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COMPARISON OF CONSULTING CONTRACT

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A project report submitted in partial fulfillment of
the requirements for the award of the degree of
Master of Science (Construction Management)

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NOVEMBER, 2007

I declare that this project report entitled “*Comparison of Consulting Contract*” is the result of my own research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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Date : 30 NOVEMBER 2007

Dedicate to my family...

With much love and respect

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ABSTRACT

Quantity surveying is not a new profession in Malaysia. Quantity Surveyors play a key role in the organization and financial management of construction projects. Their services are bound by a standard form of contract that dictates their contractual relationship with their client. Currently there are two standard forms used that are BQSM/JKR FORM C (Revised 1/83) issued by Board of Quantity Surveyor Malaysia and the other is ISM Standard Form, issued by Institute of Surveyor Malaysia. In C&S engineering consulting services most of the contract engagement uses quite standardized form of contract compare to quantity surveying consulting services. From the initial interview conducted with the experienced quantity surveyor, noticed that there are scarcities in the existing standard form. Furthermore, the preliminary review reveals that in C&S standard form there are few extra clauses that absence in the quantity surveying standard form. Therefore, this study is undertaken to address the difference between quantity surveying consulting services contract with other consultant and also the problem of the quantity surveying consulting contract with the client. The study utilised literature review, document analysis, interviews with the expert panels and questionnaire survey. The respondents to the questionnaire survey are the quantity surveyors. The result of this study reveals that there are deficiencies in the existing standard forms particularly related to clauses concerning the fee. These limitations claimed to be the roots of the problem regarding the fee faced by quantity surveyor. The study demonstrates that to overcome this, the relevant institution need to take initiative to scrutinize this issue by reviewing the contents of the standard form. In conclusion extra clauses need to be added in order to control or reduce the problem.

ABSTRAK

Juruukur bahan bukanlah suatu profesyen yang baru di Malaysia. Juruukur Bahan memainkan peranan penting dalam organisasi dan pengurusan kewangan bagi sesuatu projek pembinaan. Perkhidmatan mereka terikat oleh borang kontrak standard yang menetapkan hubungan kontrak dengan klien. Dalam praktis masa kini, dua borang kontrak standard digunakan iaitu BQSM/JKR FORM C (Revised 1/83) yang dikeluarkan oleh Lembaga Juruukur Bahan Malaysia dan Borang Kontrak Standard ISM, dikeluarkan oleh Institut Juruukur Malaysia. Didalam perkhidmatan perundingan kejuruteraan awam dan struktur borang kontrak yang digunakan adalah agak seragam berbanding perkhidmatan perundingan juruukur bahan. Melalui temu bual awal bersama juruukur bahan yang berpengalaman, didapati bahawa terdapat kekurangan didalam borang kontrak standard yang sedia ada manakala pembacaan awal menunjukkan terdapat beberapa klausa tambahan didalam borang kontrak standard kejuruteraan awam dan struktur dimana tidak terdapat didalam borang kontrak standard juruukur bahan. Oleh itu kajian ini dilakukan untuk membuat perbandingan kontrak perkhidmatan perundingan diantara perunding juruukur bahan dan perunding lain serta masalah didalam penggunaan kontrak diantara perunding juruukur bahan dengan klien. Kajian ini menggunakan kaedah kajian literatur analisis dokumen, temubual dengan panel pakar dan borang soal selidik. Responden bagi kajian ini adalah juruukur bahan. Hasil daripada kajian telah mengesahkan bahawa terdapat kekurangan didalam borang kontrak standard sedia ada terutama masalah yang berkaitan dengan yuran perkhidmatan. Kekurangan tersebut menjadi punca kepada masalah-masalah berkaitan dengan yuran perkhidmatan yang dihadapi oleh juruukur bahan. Saranan juga dibuat terhadap institusi yang berkaitan agar mengambil inisiatif untuk mengkaji isu ini dengan menyemak semula kandungan borang kontrak standard tersebut. Kesimpulannya, klausa tambahan diperlukan untuk mengurangkan atau mengatasi masalah yang dihadapi.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The quantity surveying profession is not a new profession in Malaysia. Quantity surveyors work on projects ranging from residential to commercial developments, office blocks, schools, hospitals, factories, and large process engineering works such as road, drains, earthworks, water reticulation and other related works. Today's quantity surveyor provide a much comprehensive services on building and engineering projects, with the emphasis on budgeting, financial controlling and contractual administration (Khairani Ahmad, 2006).

As mention above, quantity surveyors play a key role in the organization and financial management of construction projects. In essence they manage projects to ensure that they are built on time and to budget. Their job is to manage costs effectively and to ensure that they get the best value from contractors and suppliers. This involves obtaining tenders, arranging contracts and managing costs for the client while the works are undertaken. It is also their job to negotiate with the client's representative on payments and the final settlement. Quantity surveyors deal with other professionals within their company as well as clients out-with the organization.

It is an extremely diverse area and can include project management, facility management, construction management and management consultancy (Seeley, 1997).

Everyone involved in the project, whether consultants, builder is involved through a contract. This will connect the client with a supplier or with a provider of services. The document may be a building contract, a sub-contract or a professional's conditions of engagement (Murdoch, 1996). Same goes to quantity surveyor consultant where the quantity surveyor consultant provides professional services for a client and the legal relationship existing between them is therefore a contract for services (Ashworth, 2002).

Although many of the participants will be professionals, the basic commercial nature of the process cannot be denied. Contracts are records of business transactions between the parties (Murdoch, 1996). The nature of contract is to controls the respective rights and obligations of the parties. So far as the quantity surveyor is concerned it determines the duties to be performed, powers and remuneration for the particular work undertaken (Ashworth, 2002).

1.2 Problem Statement

Based on the initial interviews with some quantity surveyors in quantity surveyor consultant firms, it was found that, for government project they use the standard form BQSM/JKR FORM C (Revised 1/83) for the memorandum of agreement between the quantity surveyor consultant firm and client. However, for private projects, they did not use the standard form BQSM/JKR FORM C (Revised 1/83) all the time. It is because, they tend to follow the clients' instruction to use

either the standard form or the client will prepare their own condition of engagement for the agreement.

One of the characteristic of standard form is the terms or conditions are deemed to be agreed and are not subjected to further negotiation and/or amendment (Harbans Singh, 2006). Yet, sometimes there are some client who used BQSM/JKR FORM C (Revised 1/83), but modified it to make it suitable for their projects. The part of the standard form, that mostly being modified is the schedule of fee. Therefore from this current condition, clarifies the fact that BQSM/JKR FORM C (Revised 1/83) cannot actually afford to satisfy client's need.

Besides that, from some early readings on BQSM/JKR FORM C (Revised 1/83) and BEM/JKR FORM A (Revised 1/83), there are some different in contents between these two. Noticed that the clauses in BEM/JKR FORM A (Revised 1/83) are more detailed than BQSM/JKR FORM C (Revised 1/83) in certain part and clauses.

1.3 Research Aims and Objectives

The main aim of this research is to make the comparison of the quantity surveyors consultation services contract with other consultants. The objectives for this study are as follows:

1. To make comparison between the contract form use for consultation services for Quantity Surveyors and other consultants.
2. To investigate the problem of the Quantity Surveyor services contract with the client.

3. To suggest possible solution to reduce the problem occurred in the usage of existing quantity surveyors contract.

1.4 Research Scopes and Limitations

Basically this study aim to explore in detail the content of contract form used in quantity surveyor consultation services contract. Then a thorough comparison has been made between the contract form used in quantity surveyor consultation services with contract form use in other professional services such as in civil and structure (C&S) consulting services. The contract forms that have been studied in this research are limited to the following form:

- a) BQSM/JKR FORM C (Revised 1/83)
- b) BEM/JKR FORM A (Revised 1/83)

The data collected for the interview with the expert panels is confined in the Johor Bahru area are only. As for questionnaire survey, the questionnaire forms are distributed to all states in Peninsular Malaysia.

1.5 Importance of the Study

Generally, the importance of this study is aimed at the eradication of the current problem due to the usage of the existing standard form in the formation of consulting contract between quantity surveyor consultant and the client. Therefore the comparison between quantity surveyor and C&S engineering consulting services

contract are made. The main purpose of comparing between quantity surveyor consultation services contract with civil and structure engineering consultation services is to discover any differences of the contract's content. From the comparison, the scarcity in the quantity surveyor contract can be identified. After identifying the deficiency, then be able to come out with proposal on the necessary changes to the existing standard form in order to improve it.

1.6 Brief Research Methodology

The methodology adopted for this research involves literature review, interview with expert panels and questionnaire survey. The appropriate choice of methodology largely depends on the objectives to be achieved.

Various methods had been adopted for this study. The analysis for the interview engaged content analysis method. As for questionnaire survey the data were analysed using frequency analysis and average index method. Figure 1.1 shows the flow chart of research methodology adopted.

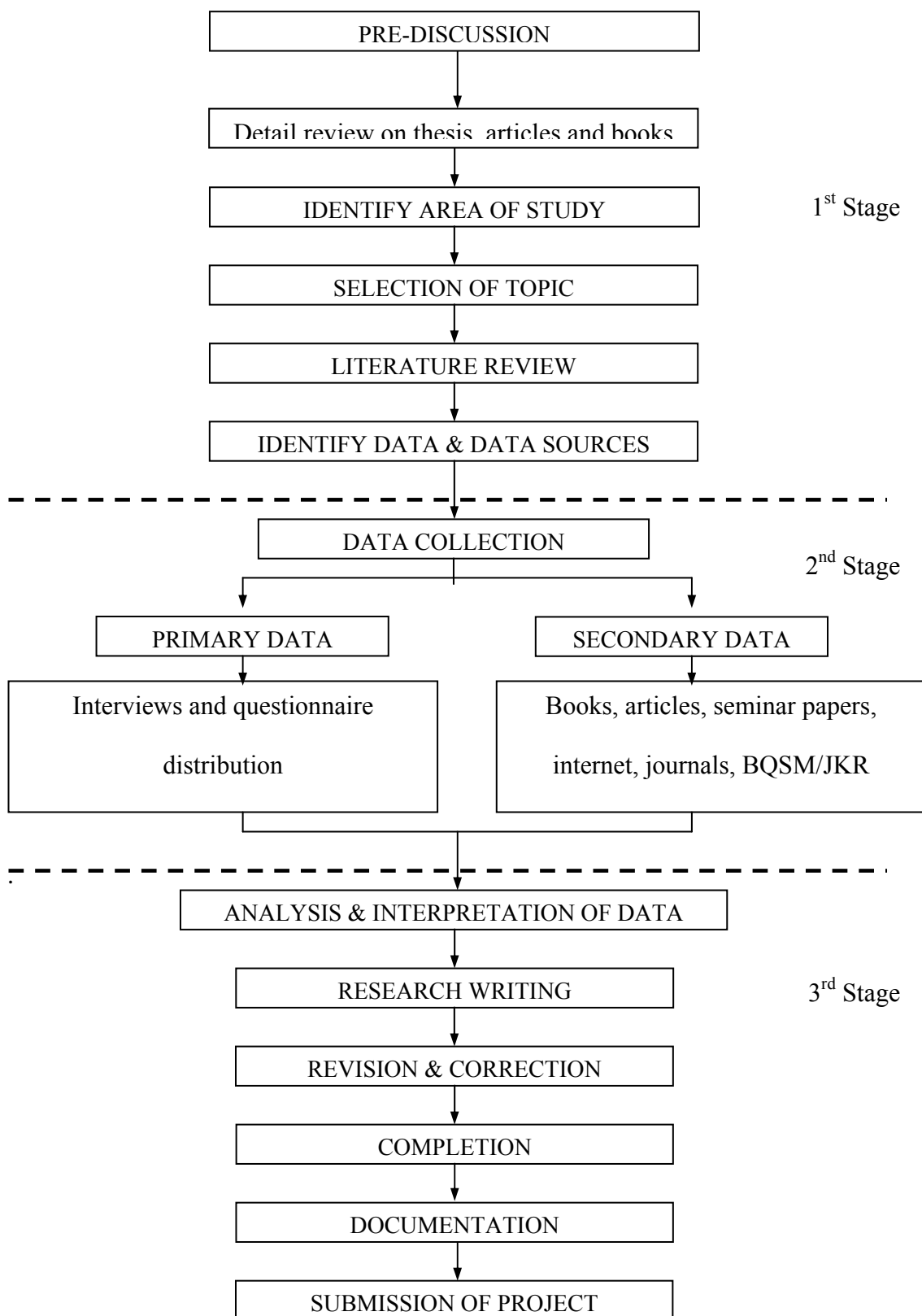


Figure 1.1: Research Methodology

1.7 Summary of the Chapter

This research is divided into seven chapters.

Chapter 1 describes the overall intention of the study. It also explains the objectives, the scope and limitation, the importance of the study and the brief methodology adopted for the study.

Chapter 2 is a literature review on the role and responsibilities of the quantity surveyor consultant in the construction industry. It describes about consultants and the quantity surveyors consultant activities.

Chapter 3 describes about contract generally and the contract form for quantity surveying and also C&S consulting services for comparison purposes.

Chapter 4 describes in detail the methodologies of study to achieve the objectives. This includes the methodology for data collection and data analysis for interview with expert panels and questionnaire survey.

Chapter 5 analysed the data using content analysis for expert panels and frequency analysis and average index for questionnaire survey.

Chapter 6 discussed in details the data analysed in the previous chapter.

Chapter 7 concludes the overall study on the subject and evaluate whether the objectives of the study are met. Recommendations for further studies are also suggested.

CHAPTER 2

ROLE AND RESPONSIBILITIES OF THE QUANTITY SURVEYOR CONSULTANT

2.1 Introduction

The employment of the quantity surveyor on building projects today is well established. They also occupy a much more influential position than in the past, particularly when they are involved at the outset of a project. In some cases, they may be the client's first point of contact. Quantity surveyors are the cost and value experts of the construction industry. Their responsibilities include advising clients on the cost and value implication of design decisions and the controlling of construction costs. Great importance is now attached to the control of costs on the majority of projects (Ashworth, 2002).

Trend in the industry's re-organization and practices have been motivated powerfully by the changing nature of client demand. Clients' influences on the practice of quantity surveying have been equally profound (Connaughton, 2000). Nowadays, many quantity surveyors were providing services outside their normal functions (Seeley, 1997).

2.2 Measurement of Building Material Quantity

Measurement is a process involving measuring the construction items from the construction drawing and put into dimension papers. This process is also known as '*taking off*'. After that the dimension measured from the drawing will be calculated by multiplying, dividing, adding and subtracting and suitable unit for each item is determined based on the standards. The purposes of measurement are as follows (Rosli Abd. Rashid, 1996):

- a) To prepare approximate estimate of construction cost for the project
- b) To prepare cost planning for the proposed construction project
- c) To prepare planning for resources allocation
- d) To evaluate progress payment and any variation order

2.2.1 Person Who Undertake the Measurement

On projects of any size the architect will normally advise his client on the appointment of a quantity surveyor. Private quantity surveyors work in practices similarly to architects and are often called the professional quantity surveyor. They are paid a fee based on the total contract sum. Measurement work undertaken by quantity surveyors is varied and interesting and will include some of the following:

a) **Cost Appraisal**

There are several techniques available which enable an approximate estimate of cost to be made of building projects at sketch design stage. This can assist the architect and client in establishing the most economic design for the required building work (Gardner, 1981).

b) Measurement on Sites

The quantity surveyor has to conduct site valuations, usually monthly to ascertain the total value of works executed and unfixed materials on site as of the date of valuation. The measurement on site also needed as there are quantities that are often measured provisionally and are then subject to re-measurement on site as the actual work is undertaken. This is particularly the case with substructure, drainage and external works (Lee, 2004).

c) Valuation for Stage Payments

Interim valuation shall be made by the quantity surveyor whenever the architect considers them to be necessary where usually monthly, for the purpose of ascertaining the amount to be stated as due in an Interim Certificate (Ashworth, 2002). Quantity surveyor will normally visit the site and evaluate the work undertaken in the current month.

d) Valuation of Variations to the Contract

Building contracts are usually subject to extensive variations. These are caused by a variety of reasons such as architect's instruction, errors in the contract bills, etc. The effect is to alter the design or specification and therefore the estimated price which the contractor originally submitted. The quantity surveyor should use his best endeavors to value the variations fairly to the satisfaction of the client and the contractor (Turner, 1983).

e) Fluctuations in Cost of Materials and Labour

Because of the difficulty in predicting the rate of increase in the cost of materials and labour during a building project the common practice is for contractors to base their estimate at current prices. The contractor is then

reimbursed as materials rise in cost or nationally agreed wage increases come into force. The contractor, therefore, does not have to predict the level of future inflation at the estimating stage. The quantity surveyor must check and agree any claims for increased costs presented by the contractor (Gardner, 1981).

f) Preparation of Final Account

At the end of a building project the quantity surveyor prepares the final account which is similar to a balance sheet, showing how the total contract sum has been calculated. In any but the very smallest jobs, there will be many adjustments made to the contract sum and the employer is liable to pay and the contractor is entitled to receive any additional amount if there is any (Ramus, 1996).

