Operational competencies include the ability to carry the following services efficiently and effectively; arbitration and other dispute resolution process such as litigation, adjudication and alternative dispute resolution, developmental appraisal, facilities management, insolvency, insurance, project management, property investment funding, research methodologies and techniques, taxation allowances, grants and valuation. Professional services can be measured based on the level of competency in carrying it out, satisfaction derived and its ability to serve the purpose.

**III. RESEARCH METHODOLOGY**

*A. Preamble*

This chapter deals with the research methods adopted in achieving the research objectives, ft population, sampling techniques, instruments used for data collection and the method of data.

*B. Research Design*

Quantitative method was adopted in the study. It involves measuring the frequency of an occurrence through hypothesis testing. Kothari (2003) opined that quantitative research method involves collection of data in a quantitative way and then analyzing the data quantitatively by the use of statistical analysis tools. The data are mostly gotten from a small number of respondents using questionnaire.

*C. Study Population*

The estimated target population for the study comprises of large scale contracting and consulting firms in Lagos state Nigeria. The state is divided into three geographical regions which are Lagos east, Lagos West and Lagos central. The geographical region is further divided into 20 Local Government Areas (LGA).

This research focused on two local governments each from Lagos west, Ikeja and Mushin, Lagos Central, Surulere and Yaba. The choice of this area is based on the fact that they represent the major central business district of the city with foremost firms and construction companies concentrated in the area. The population of respondent is presented in Table 2.



Table 2: Population of Respondent Firms

S/N	LG	CONSULTING	CONTRACTING
1	Ikeja	12	7
2	Mushin	10	8
3	Surulere	11	7
4	Yaba	12	7
5	Total	43	29

**D. Sampling Methods**

This research employs a non-probabilistic sample method precisely purposive sampling. Purposive sampling method was used in selecting firms in Lagos state, due to the relatively small population size of selected firms. Focus of the study was on firms in selected local government areas in Lagos state, which are accessible and more narrowly defined and manageable.

**E. Sampling Size and Techniques**

Total population sampling techniques was adopted for this study; it is a type of purposive sampling technique that involves examining the entire population that have a particular set of characteristics. This was adopted because the respondents are QS in construction and contracting firms that have experience in construction works and the population size of the respondent is relatively small. In Lagos state, there are 57 consulting firms registered by Nigerian Institute of Quantity Surveying and 35 contracting firms. The sample size (n) for quantity surveying firm is calculated as in Table 3.2.

**F. Questionnaire Design**

A questionnaire is a set of printed questions with a choice of answers developed for the purpose of gathering information from the respondents. It was aimed at reflecting the major areas of interest to the researcher and hence providing important information to the research objectives. The questionnaire was structured in a simple and clear way in which section one investigate the level of participation of female QSs in professional practices, section two assess the performance of female QSs in professional practices, section three investigate the factors that affect the performance of female QS in professional practices and section four provide measures to improve performance of female QS in professional practices. The questionnaire was structured using a fivepoint Likert scale to measure a range of opinions on level of significance and degree of impact.

The first part of the questionnaire was designed to capture background information of the respondent such as designation of respondent, gender of respondent and academic qualification of respondent. Section A consists of the first objective of the research which is to investigate the level of participation of female QSs in professional service using a Likert scale 1-5(Very high (5), High(4), Moderate (3),Low (2), Very low (1))

Section B consist of the second research objective which is to assess the performance level of female QSs in carrying out professional services in the study area on a Likert scale 1-5(Very high (5), High (4), Moderate (3)Low (2) Very low (1))

Section C rank the significance, degree of impact and level of adaptation to challenges faced by female quantity surveyor on job performance in consulting and contracting firms using five point Likert scale (Most significant (5), More significant (4), Significant (3),Fairly significant (2), Not significant (1)); (Very high impact (5), High impact (4), Average impact (3), Less impact (2), No impact (1));(Very high(5),, High (4), Moderate (3) Low (2)Very low(1))

Section D rank the strategies to enhance the job performance of female QSs on a Likert scale 1-5 (Very high impact (5), High impact (4), Average impact (3), Less impact (2), No impact (1))

**G. Data Analysis and Presentation**

Data analysis involved the arrangement and organization of n processed data collected to enable the extraction of useful information. The data collected was analyzed through descriptive and inferential statistics. Inferential and descriptive statistics used are discussed below;

➤ **Mean**

It can also be called arithmetic mean, it helps summarize an entire population in a sample. A set's mean was calculated by adding the numbers in the set together and dividing the sum by the number of members in the set. Mean value helps to summarize entire set of numbers.It is calculated using the below formula,

Where;

F = frequency  
X = number of respondents

Mean value was used to describe the level of participation of female QSs in professional practices,job performance of female QSs and factors affecting the job performance of female Qss in professional practices in consulting and contracting firms.

