ADAPTATION OF ISTISNA'A AND IJARA'H INTO THE CONCEPTUALIZATION OF IPS IN THE MALAYSIA CONSTRUCTION INDUSTRY

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by

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LIST OF ABBREVIATIONS

BQSM Board of Quantity surveyors Malaysia

BOO Build own-operate

BOOT Build-own operate-transfer

BOT Built, Operate and Transfer

CR Cost Reimbursement

CIDB Construction Industry Development Board

CIMP Construction Industry Master Plan

D&B Design and Build

ECER Eastern Corridor Economic Region

ETP Economic Transformation Plan

FP Fixed Price

GDP Gross domestic product

GMP Guaranteed Maximum Price

IEM Institute Engineers Malaysia

IM Islamic Mu'amalat

IPS Islamic procurement system

NCER Northern Corridor Economic Region

NEM New Economic Model

NEP National Economic Policy

SJER South Johor Economic Corridor

SPSS Statistical Package for Social Sciences

PAM Pertubuhan Akitek Malaysia

PA Price in Advance

PWD Public Work Department

PMC Project Management Consultancy

PFI Private Finance Initiative

PMC Project Management Consultancy

PFI Private Finance Initiatives

PPP Public–private partnership

QA Quality Assurance

QC Quality Control

QS Quantity Survey

REHDA Real Estate Housing Developers Association

UK United Kingdom

USA United States of America

PENYESUAIAN ISTISNA'A DAN IJARA'H KE DALAM PEMBUATAN KONSEP IPS DALAM INDUSTRI PEMBINAAN MALAYSIA

ABSTRAK

Permintaan projek yang bertambah telah mendorong industri pembinaan Malaysia untuk menggunakan pelbagai jenis sistem pemerolehan seperti "Design and Build" dan "Project Management Consultancy". Bagaimanapun, kekurangan ketelusan, kualiti kemahiran yang rendah, risiko, pertikaian, kekurangan keupayaan dan masalah berkaitan pengurusan ialah antara beberapa halangan yang dikenal pasti mempunyai kaitan dengan sistem pemerolehan semasa yang digunakan di industri pembinaan Malaysia. Penyelidikan ini bagaimanapun dijalankan untuk menyediakan satu sistem pemerolehan Islam alternatif yang akan menangani masalah-masalah yang dikenalpasti. Maka, penyelidikan ini dilaksanakan bagi mencapai objektif berikut: Pertama, penyelidikan ini akan menilai penggunaan sistem-sistem pemerolehan yang diamalkan di industri pembinaan Malaysia; Kedua, mengenal pasti masalah utama dalam sistem pemerolehan yang diamalkan dalam industri pembinaan Malaysia; Ketiga, mengulas kemungkinan kebolehgunaan Istisna'a and Ijara'h dalam sistem pemerolehan pembinaan akan dijalankan; Keempat, satu sistem pemerolehan Islam dalam industri pembinaan Malaysia ditentukan; dan kelima, sistem pemerolehan Islam dalam industri pembinaan Malaysia dikonsepsikan. Dengan menggunakan pendekatan bercampur, sejumlah 800 soal selidik berstruktur telah diagihkan kepada syarikat-syarikat industri pembinaan di Semenanjung Malaysia dengan sejumlah 151 soal selidik yang siap dan sahih telah dipulangkan. Lanjutan, 10 temubual dijalankan untuk melengkapkan data kuantitatif. Penemuan

daripada penyelidikan mencadangkan bahawa kebanyakan sistem pemerolehan yang digunakan di industri pembinaan Malaysia ialah sistem perolehan tradisional. Kajian ini juga mendapati masalah utama yang dikaitkan dengan sistem pemerolehan semasa adalah pertikaian, kelebihan kos, serta masalah berkenaan pengurusan dan keupayaan. Kajian ini mencadangkan satu konsep sistem pemerolehan Islam dengan mengadaptasikan *Istisna'a* dan *Ijara'h* di industri pembinaan Malaysia.

ADAPTATION OF ISTISNA'A AND IJARA'H INTO THE CONCEPTUALIZATION OF IPS IN THE MALAYSIA CONSTRUCTION INDUSTRY

ABSTRACT

The increasing project demands have driven Malaysian construction industry to embrace various modern types of procurement system such as Design and Build and Project Management Consultancy. However, lack of transparency, low quality of workmanship, risk, dispute, lack of capability and management-related problems are some of the setbacks identified to be associated with the current procurement system used in the Malaysian construction industry. This research was therefore conducted to provide an alternative Islamic procurement system that would address the identified problems. Hence, this research is implemented to achieve the following objectives: first, this research will evaluate the usage of procurement systems practised in Malaysian construction industry; second, to identify the major problems in procurement systems practised in Malaysian construction industry were identified; third, the review on the applicability of *Istisna'a* and *Ijara'h* in construction procurement system were conducted; fourth, the need for an Islamic procurement system in Malaysian construction industry were determined; and fifth, the Islamic procurement system in Malaysian construction industry were conceptualised. By using a mixed method approach, 800 structured questionnaires were distributed to industry players of Malaysian construction industry in Peninsular Malaysia with 151 completed and valid questionnaires were returned. In addition, 10 interviews were conducted to complement the quantitative data. The findings of this