2.2.2 The Contractor's Surveyor

The general contractor who undertakes major construction projects will require a quantity surveying staff who are trained to deal with matters involving measurement and costs. Therefore the contractor's surveyor is employed directly by his company that is the contractor firm and his duty is entirely to his organization (Dent, 1980). Several of his functions overlap or assist those of the quantity surveyor; these include:

- a) Measurement on site
- b) Assistance with preparation of valuations with the quantity surveyor
- c) Agreeing value of variations with the quantity surveyor
- d) Preparing information with regard to fluctuation claims

- e) Agreeing the final account with the quantity surveyor

In addition there are tasks which are completely independent of the quantity surveyor.

- a) **Cost Reconciliation**

This is to compare estimated costs with actual costs as the work progresses. Information can be fed back for use in estimating on new projects and also to advise management should a contract be going astray financially. For this type of information to be useful it must be available as quickly as possible (Gardner, 1981).

- b) **Monthly Valuation**

Contractors are normally paid for their work by monthly installments based on the amount of work executed and materials delivered. The quantity surveyors have to prepare the monthly valuations detailing the amounts due to the contractor and also to the nominated sub contractors and suppliers (Dent, 1980).

- c) **Contract Administration**

Dealing with claims by nominated subcontractors and suppliers and labour-only-subcontractors. Measuring and checking on site for calculation of bonus payments (Gardner, 1981).

2.2.3 The Use of Measurement

The measurement can be used in few areas as stated below:

a) Approximate Estimating

Approximate estimating involves the measurement of items of major cost significance. It has been necessary to forecasting building costs using approximate methods at sketch design stage. No specific rule exists in doing approximate estimating but result from the experience of the individual quantity surveyor. In order for the quantities to be realistically measured, more information is required from the designer. Specifically ruled estimating paper is available, which is designed particularly for approximate estimating purposes (Ashworth, 2002).

b) Operational Estimating

Operational estimating is undertaken by the contractor's estimator and is factual in that it involves the actual calculation of building costs for the inclusion in an estimate. In analyzing building work the estimator will price under three basic headings (Gardner, 1981):

1. The material content of the work including an allowance for waste and unloading.
2. The labour content of the work
3. The plant content of the work

c) **Production of Bills of Quantities**

One of the main responsibilities of quantity surveyors is to prepare the bill of quantities (BQ). The traditional method of BQ preparation involves two main processes (Teo, 2004):

1. **Taking-off:** Reading or scaling the dimensions from drawings, booking these dimensions in a specially designed paper, called dimension paper.
2. **Working-up:** Squaring the dimensions, transferring the resultant quantities to the abstract in an orderly operation for all items of work listed in full under the respective work sections.

The BQ can be presented in various formats, such as Trade BQ, Elemental BQ, and Operational BQ. However the measurement must be standardised which complying a code of measurement known as The Standard Method of Measurement of Building Works. The content of bill of quantities is:

1. Preliminaries section
2. Preamble clauses
3. Work Sections
4. Provisional and prime cost sums
5. Contingency sums

d) **Planning and Resource Allocation**

The time taken to complete an activity in the program depends on the resources allocated to that activity. The approaches used in assessing the required resources can be based on the quantities measured in the bill of quantities. The contractor can evaluate the likely time required to construct each part of the building. This information is then can be used in determining

the amount and type of resources needed for the activities and prepared in the form of a bar chart (Ashworth, 2001).

2.2.4 Take-Off

The measurement quantity from the drawing is based on a quantity survey which called take-off. The quantity survey is an extraction from the drawings and specifications of all the labour and material required for the project. A quantity survey, properly made, is much more than simply a list of so many cubic yards of concrete, so many areas of bricks, etc. A good take-off shows everything necessary in preparing estimate contract sum (Foster, 1995).

Before starting to take-off quantities, the quantity surveyor will examine all of the drawings. The quantity surveyor will take a quick look through the entire set of drawings for an idea of the layout, type of building, number of floors and general designs, and also the order of the drawings. There are three basic rules for taking off quantities (Foster, 1995):

1. Measure everything as it shows
2. Take off everything seen
3. If it different, keep it separate

2.3 The Standard Method of Measurement (SMM)

The quantifying of construction works is best done using an agreed set of rules or method of measurement. It is then clear to all users how the work has been measured and what has not been measured (Ashworth, 2002).The Standard Method

of Measurement (SMM) is agreed by the Royal Institution of Chartered Surveyors as a set of rules for the measurement and description of building work. SMM is a document that provides not only a uniform basis for measuring building work but also embodies the essentials of good practice. Without the use of such a set of rules the quality of measurement can vary widely (Lee, 2005)

2.3.1 History of SMM

Prior to 1922 there were no specific rules for the way in which building work was measured or how disputes should be settled. Quantity surveyors often used different methods and contractors misinterpreted the meaning of descriptions in bills of quantities leading to inaccuracies in tendering (Gardner, 1981). Due to the problem arise, in 1912, a committee was formed to prepare rules for the measurement of construction works, resulting in the first edition of *The Standard Method of Measurement of Building Works* in 1922. However, it should be noted that this was preceded by a SMM in Scotland that was published in 1915. A unified SMM for the whole of the UK was not agreed until 1965. Since the first *Standard Method of Measurement* was published in 1922 there have been several revisions. Table xx shows the developing history of methods of measurement (Ashworth, 2002)

The current edition is then the first method to be revised with the metric system fully in use in the building industry. Comparing the methods over the years, the most noticeable changes would be the greater number of enumerated item today due to the expanding use of components that made in factories. For example, precast component, sanitary fitting, etc. The standard method of measurement has changed in recognition of the modern building industry (Gardner, 1981).

However in Malaysia, the Royal Institute of Chartered Surveyors (RICS) branch at Malaysia and Singapore had establish the first edition of SMM for Malaysian use based on fourth edition of British SMM in 1960. The current SMM

use in Malaysia is SMM2 which is the revision from the first edition (Noor Ashikin, 1978).

Table 2.1: The History of Methods of Measurement

1915	Scottish SMM for Building Works
1922	Standard Method of Measurement of Building Works. 1 st Edition
1927	SMM Building, 2 nd Edition
1933	Standard Method of Measurement of Civil Engineering Quantities
1935	SMM Building, 3 rd Edition
1945	Code for the Measurement of Building Works in Small Dwellings, 1 st Ed.
1948	SMM Building, 4 th Edition
1953	SMM Civil Engineering Quantities (Revision)
1956	Code for Small Dwellings (Revision)
1958	Scottish Mode of Measurement
1963	SMM Civil Engineering Quantities (Revision)
1963	Code for Small Dwellings, 2 nd Edition
1963	SMM Building, 5 th Edition
1964	SMM Building, 5 th Edition (Amended)
1968	SMM Building, 5 th Edition (Metric)
1969	Method of Measurement for Roads and Bridgeworks
1970	SMM Building, 5 th Edition (with fitted carpet amendment)
1972	Standard Method of Measurement of Construction Engineering Works
1976	Civil Engineering Standard Method of Measurement
1979	SMM Building, 6 th Edition (with Practice Manual)
1979	Code for Small Dwellings, 3 rd Edition
1979	Principles of Measurement (International) for Works of Construction
1984	SMM 6, with ammendments
1985	CESMM, 2 nd Edition
1987	SMM7 Measurement Code
1988	SMM7
1991	CESMM 3 rd Edition
1998	SMM7 with ammendments
1991	SMM7 Measurement Code, second edition

2.3.2 Function of the SMM

To describe the function of the SMM it is easier to quote from the introduction of the document itself:

“This standard method of measurement provides a uniform basis for measuring building works and embodies the essentials of good practice but more detailed information than is required by this document shall be given where necessary in order to define the precise nature and extent of the required work. This Standard Method of Measurement shall apply equally to both proposed and executed works.”

The main function of SMM is to commencing from measurements work until editing work. During the measurement work, the work description and the unit to be used is according to the guideline as stated in the SMM. Meanwhile, the purpose of editing work is to ensure all the construction details are complying with SMM. Therefore the bill of quantity that can be understood by all people who use it can be produced (Nor Aida, 1992).

2.3.3 The Use of SMM in Practice

The usage of SMM is not compulsory in the measurement process. Without using SMM the measurement still proceed but the possibility of the SMM usage can contribute benefits is not deniable. Using SMM did not promise the quality of measurement. However, it can promote good measurement practice for the quantity surveyor and people who need and use the measurement information because they share the same understanding (Noor Ashikin, 1978).

The SMM is not a simple document to use initially. In the taking-off process the SMM is used as follows:

1. To define the unit of measurement of the particular piece of work being measured.
2. To build up a suitable description of the work being measured which will enable the estimator to price the item.

2.4 Consultants Generally

A consultant is defined as someone who either advises a client – another person or an organization – on the desirability of taking some action, or who assists the client in making a decision and then assists the client in planning or implementing action as determined by the client. Several points are stated or implied by this definition (Stroh, 2006):

- a) A consultant works for other people (or organizations) called clients. These clients, or beneficiaries of the consultant's services, can be individuals, groups, or organizations.
- b) A consultant help these clients achieve goals that the clients, not the consultant, identify. The problem here is that the client usually decides what problems need attention or what initiatives need to be implemented, and the consultant is hired to address these.
- c) A consultant provides a specialized skill or expertise that the client, or client organization, is unable to provide on its own.

- d) Although consultants may influence decision making by virtue of their knowledge or expertise, consultants usually have little power or authority to make changes. A consultant may recommend changes, and even how to make them, but the client retains ultimate authority over whether and which changes to implement.

2.4.1 General Role and Responsibilities of the Consultant

The purpose of employing consultants in that is architect, consulting engineer and quantity surveyor on a construction project is to give the employer the benefit of that professional's skill and experience. Traditionally, the person appointed has taken responsibility for two separate functions: translating the employer's need into drawings, specifications and the like through the processes of briefing and design, and then supervising the work of actual construction. This is done to ensure that the work complies with the designer's intentions and satisfies standards of workmanship and quality (Murdoch, 1996).

2.4.2 Fee Arrangements for Consultant

There are several bases on which the consultant's fee can be determined (Bennett, 1996):

a) Fixed Fee

The professional is paid a fixed amount, which is decided on prior to commencement of work. The obvious difficulties of predicting the effort required limit the use of this arrangement to cases in which the scope of the services is clearly defined. A fixed fee will include direct costs, overhead, profit, and provision for contingencies.

b) Percentage of Construction Cost

This popular method simply multiplies the construction cost by a preagreed-on percentage. It is important to define “construction cost”. A disadvantage from the owner’s standpoint is the lack of incentive for the professional to produce a low cost project.

c) Expenses Plus Professional Fee

The professional is paid his actual expenses plus a fee that is either a fixed amount or a percentage of the expenses. It is essential to define “expenses”.

d) Multiple of Direct Hourly Expenses

The cost of supporting an employee, including salary and fringe benefits, is increased by a multiplier that will then cover administrative costs and profit. The rate can be either hourly or daily, although hourly probably will be preferred owing to the vagaries of defining a “day”.

2.5 Brief History of Quantity Surveyor Profession in Malaysia

During the period 1946 – 1970, the role of the quantity surveyor was rather obscure. Housing developers at that time were self-made men who were initially builders themselves and worked their way up to become clients developing housing projects. They were familiar with the engineering, architectural and costing aspects of house building of single-storey and double storey houses. These houses did not require complicated structures or sophisticated construction techniques. The legal requirements of the industry at that time were that the professionals were engaged to

submit plans in which contractors have predetermined its approval beforehand. Normally they would make use of submitting existing plans of buildings successfully constructed in various parts of the country that had been previously approved by the authorities (Suraya, 1999).

In the late 1970's developers engaged a pool of consultants or what has termed as consortium. This was as is normally practiced today when procuring a building, but in the 1970's and seen as "a more scientific and organized approach to housing development" in a particular locality (Hai, 1978).

Malaysian Quantity Surveying professional practice is based on United Kingdom practice. Previously, colonial quantity surveying practitioners set up their companies in Malaysia and when they returned home, the local Malaysian carry on the business. Inevitably a transfer of methods and procedure took place when the locals took over the professional practice from their colonial counterparts (Yahya, 1978).

2.8 Role and Responsibilities of Quantity Surveyor Consultant

The importance of the bill of quantities underlines the need for quantity surveying expertise in general contracting. Quantity surveyors contribute cost planning, cost control, procurement planning and contractor selection expertise. In combination, these enable the choice of contractor to be dictated by lowest price bidding. The training and experience of quantity surveyors enables them to focus on financial aspects above all others. Indeed, clients for whom finance is a priority sometimes appoint a quantity surveyor as a project manager to oversee design and construction (Murdoch, 1996).

The range of services which quantity surveyors can offer is very extensive and usually includes the following activities (Ashworth, 2001):

Pre-Contract

- Initial cost advice
- Approximate estimating
- Cost planning, value engineering, life cycle costing
- Bills of quantities and tender documentation
- Specification writing (where the bills are not required)
- Procurement
- Tender evaluation

Post-Contract

- Valuations for interim certificates
- Final accounts
- Remeasurement of the whole or part of the works
- Measuring and valuing variations
- Daywork accounts
- Adjustment to prime cost sums
- Increased cost assessment
- Evaluation of contractual claims
- Cost analysis

The following is the common role and responsibilities for quantity surveyor consultant:

2.8.1 Preliminary Cost Advice

Quantity surveyors throughout the project's inception are required to advise the client on any cost implications that may arise due to the method of construction, material, etc. selected by the designer (Ashworth, 2002). The quantity surveyor will provide continuous cost control by costing the alternative options or advising on the comparative prices of selected materials. This will enable the client and designers to decide on which scheme or material to adopt for the project. The quantity surveyor will also monitor the overall project cost against the cost plan to ensure that total cost is kept within the budget (Teo, 2004).

2.8.2 Approximate Quantities

In order for the quantities realistically measured, the quantity surveyor may need information from the designer during calculation of the approximate quantities. The use of approximate quantities is for pre-contract cost control which can create some costing and forecasting difficulties, as by the time drawings have reached the required stage and many of the matters of principle have already been settled (Ashworth, 2002).

2.8.3 Cost Planning

This is a technique which is used by the quantity surveyor to monitor the cost of a project at design stage. It requires the co-operation of the architect, and its purpose is to ensure that (a) the contract sum does not exceed the preliminary

estimate, and (b) the available money is used most effectively to achieve the designer's purpose (Dent, 1980). However, if the cost plan throws up any marked deviation from the budget, be it up or down, warning should be given. The designers may wish to adjust the design or the client may wish to adjust his requirements (Turner, 1983).

2.8.4 Contractual Methods

A number of contractual procedures have evolved from competitive tenders, as the traditional method, to negotiated tenders with a single contractor and 'design and build' contracts, where the contractor undertakes the whole task of design and construction. The quantity surveyor can advise on the best form of contract for a specific project (Seeley, 1997).