➤ **Standard Deviation**

It indicates precisely the extent of variability within a set of numbers. A set having a smaller standard deviation are more closely packed to the mean compared to that with a larger standard deviation. Standard deviation is calculated using the deviation of individual numbers from the mean figure. It was employed to assess the participation and job performance level of female QSs in professional practices.

➤ *Factor Analysis*

Factor analysis is a statistical tool used to show the variability among observed or correlated variables with respect to potentially limited number of observed variables. It was used to determine the relationship between the variables of interest and observable factors. It was used to determine the relationship between the factors affecting female QSs and their job performance in professional practices.

➤ *T-Test*

A T-Test is a type of inferential statistical tool used in determining the significant difference between the means of two groups, which may be related in certain features. It was used to compare the average values of two data sets and determine if they came from the same population. T - Test was used to compare the findings from consulting and contracting firms and draw a conclusion on job performance of female QSs in professional practices in consulting and contracting firms in Lagos state, Nigeria.

➤ *Analysis of Variance(ANOVA)*

Analysis of Variance (ANOVA) is a statistical tool that splits an observed aggregate found inside a data set into two par systematic factor and random factor. It was also used for comparison of more than two variables contracting and consulting same time.

*H. Summary*

This chapter described the research design that was used for the study, methods employed in sourcing for data, population sampling frame, sampling size, sampling techniques, method of data collection and tools for data analysis

**IV. RESULTS AND DISCUSSION OF FINDINGS**

*A. Preamble*

This chapter discusses the results of the data analysis obtained from the questionnaire. The data are presented in tables and charts for better understanding and clarification.

*B. Response Rate*

Data was collected through well-structured questionnaire administered by QSs in contracting and consulting firms in Lagos west and Lagos central. The questionnaire is sectioned to background information of the respondent, investigating the level of participation of female QSs in professional service, assessing the performance level of female QSs in carrying out professional services. A total of 74 copies of questionnaire were administered of which 43 consulting firms and 31 contracting firms in Lagos west and Lagos central with a return rate of 37.5% and 62.5% which was used for the analysis. Moser and Kalton (1971) asserted that a survey result is significant when the response rate is not lower than 30-40%. The response rate of the target sample is shown in table 3 a total number of 43 and 31 questionnaires were administered of which 25 and 15 copies were retrieved.

Table 3: Questionnaire Distributed and Retrieved

Respondent	Number Distributed	Number Retrieved	Rate of Return
Lagos West	31	15	32%
Lagos Central	43	25	68%
Total	74	40	100%

*C. Background Information of Respondents*

Table 4 shows the background profile of QSs surveyed in constructing and contracting firms, it reveals their company location, nature of organization, gender of respondent, designation of respondent, professional qualifications, age of respondent, total numbers of QSs in the firm, the number of female QSs in the firm, highest academic qualification of respondent, years of experience of the respondent and preference of female QSs to work on site or in office. It also revealed that 37.5% questionnaires were retrieved from Lagos west and 62.5% were retrieved from Lagos central in which 2.5% are from other organizations, 37.5% contracting firms and 60.0% consulting firms.

The table also shows the gender of the respondents, 25.0% female and 75.0% male, age of the respondent in which age 46 -55 years were 15%, 36-45 years were 52.5% and 25-35% 32.5%. The table revealed that 80% of the respondent were employee and 20% were partners, professional qualifications 2.5% FNIQS, 62.5% MNIQS and 35% probationer this showed that there is a significant number of respondent with professional qualifications to administer the questionnaire. The total numbers of QSs in the firm in which firm with 21-26, 1620, 11-15, 6-10, 1-5 QSs are

5%, 7.5%, 10%, 25% and 52.5% respectively. It also gives an indication of number of female QSs in the firm of which 6 - 9 numbers were 10%, 3-5 numbers 10% and 0-2 numbers 80%, this indicates that most firms have a few number of females which makes it infer-able that the profession is a male dominated one.