research suggest that the most used procurement system in Malaysian construction industry is the traditional procurement system. This study also found that the major problems associated with current procurement system are: dispute, cost overrun, as well as management and capability related problems. This study proposed Islamic procurement system with an adaptation of *Istisna'a* and *Ijara'h* in the Malaysia construction industry.

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

This chapter begins with the background of the study. Next, the chapter presents the issues that motivate this research to be conducted. Then, the research objectives are rendered together with research questions. Subsequently, the research scope is presented and followed by definitions of the key terms in this study. The organisation of the thesis and the chapter summary are presented at the end of the chapter.

The purpose of this thesis is to explore on alternative procurement system by addressing current problems that are lingering the present procurement system in the Malaysian construction industry. To achieve the main objective of the study, it is necessary to understand the types of the procurement system currently practiced in the industry and its associated problems. It is also necessary to understand the applicability, need and acceptance level of the Islamic procurement system proposed in this study.

Specifically, this study focused on the conceptualization of Islamic procurement system (IPS) suited with the construction industry in order to mitigate the problems associated with the procurement systems that are currently in practice. This chapter presents the definition of the procurement system, procurement contract, Islamic *Mu'amalat* (IM) contract and IPS as well. Thereafter, the contemporary scenario of construction industry development in Malaysia and procurement system is presented to shed light on the problem statement, research objectives and research questions accordingly. Finally, a number of key terms have been defined and the organisation of this thesis was supplied at the end of the chapter.

1.2 BACKGROUND OF THE STUDY

The existing procurement systems in many developing countries were inherited from their former colonial administrators, (Ofori, 2007; CIDB, 2009). Procurement systems still remain a major concern of the construction industry if the output of the industry is the main consideration. Perceived as a key to project success, a study on procurement is still receiving attention from the industry (Al Khalil, 2002). The term 'procurement system' refers to the type of contract, obligation, rights and responsibilities of the parties involved that may include clients, consultants and contractors (Ashworth, 1991). Hence, a careful consideration of all factors is important when selecting the type of procurement systems to be utilised in the beginning of the project (Rashid et al., 2006). Apparently, different types of procurement systems have diverse effects on time, quality and cost of the built project. Various changes within as well as demands of the industry will affect the productivity and efficiency of the entire supply chain industry, warrant to be tailored with careful selection of the procurement system to ensure proper project performance.

According to umpteen academia (e.g., Hashim et. al., 2006; Rashid, et. al., 2006; Adnan, 2008; CIOB report, 2010), procurement system can be categorised into three branches: traditional, design and build as well as management system. Further classification of management system comprises management contracting and construction management.

In relation to Islamic *Mu'amalat* contract for developing the Islamic procurement system, it is essential for this study to supply high-impact definition of procurement contract. While there are various definitions of procurement contract provided by

scholars, this study adopt the definition by Gould (1997), as an agreement between two or more parties that agree to provide goods and services. The person who requires the service is referred as the client while the service provider could be a contractor, supplier or consultant, depending on the services the vendor may provide. Several types of procurement contracts have been identified in the literature. They can be broadly categorised into two (Al Khalil, 2002), namely cost reimbursement (CR) and fixed price (FP). This research embraces this wide classification because it provides clear and comprehensive type of contracts under both groups.

According to several scholars (i.e., Bajari & Tadelis, (2001); Turner, (1990); Ferry, 1972), in CR contract, a contractor agrees that all expenditures on labour, materials, and others of the ilk will be shouldered by the client, aside of an agreed-upon fee that will be charged throughout the contact. The procurement system under this category entails management systems such as management contracting system and construction management system. CR is used in situations when measuring the approximate quantity of work was unsuitable because of the unusual nature of the project (Ferry, 1972; Turner, 1990; Al Khalil, 2002).