2.8.5 Tendering

A good quantity surveyor is the one who have ability to describe clearly, fully and precisely the requirements of the designers and arrange the bill of quantities so that the contractor's estimator can quickly, easily and accurately arrive at the estimated cost of the work for bidding purpose. It is important that the surveyor should be able to write clearly in language that will not be misunderstood, and must have a sound knowledge of building materials and construction and of customs prevailing in the industry (Ashworth, 2002).

2.8.6 Choice of Contractor

In a competitive tender, the quantity surveyor will examine the tenders submitted and prepare a preliminary tender report for the client. The report contains

arithmetical errors found in the tenders, high and low prices found in the tenders and also qualifications made by the tenderers. The quantity surveyor will make recommendation to the client the suitable contractor and price for the award of the contract (Teo, 2004).

2.8.7 Valuation of Construction Work

Interim valuations are usually prepared by the client's quantity surveyor in agreement with contractor's surveyor. The valuations will be prepared on a monthly basis until the certificate of practical completion is issued. He will also settle the final account and prepare financial statements for the employer. If required he can also prepare statements of expenditure for tax or accountancy purposes and assess the project's replacement value for insurance purposes (Ashworth, 2001).

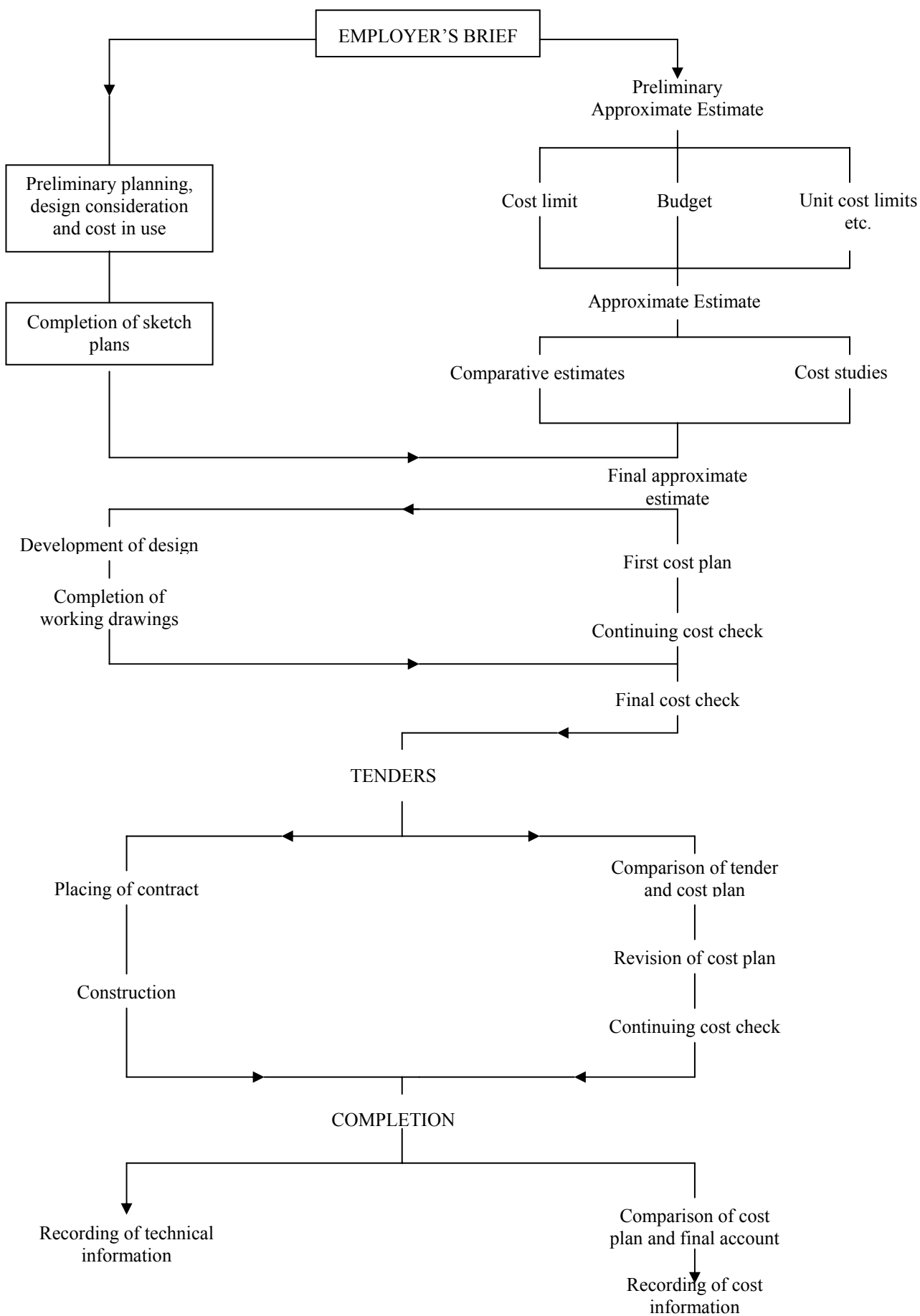


Figure 2.1: The Quantity Surveyors and Architect Work Process

2.9 Other Quantity Surveying Activities

Many quantity surveyors were providing services outside their normal functions. A wide and diverse range of other activities in which the quantity surveyor may be engaged ranging from construction management to the settlement of construction disputes (Seeley, 1997).

2.9.1 Contracting and Construction Management

a) Contracting Arrangements

Employers in both the public and private sectors are concerned to know the end cost and the completion date of a construction project with a reasonable degree of certainty. These can be successful in particular situations and quantity surveyors should be ready to offer services to the employer appropriate to the circumstances, recognizing that there can be considerable benefit in introducing a contractor at the formative stage of a contract, and that in management contracts the main contractor will be working with the employer's professionals to ensure that the cost and time targets are met.

b) Construction Management

Construction management is one of the areas which quantity surveyors are most suited to diversify into, given their cost and contract knowledge and their role as intergrating managers. Services offered may include (Teo, 2004):

- Planning and scheduling
- Monitoring the work progress
- Identifying problems and delays that arise during construction
- Evaluating the cause of delays and disruptions

2.9.2 Expenditure Statements, Technical Auditing and Cost Accounting

Quantity surveyors can be called upon to assist with the compilation of building costs for a variety of purposes.

a) Preparation of Statements of Expenditure

Accountants and tax inspectors often require evidence of the cost of new building work or of alterations or adaptations to existing buildings. The quantity surveyor involved with a project is able to supply all the required cost information suitably categorized from his own records.

b) Technical Auditing

Employers sometimes require a technical audit of building costs to satisfy themselves that they are being asked a fair and proper price for the work undertaken. The quantity surveyor can investigate all the costs incurred and determine a fair and reasonable price, having regard to all the relevant circumstances.

2.9.3 Advice on Funding, Grants, Capital Allowances and Taxation

Both insurance companies and property owners require professional advice on valuations for fire insurance. This service is provided in two main areas:

1. Valuation of replacement cost to ascertain the sum to be insured
2. The preparation and negotiation of submissions to insurance companies for reimbursement following a loss

When assessing fire damage the surveyor will need to visit the site as quickly as possible to quantify and evaluate the damage and check on the details in the policy. Quantity surveying practices is now also providing a range of construction industry related insurance services through an associated company, including advice and investigations regarding bond and surety, loss adjusting and risk appraisal.

2.9.4 Building Maintenance Management

Quantity surveyors could involved in building maintenance management encompassing building use, assessing the life of buildings and the effect of maintenance upon rental and capital, maintenance surveys, and planning, programming, controlling maintenance and repair work. This work can include preparing and advising on building maintenance estimates, annually assessing the building maintenance requirements and investigating and possibly implementing preventive maintenance schemes. The preparation of drawings, specifications and contracts for minor capital works may also be involved although this function more often falls within the sphere of the building surveyor.

2.9.5 Quality Assurance

Many quantity surveying practices have developed quality management systems to improve the quality of their service to client, and some offer a quality assurance consultancy service to clients and other professionals within the construction industry.

2.9.6 Arbitration

Quantity surveyors are often appointed as arbitrators in connection with building disputes as their qualifications, training and experience make them very suitable persons to act in this capacity. Other than that, quantity surveyors also are often called upon to act as expert witnesses at arbitration proceedings and public inquiries.

2.8 Conclusion

Quantity surveyor is one of the important consultants in construction project as he is responsible in handling financial aspects. However, nowadays the role and responsibilities of quantity surveyor is not only focusing on the traditional quantity surveyor services but very much diverse from that. It is due to the increasing on clients' expectation towards quantity surveyor services.

CHAPTER 3

CONTRACT FORM FOR QUANTITY SURVEYORS CONSULTATION SERVICES

3.1 Introduction

A consulting contract typically will cover such matters as what work the consultant will perform and what the consultant will get paid. The contract may also cover a variety of other legal issues, such as who has the rights to material the consultant develops while under contract to the client and the conditions under which the contract may be terminated. Both parties, the consultant and the client, must agree to all parts of the document and must sign the contract before it is legally binding and will be honored in a court of law (Stroh, 2006).

The existence and nature of the agreement can be established by an exchange of correspondence or by the use of a standard form of appointment such as condition of engagement which is published by the related board for the discipline, term of reference, etc. It cannot overstate that whatever practice is adopted, there is a need to ensure that a valid, comprehensive and adequately evidenced contract exists between the respective parties (Ashworth, 2002).

Prior to agreeing any contract terms, it is essential to have full written terms of appointment. Unless the duties to be undertaken by the quantity surveyor are fully detailed, the standard contract term that ‘all reasonable skill and care be taken in the performance of those duties’ leaves it open to argument as to the definition of such duties if a claim is brought under the contract in the future (Ashworth, 2002).

3.2 Contract Generally

The term contract usually refers to a legally binding document, often prepared with the help of an attorney. When signed by both the seller and buyer, for example, a real estate contract officially and legally turns over the ownership of a house from one owner to another (Stroh, 2006).

3.2.1 Definition of Contract

A contract is a legally enforceable agreement (Murdoch, 1996). Contract can be defined as an agreement that giving rise to obligations which are enforced or recognized by law. The factor which distinguishes contractual from other legal obligations is that they are based on the agreement of the contracting parties (Richards, 2004).

3.2.2 Formalities of the Contract

Many consulting contracts are based on oral agreements, particularly if the client and the consultant are both in-house employees. Recently, however, many companies are using written contracts even when both parties work for the same

company. Some of this stems from a growing emphasis on the exchange of payments and accountability for intradepartmental services. Another reason for the increased frequency of written contracts is that oral contracts are a recipe for potential problems. Sometimes people do not remember the details of what they agreed on (Stroh, 2006).

If there is any oral transactions, relating to either the original agreement, should always be recorded and confirmed in writing. This is more than an elementary precaution, for it should be borne in mind that what is known as the parol evidence rule will normally preclude any variation of an apparently complete and enforceable existing written contract, by evidence of contrary or additional oral agreement (Ashworth, 2002).

For these reasons, all agreements should be put in writing, regardless as an internal or an external consultant. A short memo often suffices; sometimes, a somewhat more formal letter of agreement or proposal is necessary. Regardless of the format of the document, both parties should acknowledge verbally and in writing that they accept the terms and should retain copies of the agreement.

In addition to the legal advantages of having a written agreement, the process of preparing the document forces both parties to clarify exactly what results they expect from the project and from each other. If there are questions down the line about the terms on which the two parties agreed, or about any other details, the written agreement should provide the answer. If changes are necessary once the project is underway, a memo describing changes, signed by both parties, should satisfy a legal challenge (Stroh, 2006).

3.2.3 Breach of Contract

Breach of contract is the failure, by a contracting party to perform a duty imposed by the contract, absent sufficient excuse for nonperformance. If a party to a contract is found to have “substantially performed” his or her part, however, that party is not in breach of the contract, although some amount of compensation may be assessed to recognize the less-than-complete performance (Bennet, 1996).

Quantity surveyors, structural engineers and other consultants engaged by the employer in connection with a building project, all have separate contractual relationships with the employer. They all undertake to carry out their work in a professional and workmanlike manner to the accepted standards of their professions. If failure to meet these standards results in problems, causing additional expenses or delays, they will be in breach of their contracts and may be liable for damages (Seeley, 1997).

Apart from contractual obligations there exists a duty in tort to take reasonable care in executing their work. Thus the quantity surveyor will be expected to display a reasonable level of professional competence and care in all his duties concerned with the measurement and cost control of projects (Seeley, 1997). Breach of contract by a consultant will nearly always occur during conduct of the agreement. Problems discovered during a subsequent phase of project development will usually be categorized as negligent acts, errors or omissions (Ohio Department of Transportation, 1998).

Breach of contract will generally fall into three categories (Ohio Department of Transportation, 1998):

a) Failure to perform work included in the scope of services

A consultant's interpretation of the scope of services that certain work is not included, when the client believes otherwise, may lead to a disagreement in which the consultant is declared in breach of contract. The project manager must notify the consultant in writing and if the difference is not resolved, the dispute resolution provisions in the condition of engagement may be utilized. Only after these attempts to resolve the matter have failed, then the consultant is declared in breach of contract.

b) Failure to perform timely

The consultant is responsible to perform their job in timely manner consisting of an overall completion date and intermediate milestone dates for review submittals as the work program. The client relies on adherence to the work program in delivery of projects and services. Failure by the consultant to meet the program, either intermediate or final completion dates, must be addressed in writing by the project manager. The letter to the consultant must cite the lack of timely delivery, require a return to the contractual schedule and set a time limit for response by the consultant. The consultant's failure to acceptably return to the contractual schedule will result in default of contract with appropriate actions by the client.

c) Failure to perform technically

The contracts specify services provided in accordance with standard guidance documents, professional standards, and industry standards. A breach of contract based on technical performance is defined herein as unsatisfactory

performance. The consultant's work was unsatisfactory to the point that extensive involvement by client personnel was required. Without such extensive involvement by the client, major errors would go undetected and a usable work product would not be provided.

As stated above, unsatisfactory technical performance by the consultant must be addressed in writing by the project manager. The letter to the consultant must cite the specific areas of unsatisfactory performance, require a return to an acceptable level, and set a time limit for response by the consultant. The consultant's continued failure to provide an acceptable level of performance may result in default of contract.

3.2.4 Remedies for Breach of Contract

As described above, a consultant's failure to address an identified problem in his performance is the required condition in declaring a consultant in breach of contract. The following remedies are available for the client in addressing breach of contract by a consultant (Ohio Department of Transportation, 1998):

1. Administrative Suspension

A temporary loss of pre-qualification that will prevent the consultant from pursuing additional work with the department during the suspension period. The time period of the suspension may be indefinite (lifting of suspension based on some cure) or may be a defined time period.

2. Termination of the consultant's agreement

Due to the continuous breach of contract by the consultant without any remedial action the client can terminate the contract for consulting services.

3. Revocation or non-renewal

The client also can take action by revocation or did not renew of the contract for consulting services (some future opportunity for reinstatement will be afforded).

3.3 Standard Form of Contract for Consulting Services in Construction Industry

According to An Engineering Contract Dictionary by Vincent Powell-Smith, the definition of standard form of contract is;

“A printed form of contract containing standard conditions which are applicable (or can be made applicable by the use of alternatives) to a wide range of projects. They are preferable to specially drafted contracts because they are intended to be comprehensive and avoid most of the pitfalls which surround relations in the building industry.....”

The following is the characteristics that can be identified about the standard forms of contract (Harbans Singh, 2006):

1. These are in a printed form and published by an authoritative body of the industry, which body is recognized by the contracting parties.

2. The forms set out the terms or conditions on which the contract between the parties is to be carried out.
3. The terms or conditions are deemed to be agreed and are not subject to further negotiation and/or amendment.
4. The terms or conditions are generally suitable for a wide range of common projects or works.

