

**EXPLORE THE CAUSES AND ISSUES OF UNETHICAL BEHAVIOUR IN
THE MALAYSIAN CONSTRUCTION INDUSTRY**

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**A project report submitted in partial fulfilment of the
requirements for the award of Bachelor of Science
(Hons.) Quantity Surveying**

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April 2019

DECLARATION

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at UTAR or other institutions.

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APPROVAL FOR SUBMISSION

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ABSTRACT

Corruption in construction industry comes at a huge price to government, industry and citizens. It leads to massive hidden costs on the environment, jobs and lives. Other than corruption, the unethical issues included fraud, bribery, collusive tendering, dishonest and unfair conduct and professional negligence. This research explores unethical issues in the Malaysian construction industry and to uncover the causes of these unethical issues. The research included a review of published literature in order to develop interview guide and questionnaire for field data collection. A semi-structured preliminary interview was conducted with 15 construction industry practitioners to explore the unreported unethical issues in the published literature. It also serves as a triangulation of the known facts of unethical issues. The questionnaire survey aimed to investigate the causes of unethical issues in Malaysian construction industry empirically. 500 questionnaires were sent to stakeholders of the Malaysian construction industry such as consultant, contractors, subcontractors, property developer, construction building material suppliers, plant and equipment suppliers in Klang Valley, Malaysia. A total of 192 questionnaires were returned. Data collected were analysed statistically in order to infer the results before it could be generalised and added to the body of knowledge on causes and issues of unethical behaviours in the construction industry. This research concluded that contractors, top management, fresh graduates and senior level perceived significantly that acceptance of meal treats, gift and cash to maintain long term relationship were the forms of corruption and bribery. The senior level, top management and members of the professional body's membership perceived that they are taking ethics seriously in their daily deals. This research recommended the measures to pre-empt the unethical issues in the Malaysian construction industry.

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LIST OF SYMBOLS / ABBREVIATIONS

| | |
|---------|--|
| 1MDB | 1Malaysia Development Berhad |
| APM | Association for Project Management |
| BQSM | Board of Quantity Surveyor |
| CIDB | Construction Industry Development Board |
| CPD | Continuing Professional Development |
| FELDA | Federal Land Development Authority |
| GPS | Global Positioning System |
| IBE | Institute of Business Ethics |
| JDCTC | Jingan District Construction and Traffic Committee |
| MACC | Malaysian Anti-Corruption Commission |
| MARA | Majlis Amanah Rakyat |
| PCAW | Public Concern at Work |
| PMI | Project Management Institute |
| QLASSIC | Quality Assessment System in Construction |
| RICS | Royal Institute Chartered Surveyor |
| SJCD | Shanghai Jiayi Construction and Decoration Co. Ltd |
| TI | Transparency Index |
| UK | United Kingdom |
| US | United States |

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CHAPTER 1

INTRODUCTION

1.1 Research Background

The construction projects involve complex procurement choices and production processes. It demands managing and coordinating a huge amount of activities, involves a wide range of resources. There is a great potential for unethical issues to happen and bring direct effect on the lives of human being, the value of human life. Therefore, the industry requires nothing but the highest morality to deal with (Ehsan, Anwar and Talha, 2009). Jones (1991) defined ethical issue is an issue that is both morally and legally acceptable by the large community. Contrariwise, unethical issue is an issue that is both illegally and morally unacceptable by the large community. For example, corruption costs people lives (Shan, et al., 2016). Little erosions of ethical decision making could make the big contraventions possible. Various researches have shown that most unethical practice in the construction industry takes the form of misconduct and unethical practices such as money laundering, professional negligence, manipulation of payment games, inappropriate of code of ethics, corruption, fraud and bribery (Ho, 2011; Ehsan, et al., 2019; Olatunji, et al., 2016). However, there were not many relevant studies in Malaysia. Hence, this research seeks to explore the unethical issues in the construction industry of this country.

1.2 Problem Statement

Construction industry is the most corrupt sector around the world (Transparency International, 2011) as it provides authorities excessive amounts of power over rules, regulations indirectly increase the risk and causes the override of safety or quality assurances, thus creating potential for underlying physical harms to the citizens (Center For Strategies and International Studies, 2014). These unethical issues hamper the growth of economy and threaten the integrity of markets whether in developing or developed countries. It can take many shapes and forms in the industry with issues of manipulation of payment, bribery to obtain planning permission, overstating of budgets, and under-pricing of tender in order to win, collusion to share and divide the market. It is unsurprising that even with this repertoire of unethical cases, unethical issues continue to be hard to define and that remains prevalent.