The result in the table also shows that 12.5% of the respondents have obtained Master of Science (MSc)/Master of Technology (M.Tech), 80% have obtained Bachelor of Science (BSc)/Bachelor of Technology (BTech), 5% have obtained higher national diploma (HND) and 2.5% have obtained national diploma (ND). It shows the years of experience of the respondents in which 21 - 30 years of experience have 7.5%, 11-20 years of experience have 55% and less than 10 years of experience 37.5%, it depicts that the respondents have significant experience in professional practice to respond to the research questions. The table also shows the preference of female QSs to work on site or in office in which 52.5% female QSs prefers to work on site and office, 40% prefer to work in an office and 7.5% female QSs prefers to work on site.

*D. Analysis and Discussion*

➤ *Investigating the Participation of Female QSs in Professional Services in Construction and Contracting firms*

Objective one evaluated the participation of female QSs in consulting and contracting firms, Table 4.3 shows the response and information gathered on the participation of female QSs in professional services in contracting and consulting firms, the 1st ranked service by partner is 'preparation of budget and expenditure statements' (MS=4.43), followed by the 2nd,3rd,4th and 5th which are 'contract documentations', 'monitoring of project progress', 'cost planning' and 'preliminary cost advice', this finding which has preparation of budget and expenditure statement for tax and accounting is in line with the RIBA plan of work which included the preparation of budget and expenditure statements for tax and accounting and one of the roles and responsibilities of QSs.

The 1st and 2nd ranked services by employee is 'contract documentation' and 'tendering procedure' (MS = 4.25) this is followed by 3rd(MS=4.23) which is 'preparation of bills of quantities'. The 4th highest ranked by the employee is 'advice on contractual methods' (MS =4.22) and the 5th highest ranked is 'measure & value variation in project work' (MS = 4.19). Contract documentation which was ranked the 1st correlated with Seeley and Winfield (2005) opinion that QSs are majorly responsible for the preparation of contract documentations which includes the condition of contract, and specifications, this is also in accordance with RICS (1991) which includes contract documentations as one of the roles performed by QSs at pre-contract stage. The result from the findings showed that partners are of the opinion that female QSs participate mostly in preparation of budget and expenditure statement for tax and accounting. Employees are of the opinion that female QSs participate mostly in contract documentations. The respondents view was tested using ANOVA; the results showed that the respondents view were uniform on the participation of female QSs in professional services at (P value≤0.01 and≤0.05).

Table 4: Participation of Female QSs in Professional Services; Partners and Employees Perception

No	Professional Services	Overall Measurement
1	Contract documentations	4.2
2	Advice on contractual methods	4.2
3	Tendering procedures	4.2
4	Preparation of bill of quantities	4.1
5	Preparation of expenditure budget statements for tax and accounting	4.1
6	Measures and values variations in project works	4.18
7	Monitoring of project progress	4.1

Table shows the ranking of participation of female QSs in contracting and consulting

Respondents from consulting firms ranked 'preparation of expenditure budget statement for tax & accounting' 1st (MS=4.32), this is followed by 'measures & value variations in project (MS=4.19), 'advice on contractual methods' ranked 3rd which is followed by 40 'tendering procedure' (N .25) which ranked 4th and 'cost planning' 5<sup>th</sup> (MS =4.20). The 5th(MS=4.20). Table also shows that respondents from contracting firms ranked 'contract documentations' as methods'(MS=4.13) was ranked 4th and 'tendering procedures' (MS=4.13) was ranked 5th(MS=4.13). The result from consulting firm which ranked preparation of expenditure budget statement for tax and accounting correlated with the RIBA plan of work; QS roles and responsibilities. Preparation of expenditure budget statement for tax and accounting according to RIBA is one of QSs duties at tender stage. Also, project documentation which was ranked 1st is also in line with Seeley and Winfield (2005) who were of the opinions that QSs are majorly responsible for the preparation of contract documentations. The result from the findings showed that female participate mostly in preparation of expenditure budget statement for tax and accounting in consulting firms, and they participate mostly in Contract documentations in contracting firms.

The respondents view was tested using ANOVA, the results showed that the respondents view were uniform on the participation of female QSs in professional services from the consultant QSs and contracting QSs view at (P value ≤0.01 and≤0.05).

**V. CONCLUSIONS AND RECOMMENDATIONS**

*A. Preamble*

The previous chapter analyzed the data collected and discussed the findings which assessed the participation of females QSs, performance of female QSs and factors affecting performance of female QSs in professional services in constructing and contracting firm. This chapter summarized the findings and presents the conclusions and recommendations based on the findings from the study.

*B. Summary of Findings*

This chapter presents the findings that emanated from the study based on the research objectives and data collected from the field survey, the results are summarized as follows:

- The study established that female QSs participate above average in all the presented professional services. Although, the most ranked professional services in which female QSs participate in consulting firm was Preparation of expenditure budget statements for tax and accounting.