In Malaysia, the standard form use for consulting services in construction industry is the standard form that produced by the board for each discipline. Table 3.1 shows the standard form for Architect, Civil & Structure and Mechanical & Electrical and Quantity Surveyor Consulting Services.

Table 3.1: Standard Form for Architect, Civil & Structure and Mechanical & Electrical and Quantity Surveyor Consulting Services

Discipline	Standard Form	Related Board
Architect	BAM/JKR FORM B (Revised 1/83)	Board of Architect, Malaysia
Civil and Structure Mechanical and Electrical	BEM/JKR FORM A (Revised 1/83)	Board of Engineering, Malaysia
Quantity Surveyor	BQSM/JKR FORM C (Revised 1/83)	Board of Quantity Surveying, Malaysia

3.4 Adoption of Standard Form for Quantity Surveying Consulting Services Contract

Based on the interview with Mrs Ramzah bte Ahmad, the Assistant Director for Quantity Surveying Department at Public Work Department Johor, standard form used for quantity surveying consulting services is the BQSM/JKR FORM C (Revised 1/83) which is produced by Board of Quantity Surveying Malaysia. The same standard form is applied regardless the size of the project.

The main purpose of establishing the standard form BQSM/JKR FORM C (Revised 1/83) is to protect the quantity surveyor consultant interest as the contents in the standard form had been created by seeking assistance with the law expertise where every single word and sentences used have the touch of law. Thus, as the standard form is carefully created that is why BQSM/JKR FORM C (Revised 1/83) will be used in the formation of the Memorandum of Agreement between the government and the quantity surveyor consultant in every government projects. As for the private project they also are encouraged to use the standard form although there is no statement that mentions the use of the standard form is compulsory.

However, based on the interviews with some quantity surveyors at quantity surveyor consultant firm, according to them, in their practice, for private projects most of the clients used their own created standard form. Though, there are some clients who choose to use BQSM/JKR FORM C (Revised 1/83) in the formation of Memorandum of Agreement. The clients either using it wholly untouched or modified it to make it suitable for their projects and their needs.

3.5 Contract Form for Quantity Surveyors

The scope and nature of the service to be provided by the quantity surveyor will vary with the particular project in order to meet the client's requirements. To facilitate good working relationships and to avoid misunderstandings a clear agreement is essential. Such an agreement needs to set out the responsibilities of the Quantity Surveyor, the client, and others, as well as the extent of the service to be provided and conditions of payment for that service (New Zealand Institute of Quantity Surveyor, 1995).

3.5.1 Content of Contract for Quantity Surveyors Consultation Services

The contract form used in bonding the relationship between client and quantity surveyor consultant is known as Memorandum of Agreement (MOA). In order to create MOA between client and quantity surveyor the Board of Quantity Surveyor, Malaysia has produced the standard form that is BQSM/JKR FORM C (Revised 1/83). This form will be part of the MOA for government project. Institute of Surveyor Malaysia also produced standard form for quantity surveyor consulting services which designed for private project. However, in private project most of the time the client will use their own standard form.

Basically the content of quantity surveyor consulting services consists of:

1. Memorandum of agreement

The items in Memorandum of Agreement (MOA) are consisting of the name of client and quantity surveyor consultant firms who the client engaged and also the project name or description. After that, there is several statement of what is agreed between the parties. Lastly, the MOA will be signed by both parties and also their witnesses.

2. General condition of engagement of consulting quantity surveyor

The general conditions of engagement are the important part of the agreement as this set out the responsibilities of the parties. The conditions of engagement include such matters as listed below:

- a) Definitions
- b) Duration of engagement
- c) Proprietary Right of the Government in documents
- d) Settlement of Disputes
- e) Obligations of the consulting quantity surveyor
- f) Delivery of document to the client on termination by the consulting quantity surveyor
- g) Obligation of the Government
- h) Type of Services and Payments

3. Schedule of fees

For schedule of fees, it is divided into two parts. Part A is the explanation about professional services while Part B is the guideline for calculation of scale of fees.

- a) Definition
- b) Type of Services
- c) Basic Services for Building and Civil Engineering Works
- d) Additional Services
- e) Categories of Projects
- f) Scale of fees for basic services
- g) Scale of fees for basic services where contracts are based on provisional bills of quantities
- h) Breakdown of percentage of charges
- i) Scale of charges for additional services
- j) Reimbursable expenses

- k) Time of payment for services rendered
- l) Time of payment for reimbursable expenses
- m) Payment for re-measurement of works due to alteration or modification of design
- n) Payment when works are damaged or destroyed
- o) Payment following termination or suspension by the client

4. Term of reference

Principally, the contents of term of references are almost similar with MOA and conditions of engagement which is begin with signature of the parties and their witnesses. Then it is followed by several conditions that are determined by the client which is more detail compare to the contents of conditions of engagement which meant to suit the particular project in order to achieve completeness of the contract because sometimes the conditions of engagement are too general. The provisions include such matter as:

- a) Introduction
- b) Objective
- c) Scope of consultancy services
- d) Consultants duties and responsibilities
- e) Submission of proposals (Technical and financial)
- f) Commencement of consultancy services
- g) Government instructions
- h) Disputes

5. Appendices

The appendices enclosed with the agreement are depending on what client require. Usually the appendices that enclosed with the agreement are as listed below:

- a) Letter of appointment
- b) Letter of acceptance
- c) Master schedule
- d) Gross floor area of the project
- e) Calculation of fees
- f) Calculation of reimbursable cost
- g) Registration certificates as practicing quantity surveyor
- h) Company organization chart
- i) Location plan
- j) Quantity surveyor plan of work

Item one to three is part of standard form BQSM/JKR FORM C (Revised 1/83)

3.6 Contract Form for Civil and Structure Engineering Consultant

In favor of first objective achievement, which is to make comparison between the contract used for consultation service for quantity surveyors and civil and structure engineering consultant, the contents for civil and structure contracts will also be explain here.

The contract form use in bonding the relationship between client and civil and structure engineering consultant is same as quantity surveyor that is using Memorandum of Agreement (MOA). In order to create MOA between client and civil and structure engineering consultant the Board of Engineering, Malaysia has produced the standard form that is BEM/JKR FORM A (Revised 1/83). This form will be part of the MOA for government project. As for private project, most of the time the client will use their own created standard form.

Basically the content of civil & structure engineer consulting services consists of:

1. Memorandum of agreement

The item in memorandum of agreement (MOA) is consisting of the name of client and quantity surveyor consultant firm who the client engaged the project name or description. After that, there several statements of what is agreed between the parties. Lastly, the MOA will be signed by both parties and also their witnesses.

2. General condition of engagement of consulting quantity surveyor

The general conditions of engagement are the important part of the agreement as this set out the responsibilities of the parties. The conditions of engagement include such matters as listed below:

- a) Definitions
- b) Duration of engagement
- c) Proprietary rights of the government in documents
- d) Settlement of disputes
- e) Obligations of consulting engineer
- f) Requirement for additional professional services
- g) Arrangements for additional professional services and fees
- h) Supervision on site
- i) Delivery of documents to the government on termination by the consulting engineer
- j) Obligations of the government
- k) Types of services and payments

3. **Schedule of fees**

For schedule of fees, it is divided into two parts. Part A is the explanation about professional services while Part B is the guideline for calculation of scale of fees.

Part A: Professional Services

- a) Basic services
- b) Additional professional services not included in basic services
- c) Supervision on site
- d) Categories of projects

Part B:

- a) Scale of fees for basic professional services
- b) Scale of fees for additional professional services not included in basic services
- c) Stages of payment

Part C: Other Payments

- a) Payment for use of computer or other special equipment
- b) Payment for site supervision
- c) Disbursements
- d) Payment for alteration or modification to design
- e) Payment when works are damaged or destroyed
- f) Payment following termination or suspension by the government
- g) Payment following termination by the consulting engineer

4. Term of reference

For civil and structure engineering consultant the content of term of reference is about the detail of the project information and work they have to carry out. The term of references attach in the contract is divided or separated according to type of the civil and structure work. Therefore, the civil and structure consultant firm have a very detail reference about their work.

5. Appendices

The appendices enclosed with the agreement are depending on what client require. Usually the appendices that enclosed with the agreement are as listed below:

1. Letter of appointment
2. Letter of acceptance
3. Calculation of fees
4. Calculation of reimbursable cost
5. Registration certificates as practicing quantity surveyor
6. Company organization chart
7. Location plan

Item one to three is part of standard form BEM/JKR FORM A (Revised 1/83)

3.7 The Comparison of Contract Between Quantity Surveyor Consultation Services With Civil and Structure Consultation Services

Four characteristics are chosen for comparison purposes that are formalities, completeness, the content of general condition of engagement part and the content of scale of fees part.

Table 3.2: Comparison of Contract between Quantity Surveyor Consultation Services With Civil and Structure Consultation Services

No.	Items to be compared	Quantity Surveyor Contract	Civil & Structure Contract
1.	Formalities	Yes	Yes
2.	Completeness	Yes. But less information in the term of references	Yes. Got a very detail term of references
3.	The content of general condition of engagement part	There are few clauses absent compare to C&S	Got few extra clauses compare to QS
4.	The content of scale of fees part	There are few clauses absent compare to C&S	Got few extra clauses compare to QS

3.7.1 Formalities of the Contract

As aforementioned, the formalities of the contract are a very important matter to put a mind into it. It is to avoid any dispute occur later on. From the comparison between quantity surveyor and civil and structure consultation services contract, both are very formal contract which is clearly written and structured. Furthermore, the contract is signed by both parties with witnesses.

3.7.2 Completeness of the Contract

From the comparison the contents of the contract are very much similar which is consisting of the Memorandum of Agreement, standard form of contract, term of references and appendices. However, from the observation the term of references for civil and structure consultation services contract is much more detail compare with quantity surveyor consultation services contract. The term of references provided by the client is very detail which is described each of project information and work related with the particular project they execute.

3.7.3 Content of the Standard Form

For the content of standard form, generally the contents are very much alike which is consisting of condition of engagement and scale of fees. However, as for civil and structure standard form, there are three extra clauses that absent in quantity surveying consultant services standard form. Table 3.3 shows the comparison of content between the two standard forms in the General Condition of Engagement part. From the table the clauses that did not include in quantity surveying consulting services standard form are clauses for requirement for additional professional services, arrangements for additional professional services and fees and also supervision on site. The lacking of these three clauses indeed will bring disadvantage towards quantity surveyor consultant firm. It is because along the construction process most of the time they do need to give additional services and also go to the site for evaluation of work done.

Table 3.3: Contents of General Condition of Engagement for Quantity Surveyor and Civil & Structure Consulting Services Standard Form

Clause	Quantity Surveyor	Civil and Structure Engineer
1	Definitions	Definitions
2	Duration of engagement	Duration of engagement
3	Proprietary rights of the government in documents	Proprietary rights of the government in documents
4	Settlement of disputes	Settlement of disputes
5	Obligations of consulting Q.S.	Obligations of consulting engineer
6	Delivery of documents to the government on termination by the consulting Q.S.	Requirement for additional professional services
7	Obligations of the government	Arrangements for additional professional services and fees
8	Types of services and payments	Supervision on site
9		Delivery of documents to the government on termination by the consulting engineer
10		Obligations of the government
11		Types of services and payments

3.7.4 Scale of Fees for Consultation Services

Table 3.4 show the content of Scale of Fee part in the standard form for quantity surveyor consulting services and civil & structure consulting services. From the table it can be seen that the different in the schedule of fee part is relatively big in term of the fragmentation and arrangement of the clause which made the civil & structure engineer consulting services standard form clearer. As for the items, there is slight different which the civil and structure consulting standard form has few extra clauses.

Table 3.4: Contents of Scale of Fee for Quantity Surveyor and Civil & Structure
Consulting Services Standard Form

Clause	Quantity Surveyor		Clause	Civil and Structure Engineer
1	Definition	Part A: Professional Services	1	Basic services
2	Type of services		2	Additional professional services not included in basic services
3	Basic services for building and civil and civil engineering works		3	Supervision on site
4	Additional services			
5	Categories of projects	Part B	1	Scale of fees for basic professional services
6	Scale of fees for basic services		2	Scale of fees for additional professional services not included in basic services
7	Scale of fees for basic services where contract are based on provisional bills of quantities		3	Stages of payment
8	Breakdown of percentage of charges	Part C: Other Payments	1	Payment for use of computer or other special equipment
9	Scale of charges for additional services		2	Payment for site supervision
10	Reimbursable expenses		3	Disbursements
11	Time of payment for services rendered		4	Payment for alteration or modification to design
12	Time of payment for reimbursable expenses		5	Payment when works are damaged or destroyed
13	Payment for remeasurement of works due to alteration or modification of design		6	Payment following termination or suspension by the government
14	Payment when works are damaged or destroyed		7	Payment following termination by the consulting engineer
15	Payment following termination or suspension by the government	Appendix (Classification of works)		

3.8 Conclusion

Contract is a vital element in the relationship between the quantity surveyor consultant and the client. The most important part of the contract is the condition of engagement. It is because the condition of engagement is the terms that agreed and have to obey by both parties throughout the contract duration. Therefore the content of condition of engagement must be fair and able to satisfy both parties so that there is no problems arise later on.

From the list of content for standard form of quantity surveyor consultation services and standard form of civil and structure engineering consultation services, there is a slight different in the condition of engagement part. However, for schedule of fee part, the different seem to be quite a lot.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter outline the methodology that can be applied to conduct the research. The methodological process requires proper planning and detailed study on the steps necessary to come up with the desired result. It is pertinent to note that there are numerous ways of methodology conduct; depending largely on the output that the researcher desired to achieve. The information needed for this research was obtained from three principal sources which are literature reviews, semi structured open ended interview and questionnaire survey.

4.2 Literature Review

The literature review is done in two chapters with two main purposes. Firstly, is to gain an in-depth knowledge of the quantity surveying consulting services in the construction industry. These include consultants generally, the history of quantity

surveying in Malaysia, the definition and role and responsibilities of quantity surveying consultant firm and also contractor quantity surveyor in the industry.

The second purpose is to gain knowledge on the contract generally and also the contract form between the quantity surveying consultant with the client. Other than that, the contract form between the civil and the structure engineering consultant is also stated in the literature review. The output of the literature review is the comparison between the quantity surveying consulting services contract with the civil and structure consulting services contract. Comparison shows that the quantity surveying consulting contract is almost the same with the civil and structure consulting contract. However there is a part where the quantity surveyor consulting contract is not as detail and structured compare to the civil and structure consulting contract; which is the scale of fee.

4.3 Document Search and Analysis

For this research, the researcher pursuit the consulting contract between the quantity surveyor consultant firm and the client. The consulting contract between the civil & structure consultant firm is also needed for comparison purposes. The researcher manage to collect two consulting contract for each quantity surveyor and civil & structure consultant. All of the consulting contract which is known as the Memorandum of Agreement (MOA) very much have the same contents (refer to Chapter 4 for better illustration).

4.3.1 Procedure of Document Analysis

a) Step 1: Review

In step 1 the researcher performs a brief review on the entire collected consulting contract. Based on the brief review, the researcher will identify the contents for each contract and the rough idea on how the contract was structured before doing a detail analysis on the contracts.

b) Step 2: Analysis

Based on the document review, the researcher now has an idea on the content of the contract and can make a detail comparison between the contents of the quantity surveyor and the civil & structure consultant contract. Other than that, the researcher also does a detail comparison between the standard form used for quantity surveying and civil & structure engineering consultant services which is the BQSM/JKR FORM C (Revised 1/83) and BEM/JKR FORM A (Revised 1/83).

4.4 Interview with Expert Respondents

The methodology involves face to face interview with each individual who are categorized as expert panels in the field. For every interview the researcher posed various open ended questions and the responses to the questions are recorded as the interviewees expressed their opinion. The purpose of the interview is to gain an overview or initial idea of the issues so the researcher may develop a more comprehensive questionnaire.