On the other hand, according to Bajari and Tadelis (2001), FP contract is defined as the action of buyers in offering a pre-specific price for completing the project to a seller upon the agreement. FP is used when the client or his representative has no control on the cost, detailed method, programming, and expenditures because the terms of the contract have been agreed upon in earlier. Examples of the system under this category are traditional, design, and build (Ferry, 1972; Turner, 1990; Al Khalil, 2002)

IM stems from Fiqh *Mu'amalat* (Islamic rules on transactions) as one dimension of Islamic law (*Sharia'h*). The rules and practices of IM contract came from the *Quran*, which is from *Allah*, the *Sunna'h* is from *Muhammad* s.a.w, and other sources of IM contract are opinions collectively agreed between *Sharia'h* scholars (*ijma'*), analogy (*qiyas*) and personal reasoning (*ijtihad*) (Wahbah Al-Zuhily, 2002). IM refers to contractual relationships, right and obligations between two or parties involved in contract or providing good and service or manufacturing, fabrication and construction (Rashid, 2008; Usmani, 2002; Wahbah Al-Zuhily, 2002; The *Majalla al-ahkam al-adaliyyah* from source: http://www.iiu.edu.my/)

There are three components of *sharia'h* or Islamic law: *al ahkam al-I'tiqqadiyyah* (component relating belief), *al-Ahkam al-Akhlaqiyyah* (component relating to moral and ethics), and *al-A'maliyyah* (component dealing with actions, verbal and relationships between persons), also known as *Fiqh* (Rashid, 2009). While, this research seeks to propose IPS, IM contract such as *Istisna'a* and *Ijara'h* relating construction which looks compatible with the present study of construction in proposing the IPS.

IM is not limited to construction industry alone; it has been applied to other industries such as construction finance, housing and infrastructure development, *mu'amalat* banking and insurance sector (Adelekan et al., 2013). There are diverse applications of IM. For example, the application of Islamic commercial dealings has been similarly applied in the banking, insurance and capital market in Malaysia. The achievement of Islamic banking such as *mu'amalat* bank in 1983 and the *Takaful* where it has been known as Islamic insurance in 1984, has led to the establishment of Islamic financial system in Malaysia (Rashid, 2009; Norman and Schmidt, 2007;

Billah, 2006; Qal'ahji, 2005). Subsequently, Islamic banking in Malaysia is the largest in Asia (the Edge Daily, December 2007) with assets accounting RM147 billion (US\$ 43.8 billion) as at the end of 2007 (Berita Harian, 30 January 2008).

According to numbers of researchers (e.g., Rashid, 2007; Norman & Schmidt, 2007; Billah, 2006; Qal'ahji, 2005; Wahbah A1-Zuhily, 2002; Al-Amine and Al-Bashir, 2001) IM has been identified into few categories, that are *Al-Mudaraba* (partnership), *Bai bithaman Ajil* (sale and purchase), *Murabaha'h* (sale and purchase), *Musharaka'h* (equity financing), *Salam* (advance purchase), *Muqawala'h* (*Ijara'h* and *Istisna'a*) which explains on manufacturing, construction and Takaful (Islamic insurance) segment. Each of these IM has their own purposes and usage, which will be explained in chapter 4.

This study centres on the concept and application of IM with specific focus on *Istisna'a* and *Ijara'h*. Therefore, two types of contracts under *Muqawala'h* namely *Istisna'a* and *Ijara'h* are presented accordingly (Resolution No. 129(14/3), 2003; Wahbah Al-Zuhily, 2002). *Istisna'a* is a contract whereby one of the contracting parties agrees to manufacture a product or perform stipulated works which is equalled to the payment promised by the other party (Resolution No. 129(14/3), 2003; Rashid, 2007; Qal'ahji, 2005; Wahbah Al-Zuhily, 2002). In other words, *Istisna'a* is the IM for financing construction or manufacturing projects such as apartment buildings, aircraft, ship building, etc. An important characteristic of *Istisna'a* is that both parties agree to finance the project's transaction in conformity with *Sharia'h* even when the subject matter of the deal or the product does not exist at the time of the contract. Another consequential feature is that payments can either

be paid at the time of transaction or later (Rashid, 2007; Qal'ahji, 2005; Al-Amine and Al-Bashir, 2001); Wahbah Al-Zuhily, 2002).

When the contractor advances only the work in a contract, *fiqh* scholars call this as an *Ijara'h* (lease or hiring) on the work (Resolution No. 129(14/3), 2003; Rashid, 2007; Qal'ahji, 2005; Wahbah Al-Zuhily, 2002). The term *Ijara'h* means "to give something on rent". From the viewpoint of the Islamic jurisprudence, the term "Ijara'h" means "to employ the services of someone on wages given to be paid as a consideration for his work". This type of *Ijara'h* deal between two parties as one of them will give service and other will give *ajra'a* to there who give work, so the service of that person is hired by someone else (Usmani, 2002; Wahbah Al-Zuhily, 2002).