- The study established that, female QSs participate above average in all the presented professional services. Although, the most ranked professional services in which female QSs participate in contracting firm was contract documentations.
- The study established that, all the factor have high impact on the performance of female QSs. Although the most ranked factor affecting the performance of female QSs in professional services in consulting firm was job restriction practices.
- The study established that, all the factor have high impact on the performance of female QSs. Although the most ranked factor affecting the performance of female
- QSs in professional services in contracting firm was limited promotion opportunity.

### C. Conclusions

#### ➤ *The Study Concluded that:*

- Female QSs participate in all the professional services presented but mostly in preparation of expenditure budget statements for tax and accounting in consulting firms and contract documentations in contracting firms.
- Female QSs performed above average in all the professional services but have highest performance in preliminary cost advice in consulting firms and cost planning in contracting firms.
- All the listed factors in the literature have high impact on the job performance of female QSs. Although the service with highest factor in consulting firm was job restriction practices and in contracting firm was limited promotion opportunity.

#### ➤ *Recommendations*

- As a result of the foregoing conclusion drawn from the findings, it is deemed fit that some strategies and recommendations should be made that if properly implemented would alleviate some of the factors affecting performance of female QSs in professional services.

#### ➤ *These Recommendations Include;*

Participation of female QSs should be improved in all other professional services through increased engagement of female QSs in other job areas and employers should avoid job delegations based on masculine characteristics, physical strength and stereotypes in both the consulting and contracting firms.

- Also, job performance of female QSs in all other professional services should be improved through organizing of seminars and workshops aimed at sensitizing female QSs in both contracting and consulting firms.
- Lastly, factors affecting the job performance of female QSs can be mitigated through the adoption of favourable policies and procedures in work place, provision of reliefs such as child care facilities and health care centers, adoption of less rigid working hour, legislation against sexual discrimination and fair evaluation of job done by

the female and male professionals in both consulting and contracting firms.

### D. Contribution to Knowledge

This research has helped to establish the level of performance of female QSs in consulting and contracting firms, and the various factors that affect their level of job performance. It has also proffered possible solutions to the factors affecting their level of performance to get the best possible output from the respective duties and responsibilities assigned to them while improving the level of representation of female QSs in the industry. It will also assist female QSs to specialize as either consulting or contracting QSs.

### E. Future Research Study

This study covers only Lagos central and Lagos west, further research need to consider other areas in Lagos state and in Southwest geo political zones to effectively assess the performance of female QSs in professional services in consulting and contracting firms and factors affecting their performance.

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**DEPARTMENT OF QUANTITY SURVEYING, FACULTY OF ENVIRONMENTAL DESIGN AND MANAGEMENT,  
OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE, OSUN STATE**



Dear Respondent,

**QUESTIONNAIRE ON: ASSESSMENT OF JOB PERFORMANCE OF FEMALE QUANTITY SURVEYORS IN PROFESSIONAL PRACTICES IN CONTRACTING AND CONSULTING FIRMS IN LAGOS STATE NIGERIA**

I am an undergraduate student of the Department of Quantity Surveying, Faculty of Environmental Design and Management, OAU Ile – Ife, Osun state and currently undertaking a research for the award of Bachelor of Science (B.Sc.) degree. This questionnaire is aimed at assisting in obtaining information on the above research topic. You have been chosen to respond to the Questionnaire. Kindly assist in answering the questions sincerely based on your knowledge and job experience. Response provided will be confidentially treated as the research is strictly for academic purpose.

Thank you for your time and assistance  
-----

Adepeju Nafisat ARANSI  
Aransi.adepeju@yahoo.com  
08035093991

➤ *Background Information of Respondent*

- Company’s address or location (optional).....
- Year of establishment of firm or company.....
- Nature of organization (a) Consulting ( ) (b) Contracting ( ) (c) others (please, specify).....
- Gender of respondent (a) Male ( ) (b) Female ( )
- Total number of quantity surveyors in firm or company \_\_\_\_\_
- Number of female quantity surveyor in firm or company \_\_\_\_\_
- Highest academic qualification of respondent (a) ND ( ) (b) HND ( ) (c) B.Sc. / B.Tech ( ) (d) M.Sc. ( ) (e) Ph.D ( ) (f) Others (please specify) ( )
- Designation of respondent.....
- Year(s) of experience of respondent (a) <10 years ( ) (b) 11-20 years ( ) (c) 21-30 years ( ) (d) 31-40 years ( ) (e) >40 years ( )
- Preference of female QS to work on site or office \_\_\_\_\_