The main aim of the interview is to achieve the two main objectives as follow:

- i) To investigate the limitation of the quantity surveyor services contract with other consultants
- ii) To propose changes in the clause of the quantity surveyors contract

The findings from the interview formed the basis for the development of the questionnaire survey that will be used in this study.

The interviewed expert panels are professionals who have involved and very much experience in the construction industry for 8 years and more. All of the respective professionals are quantity surveyors who are also the head of their quantity surveying consultant firm. The reason of gaining information from these professionals is because of the scope of this research itself which is to investigate on the quantity surveying consulting contract.

4.4.1 Design of the Structured Open Ended Questions

The purpose of adopting a structured type question is to facilitate the researcher to gain variety of answers or responses from the different respondents for the same question. The respondents will be presented with the same questions in the same direct order. The structured open ended interview will allow the respondents to express their opinion freely. The disadvantage of this method is open ended interviews often invite long answers. Therefore, the researcher has to record to avoid loss of any information from the expert panels. At the same time, the researcher also has to participate in the conversation to ensure a smooth flow, create interest and generate enthusiasm on the respondent feedback.

The questions imposed to the respondents hinged within the five (5) motives which have been identified during the literature review process. The deductions to the motives are elaborated as follows:

- i) Based on the literature review in Chapter 3, there is an elaboration on the contract generally. Therefore, the purpose of the question is to get the general opinion from the quantity surveying consulting on the contract made between them and the client

Motive 1: To investigate the professional general opinion regarding the contract made between the quantity surveyor consultant firms with the client.

- ii) From the literature review in Chapter 3, it was mentioned that the standard form used in Malaysia for consulting services in the construction industry is a standard form that is produced by the board of each discipline. Hence, the motive of the questions is to investigate whether the standard form is use by all the quantity surveying consultant firm. Thus:

Motive 2: To investigate the usage of the standard form published by Board of Quantity Surveyor Malaysia among the quantity surveyor's consultant firm.

- iii) The literature review has listed and briefly elaborated on the content of the standard form for the quantity surveying consulting services. Therefore the third motive is to investigate the satisfactory level of the quantity surveying consultant firm towards the standard form

Motive 3: To investigate the adequacy and level of satisfaction of the Standard Form contents' published by the Board of Quantity Surveyor, Malaysia

- iv) Based on the investigation result of the satisfaction level, the researcher wanted to investigate the problem arise regarding the standard form used

Motive 4: To investigate the problem arises with the contract used in the current practice

- v) Finally, the researcher asks the opinion from the respondents for the possible solution to the problem or as an improvement for the standard form.

Motive 5: To ask suggestions for improvement

The sample of the structured open ended question for the expert panels is displayed in the Appendix.

4.5 Questionnaire Survey Design

The steps required to design and administer the questionnaire include defining the research objectives, determining the sampling group, writing the questionnaire, administering the questionnaire and interpretation of the results. The discussion will concentrate on how to formulate the questionnaire design for this research.

The questionnaire survey design was intended to be as simple as possible but compact; in the form of a 6 pages length, double sided print of information gathering table. The rating scale technique is used and also the blanks filling method if the respondents have any views or opinions to add to this research. The respondents are

obliged to tick in the appropriate box and the appropriate rating scale for each section.

The questionnaire is divided into five sections. Section A for the respondent's particular, Section B for the standard form used in the current practice, Section C for opinion on the standard form, Section D for problems in the current practice and Section E for possible solutions. Section A is aimed to get the total of the respondent's working experience. By knowing the years of experience, we will know the reliability of the result.

Section B will state the standard form used in the current practice for government and private project. In the construction industry, the standard form used for quantity surveying consulting services is either the BQSM/JKR FORM C (Revised 1/83), the ISM Standard Form or the standard form that is produced by the client itself. For this section the respondents may tick all of the standard form where they find applicable based on their experience.

In section C, the discussion is about the respondent's opinion towards the three type of the aforementioned standard form. The area of discussion includes the easiness for the respondent to understand the wording or phrasing used in the standard form. Other than that this section also intended to seek the respondent's opinion towards the completeness of the standard form, suitability of the standard form for project use besides the traditional method of procurement and plus either the standard form need an improvement or not.

The question in Section C must be answered with a rating from scale of 1 to 5 as shown below.

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly Agree

Next, the current practice problems caused by the usage of the existing standard form are described in Section D. The problems listed in this section are gathered from the result of the semi structured interview with the expert panels. There are 6 problems in this section that have to be filled in by the respondent's base on the appropriate rating scale. The problems are as listed below:

- a) Client did not follow the mode of payment as stated in the standard form
- b) Payment for double work is not included in the fees
- c) The contract did not specify clearly the scope of work for other than traditional procurement method
- d) There is no specific guideline or clause for compensation if the consultant commit professional negligence (e.g. fill in wrong quantity in the bill of quantity)
- e) Scale of fee for quantity surveyor is much lower than other consultant
- f) Client always request changes in the content of the standard form produced by the board or institute to navigate more towards their benefit

The question in Section D must be answered with a rating from scale of 1 to 5 as shown below.

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly Agree

Lastly, Section E aims to identify the possible solution to reduce or eliminate the problems faced by quantity surveyor consultant firm as listed in Section D. The possible solutions to reduce or eliminate the problem are also gathered from the semi structured interview with the expert panel which listed as follows.

- a) The Board of Quantity Surveyor Malaysia and ISM need to produce new standard form for project other than the traditional procurement method
- b) The Board of Quantity Surveyor Malaysia and ISM need to introduce the minimum scale of fees for private project
- c) Simplify the fees calculation
- d) Add new clause for the compensation of professional negligence committed by consultant
- e) Add new clause for the cost of double work
- f) Enforcing the usage of BQSM Form C and the standard form produced by ISM for government and private project
- g) The standard forms produced by the board and institute are exclusive. Therefore client could not request any changes in the contents of the standard forms

- h) Revise the scale of fee for quantity surveying consulting services

There are 5 rating scales for the question in this section to identify the level of agreement towards each of the suggestion on the possible solution as listed above. The question in Section E also needs to be answered with a rating from scale of 1 to 5 as shown below.

1. - Strongly Disagree
2. - Disagree
3. - Neutral
4. - Agree
5. - Strongly Agree

4.6 Analysis Method

There are two methods that will be used to analyse the collected data; which are the frequency analysis and the Average Index method. Frequency analysis is used in analysing the standard form used in Section B of the questionnaire and this method will show the number of respondents who use the the particular standard form. The next method, average index, is used in analysing Section C, D and E and this method will show the Average Index and rating scale. The feedback from the questionnaires will be analysed through the computer program, Microsoft Excel. There are also other tools for analysing technique such as SPSS, but the researcher used Microsoft Excel because this research only involved not more than 50 data to be analysed and it can be perform using a simple computer program that is Microsoft Excel.

4.6.1 Frequency Analysis

Frequency analysis is a method to decompose a function, wave or signal into its frequency components so that it is possible to have a frequency spectrum. The frequency analysis is used to represent the data analysis results of the respondent frequency response, in order to differentiate the variables in the questionnaire survey. The result will be tabulated in the form of frequency number and percentage according to the total of respondents. The frequencies can also be represented in the form of tables, pie charts and bar charts for graphic result.

4.6.2 Average Index Analysis

The Average Index analysis for each variable is calculated by using the formula as shown below (Abdul Majid and McCaffer, 1997):

$$\text{Average Index} = \frac{\sum a_i x_i}{\sum x_i}$$

Where,

a_i = constant expressing the weight given to i

x_i = variable expressing the frequency of response for $i = 1, 2, 3, 4, 5, \dots, n$

Based on the assumed values stated earlier,

(Section C, D & Section E)

x_1 = frequency of the 'Strongly Disagree' and corresponding to $a_1 = 1$

x_2 = frequency of the 'Disagree' and corresponding to $a_2 = 2$

x_3 = frequency of the 'Neutral' and corresponding to $a_3 = 3$

x_4 = frequency of the 'Agree' and corresponding to $a_4 = 4$

x_5 = frequency of the 'Strongly Agree' and corresponding to $a_5 = 5$

The Average Index will be used to analyse each question in Section C, D, and E (Abdul Majid and McCaffer, 1997).

Table 4.1: The classification of the rating scales in Section C, D and E of the questionnaire

Rating Scale	Average Index (AI)
Strongly Disagree	$1.00 \leq AI < 1.50$
Disagree	$1.50 \leq AI < 2.50$
Neutral	$2.50 \leq AI < 3.50$
Agree	$3.50 \leq AI < 4.50$
Strongly Agree	$4.50 \leq AI \leq 5.00$

4.7 Conclusion

In order to achieve the objectives of the study, the research methodology has been established. This study was carried out based on literature reviews, semi structured open ended interview and questionnaire survey.

CHAPTER 5

DATA ANALYSIS AND RESULT

5.2 Introduction

This chapter will explain in detail on the data collected and the analysis carried out based on the methodology described in Chapter 4. The analysis is performed on the information gathered from interview with expert panels and also results from the questionnaire survey.

5.3 Interview with Expert Panels

Five (5) expert panels were interviewed with structured open ended questions. Seventeen (17) similar questions were imposed during the interview and recorded in an interview sheet. The interview venue was conducted mainly in their respective offices. Prior to the appointment, confirmation was made to ensure their willingness to be interviewed. All of the respondents were briefed of the purpose of the interview and all of the information that will be used is purely for academic

purposes. Thus, strict confidentiality will be maintained throughout the reporting process.

5.3.1 Background of Expert Panels

Since the objective of this research is to investigate the contract between the quantity surveyor consultant firm and the client, all of the respondents are selected from quantity surveyor consultant firm. All of the interviewed expert panels have gained the working experience of 8 to 35 years in the field. Besides that, this research focus on the contract made between the quantity surveyor consultant firm and the client. Hence the interview is also conducted with the director of the firm. It is due to the common cause that quantity surveyor in the consultant firm actually are not clear on the contract made between the firm and the client. They only handle the contract made between the contractor and client. Only the head or the higher management of the firm knows about the Memorandum of Agreement because the negotiation and dealing is between the consultant firms' director and the client representative.

5.3.2 Content Analysis of Interview with Expert Panels

The content analysis is as shown in the table 5.1. The table summarizes the structured open ended interview questions, their years of experience and the response to the questions imposed. The content analysis also determines the level of agreement of each respondent in terms of frequency and percentage.

Table 5.1: Content Analysis of Interview with Expert Panels (Respondent 1, 2, 3, 4 and 5 – Question 1 to 4)

		Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
	Experience	35 years	8 years	15 years	20 years	20 years
1	Which party prepares the contract	<ul style="list-style-type: none"> - Small project the consultant will prepare the contract - Big project the client will prepare the contract 	<ul style="list-style-type: none"> - Experienced client will prepare the contract - Inexperienced client will let the consultant prepare the contract 	<ul style="list-style-type: none"> - The consultant will prepare the contract 	<ul style="list-style-type: none"> - The consultant will prepare the contract 	<ul style="list-style-type: none"> - Small project the consultant will prepare the contract - Big project the client will prepare the contract
2	What are the common contents of the contract	<ul style="list-style-type: none"> - MOA - Condition of engagement - Term of references - Appendices 	<ul style="list-style-type: none"> - MOA - Condition of engagement - Term of references - Appendices 	<ul style="list-style-type: none"> - MOA - Condition of engagement - Term of references - Appendices 	<ul style="list-style-type: none"> - MOA - Condition of engagement - Term of references - Appendices - Quantity surveying plan of work 	<ul style="list-style-type: none"> - MOA - Condition of engagement - Term of references - Appendices - Quantity surveying plan of work
3	In your opinion, do you think the contents of the contract are adequate	Yes	Yes	Yes	Yes	Nope
4	If not, what are the extra documents need to be added into the contract					Detail of information for other than traditional procurement method

Table 5.2: Content Analysis of Interview with Expert Panels (Respondent 1, 2, 3, 4 and 5 – Question 5 to 7)

No		Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
	Experience	35 years	8 years	15 years	20 years	20 years
5	What is the guideline your company usually use in practice to form the contract in consultation services between your company and the client	<ul style="list-style-type: none"> - Refer the BQSM Form C 	<ul style="list-style-type: none"> - Most of the time based on client's standard form but still refer to BQSM Form C 	<ul style="list-style-type: none"> - Refer the BQSM Form C 	<ul style="list-style-type: none"> - Private project will refer to standard form published by ISM - Government project will refer to BQSM Form C 	<ul style="list-style-type: none"> - Government project will refer to BQSM Form C - Private project will refer to the standard form produced by the client itself
6	Do you apply the standard form published by Board of Quantity Surveyor, Malaysia in practice for your consultation services with the client	<ul style="list-style-type: none"> - Yes - But not follow hundred percent 	<ul style="list-style-type: none"> - Yes - But just as a reference 	<ul style="list-style-type: none"> - Yes 	<ul style="list-style-type: none"> - Yes - But only for government project - Not use for private project 	<ul style="list-style-type: none"> - Yes - But only for government project - Not use for private project
7	If not, why	<ul style="list-style-type: none"> - Client require some adjustment to favor on their side - Client want to suit their company policy 	<ul style="list-style-type: none"> - Only follow the principle from the BQSM but not all the clauses 		<ul style="list-style-type: none"> - For private project the client want to use their own standard form 	<ul style="list-style-type: none"> - For private project the client want to use their own standard form

Table 5.3: Content Analysis of Interview with Expert Panels (Respondent 1, 2, 3, 4 and 5 – Question 8 to 11)

		Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
	Experience	35 years	8 years	15 years	20 years	20 years
8	Does your company modify the content of the standard form	Yes	No	Yes	Yes	Yes
9	If yes, why	- Upon the request of the client - Follow the client's company policy		- Upon the request of the client	- Upon the request of the client	- Upon the request of the client
10	Which clauses in the standard form do you modify	- Mode of payment - Scale of fee		- Scale of fee	- Mode of payment - The percentage of payment according to the stage of work	- Termination clause - Definition of the cost of the work
11	Do you think the contents of the standard form are fair? If not why	- The BQSM Form C is fair - The adjusted is not fair	- The BQSM Form C is fair - The adjusted is not fair	- The BQSM Form C is fair - The adjusted is not fair	- The BQSM Form C is fair - The adjusted is not fair	- The BQSM Form C is fair - The adjusted is not fair

Table 5.4: Content Analysis of Interview with Expert Panels (Respondent 1, 2, 3, 4 and 5 – Question 12 to 14)

		Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
	Experience	35 years	8 years	15 years	20 years	20 years
12	Do you think the contents of the standard form are sufficient? If not why	- Yes	- Yes	- No - No clause about the compensation for professional negligence	- No - There is no clause for cost of double work should be included in fees	- No - The standard form only suitable for traditional procurement method
13	What is your level of satisfaction towards the content of the standard form	Satisfy	Satisfy	Acceptable	Acceptable	- For traditional procurement is satisfy - For procurement other than traditional not satisfy
14	Is there any problem occurred because of the contents of the contract generally and the standard form particularly	Yes	No	Yes	Yes	Yes

Table 5.5: Content Analysis of Interview with Expert Panels (Respondent 1, 2, 3, 4 and 5 – Question 15 to 17)

		Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5
	Experience	35 years	8 years	15 years	20 years	20 years
15	If yes, what and which area is the common problem arise	- Client did not follow the mode of payment		- The compensation when the consultant commit professional negligence	- The payment for double work did not included in the fees - Scale of fee for quantity surveyor is much lower than other consultant	- Scope of work for other than traditional method of procurement is not clarified - Client did not follow the mode of payment
16	Do you think the standard form published by the Board of Quantity Surveyor, Malaysia need an improvement	Yes	No	Yes	Yes	Yes
17	If yes, what are the necessary improvements? Should the clauses to be revised or to be added	- Simplify the calculation of the fee so that the client will not adjust the standard provided		- Introduce minimum scale of fees for the private project - Clause for the compensation if the consultant do negligence	- Revising the schedule of fees for consultant because it is much lower than other consultant though the work load is not so different	- Establish standard form for other type of procurement

Based on the analysis, the following information is discovered:

- a) 60% of the expert panels say that the party that prepares the contract is depending on the client. For a small project, the quantity surveying consultant firm will prepare the contract while for a big project or if the client is from a corporate company, the client itself will prepare the contract.
- b) 100% of the expert panels use the Standard Form published by the Board of Quantity Surveyor, Malaysia as a referring guideline to prepare the contract between them and the client, or followed the standard form hundred percent.
- c) 80% of the expert panels do some modification on the BQSM Form C because of the client requirement.
- d) 60% of the expert panels agree that the content of the BQSM Form C is not sufficient
- e) 100% of the expert panels agree that the content of the BQSM Form C need to be improved or revised.
- f) 80% of the expert panels face problems regarding fees.
- g) 60% of the expert panels make suggestion to improve the standard form that is related to their fees.