1.3 CONSTRUCTION INDUSTRY AND PROCUREMENT SYSTEM DEVELOPMENT IN MALAYSIA

The construction industry is a significant contributor to the global economy. The products of this industry provide necessary public infrastructures and private physical structures for many daily activities such as services, commerce, utilities and other industries (Abdel-Wahab & Vogl, 2011; Yi & Chan, 2013). The industry is not only important for its finishing product, but it also employs a large number of people (directly and indirectly) that may put severe effects on the national economy during the actual construction process (Yi & Chan, 2013; Ofori, 2015). Similarly, Ngowi, (2002) and Kong, Glascock & Lu-Andrews, (2016) notes the strong relationship between the construction industry and economic growth, specifically in terms of the provision of capital infrastructure. The importance of the construction industry and its many significant contributions are also noted by many studies (Vogl and Abdel-

Wahab, 2014; Ofori, 2015). Particularly in terms of impacts on Gross Domestic Products, economic activities, government revenues, benefit of investment and nation-wide employments. (Ngowi, Pienaar, Talukhaba and Mbachu, 2005; Ofori, 2015).

The construction industry globally, is highly fragmented; therefore, the coming together of participants in the building process on an ad hoc basis has significant effect on project delivery and performance. Hence, the obvious separation of clients, main or general contractors and subcontractors requires an arrangement to procure the projects and establish authorities between the stakeholders for construction work to commence (Gruneberg and Hughes, 2006). Since Emerson's (1962) reports have been published, the need to implement procurement system in building process has heightened. Broadly, construction procurement systems are classified as traditional and non-traditional procurement systems (Harris & McCaffer, 2005).

The construction industry in Malaysia has been expanded since pre-independence days. After the independent in 1957, the development in Malaysia construction industry has gone through three important stages. First, the period before 1990s; second stage is in the 1990s which cover the period until before recession period of 1997/1998; and third, the period after recession period of 1997/1998. In general, the inflicted changes had affected the development of procurement systems in construction industry in Malaysia (Jaafar and Nuruddin, 2012).

The trend in development of the procurement system in Malaysia can be broadly divided into three stages: before the recession, during recession and after recession.

The first stage was the period when the industry enjoyed normal construction growth

before the 1990s. That was the period when the public sector dominates the demands to the industry in constructing new buildings and infrastructure facilities such as quarters, schools and roads. This development was also in line with the privatisation programme that was championed by the Malaysian government. In addition, the project implementation largely depends on traditional procurement systems inherited from the British.

The second stage started in the early 1990s until the recession period of 1997/1998 whereby the industry growth was the highest. During this period, the public sector through its technical department, the Public Work Department (PWD), could not handle the increasing number of projects in the public. Subsequently, new system of procurement, for example, Built, Operate and Transfer (BOT) and Design and Build (D&B) were introduced. Interestingly, these initiatives are similar to what had happened in other countries like United Kingdom (Davis, 1995) and United States of America (Tulacz, 2002; El Wardani et al., 2006; Hale et al., 2009) in order to achieve good project outcomes.

Third stage covers after the recession period of 1997/1998 until now. During this period, the public sector through its technical department, the Public Work Department (PWD), could not handle the increasing number of projects in the public. Subsequently, new system of procurement, for example, New procurement systems, such as Project Management Consultancy (PMC), According to Nitithamyong and Tan, (2007), in 2003, the Ministry of Works revealed that some public projects handled by a few PMC's were unable to be completed within the time scheduled and the worst effect of this system was the poor workmanship. Also during this period, the government is aggressively pursuing the status of developed nation that leads to

development of tactful Malaysia Plan (MP). During the announcement of the Ninth Malaysia Plan (9MP), the Construction Industry Master Plan (CIMP) was launched by CIDB in 2006 as an industry strategic plan with seven comprehensive thrusts to transform the industry to be a global player as well as innovative and knowledgeable solution provider. Due to the rapid growth of the construction industry in Malaysia and the introduction of procurement system that are new to the industry players, both the public and private sectors of the construction industry in Malaysia have to adapt to the various changes in the construction industry (Jaafar & Aziz, 2009). In the 9th Malaysia Plan, the government began to draw aggressive private-sector involvement in implementing public projects through private finance initiative (PFI) modalities. This effort was in tandem with the New Economic Model (NEM), which focuses on enabling the private sector to lead project developments. Following the launch of the 9MP, the government also announced the implementation of three regional economic corridors, namely, South Johor Economic Corridor (SJER), Northern Corridor Economic Region (NCER), and Eastern Corridor Economic Region (ECER). All of them comprise a significant element of PFIs as a funding mechanism for many development projects. For example, the total investment for ECER is RM 112 billion, of which 47% of the total cost will be financed by the private sector, including 27% via PFI. The NEM has been introduced to underpin the strategy to support the achievement of developed country status in 2020 with the private sector being the main engine of growth (Jaafar & Aziz, 2009).