Construction industry is unique as the complex nature of construction projects include myriad organisations, professions, stakeholders and labours enable every project to be delivered on budget, on schedule as well as free from hazard events (Murray, et al., 2013). At the same time, the highly competitive nature of construction project also provides unethical issues to happen. Hamimah (2011) argued that there is no exception in the Malaysian construction industry as well. The mega scandals are plenty published in the media namely 1Malaysia Development Berhad (1MDB), Federal Land Development Authority (FELDA), Majlis Amanah Rakyat (MARA), Sabah Water Department, SRC International and Tabung Haji (GIACC, 2019). Much researches about unethical issues have been carried out in other countries, including United Kingdom (UK) (Sohail and Cavil, 2006), (Mohamad and Aziz, 2009) and (CIOB, 2013), South African (Bowen, et al., 2007), Australia (Vee and Skitmore, 2003) and Hong Kong (Fan and Fox, 2005). The earlier researches have uncovered inducers and variables to define the consequences of unethical issues in the public procurement sector (Bowen, et al., 2007, Shan, et al., 2016; Abdul-Rahman, Chen and Yap, 2010), however, there are lack of similar studies found in Malaysia. What are the existing unethical issues in construction industry? What are the causes of such unethical issues? What are the perceptions of unethical issues faced by different construction industry practitioners in Malaysia? These are the research questions that this study intends to answer.

1.3 Research Aim

The aim of this study is to explore the existing unethical issues in the Malaysian construction industry.

1.4 Research Objectives

The objectives of this research are:

- (i) To identify the existing unethical issues in the Malaysia construction industry.
- (ii) To uncover the causes of unethical issues in the Malaysian construction industry.
- (iii) To recommend measures to deal with most of the unethical issues.

1.5 Research Methodology

Past researches are reviewed after the research problem is identified. After clarifying the research problem, mixed method research design is adopted which include qualitative and quantitative research. Interview and questionnaire survey are the instruments use to collect data. Data are analysed. The results obtained are reported and discussed. Inferences will be drawn from the interpretation.

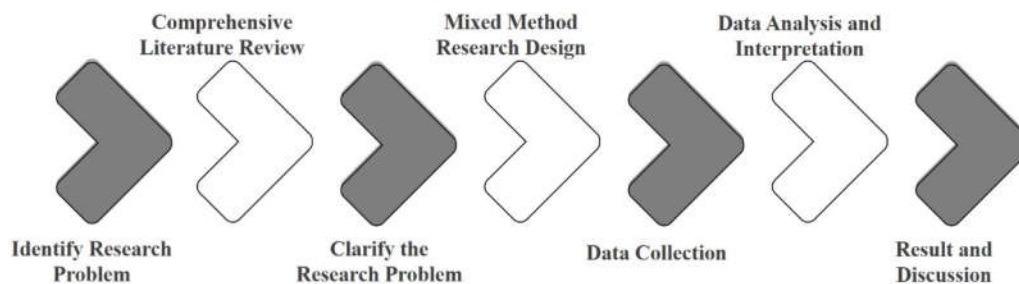


Figure 1.1: Research Methodology Flow Chart (Source: Cooper and Schindler, 2014)

1.6 Scope of Research

This research aims to achieve the aim and objectives by focusing on all the stakeholders of the Malaysian construction industry such as consultant, contractors, subcontractors, property developer, construction building material suppliers, plant and equipment suppliers in Klang Valley, Malaysia. They are the targeted respondents because of their majority representation in part of this industry. Apart from that, this research was conducted in Klang Valley only due to the rapid growth in population and construction projects in Klang Valley involved mixed development projects, residential projects, infrastructure projects are the potential sampling.

1.7 Report Structure

Chapter 1 provides general idea of the research which includes background and problem statement. Research aim and objectives of this research are expounded as well as research methodology, scope of research and report structure.

Chapter 2 includes a comprehensive literature review of this research. It defines the literature on the definition of ethics, ethics in construction industry, unethical issues in construction industry, overcome measures to deal with most of the unethical issues.

Chapter 3 includes mixed method research design methodology by conducting interview and questionnaire survey for data collection.

Chapter 4 will analyse the data that are collected from target respondents. The data are interview results and questionnaire survey results. The final results of the data will then be interpreted and tested by various tests.

In Chapter 5, it comes to a conclusion of the study by summarising the findings. Achievement of objectives are discussed. Research contribution, limitations and recommendations are to be expounded in this chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter includes topics of ethics in Section 2.2 whereas discusses ethics in construction industry in Section 2.3. Section 2.4 discusses unethical issues in construction industry. Meanwhile, Section 2.5 and Section 2.6 includes overcome measures to deal with the unethical issues and theoretical framework respectively.