Based on the finding above, it is apparent that the interviews contain mixed answer from the expert panels. A majority of the response by the expert panels during the interview were directed to acknowledge that there are issues relating to the completeness of the BQSM Form C, particularly the fees. As all of the questions in the interview relates to the motives established in Chapter 4, it is concluded that all

of the motives are validated and thus the parameters are justified to be carried forward to the questionnaire survey.

5.3.2.1 Contents of the Contract

According to the expert panels, usually the contents of the contract are as listed below. The elaborations of the content have been described in the Chapter 3:

- a) Memorandum of Agreement (MOA)
- b) Condition of Engagement
- c) Scale of Fee
- d) Term of Reference
- e) Appendices

However, respondent 4 and respondent 5 mentioned that sometimes the clients require the consulting quantity surveyor to prepare their plan of work. The quantity surveyor plan of work is the planning of the quantity surveyor's work for the project from start to finish.

5.3.2.2 Standard Form Use for Formation of MOA

Based on the interview with the expert panels, the standard form used in the formation of the MOA between the consulting quantity surveyor and the client is the BQSM/JKR FORM C (Revised 1/83), the standard form published by the Institute of Surveyors Malaysia (ISM) and also the standard form produced by the client itself.

For government project, the standard form used is the BQSM/JKR FORM C (Revised 1/83) while for private project the client is free to not use the BQSM/JKR

FORM C (Revised 1/83). Most of the time, the client will use their own particular standard form if the client is well experienced. It is obvious that the content of the standard form is navigate more towards the client's benefit as they are the one who prepare it.

Other than that, according to respondent 4, for private project apart of client's standard form sometimes they also use ISM standard form. The standard form published by ISM is specifying for private project. In spite of using ISM standard form which is specifying for private project, the client also sometimes require to use BQSM/JKR FORM C (Revised 1/83) but they requested some modification in the clauses of the standard form. Again, according to the expert panels, the modification is usually to favour on the client's side.

According to respondent 1, respondent 3 and respondent 4, the clauses that the client request to modify is the scale of fee clauses such as the fee calculation and the mode of payment. After the modification, the fee is lower than it should be. Other than that, according to respondent 5 sometimes the client will also extract out the clause for termination by the consulting quantity surveyor. Respondent 5 also said that clients wanted to change the definition of the cost of work.

5.3.2.3 Satisfaction Towards the Standard Form

Table 5.2 shows the satisfaction level of the expert panels towards the BQSM/JKR FORM C (Revised 1/83):

Table 5.2: Satisfaction toward the Standard Form

Expert Panel	Satisfaction
1	Satisfy
2	Satisfy
3	Acceptable
4	Acceptable
5	For traditional procurement the method is satisfying, but for non- traditional procurement method did not satisfy

Both respondent 1 and respondent 2 are satisfied with the BQSM/JKR FORM C (Revised 1/83) and think that the content is complete and fair. As for respondent 3 and respondent 4, both of them think that the level of satisfaction for BQSM/JKR FORM C (Revised 1/83) is acceptable. It is because both respondents agree that though the content of BQSM/JKR FORM C (Revised 1/83) is fair, there are additional clauses need to be included in the standard form.

5.3 Questionnaire Survey

A total of 100 questionnaires were distributed to quantity surveyors and a total of 31 questionnaires were returned. However one was disqualified because the respondent did not complete all the questions in the questionnaire form. The distribution and the returned of the questionnaires are shown in the Table 5.3 and Figure 5.1.

Table 5.3: Distribution of the Questionnaires

Questionnaire distributed	No.	Percentage (%)
Returned	31	31
Unreturned	69	69
Total	100	100

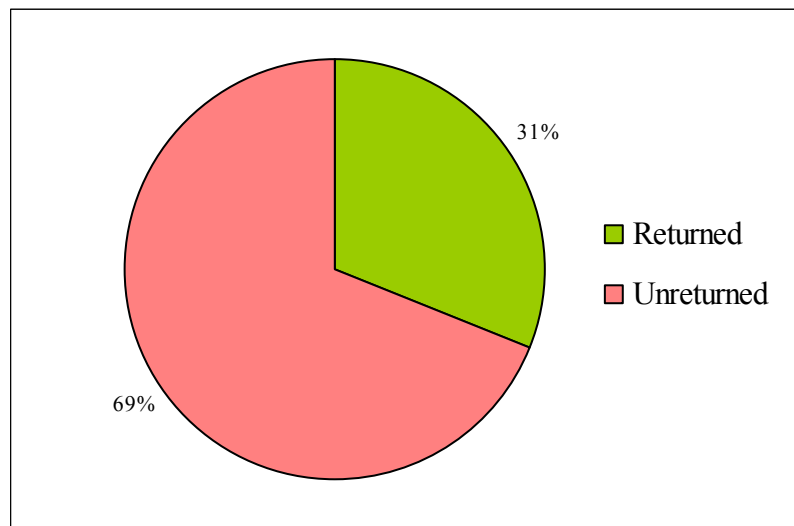


Figure 5.1: Distribution of the Questionnaires

5.3.1 Data Analysis for Questionnaire Survey

The collected data from the questionnaires were analyzed using two methods, which are the frequency analysis and the average index. The frequency analysis is used in analysing general information in Section A and B of the questionnaire and this method will show the frequency, percentage and in certain questions in number. The second method, the average index, is used in analysing Section C, D and E and this method will show the mean score and the average index. The tables created from their rating scale represent their ranking. The researcher used Microsoft Excel in order to generate the result.

5.3.1.3 Analysis for Respondents Particular

Analysis of the respondent for questionnaire survey is just on their working experience of the respondent as it is important to ensure the validity of the results. The total number of respondents that completed and returned the questionnaire sets was 31 but researcher has to reject one questionnaire as the respondent did not completely fill in the questionnaire.

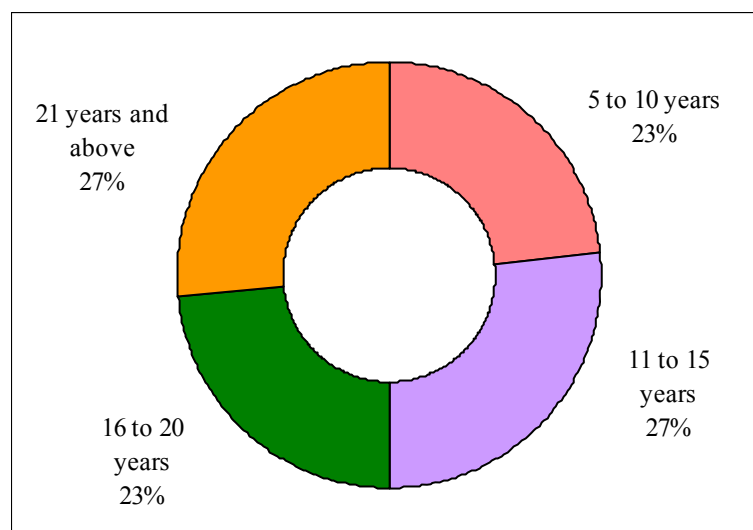


Figure 5.2: Respondent's working experience

Table 5.4: Respondent's working experience

Total Working Experience	Frequency	Percentage
5 to 10 years	7	23%
11 to 15 years	8	27%
16 to 20 years	7	23%
21 years and above	8	27%
Total	30	100%

The respondents' year of experience can be classified into four categories as shown in figure 5.1 and table 5.7. From the pie chart and table, 23% of the respondents have five to ten years; and 16 to 20 years of experience. For respondents who have the experience of eleven to fifteen years, and above 21 years; both classes have the same percentage that is 27%. This reflects that the questionnaire's answer is reliable because most of the respondents have more than ten years of experiences which make the total value 77% of the total respondents.

5.3.1.4 Analysis for Standard Form Used

The analysis of the respondents' experience in using standard form can be divided into two categories which are government project and private project.

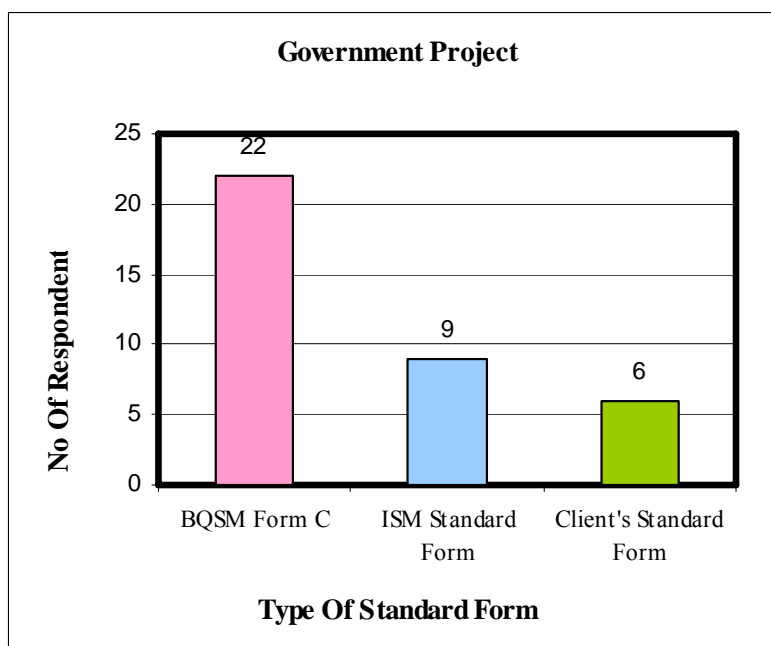


Figure 5.3: Standard Form used in Government Project

Table 5.5: Standard Form used in Government Project

Standard Form used in Government Project	No of Respondents
BQSM Form C	22
ISM Standard Form	9
Client's Standard Form	6

Figure 5.2 and table 5.8 shows the standard form used in the government project by the respondents. Most of the respondents, 22 individuals, have experience in using the BQSM Form as indicated in table 5.2. This was followed by the ISM Standard Form, 9 respondents, and the client's standard form, 6 respondents.

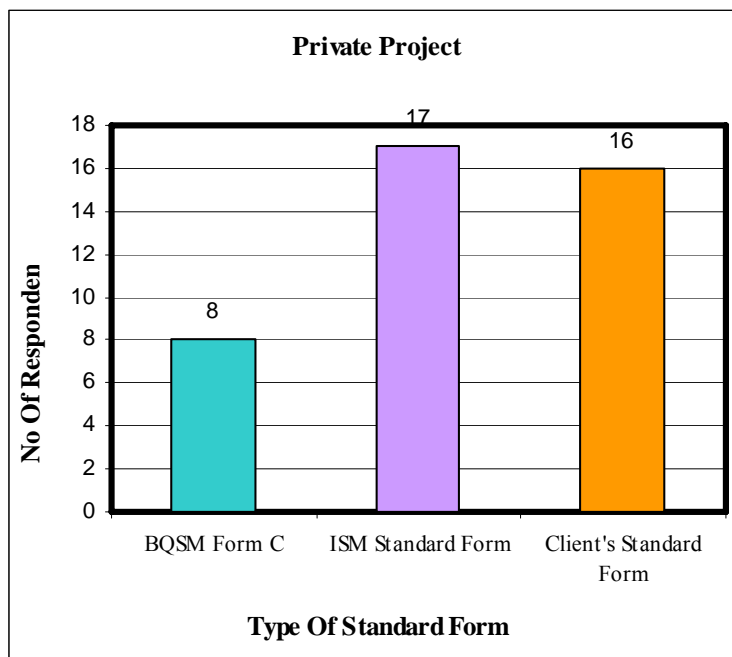


Figure 5.4: Standard Form used in Private Project

Table 5.6: Standard Form used in Private Project

Standard Form used in Private Project	No of Respondents
BQSM Form C	8
ISM Standard Form	17
Client's Standard Form	16

Figure 5.3 shows the standard form used in the private project by the respondents. Most of the respondents have experience in using the ISM standard form with 17 of the respondents as indicated in table 5.9. This was closely followed by the client's standard form, 16 respondents and BQSM Form C, 8 respondents.

The frequency analysis and average index that use for Section C, D & E are shown in Table 5.7. It summarises the questions, frequencies of response for each Likert Scale, average index for every questions. To make the frequency analysis more meaningful in terms of frequency agreement, disagreement and neutral, the results obtained from Table 5.7 have been further categorised in terms of the level of

agreement mentioned based on the criteria set in Chapter 4. This is shown in the Table 5.8.

5.3.1.3 Analysis for Opinion on Standard Form

a) BQSM Form C

The following findings are obtained from the analysis for Section C of the questionnaire i.e. opinion on the BQSM Form C:

- (i) The respondents agree that the contents of BQSM Form C plus the wording and phrasing are easy to understand. They also agree that additional clauses in the BQSM Form C are needed for improvement.
- (ii) The respondents feel that the BQSM Form C is not so suitable for project that used other non-traditional procurement method.

b) ISM Standard Form

The following findings are obtained from the analysis for Section C of the questionnaire i.e. opinion on the ISM standard form:

- (i) The respondents agree that the contents of the ISM standard form and also the wording and phrasing are easy to understand. Furthermore, they also agree that additional clauses in the ISM standard form are needed for improvement principally in the scale of fee part because they agree on the general condition of engagement part.
- (ii) The respondent's think that the ISM standard forms is not so suitable for project that used non-traditional procurement method.

c) Client's Standard Form

The following findings are obtained from the analysis for Section C of the questionnaire i.e. opinion on the client's standard form:

- (i) The respondents agree that the contents, wording and phrasing of the standard form are easy to understand.
- (ii) The respondents agree that additional clauses in the client's standard form are needed for improvement.
- (iii) The respondents disagree that the fee calculation in the client's form is satisfactory and the contents of client's standard form are fair
- (iv) As for the contents/clauses of the General Condition of Engagement part in the client's standard form are sufficient, the client's standard form is suitable for project using non-traditional procurement method plus the contents/clauses of the Scale of Fees part in the client's standard form are sufficient, the respondents rate it as neutral.

5.3.1.4 Problems in the Current Practice

The following findings are obtained from the analysis for Section D of the questionnaire i.e. problems in the current practice:

- (i) The respondents agree on the five out of six of the problems that are the payment for the double work is not included in the fees, the client did not follow the mode of payment, the scale of fee for quantity surveyor is much lower than other consultant, clients always request changes in the content of the standard form produced by the board or institute, and the contract did not specify clearly the scope of work for other than traditional procurement method.

- (ii) As there is no specific guideline or clause for compensation if the consultant commit a professional negligence, respondents gave a neutral rating scale.

5.3.1.6 Possible Solutions

The following findings are obtained from the analysis for Section D of the questionnaire i.e. possible solutions:

- (i) The respondents agree to all the proposed possible solutions that are revising the scale of fee for quantity surveying consulting services, adding new clause for cost of double work, the need for Board of Quantity Surveyor Malaysia and the ISM to introduce the minimum scale of fees for private project, enforcing the usage of the BQSM Form C and the standard form produced by the ISM for government and private project, the standard forms produced by the board and institute are exclusive, Board of Quantity Surveyor Malaysia and the ISM need to produce a new standard form for projects with other than the traditional procurement method and adding new clause for the compensation of professional negligence committed by consultant.