Statistics from CIDB (2009) indicate that the private sector has been a significant contributor in creating demand to the industry with total project numbers of 3,906 (57%), worth RM 40.4 billion in 2009. As for 2010, the percentage ratio of the public and private project is 28:72 from the total number of 6344 projects valued at about

RM 75.6 billion. Under the Tenth Malaysia Plan (10MP) which covers 2011-2015, CIDB (2011) is expecting 3.7% growth per annum within that period. Besides the continuous implementation of high-value fiscal stimulus package projects, the demand for high-end residential properties help to further boost the performance of the industry.

According to CIDB (2013), the Malaysian construction industry has been playing a major role in the nation's growth. To be precise, it contributes about five to six per cent of the Malaysian GDP. In actual fact, its multiplying linkage to about 140 related sub-sectors, including many SMEs, sum up its contribution to 20 per cent of the national economy. Consequently, this scenario creates huge impact that may be critical to the health of Malaysian economy. The construction sector has also, been known for raising the standard of living and quality of life of the citizens. At the International Construction Week 2013 (ICW2013) held on 25 to 28 March 2013 at Kuala Lumpur, CIDB Chief Executive, Dato' Sri Ir Dr Judin Abd Karim notes that there has been a significant milestone in the Malaysian construction industry as the sector is experiencing a very robust growth, geared by development of umpteen projects under the government's Economic Transformation Plan (ETP) accompanied by soaring property market.

It is relatively true that procurement systems will continue to remain a major concern of the construction industry if the performance of the industry is the main consideration. Based on CIOB (2010), procurement system is an important issue in the construction industry since it is perceived as a key to achieve success in projects. Procurement systems can be grouped in two types of procurement contract: FP and CR. Several studies have been conducted on fixed price contract as it is the most

popular contract, being used in the Malaysian construction industry. Their findings pinpoint that the traditional system still dominates the industry, with the increasing use of D&B and turnkey contracts (Jaafar and Aziz, 2009; Jaafar, 2010). Additionally, the industry players also concur that the existence of stakeholders dispute and other related problems in each dominant system has affected the project outcomes. Besides that, the findings reveal that client sectors also highlighted supplementary problems on legalities, risk, capabilities of parties involved, delay, and costing that have hampered the progress of the industry.

1.4 PROBLEM STATEMENT

Ofori (2007), unveils few significant factors of procurement reform in the construction industry across the globe, such as the need to improve efficiency and considerable savings in Australian construction industry; enhance competitiveness, improve efficiency, effectiveness and value for money in the South African construction industry; improve a better value for money by reducing cost and develop capacity of contracting firms in Bangladesh construction industry. With specific reference to the procurement system in developing countries, Ofori (2007) identifies it as lacking in terms of guiding principles and best practice. For example, South Africa's procurement system has been associated with risk. Bureaucracy is another factor hindering the efficiency of the procurement system in developing countries. In Tanzania, inadequate laws for procurement works, absence statutory body to enforce the legal frame work and procedures are some factors that impede the efficiency in the procurement system. Thus, procurement system is one of the significant issues to be addressed in the construction industry across the world.

As applied to many British colonised countries, Malaysia also inherits the procurement practices from the colonial country (Jaafar and Aziz, 2009; Jaafar, 2010; Jaafar and Nuruddin, 2011). To meet the increasing project demand, Malaysia has adapted new procurement system from the west such as Design and Build and Project Management Consultancies. The practice of many procurement systems couples with the problems associated with the outputs of these procurement systems in 1990s such as project delay, cost overrun and quality-related problems have triggered researchers to identify the most efficient and effective procurement system (Jaafar and Aziz, 2009; Jaafar, 2010; Jaafar and Nuruddin, 2011). to emulate the steps taken by international researchers such as Love et al. (2008) and Coulson (2008) who examine on the sustainability issues in the procurement system.

Although there is no procurement systems being declared as the best option for certain projects (Love et al. 1998), Gordon (1994) observes that selecting the most appropriate procurement system for a particular project can save cost by 5% and may also contribute to project success. Therefore, Ashworth (1990) argues that to choose the right procurement system can be very difficult. In relation to this, few factors contributing to the complexity in selecting the right procurement system consist of changes in method of working, different construction techniques and the complexity roles played by professionals and contractors identified by Ashworth (1990).

Few recent studies (see Shu Hui et al., 2011; Othman et al., 2010) claim that the prevalent issues with the procurement system in the Malaysian construction industry are not due to the types or nature of the procurement system in practice, but largely caused by the behavioural-related factors among the industry players during the implementation process. For illustration, Shu Hui et al., (2011) examine the

procurement system in Malaysia with focusing on issues such as accountability, transparency, corruption, integrity and cronyism pertaining to the public procurement system where they found that there is an interference from outside parties while cronyism happens during the procurement process that further aggravated by ineffective system implementation. The effect of interference of project procurement can be viewed as non-transparency of procurement system in the Malaysian construction industry. In a related study, Othman et al., (2010) focus on the weaknesses in the prevalent procurement system in the Malaysian construction industry. The study seems to conclude similar result where the current procurement system used is associated with the risk of abuse, unethical manipulations and corruption practices.