2.2 Ethics

Ethics is a term derived from Ancient Greek, *ethos*, has the meaning of habit and is also called moral philosophy concerned with what is morally good or right in human interaction. According to this philosopher, ethics is the central questions to ask “what is the best way to live” and “what actions are right or wrong in that particular situations?” It is often used interchangeably with morality. Also, ethics is the conduct of ethical values such as integrity, candour, honesty, broad-mindedness to business behaviour. While business ethics refers to the way business is done. It concerned discretionary decisions that professionals and organisation make in the day-to-day practise they face (Association for Project Management, 2019).

According to Holme (2008), ethics can be governed if want to. However, it is said that professionals have specialist skills and knowledge, how they utilise such is governed by code of ethics. PwC Fraud Academy defines code of ethics as the decisions, procedures and systems of an organisation are guided by principles, standards, values or rules of behaviour in a way that respects the rights of all constituents affected by its operations and contributes to the welfare of its key stakeholders. Institute of Business Ethics (IBE) Framework explains that code of ethics is a Global Positioning System (GPS) which helps professionals to navigate the ethical dilemmas in the workplace.

Most of professional bodies have their respective code of ethics to guide their members in good ethical practices (Abdul-Rahman, Chen and Yap, 2010). There are professional ethics used by professions to show how they should behave regardless position within the organisation in their day-to-day practise (Amin, et al., 2014). The

Project Management Institute (PMI) in the United States (US) has a code of ethics that drive ethical conduct for the project management profession. PMI has determined that honesty, responsibility, respect and fairness are the standards of conduct. The purpose of the code is to assist an individual to become a better professional and inculcate their confidence.

2.3 Ethics in Construction Industry

In construction industry, ethics has developed both at a professional and organisation level. Professions like project managers, architects, engineers, quantity surveyors are required to have high level of ethics standard, just as to have high level of professional standard (APM, 2017). However, in organisation level, all staffs must be urged to follow organisational code of ethics (Olatunji, Oke and Aghimien, 2016). The upholding of ethical acumen is not only an essential personal skill but also an important business skill. Ethical behaviour differentiates professionals from others in the business environment (RICS, 2018). Thus, code of ethics is important for instilling professions' discipline by helping out to make clear what an association wants and expectations on its employees (Sakyi and Bawole, 2009). For instance, Royal Institute Chartered Surveyor (RICS) has a set of standards as a guide for members in their workplace. All surveyor members must act with integrity, take responsibility, reliance, and being respectful. How the professionals executed their obligations and responsibilities of members towards their peers, superiors, clients and general public are according to these code of ethics (Paul, Robert and Akintola, 2007). Board of Quantity Surveyors Malaysia (BQSM) has its QS Act and Rules for member to ensure good practice in surveying. Apart from that, contractors are urged to be honest in carrying out duties, to comply with the laws and regulations, respect for each other; however, contractors should be aware of importance of quality, skills and standards, safety and health as well as environmental preservation (CIDB, 2017).

2.4 Unethical Issues in Construction Industry

Construction industry practitioners are brought together for a specific construction project and then they are disbanded after the completion of project (Helen, 2017). However, complexity involvement of many aspects and institutions which are commonly lead to unethical issues such as bribery, fraud, manipulation of bidding,

cover pricing, tenderers' overstatement of qualifications to assure works, lack of safety ethics, offering entertainment, personal gifts (Ernst and Young, 2014).

There are 18 causes of unethical issues in construction industry identified from the researchers in the past as shown in Table 2.1.