Table 5.7: Frequency analysis and Average Index for questions in section C: Opinion on the BQSM Form C – Question a to d

No.	Question Section C	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
a.	The content of BQSM Form C is easy to understand	0	0.00	0	0.00	2	6.67	26	86.67	2	6.67	4.00
b.	The wording and phrasing used in the BQSM Form C is easy to understand	0	0.00	0	0.00	3	10.00	24	80.00	3	10.00	4.00
c.	The contents/clauses of General Condition of Engagement part in BQSM Form C are sufficient	0	0.00	6	20.00	15	50.00	9	30.00	0	0.00	3.10
d.	The following clauses of General Condition of Engagement part in BQSM Form C are fair											
	Duration of engagement	0	0.00	0	0.00	14	46.67	13	43.33	3	10.00	3.63
	Proprietary right of the government in documents	0	0.00	1	3.33	16	53.33	11	36.67	2	6.67	3.47
	Settlements of disputes	0	0.00	4	13.33	10	33.33	16	53.33	0	0.00	3.40
	Obligation of the consulting quantity surveyor	0	0.00	0	0.00	11	36.67	19	63.33	0	0.00	3.63
	Obligation of the government	0	0.00	2	6.67	11	36.67	16	53.33	1	3.33	3.67
	Types of services and payments	0	0.00	2	6.67	10	33.33	17	56.67	1	3.33	3.57

Table 5.7: Frequency analysis and Average Index for questions in section C: Opinion on the BQSM Form C – Question e to h

No.	Question Section C	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
e.	The contents/clauses of Scale of Fees part in BQSM Form C are sufficient	0	0.00	6	20.00	9	30.00	15	50.00	0	0.00	3.30
f.	The fee calculation in BQSM Form C is satisfactorily	0	0.00	7	23.33	11	36.67	8	26.67	4	13.33	3.30
g.	BQSM Form C is suitable for project other than traditional procurement method	1	3.33	9	30.00	12	40.00	7	23.33	1	3.33	2.93
h.	Additional clauses in the BQSM Form C are needed for improvement	0	0.00	0	0.00	9	30.00	18	60.00	3	10.00	3.80

Table 5.7: Frequency analysis and Average Index for questions in section C: Opinion on the ISM standard form – Question a to d

No.	Question Section C	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
a.	The content of ISM standard form is easy to understand	1	3.33	0	0.00	6	20.00	21	70.00	2	6.67	3.77
b.	The wording and phrasing used in the ISM standard form is easy to understand	0	0.00	1	3.33	9	30.00	18	60.00	2	6.67	3.70
c.	The contents/clauses of General Condition of Engagement part in ISM standard form are sufficient	0	0.00	1	3.33	13	43.33	13	43.33	3	10.00	3.60
d.	The following clauses of General Condition of Engagement part in ISM standard form are fair											
	Duration of engagement	0	0.00	1	3.33	15	50.00	12	40.00	2	6.67	3.50
	Obligation of the consulting quantity surveyor	0	0.00	1	3.33	12	40.00	15	50.00	2	6.67	3.60
	Arrangements for additional professional services and fees	0	0.00	0	0.00	14	46.67	13	43.33	3	10.00	3.63
	Types of services and payments	0	0.00	1	3.33	15	50.00	12	40.00	2	6.67	3.50

Table 5.7: Frequency analysis and Average Index for questions in section C: Opinion on the ISM standard form – Question e to h

No.	Question Section C	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
e.	The contents/clauses of Scale of Fees part in ISM standard form are sufficient	0	0.00	6	20.00	10	33.33	12	40.00	2	6.67	3.33
f.	The fee calculation in ISM standard form is satisfactorily	0	0.00	4	13.33	14	46.67	10	33.33	2	6.67	3.33
g.	ISM standard form is suitable for project other than traditional procurement method	0	0.00	7	23.33	13	43.33	9	30.00	1	3.33	3.13
h.	Additional clauses in the ISM standard form are needed for improvement	0	0.00	1	3.33	10	33.33	17	56.67	2	6.67	3.67

Table 5.7: Frequency analysis and Average Index for questions in section C: Opinion on the client's standard form – Question a to h

No.	Question Section C	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
a.	The content of client's standard form is easy to understand	0	0.00	0	0.00	10	33.33	16	53.33	4	13.33	3.80
b.	The wording and phrasing used in the client's standard form is easy to understand	0	0.00	0	0.00	11	36.67	15	50.00	4	13.33	3.77
c.	The contents/clauses of General Condition of Engagement part in client's standard form are sufficient	0	0.00	2	6.67	17	56.67	8	26.67	3	10.00	3.40
d.	The contents of client's standard form are fair	0	0.00	16	53.33	14	46.67	0	0.00	0	0.00	2.47
e.	The contents/clauses of Scale of Fees part in ISM standard form are sufficient	0	0.00	9	30.00	14	46.67	6	20.00	1	3.33	2.97
f.	The fee calculation in client's standard form is satisfactorily	0	0.00	16	53.33	14	46.67	0	0.00	0	0.00	2.47
g.	Client's standard form is suitable for project other than traditional procurement method	0	0.00	6	20.00	13	43.33	9	30.00	2	6.67	3.23
h.	Additional clauses in the client's standard form are needed for improvement	0	0.00	0	0.00	8	26.67	17	56.67	5	16.67	3.90

Table 5.7: Frequency analysis and Average Index for questions in section D: Problem in the current practice – Question a to f

No.	Question Section D	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
a.	Client did not follow the mode of payment as stated in the standard form	0	0.00	4	13.33	5	16.67	11	36.67	10	33.33	3.90
b.	The payment for double work did not included in the fees	0	0.00	2	6.67	1	3.33	19	63.33	8	26.67	4.10
c.	The contract did not specify clearly the scope of work for other than traditional procurement method	1	3.33	3	10.00	6	20.00	18	60.00	2	6.67	3.57
d.	There is no specific guideline or clause for compensation if the consultant commit professional negligence (e.g. fill in wrong quantity in the bill of quantity)	0	0.00	2	6.67	15	50.00	12	40.00	1	3.33	3.40
e.	Scale of fee for quantity surveyor much lower than other consultant	0	0.00	1	3.33	10	33.33	14	46.67	5	16.67	3.77
f.	Client always request changes in the content of the standard form produced by board or institute which more towards their benefit	1	3.33	6	20.00	2	20.00	17	56.67	4	13.33	3.57

Table 5.7: Frequency analysis and Average Index for questions in section E: Possible solution – Question a to d

No.	Question Section E	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
a.	Board of Quantity Surveyor Malaysia and ISM need to produce new standard form for project other than traditional procurement method	0	0.00	1	3.33	7	23.33	19	63.33	3	10.00	3.80
b.	Board of Quantity Surveyor Malaysia and ISM need to introduce the minimum scale of fees for the private project	0	0.00	1	3.33	6	20.00	14	46.67	9	30.00	4.03
c.	Simplify the calculation of the fees	0	0.00	4	13.33	15	50.00	8	26.67	3	10.00	3.33
d.	Add new clause for the compensation of professional negligence commit by consultant	1	3.33	4	13.33	10	33.33	13	43.33	2	6.67	3.37

Table 5.7: Frequency analysis and Average Index for questions in section E: Possible solution – Question e to h

No.	Question Section E	Frequency Analysis										Average Index
		1		2		3		4		5		
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
e.	Add new clause for cost of double work	0	0.00	1	3.33	2	6.67	18	60.00	9	30.00	4.17
f.	Enforcing the usage of BQSM Form C and standard form produced by ISM for government and private project	0	0.00	1	3.33	8	26.67	12	40.00	9	30.00	3.97
g.	The standard forms produced by board and institute are exclusive. Therefore the client can not request any changes in the contents of the standard forms	0	0.00	4	13.33	4	13.33	13	43.33	9	30.00	3.90
h.	Revise the scale of fee for quantity surveying consulting services	0	0.00	1	3.33	3	10.00	9	30.00	17	56.67	4.40

Table 5.8: Frequency analysis based on percentage of agreement for questions in section C: Opinion on the BQSM standard form

No.	Question	Frequency Analysis (%)		
		Disagree	Neutral	Agree
a.	The content of BQSM Form C is easy to understand	0.00	6.67	93.34
b.	The wording and phrasing used in the BQSM Form C is easy to understand	0.00	10.00	90.00
c.	The contents/clauses of General Condition of Engagement part in BQSM Form C are sufficient	20.00	50.00	30.00
d.	The following clauses of General Condition of Engagement part in BQSM Form C are fair			
	Duration of engagement	0.00	46.67	53.33
	Proprietary right of the government in documents	3.33	53.33	43.34
	Settlements of disputes	13.33	33.33	53.33
	Obligation of the consulting quantity surveyor	0.00	36.67	63.33
	Obligation of the government	6.67	36.67	56.66
	Types of services and payments	6.67	33.33	60.00
e.	The contents/clauses of Scale of Fees part in BQSM Form C are sufficient	20.00	30.00	50.00
f.	The fee calculation in BQSM Form C is satisfactorily	23.33	36.67	40.00
g.	BQSM Form C is suitable for project other than traditional procurement method	33.33	40.00	26.66
h.	Additional clauses in the BQSM Form C are needed for improvement	0.00	30.00	70.00

Table 5.8: Frequency analysis based on percentage of agreement for questions in section C: Opinion on the ISM standard form

No.	Question	Frequency Analysis (%)		
		Disagree	Neutral	Agree
a.	The content of ISM standard form is easy to understand	3.33	20.00	76.67
b.	The wording and phrasing used in the ISM standard form is easy to understand	3.33	30.00	66.67
c.	The contents/clauses of General Condition of Engagement part in ISM standard form are sufficient	3.33	43.33	53.33
d.	The following clauses of General Condition of Engagement part in ISM standard form are fair			
	Duration of engagement	3.33	50.00	46.67
	Obligation of the consulting quantity surveyor	3.33	40.00	56.67
	Arrangements for additional professional services and fees	0.00	46.67	53.33
	Types of services and payments	3.33	50.00	46.67
e.	The contents/clauses of Scale of Fees part in ISM standard form are sufficient	20.00	33.33	46.67
f.	The fee calculation in ISM standard form is satisfactorily	13.33	46.67	40.00
g.	ISM standard form is suitable for project other than traditional procurement method	23.33	43.33	33.33
h.	Additional clauses in the ISM standard form are needed for improvement	3.33	33.33	63.34

Table 5.8: Frequency analysis based on percentage of agreement for questions in section C: Opinion on the ISM standard form

No.	Question	Frequency Analysis (%)		
		Disagree	Neutral	Agree
a.	The content of client's standard form is easy to understand	0.00	33.33	66.66
b.	The wording and phrasing used in the client's standard form is easy to understand	0.00	36.67	63.33
c.	The contents/clauses of General Condition of Engagement part in client's standard form are sufficient	6.67	56.67	36.67
d.	The contents of client's standard form are fair	53.33	46.67	0.00
e.	The contents/clauses of Scale of Fees part in ISM standard form are sufficient	30.00	46.67	23.33
f.	The fee calculation in client's standard form is satisfactorily	53.33	46.67	0.00
g.	Client's standard form is suitable for project other than traditional procurement method	20.00	43.33	36.67
h.	Additional clauses in the client's standard form are needed for improvement	0.00	26.67	73.34

Table 5.8: Frequency analysis based on percentage of agreement for questions in section D: Problem in the current practice

No.	Question	Frequency Analysis (%)		
		Disagree	Neutral	Agree
a.	Client did not follow the mode of payment as stated in the standard form	13.33	16.67	70.00
b.	The payment for double work did not included in the fees	6.67	3.33	90.00
c.	The contract did not specify clearly the scope of work for other than traditional procurement method	13.33	20.00	66.67
d.	There is no specific guideline or clause for compensation if the consultant commit professional negligence (e.g. fill in wrong quantity in the bill of quantity)	6.67	50.00	43.33
e.	Scale of fee for quantity surveyor much lower than other consultant	3.33	33.33	63.34
f.	Client always request changes in the content of the standard form produced by board or institute which more towards their benefit	23.33	6.67	70.00

Table 5.8: Frequency analysis based on percentage of agreement for questions in section E: Possible solutions

No.	Question	Frequency Analysis (%)		
		Disagree	Neutral	Agree
a.	Board of Quantity Surveyor Malaysia and ISM need to produce new standard form for project other than traditional procurement method	3.33	23.33	73.33
b.	Board of Quantity Surveyor Malaysia and ISM need to introduce the minimum scale of fees for the private project	3.33	20.00	76.67
c.	Simplify the calculation of the fees	13.33	50.00	36.67
d.	Add new clause for the compensation of professional negligence commit by consultant	16.66	33.33	50.00
e.	Add new clause for cost of double work	3.33	6.67	90.00
f.	Enforcing the usage of BQSM Form C and standard form produced by ISM for government and private project	3.33	26.67	70.00
g.	The standard forms produced by board and institute are exclusive. Therefore the client can not request any changes in the contents of the standard forms	13.33	13.33	73.33
h.	Revise the scale of fee for quantity surveying consulting services	3.33	10.00	86.67

5.3 Conclusion

Based on the analysis presented in this chapter, it can be concluded that the contents of the contract between the client and the quantity surveyor consultant is adequate. The problems are on the standard forms used that are the BQSM Form C, the ISM standard form and the client's standard form. The result shows that there are insufficiencies in the existing standard form on the general condition of engagement and scale of fee part where the respondents agreed on these problems. The problem can be corrected by selecting the suggested solution raised in the questionnaire as proposed by the expert panels. All of the suggestions are agreed by the respondents except for one suggestion.

CHAPTER 6

DISCUSSION OF RESULTS

6.1 Introduction

The purpose of this chapter is to discuss the results obtained from all the analysis done by interview with expert panels and questionnaire survey. For interview with expert panels, the discussion will be based mainly on the contents analysis, whereas for questionnaire the main dependent will be based on the statistical calculation as done in the Chapter 5. To facilitate the flow of arguments, this chapter will discuss the respective sections as outline in the questionnaire survey which also coincides with the motive of research as follows:

- a) Opinion on the standard form
- b) Problems in the current practice
- c) Possible solutions for problems incurred

6.2 Opinion on the Standard Form

In this section of the questionnaire, opinion on the three type of standard form that are BQSM Form C, ISM standard form and client's standard form was asked. Frequency analysis on the opinion on the standard form indicate that the respondents mostly agree that the content of standard form and also the wording and phrasing used in the standard form is easy to understand for all type of standard forms. Furthermore the respondents agree that all these three standard forms need additional clauses for improvement particularly for client's standard form as it has the highest frequency compare to BQSM Form C and ISM standard form.

Generally, the opinion on BQSM Form C and ISM standard form is very much similar. Both standard forms are relatively fair on the opinion of the respondents. Other than that most of the respondents also agree that the contents/clauses of Scale of Fees part in these two standard forms are sufficient. These two characteristics are agreed by the respondents as both standard forms are prepared by the expert in the industry and also have the touch from law expertise. Hence the standard forms prepared with considering the quantity surveyor consultant's interest. As for the satisfactorily on the fee calculation, the respondents agree for the fee calculation in the BQSM Form C but felt neutral for ISM standard form.

Contrast to client's standard form, the frequency analysis shows that most of the respondents disagree on the fairness of the client's standard form. They also felt that the fee calculation is not satisfactorily. For client's standard form, most of the time the contents of the standard form is always at their advantages. It is because they prepare the standard form themselves where they free to design the standard form as they wish. According to the expert panels interviewed, quantity surveyor consultant have to comply with the client as they want to secure their business though the standard form is obviously not fair to them. In practice, the usage of standard form publishes by Board of Quantity Surveyor, Malaysia or Institute of

Surveyor, Malaysia that are BQSM Form C and ISM standard form is just recommended but not mandatory. Therefore most of the private project, the client requires using their own published standard form.

Most of the respondents felt neutral on the suitability of all three standard forms to be used for project use other than traditional procurement method. Nowadays there are several types of procurement method such as design and build, cost plus, management contracting to name a few. However there are no specific standard forms for each type of these procurement methods.