➤ *Section A: Participation of Female Quantity Surveyors in Professional Services*

Rank the **level of involvement** of female quantity surveyor’s in professional practices in contracting and consulting firms. Using scale as below; **Very high (5), High (4), Moderate (3), Low (2), Very low (1).**

	<b>Professional services in contracting and consulting firms</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1	Preliminary cost advice					
2	Project feasibility study					
3	Cost planning					
4	Budget estimation					
5	Budget cost control					
6	Advice on contractual methods					
7	Tendering procedures					
8	Advice on contractors selection					
9	Preparation of expenditure budget statements for tax and accounting					
10	Preparation of bill of quantities					
11	Contract documentations					
12	Project control at all stages of construction works					
13	Monitoring of project progress					
14	Measures and values variations in project works					
15	Preparation of final account					
16	Assessment of building replacement and value for insurance					
17	Expert evidence in arbitration and mediation					
18	Represent employer in design and build contract					
19	Life cycle costing					

➤ *Section B: Performance of Female QS in Carrying out Professional Services*

Rank the performance of female QSs in carrying out professional services in contracting and consulting firms. Using scale as below; **Very high (5), High (4), Moderate (3) Low (2) Very low (1)**

	<b>Professional services in contracting and consulting firms</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1	Preliminary cost advice					
2	Project feasibility study					
3	Cost planning					
4	Budget estimation					
5	Budget cost control					
6	Advice on contractual methods					
7	Tendering procedures					
8	Advice on contractors selection					
9	Preparation of expenditure budget statements for tax and accounting					
10	Preparation of bill of quantities					
11	Contract documentations					
12	Project control at all stages of construction works					
13	Monitoring of project progress					
14	Measures and values variations in project works					
15	Preparation of final account					
16	Assessment of building replacement and value for insurance					
17	Expert evidence in arbitration and mediation					
18	Represent employer in design and build contract					
19	Life cycle costing					

➤ *Section C: Factors Affecting the Performance of Female QSs*

Rank the significance, degree of impact and level of adaptation to challenges faced by female quantity surveyor on job performance in consulting and contracting firms. Using scale as indicated below; **Most significant (5), More significant (4), Significant (3), Fairly significant (2), Not significant (1) Very high impact (5), High impact (4), Average impact (3), Less impact (2), No impact (1) Very high (5), High (4), Moderate (3) Low (2) Very low (1)**



	Barriers faced by female QS in contracting and consulting firms	Level of Significance					Degree of Impact					Level of Adaptation				
		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
1	Nature and complexity of the profession															
2	Unfavourable working environment															
3	Need to work for long hours															
4	Male dominated nature of the profession															
5	Family commitment															
6	Knowledge and information about the profession															
7	Adequate qualifications															
8	Ability to carry out tasks requiring physical strength															
9	Informal recruitment procedure by employer															
10	Job advertisement restrictions to masculine characteristic and strength															
11	Sanctions accrued to female for poor performance															
12	Tradition of the industry															
13	Maternity and other leaves															
14	General believe that females lack confidence and have low self esteem															
15	Limited job opportunities															
16	Gender discrimination															
17	Sexual harassment															
18	Promotion opportunity															
19	Competition with man															
20	Smaller proportion of females in QS profession															
21	Support and mentoring															
22	Personal protective equipments															

Others please specify

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➤ Section D

Based on experience as a quantity surveyor rank the **strategies** to enhance the job performance of female quantity surveyors using the scale below; **Very high impact (5), High impact (4), Average impact (3), Less impact (2), No impact (1).**

S. NO.	Strategies to Enhance Job Performance of Female QSs	5	4	3	2	1
1	Improved working environment					
2	Less rigid working hours					
3	Better benefits and incentives					
4	Seminars and workshops aimed at sensitizing female QSs					
5	Encouraging female to choose career in QS					
6	Avoidance of informal recruitment procedure by employer					
7	Eliminating gender pay gap					
8	Fair evaluation of job done					
9	Reliefs such as child care facilities and health centers					
10	Enhancing good communication and room for expressing themselves					
11	Flexible job recruitment strategies					
12	Encouraging gender equity					
13	Legislation against sexual harassment					
14	Improved promotion opportunity					
15	Favourable policies and procedures in work place					
16	Better female representation					
17	Support and mentoring in major job areas					

18	Avoiding job delegations based on stereotypes or physical strength					
19	Increase engagement of female QSs in job execution					
20	Provision of adequate protective clothing's and gadgets for female QSs					

Others please specify

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