Table 2.1: Causes of Unethical Issues in Construction Industry

| Item | Unethical Issues | Sources |
|------|--|---|
| 1 | Collusive tendering | Vee and Skitmore (2003), Shan, et al. (2016), Azhar, et al. (2011), Ehsan, et al. (2009), CIOB (2013), Ray, et al. (2010), Adnan, et al. (2012) |
| 2 | Unfair treatment to contractors in tender/final account negotiations | Vee and Skitmore (2003), Tabish and Jha (2011), Ehsan, et al. (2009) |
| 3 | Unfair treatment to clients in tender/final account negotiations | Vee and Skitmore (2003), Tabish and Jha (2011), Ehsan, et al. (2009) |
| 4 | Under-pricing of tender | Vee and Skitmore (2003), Shan, et al. (2016), Azhar, et al. (2011) |
| 5 | Over-pricing of work done | Vee and Skitmore (2003), Shan, et al. (2016), Azhar, et al. (2011) |
| 6 | Overstatement of capacity and qualifications to secure work | Ogbu and Asuquo (2018) |
| 7 | Late interim payment to main contractors or subcontractors | Azhar, et al. (2011), Bowen, et al. (2007) |
| 8 | Acceptance of meal treats to maintain long term relationship | Vee and Skitmore (2003), Azhar, et al. (2011), Al-sweity (2013), CIOB (2013), Sohail and Cavill (2006) |
| 9 | Acceptance of cash to maintain long term relationship | Vee and Skitmore (2003), Azhar, et al. (2011), Al-sweity (2013), CIOB (2013), Sohail and Cavill (2006) |
| 10 | Acceptance of gifts to maintain long term relationship | Vee and Skitmore (2003), Azhar, et al. (2011), Al-sweity (2013), CIOB (2013), Sohail and Cavill (2006) |

Table 2.1 (Continued)

| | | |
|----|---|--|
| 11 | Project design ignored sustainability requirement | Bowen, et al. (2007), Sohail and Cavill (2006) |
| 12 | Project execution ignored sustainability requirement | Bowen, et al. (2007), Sohail and Cavill (2006) |
| 13 | Lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals | Vee and Skitmore (2003), Azhar, et al. (2011), Bowen, et al. (2007) |
| 14 | Incomplete or ambiguous documentation issue | Azhar, et al. (2011), Rumaizah, et al. (2012), Hassim, et al. (2010), Ogbu and Asuquo (2018) |
| 15 | Fraudulence in document preparation | Rumaizah, et al. (2012), Hassim, et al. (2010) |
| 16 | Lack of empathy in daily deals | Vee and Skitmore (2003), Adnan, et al. (2012) |
| 17 | Opportunistic tendency is high | Bowen, et al. (2007) |
| 18 | Lack of transparency in transaction | Rumaizah, et al. (2012), Hassim, et al. (2010) |

The 18 unethical issues are grouped into the following six categories of causes for details discussion.

2.4.1 Collusive Tendering

Studies showed that collusive tendering occurs when a number of tenderers have been invited to tender, they agreed between themselves either tender in such a manner as not to be competitive or not to tender in order the particular tenderer able to get the award (Ray, et al., 2010). Collusion is to cheat or deceive people with conspiracy or cooperation secretly or illegally (CIOB, 2013). The collusive tendering dilemma happened in the construction industry including cover pricing, bid-cutting, under bidding hidden fees and commissions, compensation of tendering costs, bid withdrawal and non-confirming bids (Australian Competition and Consumer Commission, n.d.). The dilemmas are likely to occur when there are few qualified competitors in the bidding, and when access to the market is difficult due to high entry costs and requirement or restrictive legislation.

There was evidence proved that construction firms colluded when bidding for tenders in the run-up to the 2010 football World Cup by allocating among firms and agreeing on targeted profit margin (BBC News, 2014). A power cable supplier from South Africa admitted to collusive tendering through cover prices with competitors for

tender submission (Anon, 2019). From 2000 to 2003, small local construction firms in South East Asia were founded rigged bidding in infrastructure works in collusion with the government and civil servants (International Anti-Corruption Resource Center, 2019). General Manager of Shanghai Jiayi Construction and Decoration Co. Ltd (SJCD) has been uncovered colluded with chief director of Jingan District Construction and Traffic Committee (JDCTC) for renovated energy saving tender (Shah and Alotaibi, 2017).

Collusive tendering leads to uncompetitive tendering process that could results unwanted costs or degraded quality that are eventually paid by citizens (Australian Competition and Consumer Commission, n.d.). However, 20 % out of 701 respondents in a report exploring corruption in the UK construction industry feel that cover pricing is not an unethical issue, it is undertaken out of necessity because contractors think it is the only way to maintain position on the list and secure for future opportunities (CIOB, 2013).

2.4.2 Corruption

Corruption costs lives in term of freedom, money or safety. It can affect project quality, resulting in cut corners and failure to meet safety requirement which as witnessed by the many deaths from earthquakes in highly corrupt countries (Ambraseys, et al., 2011). Malaysian Anti-Corruption Commission (MACC) defined corruption is the act of giving or receiving of any entertainment or gift in term of cash or in kind of high value for accomplishing a task in relation to someone's job. In other words, corruption happened is to influence someone's decision. It is the abuse of entrusted power for private purpose.