6.3 Problems in the Current Practice

In this section of the questionnaire, the respondents were given six questions about the problem in the current practice. All the questions were identified from the interview with the expert panels.

From the frequency analysis, the main problem in the current practice as it has the highest frequency is there is no clause for double work included in the fees calculation. From the pre-tender to the completion of a construction project, it will involve lots of procedure and task to be done by the quantity surveying consultant firm. There are also changes, additional or omission request by the client along the process which led to the occurrence of double work for the consultant firm. The absence of clause for double work will be the disadvantage for the quantity surveyor consultant firm because the payment for double work is not calculated appropriately.

Secondly is the problem related to payment for quantity surveying consulting services. According to the expert panels interviewed most of the time the client did

not follow the mode of payment eventhough there is a guidelines in the standard form on how to submit progress payment to the quantity surveying consultant where 70% of the respondents also agree in this problem. The quantity surveyor consultant is having a financial problem because they did not receive certain amount of money at certain project stage as stated in the standard form.

As aforementioned the standard form publishes by Board of Quantity Surveyor, Malaysia or Institute of Surveyor, Malaysia that are BQSM Form C and ISM standard form is just recommended but not mandatory. Therefore, although the client wants to use this standard form, they still free to request changes in the content of the standard form where obviously towards their benefit. It is what had happen in the current practice and agreed by the respondents.

The next problem is the scale of fee for quantity surveyor is much lower than other consultant. According to one of the expert panel, in the construction project architect got the highest amount of fee followed by civil & structural engineer, quantity surveyor and lastly mechanical and electrical engineer consultant. However, the respondents agree that the quantity surveying fee is low compare to their workload. It is because quantity surveyors are involved with the project right from the early stage until after the project is completed; after the defect liability period end.

As for no specific guideline or clause for compensation if the consultants commit a professional negligence, the frequency analysis shows that this problem is neutral. According to one of the expert panel, if such clause exists, it will not motivate the quantity surveyor consultant to perform well as there is always a clause that will protect them if they accidentally did a mistake. Without the clause, the quantity surveyor will keep their performance at the highest level and do their jobs diligently to avoid any mistakes occur.

6.4 Possible Solutions for Problems Incurred

In this section of the questionnaire, the respondents were given seven possible solutions for the problems mentioned before. The analysis reveals that high level of agreement is achieved on almost the possible solutions proposed.

From the analysis, it is reveals that the problems that usually occur are related to the quantity surveyor consultantancy fee. Therefore to overcome the problems first there is a need to revise the scale of fees for quantity surveying consultant services. As aforementioned, the quantity surveyor consultant unsatisfied towards the current calculation of fees for consulting services as they felt that their fee is relatively low to compare with their work load. Other than that, the revising of scale of fees should also consider to add new clause for cost of double work.

Furthermore, one of the expert panels suggests that Board of Quantity Surveyor, Malaysia or Institute of Surveyor, Malaysia needs to introduce the minimum scale of fees for private project. This is agreed by 76.67% of the respondents. It is because for private project most of the time the client used their own standard form and the fee is calculated as they wish, which most of the time the fee is absurdly low. Therefore, the existence of a guideline for fee calculation for private project is undeniably important so that the quantity surveying consultant deserve the appropriate amount of fees.

As for the need to add new clause for the compensation of professional negligence commit by consultant, half of the respondents agree on this propose solution while the other half is neutral plus disagree. The respondents also felt neutral for the propose solution to simplify the fee calculation as proposed by one of the expert panel.

In the current practice the usage of standard form published by Board of Quantity Surveyor, Malaysia or Institute of Surveyor, Malaysia is just recommended but not mandatory caused the client free not to use these standard forms and use their own where again obviously more towards their benefit. Therefore the most important solution is by enforcing the usage of these standard forms to all construction projects. It is because, the standard form published by board or institute are properly made which considers both party that are client and quantity surveyor consultant. Besides enforcing the usage of these standard forms, they also a need to enforce the exclusiveness of these standard forms so that the client can not request any changes in the standard forms contents.

6.5 Conclusion

Based on the analysis presented in this chapter, it can be concluded that the contents of the contract between the client and the quantity surveyor consultant is adequate. The problems are on the standard forms used that are the BQSM Form C, the ISM standard form and the client's standard form. The result shows that there are insufficiencies in the existing standard form on the general condition of engagement and scale of fee part where the respondents agreed on these problems. The problem can be resolved by selecting the suggested solution raised in the questionnaire as proposed by the expert panels. All of the suggestions are agreed by the respondents except for one suggestion that is adding new clause for compensation of professional negligence.

CHAPTER 7

CONCLUSION AND RECOMMENDATION

7.1 Introduction

This is the last chapter of the study which conclude the findings and to discuss whether the intended objectives have been achieved. The aim of this study is to identify and recommending the best solution to reduce or correct the problem occurred in the usage of the existing quantity surveyors consulting services contract. Finally, an outline of recommendations summary for further study is described at the end of this research to make the research more encompassing.

7.2 Conclusion

As outlined in Chapter 1, this research consists of three main objectives as follow:

4. To make a comparison between the contract form used for consultation services for the quantity surveyor consultant and the civil & structure engineering consultant.
5. To investigate the problem of the quantity surveyor services contract with the client.
6. To suggest possible solution to reduce the problem occurred in the usage of the existing quantity surveyors contract.

7.2.1 Objective 1: To make a comparison between the contract form use for consultation services for the quantity surveyor consultant and the civil & structure engineering consultant.

The purpose of comparing between the quantity surveying consulting services contract and the civil & engineer is to study if there are any differences between these two contract and to take the good example to be applied in the quantity surveying consulting services form. In Chapter 3 the researcher has elaborated on the contract form for the quantity surveyor and the civil & structure engineering consultant. The result shows that both contract contents are actually very much similar. However the civil & structure consulting services contract is more detail compared to the quantity surveying consulting contract as there are few extra information attached together in the contract. For example, the detail of work that is under the civil & structure engineering scope.

The details also can be seen in the standard form used by the civil & structure consultant in the formation of the MOA with the client where there are several extra clauses. Furthermore, the arrangement and fragmentation of clauses in the civil & structure consulting services standard form are also more orderly and clear. Based on the list of content for the standard form of the quantity surveyor consultation services and the standard form of the civil and structure engineering consultation services as stated in Chapter 3, there is a slight differences in the condition of engagement part. However, in the schedule of fee part, the difference seems to be quite a lot.

7.2.2 Objective 2: To investigate the problem of the quantity surveyor services contract with the client.

In order to achieve this objective the researcher first seeks the opinion from respondents via a questionnaire survey on the existing standards form that are the BQSM Form C, the ISM standard form and the client's standard form. The results in Chapter 5 shows that the respondents did not quite agree with the contents that relate to their fees as they gave a neutral rating scale. The clause in the scale of fee part is not sufficient and the calculation of fee is not satisfactorily.

Objective 2 is achieved through a semi structured open ended interview with expert panels where all the listed problems were actually gathered from them. Then, the researcher distributes questionnaire survey and respondents will rate the problems that they agree. To sump up, the findings from the questionnaire survey indicated that the problem frequently faced by the quantity surveying consultant is usually related to their fees; the payment for double work is not included in the fees, the client did not follow the mode of payment as stated in the standard form and the scale of fee for the quantity surveyor is much lower than other consultant though the work load do not vary much.

7.3.3 Objective 3: To suggest possible solution to reduce the problem occurred in the usage of the existing quantity surveyors contract.

The objective number three is achieved by analysing the questionnaire survey. It can be concluded that the possible solution to control or reduce the problem is to revise the scale of fee for the quantity surveying consulting services and also to add new clause for the cost of double work. Furthermore, there is a need for the Board of Quantity Surveyor Malaysia and the ISM to introduce the minimum scale of fee for private project.

Other than that, one of the important possible solutions is to enforce the usage of the BQSM Form C and the ISM standard form; but first have to improve on these two standard forms. If there is no enforcement, the client is free to use their own standard form which will obviously benefit more to their side. In addition, the findings indicated that the respondents agree to all the possible solutions except for one, which is to add new clause for the compensation of professional negligence commit by the consultant in order to reduce the problem faced by the quantity surveyor consultant.

7.4 Recommendation for Further Study

This study encompasses the statement of requiring some improvement towards the contract between the quantity surveyor consultant and the client in order to overcome the problem currently faces by the quantity surveyor consultant. As mentioned before, the problem that is frequently faced by the quantity surveyor consultants are usually related to their fees such as they are not satisfied with the fee calculation and the fee is low compared to their work load. Therefore it is

recommended to do a further study on reviewing the current practice of professional fees for the quantity surveying consultancy services.

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BQSM/JKR FORM C (Revised 1/83)

BEM/JKR FORM A (Revised 1/83)



**UNIVERSITI TEKNOLOGI MALAYSIA
FACULTY OF CIVIL ENGINEERING**

COMPARISON OF CONSULTING CONTRACT

**MAB0024
MASTER PROJECT**

Research objectives:

7. To investigate the limitation and problem of the quantity surveyor consulting services contract
8. To propose changes in the clause of quantity surveyors consulting services contract.

Student Name: Farihal Hanum Nurul 'Ain Bte Khalid

I/C No.: 841004015282

Metric Card No.: MA061158

RESPONDENT'S PARTICULARS

- a) Respondent's name:.....
- b) Company's name:.....
- c) How long have you been working with this company:.....years
- d) What is your total years of working in the construction industry:.....years

OBJECTIVE'S ACHIEVEMENT

To investigate peoples' general opinion regarding the contract made between quantity surveyor consultant firms with the client.

1. Which party prepares the contract?

2. What are the common contents of the contract?

3. In your opinion, do you think the contents of the contract are adequate?

4. If not, what are the extra documents need to be added into the contract?

To investigate the usage of Standard Form published by Board of Quantity Surveyor, Malaysia among quantity surveyor’s consultant company.

1. What is the guideline your company usually use in practice to form the contract in consultation services between your company and the client?

2. Do you apply the standard form published by Board of Quantity Surveyor, Malaysia in practice for your consultation services with the client?

3. If not, why?

To investigate the adequacy and level of satisfaction of the Standard Form contents' published by Board of Quantity Surveyor, Malaysia.

1. Does your company modify the content of the standard form?

2. If yes, why?

3. Which clauses in the standard form do you modify?

4. Do you think the contents of the standard form are fair? If not why?

5. Do you think the contents of the standard form are sufficient? If not why?

6. What is your level of satisfaction towards the content of the standard form?

To investigate the problem arises because of the contract used in the current practice.

1. Is there any problem occurred because of the contents of the contract generally and the standard form particularly?

2. If yes, what and which area is the common problem arise?

To ask suggestions for improvement.

1. Do you think the standard form published by the Board of Quantity Surveyor, Malaysia need an improvement?

2. If yes, what are the necessary improvements? Should the clauses to be revised or to be added?



FACULTY OF CIVIL ENGINEERING
UNIVERSITI TEKNOLOGI MALAYSIA

RESEARCH SURVEY

COMPARISON OF CONSULTING CONTRACT

This questionnaire form consists of four sections:

Section A: Respondent's Particular

Section B: Standard Form Used

Section C: Opinion on the Standard Form

Section D: Problem in the Current Practice

Section E: Possible Solutions

RESEARCH OBJECTIVES

1. To investigate the limitation of the contract made between quantity surveyor consultant and the client
2. To propose changes in the clause of quantity surveyors consulting contract

STUDENT NAME : FARIAL HANUM NURUL 'AIN BTE KHALID

**COURSE : MASTER OF SCIENCE (CONSTRUCTION
MANAGEMENT)**

**CONTACT NO. : 012-7478280
013-7082255**

SECTION A : RESPONDENT'S PARTICULAR
--

1. What is your total year of working experience in theyears
construction industry

SECTION B : STANDARD FORM USED

What is the standard form your company usually use in the formation of Memorandum of Agreement with the client? (Please tick ALL option applicable)

1. Government project

- a) Standard form produced by Board of Quantity Malaysia (BQSM Form C)
- b) Standard form produced by Institute of Surveyors Malaysia (ISM)
- c) Standard form produce by client itself

2. Private project

- a) Standard form produced by Board of Quantity Malaysia (BQSM Form C)
- b) Standard form produced by Institute of Surveyors Malaysia (ISM)
- c) Standard form produce by client itself

SECTION C : OPINION ON THE STANDARD FORM

Please specify your level of agreement to the following statements. The scale of agreement is as in the table below:

LEVEL OF AGREEMENT				
1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

1. BQSM Form C

Please where applicable according to the appropriate scale.

	1	2	3	4	5
a) The content of BQSM Form C is easy to understand					
b) The wording and phrasing used in the BQSM Form C is easy to understand					
c) The contents/clauses of General Condition of Engagement part in BQSM Form C are sufficient					
d) The following clauses of General Condition of Engagement part in BQSM Form C are fair					
1) Duration of engagement					
2) Proprietary right of the government in documents					
3) Settlements of disputes					
4) Obligation of the consulting quantity surveyor					
5) Obligation of the government					
6) Types of services and payments					
e) The contents/clauses of Scale of Fees part in BQSM Form C are sufficient					
f) The fee calculation in BQSM Form C is satisfactorily					
g) BQSM Form C is suitable for project other than traditional procurement method					
h) Additional clauses in the BQSM Form C are needed for improvement					

2. ISM standard form

Please where applicable according to the appropriate scale.

	1	2	3	4	5
a) The content of ISM standard form is easy to understand					
b) The wording and phrasing used in the ISM standard form is easy to understand					
c) The contents/clauses of General Condition of Engagement part in ISM standard form are sufficient					
d) The following clauses of General Condition of Engagement part in ISM standard form are fair					
1) Duration of engagement					
2) Obligation of the consulting quantity surveyor					
3) Arrangements for additional professional services and fees					
4) Types of services and payments					
e) The contents/clauses of Scale of Fees part in ISM standard form are sufficient					
f) The fee calculation in ISM standard form is satisfactorily					
g) ISM standard form is suitable for project other than traditional procurement method					
h) Additional clauses in the ISM standard form are needed for improvement					

3. Client's standard form

Please where applicable according to the appropriate scale.

	1	2	3	4	5
a) The content of client's standard form is easy to understand					
b) The wording and phrasing used in the client's standard form is easy to understand					
b) The contents/clauses of General Condition of Engagement part in client's standard form are sufficient					
c) The contents of client's standard form are fair					
d) The contents/clauses of Scale of Fees part in client's standard form are sufficient					
e) The fee calculation in client's standard form is satisfactorily					
f) Client's standard form is suitable for project other than traditional procurement method					
g) Additional clauses in the client's standard form are needed for improvement					

SECTION D : PROBLEM IN THE CURRENT PRACTICE

Please where applicable according to the appropriate scale.

	1	2	3	4	5
a) Client did not follow the mode of payment as stated in the standard form					
b) The payment for double work did not included in the fees					
c) The contract did not specify clearly the scope of work for other than traditional procurement method					
d) There is no specific guideline or clause for compensation if the consultant commit professional negligence (e.g. fill in wrong quantity in the bill of quantity)					
e) Scale of fee for quantity surveyor much lower than other consultant					
f) Client always request changes in the content of the standard form produced by board or institute which more towards their benefit					

SECTION E : POSSIBLE SOLUTIONS

Please where applicable according to the appropriate scale.

	1	2	3	4	5
a) Board of Quantity Surveyor Malaysia and ISM need to produce new standard form for project other than traditional procurement method					
b) Board of Quantity Surveyor Malaysia and ISM need to introduce the minimum scale of fees for the private project					
c) Simplify the calculation of the fees					
d) Add new clause for the compensation of professional negligence commit by consultant					
e) Add new clause for cost of double work					
f) Enforcing the usage of BQSM Form C and standard form produced by ISM for government and private project					
g) The standard forms produced by board and institute are exclusive. Therefore the client can not request any changes in the contents of the standard forms					
h) Revise the scale of fee for quantity surveying consulting services					