To further underscore on the important issue of integrity and transparency in a procurement system among the construction industry players in Malaysia, Tan Sri Mohd Sidek bin Haji Hassan, who happened to be the Chief Secretary to the Government of Malaysia during the National Asset and Facility Management Convention 2007 held on 13th August, had stressed the need for integrity and transparency during the process of implementing any procurement system. According to Tan Sri Mohd Sidek bin Haji Hassan, "Integrity must be given in the way we work. Tied to this is the understanding of the larger long term consequences of a decision. A step in this direction will be in the form of increasing the level of transparency in the award and management of government procurement. This also calls for better coordination between the Government agencies and the private sector entities and services suppliers that have been awarded Government contracts".

Besides studies conducted by Shu Hui et al., (2011) and Othman et al. (2010), which called for an appropriate action to be taken by the Malaysian government, it is pertinent to note that no other study (as far as the researcher's concern) has suggested a particular solution to the issues relating to integrity, corruption and transparency in the procurement of projects in Malaysia. On a separate note, there are many research works have been done on Islamic principle in the construction industry especially on *shari'ah* compliant in construction (Abdullah, 2011; Lahsasna, 2008; Habib and Rashid, 2008) with scant attention has been directed towards conceptualizing the Islamic procurement system framework that could assist both clients and government to adopt an improvised system.

The procurement problem in the Malaysian construction industry needs a procurement system that really address the ethical practices of the players in a holistic way and as such the current research suggests the introduction of IPS by using *Istisna'a* or *Ijara'h* which has been in practice in some Middle East and North African countries as one of the means for addressing the problem (Zarqa, 1997; Adelekan et al, 2013). The Middle East most often employ the *Istisna'a* and *Ijara'h* structure, which is sometimes generally referred to as the procurement structure.

Istisna'a and Ijara'h have been applied in other sector in Malaysia such as banking, insurance and capital market, The contract applies between Islamic bank and contractor, or between client and bank mu'amalat (Rashid, 2009; Norman and Schmidt, 2007; Billah, 2006) However, Islamic mu'amalat such as Istisna'a and Ijara'h adaptation into relationships between parties in the procurement system have not thoroughly conducted in construction industry.

More interestingly, the need for IPS in the Malaysian construction industry is an important reason for the conduct of this research. In response to the need for IPS, this research seeks to provide a concept model for IPS to be implemented in the Malaysian construction industry. In sum, the need for the IPS concept model in addition to the other research objectives in this research is to address the non ethical related problem (such as Legal, risk, management, cost, quality, capability, time, operation, dispute) and ethical related problems (such as lack of integrity, transparency) associated with current procurement practiced in the Malaysian construction industry (Rashid and Adnan, 2008; Bowen et al., 1997; Ofori, 2007; Ling and Poh, 2008; Yu et al., 2005; Alhazmi et al., 2000; Lam et al., 2008; Smith et al., 2004 and Walker, 2002).

Istisna'a and Ijara'h are two components of sharia'h compliant to make or produce something of which the subject matter is clearly specified and the terms of payment agreed at the onset. This form of Istisna'a and Ijara'h is mentioned in numerous verses of Qur'an such as (Al-Ra'd:20; Al-Maida: 1 and Al-Jumu'a:9) where Muslims are commanded to conduct and practice ethical working cultures and to refrain themselves from unethical and forbidden practices. Furthermore, Prophet Muhammad S.A.W. also had demonstrated numerous examples of working cultures and ethical business transactions. This was exactly followed by his close companions (Billah, 2006; Rashid, 2008).

This study, therefore, seeks to fill the gap identified in the literature by analysing the present procurement system in the Malaysian construction industry and propose an IPS with the adaption of *Istisna'a* and *Ijara'h* as an alternative method that could minimise the procurement-related problems. Moreover, the research will also

complement the literature and provide a conceptual model that could be useful to industry.

1.5 RESEARCH QUESTIONS

The present study is sought to provide answers to the following research questions as summarised below:

- 1. What are the existing practices of procurement system in Malaysian construction industry?
- 2. What are the major problems associated with the existing procurement systems practices in Malaysian construction industry?
- 3. What is the applicability of *Istisna'a* and *Ijara'h* in construction industry?
- 4. What initiates the need for IPS in Malaysian construction industry?
- 5. What is an alternative IPS proposed for the Malaysian construction industry?

1.6 RESEARCH AIM AND OBJECTIVES

The main aim of this study is to evaluate the procurement system in the Malaysian construction industry and conceptualise the adoption of *Istisna'a* and *Ijara'h* in IPS. The specific objectives of the study are:

- To assess the existing procurement system practiced in Malaysian construction industry.
- 2. To identify the major problems in procurement system practiced in Malaysian construction industry.
- 3. To review the applicability of *Istisna'a* and *Ijara'h* in construction procurement system.