According to Adnan, et al. (2012), corruption has long existed in the construction industry where has become a norm and culture to offer money under-the-counter to secure construction projects. It is undeniable that contractors willing to offer under-the-counter-money in order not to lose out in the business. Report of Transparency International showed that Malaysia is in the rank of 62th in the Bribe Payers Index in the year 2017 compared to its 55th ranking in 2016 (The Straits Times, 2018). It was the country's lowest position. The survey then revealed that Malaysia was ranked from 62th to 61st over 180 countries in the year 2018.

Corruption happened because the process of securing a project is not clear-cut and lack of transparency in transaction (CIOB, 2013). Transparency is defined as neutral and lack of hidden objectives while providing all the information required for collaboration, collective decision making and cooperation (Experts Exchange, 2012). In other words, transparency means that rules and regulation are followed in the manner that decisions are made and enforcement is done (Lim, 2010). However, the ability to oversee various information such as cost and resources in construction industry is not transparent and was difficult to check and trace projects from the early stage to handover (Rumaizah, et al., 2012).

Based on CIOB exploring corruption in the UK construction industry report, 49 % out of 701 respondents in a report agreed that corruption was a common unethical issue in the UK. Developing economies around the world distorted efficiency of resource allocation because of the illegality of corruption. Flagship projects in Malaysia have been uncovered evidence of grand corruption who involved former top country leader (TI, 2018). It was unclear where the monies have gone. However, public procurement should be conducted in open tendering. Result has proven that RM500 million has been saved by the Ministry of Finance Malaysia in open tender for the sale of the Malaysian consulate building in Hong Kong (New Straits Times, 2019).

Late interim payment accelerates small-medium size contractors to engage in corruption to survive (Azhar, et al., 2011). Delays in payment are one of the serious causes that force many contractors out of business. A payment which mean a major amount of monies required to pay for human resources, materials, plant and machinery, general overheads and expenses and preliminaries during construction period (Odeyinka and Yusif, 1998). Late interim payment would affect industry players in construction industry by causing critical cash flow problems to both main contractors and subcontractors. It eventually has an irresistible knock-on effect on the contractual payment chain.

According to Samuel (2011), the problems of late interim payment by employers are not only happened in a developing country as in the case of Malaysia but also in developed countries such as Hong Kong, Australia and United Kingdom. Report stated that delays in interim payment in the Malaysian construction industry has continue to worsen (Mohamad. N, et al., 2015).

The risk of late interim payment could be adversarial and may eventually lead to insolvency of company. Contractors depend highly on regular interim payments from employers to help out cash flow to pay finance charges such as interest. Late payment received would affect contractors to lose or increase cost in procurement of labours, materials and plant and machinery. To solve financial difficulties, contractors tend to behave unethically to act as exchange hands such as bribery, gift and hospitality (Harvard Business School, 2012).

2.4.3 Bribery

Bribery is a behaviour of promising, offering, giving, accepting or soliciting of a benefit as a bribe for an illegal or unethical action or breach of trust (Vee and Skitmore, 2003). The bribe or inducement can take the form of cash, gifts, donations, rewards or services. It is understandable that gifts giving and receiving are part of normal business practice in all areas of life in some significant relationships as well as in dealing with political agents, for instance a meal out with a business person and supplier can build a relationship; a pen with company's logo on it reminds a customer when quotation is needed. According to Institute of Business Ethics, it may be a bribe if the gift given is to influence decision. There is always an expectation that business relationship would be influenced with the intention of closing the deal by gift giving and hospitality while at any point in the time during a tendering process or a contract renewal duration (Institute of Business Ethics, 2012).

In the survey of 13th Global Fraud Survey found that organisation offering entertainment and giving gifts to help survival of business is considered acceptable provided that organisation has code of ethics and conduct to guide employees on what may be considered acceptable and unacceptable forms of hospitality, gifts and entertainments. However, the issues of acceptance of gifts and meals are subjective and might lead to blurry boundaries. They are more often occur when final accounts, at the end of contract upon completion of works, these practices are seen as common courtesy such as business lunches, gifts and free trips, can be seen as a possible way of bribery that could influence decision making.

Unethical issues in international construction have been studied by American construction companies. Results indicated that bribery is one of the most prevalent unethical issues (Al-sweity, 2013). One of the biggest construction's chief in Brazil

was arrested and accused of spearheading a \$2.1 bn bribery scheme at a state-run oil firm. Former vice-president of Betchtel Corporation was accused of accepting more than \$5 m in bribes by giving companies confidential information about the bidding process while working at joint venture construction company with Egyptian government (Global Construction Review, 2014). From 13th Global Fraud Survey, out of 24 countries surveyed, there were more than half of the respondents said bribery was widespread and they have been asked to pay a bribe (Ernst and Young, 2014). According to Bribe Payers Index 2011, Malaysia was ranked at 15th place among 28 countries with a score of 7.6 where 7.8 is the average score. The perceptions of foreign bribery by sector were asked, public works contracts and construction was ranked at 5.3 and had the lowest score among 19 sectors with the average score of 6.6 where a maximum score of 10 indicates that companies from that country never compromise in bribery when doing business abroad.

2.4.4 Fraud

Fraud is a crime using dishonest method to get something valuable from others and is an act of deceiving or misrepresenting (Merkel, 2017). It could be proved by any act or omission, attempts to mislead or to avoid an obligation (International Anti-Corruption Resource Center, 2019). In Canada, the mayor of Laval masterminded about 20 construction companies to fraud in the scheme and ran for 14 years from 1996 to 2010 where majority of construction contracts were awarded before tendering (Global Construction Review, 2018). An estimate of 5 % of revenue of AU\$102 billion lost to fraud, truly a huge cost of Australian construction business as shown (Dan Stewart, 2017). Also, studies noted that cost of fraud could be US\$860 billion globally, increasing to US\$1.5 trillion by 2025 (Grant Thornton, 2013). In this report, Grant Thornton has identified types of fraud encountered in the construction sector such as overstating the bills, bid rigging, theft of materials, use undocumented workers in term of false representation and money laundering. There were 14 - 25 % of the United State construction workforce are undocumented workers because they are illegally (Construction Programs and Results Inc., 2019). In a research finding of Ogbu, C.P. and Asuquo, C.F. (2018) stated that overstating one's organisation capacity, experience and qualification to secure contracts is a contractor related factor that caused unethical issues.

2.4.5 Professional Negligence

All of the professions in construction industry have duty of care to their client (Jackson Lees, 2019). When a profession failed to exercise reasonable care and skill, professional negligence is aroused in terms of errors and progress delays. Sustainable development in construction had been promoted and guideline to adopt it has been established to respond to new development and concern (Kamar and Hamid, 2011). Bowen, et al. (2007) showed that an 86 % of respondents had experienced professional negligence, including breaches with respect to environmental damages, poor documentation, late and short payment and conflict of interest. In the survey, 62.6 % of respondents experienced poor documentation. Moreover, 78 % of the respondents have experienced breach of professional responsibilities which is one of a major issue that concerned by the industry, this includes low awareness of construction sustainability issues, ignorance of environmental issues. The design and documentation for projects should be complete, unambiguous and precise. However, the trend of more incomplete documents in the construction industry has been increasingly (Peglowski, n.d.). According to Tilley and Barton (1997), there is a major problem of poor documentation in Australian construction industry.

Construction industry consists of documents prepared by designers that included contract documents, specification, drawings, bills of quantities and etc. which allows contractors to transform concepts and ideas into physical reality. How efficient and effective this transformation arises, depends mostly on the quality and completeness of the documentation provided (Tilley and Barton, 1997). Opportunistic parties may take advantage of poor of documentation to cut corners. For instance, MTR Corp in Hong Kong uncovered irregularities scandals on Sha Tin-Central Rail Link projects but did not know whose responsibilities due to ambiguous documentation (South China Morning Post, 2018).

Besides, professional negligence caused late and short payments which have been an ongoing issue in the construction industry. A survey in Australia noted that 40 % invoices of 72 % of Australian subcontractors were paid late (The Construction Index, 2018). It is believed that professional negligence is to blame for lack of relevant work experience of superiors in monitoring, supervising or controlling staffs as well as lack of empathy in daily deals. According to researches, empathy is the willingness or ability to recognise or identify with the feelings and needs of others. Upon further

research, positive relationship is found between empathy and job performance. Hassim (2010) classified non-transparent selection process as one of the factor contribute to unethical issue as unethical issues happen in planning stage which involves concession of contractual agreement that eventually lead to sub-optimal results.

2.4.6 Dishonest and Unfairness

Fairness means fair and reasonable treatment is given to all prospective practitioners (Tabish and Jha, 2011). Its concept related to justice as well. Conversely, unfair means inequality and favouritism treatment are given to all prospective practitioners. Unfair issues occur in contracts, in labour practices and in business practices which prohibited by law. A number of researches carried out through questionnaire survey with various stakeholder that there was every respondent had experienced some degree of unethical issues in the form of dishonest and unfair conduct. Vee and Skitmore (2003) stated that 81 % of respondents had witnessed unfair conduct to gain advantages. Upon further analysis, criteria to enter a particular tender are created with the purpose to benefit only certain 'favourite' bidders. Issues of unfair treatment to contractors or to client during tendering stage or during final account closing is one of the current unethical issues. Ehsan et al (2009) reported that 20 % of respondents in construction industry of Pakistan had experienced this unethical issue. Tow and Loosemore (2009) stated the construction stage provide opportunities for issues such as unfair working hours for subcontractors, cut corners by hiding poor quality workmanship. Contractor of MTR Sha Tin- central Link in Hong Kong was embroiled in accusation that fake proper installation of reinforcement bars used was cut short (South China Morning Post, 2018).