- 4. To determine the need for IPS in Malaysian construction industry.
- 5. To concept model of the IPS in Malaysian construction industry.

1.7 SIGNIFICANT OF STUDY

This study provides the following significance.

First, assessing the existing procurement system practiced in Malaysian construction industry will provide the insight to stakeholders about the type of procurement system that is of interest among the industry players. This will also complement the existing literature on procurement in the Malaysian construction industry.

Second, identify the major problems in procurement system practiced in Malaysian construction industry will provide a better understanding on the types and nature of problems associated with the procurement system currently in practice in the Malaysian construction industry. In addition, this study will complements the existing literature on the prolems associated with procurement in Malaysian construction industry.

Third, reviewing the applicability of *Istisna'a* and *Ijara'h* in construction procurement system provides a better understanding on the possibility of Islamic procurement system in the Malaysian construction industry.

Forth, determining the need for IPS in Malaysian construction industry will provide a better understanding on the need for an Islamic procurement system among the industry players. This will also complement the existing literature on what the players want in relation to Islamic procurement system

Fifth, conceptualisation of the IPS in Malaysian construction industry presents the framework that depicts the linkage between the Islamic procurement system (*Istisna'a* and *Ijara'h*) and where they fit into the conventional procurement system.

1.8 SCOPE OF RESEARCH

This study is based on the research perspective as a guide for selection of procurement system. First, this research is on Malaysian construction industry with focus on procurement system, procurement contract and IM. The procurement examined in this research will concentrate on FP and CR. The types of IM examined in this study are *Istisna'a* and *Ijara'h* only.

The IM in general is an overview of different types of contracts mechanism. Each one of them have their mechanism is suitable for project, It is important to understand that, in this study will select *Istisna'a* and *Ijara'h*. A major scope of this study relates to the application of *Istisna'a* and *Ijara'h* contracts in the construction management system only. This study provides a platform for future research that will examine the applicability of *Istisna'a* and *Ijara'h* on other types of procurement system.

1.9 DEFINITIONS OF THE KEY TERMS

Procurement system: It has been defined as an agreement between two or more parties that agree to provide goods or services. The term procurement system refers to the type of contract, obligation, rights and responsibilities of the parties involved - including clients, consultants and contractors (Ashworth, 1991).

Construction industry: Construction industry work covers work on new or existing commercial, industrial or domestic buildings or structures (Kamal et al., 2012).

Islamic procurement system: IPS is defined as the relationship between parties involved in managing all the processes of construction to achieve successful project within predetermined budget, quality and time by using IM such as Istisna'a and Ijara'h till completion while meeting all requirements and satisfactions of all parties including client of the project.

Istisna'a: Arab scholars (i.e., Al-Amine & Al-Bashir, 2001; Zarqa, 1997) pronounce *Istisna'a* as a contract where one party agrees to manufacture a particular asset within agreeable specification to be delivered at an agreed time for an agreed price, constructed with an obligation on the part of the manufacturer or contractor to deliver them to the client upon completion.

Ijara'h: Usmani, (2002) and Zarqa, (1997) classify the term *Ijara'h* means as an action to utilise the services of certain parties with stipulated payment for the hired services.

1.10 THESIS ORGANISATION

This thesis is divided into seven chapters, and they are described as below:

1.10.1 Chapter One: Introduction

This chapter presents the overall introductory view of the research. It examines the background of research problems where the aims and objectives of the research are formulated based on the area of study along with designed research questions. This chapter also describes the scope toward the preparation of the research process. The

research background, problem statement and objectives of the research undertaken are further discussed as well. It also provides detailed descriptions of the key terms used in this research and organisation of the thesis.

1.10.2 Chapter Two: Procurement in Construction Industry

The concept of procurement is discussed profoundly in which the various terminologies used in the construction industry are presented. Thereafter, the definitions of the term procurement provided by scholars are rendered. Next, the concept of procurement system is narrowed down towards the building of procurement system. At this stage, procurement contract will be discussed. Procurement contract is categorised into two: fixed price and cost reimbursement. Fixed price consists of traditional, and Design & Build while cost reimbursement consist of construction management and management contracting. Subsequently, the usage of procurement is discussed within the scope of Malaysian construction industry before presenting the problems associated with procurement system which focus on traditional, Design & Build and management oriented procurement system.

1.10.3 Chapter Three: Shari'ah Complaint in Procurement System

This chapter reviews the relevant hypothesis of theory of obligation (al-mithaq) and the literature on *Shari'ah*, concept of *Shari'ah*-compliant, *Shari'ah*-compliant in Malaysian construction industry, Islamic *mu'amalat* contract principles and contracts, Islamic procurement system, *Istisna'a* contract, *Ijara'h* contract as well as highlighting common features between procurement contract and Islamic *mu'amalat* contract. It also provides gap of research in detail and framework of Islamic procurement system.