2.5 Overcome Measures to Deal with Unethical Issues

Unethical issues will never be eliminated, however, it can be effectively prevented. It takes tremendous effort to do so. In fact, fighting with unethical issues require a framework for a multi-faceted measure that combines economic transforms, political determination, and the strengthening of professionals' institutions (Mohd Ali, al-Junid and Mohd Yusof, 2007). Thus, there are three measures commonly deal with unethical issues have been identified from the researchers in the past.

2.5.1 Enforcement of Code of Ethics and Conduct

According to Olatunji, et al. (2016), code of ethics and conduct provides support and guidance when one's making decision and performing work in the forms to achieve organisation goals. Code of ethics and conduct of an organisation refers to the written set of legal and ethical guidelines that are developed for practical and professional compliance (Mohd Ali, al-Junid and Mohd Yusof, 2007). The aspects in term of ethical are considered based on natural moral of human being (Ehsan, Anwar and Talha, 2009). Vee and Skitmore (2003) reported that 45 % out of 31 respondents had code of ethics and conduct in their organisation. 90 % of respondents were registered with their professional bodies. It was agreed by 84 % of respondents, code of ethics is good to organisation goals. Cartlidge (2011) mentioned that implementation of code of ethics and conduct could raise employee's ethical awareness. This is also supported by a survey of IBE that employees tend to promote high ethical standards when their organisation has code of ethics and conduct. Thus, organisation is urged to always create policies on confidentiality for reporting mechanism, thus, employees feel comfortable and safe discussing any of their concerns for instance whistle blowing protections, anonymous suggestion box (Cartlidge, 2011).

2.5.2 Ethics Education

In order to improve ethical awareness in construction industry, it should start from the way professions are educated. Vee and Skitmore (2003) mentioned the technical knowledge of a profession is no doubt important in the working journey; however, personal attributes of values and attitudes are more crucial than technical performance in long term job success. According to Vee and Skitmore (2003) studies, it showed that education in ethics should start from school as the elementary stage of a person is vital for future professionals. Nevertheless, 67 % of the respondents claimed that ethics related course was not included in the programmes where they studied and further results stated that 11 % of the respondent said that ethics-related course in the programmes should be reviewed as inadequate (Mohamad, et al., 2015).

Besides, all levels of top management, staff must be given the appropriate training courses and guidance, and the code of ethics must be monitored and supported by disciplinary measures (Olatunji, Oke and Aghimien, 2016). In United Kingdom (UK), IBE offers a variety of ethics training and tools for individuals and organisations

such as regular training course, bespoke training, E-learning course (Institute of Business Ethics, 2017). Construction Industry Development Board (CIDB) has Continuing Professional Development (CPD) programme which provides a platform for ethics related training through forum, talks and seminars (CIDB, 2017). President of Transparency International Malaysia (TI-M) encourages more youth to involve in journey of combating corruption (Free Malaysia Today, 2019).

2.5.3 Whistle Blowing Policy

Whistle-blowing is an action of bravery that reporting of misconduct of employee or superior in the organisation (Carver, 2010). The Whistle-blower Protection Act 2010 is a measure to combat corruption and other unethical issues in the public or private sector (MACC, 2010). The identity of the whistle-blower and information given are kept confidentially from any party. However, this act should be strengthened to provide more protection to whistle-blower and encourage more unethical issues to be uncovered. In research of Public Concern at Work (PCAW), three out of four whistle-blowers who reported about misconduct to their superiors have their reports ignored; the research also stated that 15 % of the whistle blowers lost their jobs and careers (PCAW, 2013).

2.6 Theoretical Framework

A comprehensive literature review as reported in this chapter established the existing unethical issues and its causes in construction industry. Based on the past researches, 18 causes of unethical issues were uncovered. It is assumed that the intervening variable, overcome measures to deal with unethical issues served as intervene tools to steer the industry practitioner's behaviour and to reduce the unethical issues in the industry. In other words, without the overcome measures, lack of ethical awareness could lead to the arising of unethical issues. A theoretical framework is proposed and illustrated as in Figure 2.1.