1.10.4 Chapter Four: Methodology

This chapter presents the structure of research methodology. Research design with focus on mixed method is rendered. Pilot test, validity and reliability of data used in this research will be determined. The population and sampling, response rate and method of data analyses are presented. Since the study is mainly descriptive in nature, the combination method of quantitative design and qualitative approach to gather as much information as possible and gain better understanding of the subject will be supplied.

1.10.5 Chapter Five: Analyses and Findings

This chapter discovers the information on the background of respondents based on their education, area of specialisation, position in company, working experience and company's details with focus on value of project executed. Next, the procurement system mostly used in Malaysian construction industry is identified. After that, the problems associated with procurement system in Malaysian construction industry is also recognised. The output of reliability test is discussed accordingly. Finally, the chapter also present the findings derived from the interviews conducted to obtain qualitative data.

1.10.6 Chapter Six: Discussion

This chapter elaborates the discussion on the findings of this research. The chapter dwells on the demographic features of the respondents. Furthermore, the chapter discusses the findings in relation to all research objectives including the most procurement system in use and the common problems associated with the existing procurement system in practice. Finally, the major attributes of the proposed Islamic

Procurement system. It is hope that this strategy will minimize the entire problem associated with procurement systems in Malaysia.

1.10.7 Chapter Seven: Conclusion and recommendations

This chapter is an amalgamation of policy implication and recommendation to draw the final conclusion from the present study and construct suggestions and proposal for Malaysian government to be further justified in the future research. In addition, it will offer novel contributions to body of knowledge and practice of current industry affairs.

1.11 SUMMARY

The overall aim of this research is to provide an alternative IPS that will address the identified major problems in parallel with the current procurement system practiced in the construction industry. This research, therefore, set five objectives to be achieved. To that extent, the research gap and current issues on the procurement system were identified in order to develop the research questions and establish research scope. Research questions be answered at the end of the research was developed and the research scope established. The key terms of this research were defined and the organisation of the thesis was presented accordingly. Finally, the structure of study was rendered.

CHAPTER TWO: PROCUREMENT IN CONSTRUCTION INDUSTRY

2.1 INTRODUCTION

This chapter begins with the definition of procurement, followed by procurement systems and procurement contracts. Next, the categorisations of procurement systems are presented and followed by an explanation on the procurement used in the global construction industry. Subsequently, the usage of procurement systems in Malaysia is presented. Then, the problems associated with procurement systems and dimensions of the problems associated with the procurement system are also delivered. The chapter summary is presented at the end.

2.2 BACKGROUND OF PROCUREMENT

Procurement system is a broad terminology which is widely used in the construction industry (Morledge, 1997; Rowlinson, 1997). Procurement is an important aspect of project delivery involving different parties in the construction industry. It is the process where properties and services are obtained by planning the acquisition route upon reviewing wants; deciding the appropriate means of choosing a contractor; distributing, retrieving and analysing the tender; awarding the project and its subsequent execution; post completion and handing over. In order to achieve project efficiency, the entire process ought to have an effective organisational structure and management procedure (Masterman, 1992).

Thus, this chapter will view on the definition and the usage of these terminologies that are procurement, procurement systems, procurement contracts and Islamic *Mu'amalat* contract. This flow is important to ensure the understanding of ideas in

providing the platform to explore the procurement system problems and try to match it with the procurement contract and Islamic *Mu'amalat* Contract.

2.3 THE DEFINITION OF PROCUREMENT

The term "procurement" in its modern context has been defined in various approaches and styles by different writers, professionals and researchers (Morledge, 1997; Rowlinson, 1997 and Rashid, 2002). This is inextricably surprising as the term itself is used in a wide range of industries and in different contexts including commerce, agriculture, defence and construction. It is important to reach a clear definition of the term 'procurement' and in order to arrive at a reasonable understanding of the term, one has to clearly identify the context of its use (Rashid, 2002). The present study refers to "procurement" in the context of construction industry.

Literally, the word procure means to obtain, acquire or buy (McGraw-Hill, 1984). This is also substantially demonstrated in Rashid et al. (2006) who state that the term procurement was derived from the word 'procure' which literally means 'to obtain', 'to bring about', or 'to acquire'. According to the authors, system brings the definition of 'organised method, technique, approach, process or procedure'.

Procurement in general is usually adopted by companies and government bodies as a purchasing program since government needs procurement to provide infrastructural services. The program entails a complete trading activity by means of obtaining goods and services from vendors. Normally, the details and specification of goods or service a company or government body (buyer or agency) wish to acquire will be sent as a request for proposals from potential bidders. Upon receiving responses from