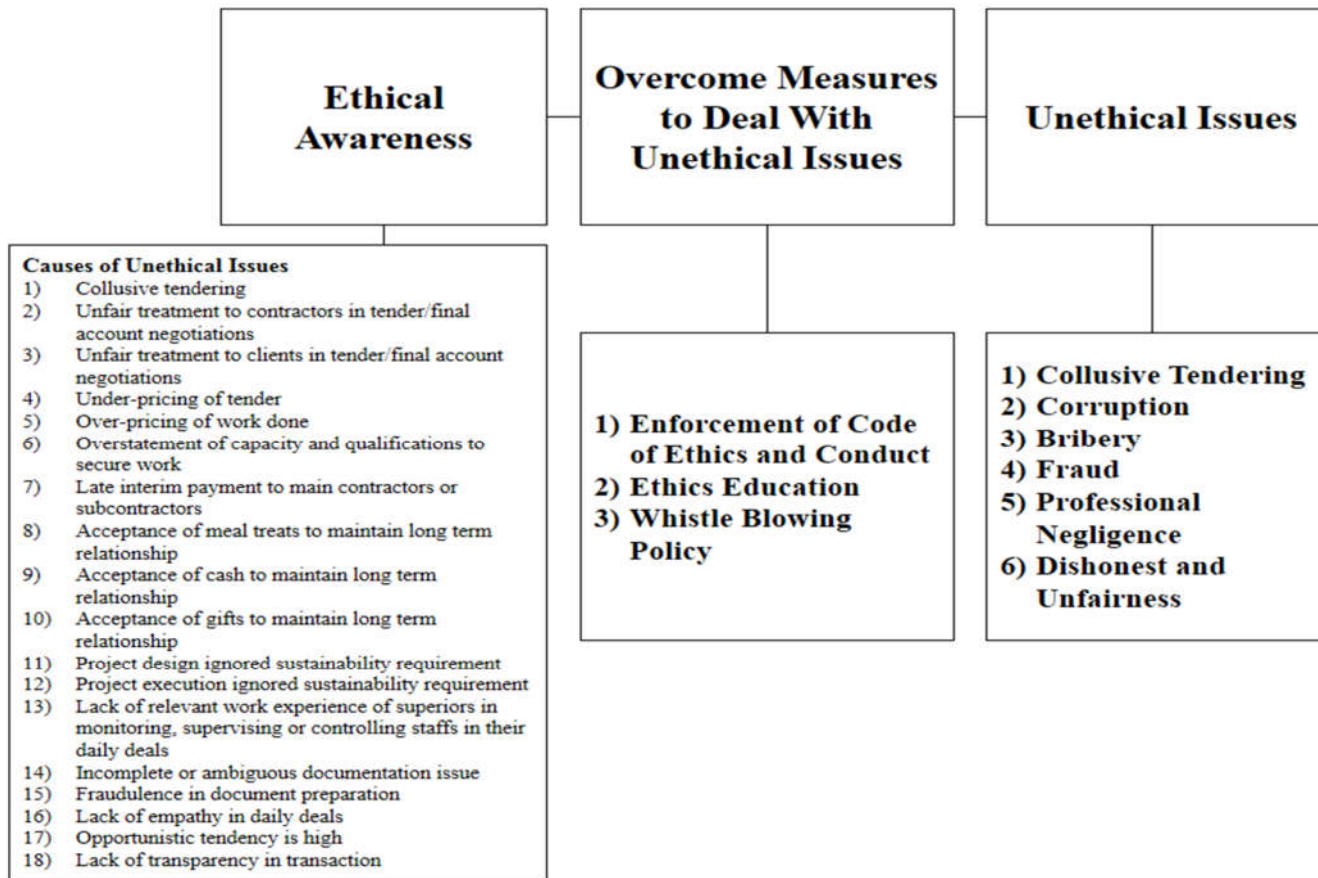


Figure 2.1: Theoretical Framework

CHAPTER 3

METHODOLOGY AND WORK PLAN

3.1 Introduction

Mixed method research design is adopted and discussed in the following Section 3.2, which outlines the plan to answer the research questions. Section 3.3 details the sources of data collected, Section 3.4 explains the sampling design of this research. Section 3.5 explains the ways of semi-structured interview and questionnaire survey conducted. Finally, Section 3.6 describes the data analysis methods, namely descriptive analysis and inferential analysis which included reliability test and significant testing on the differences of respondent's perception to the construction industry practitioners.

3.2 Mixed Method Research Design

Mixed method research design is adopted in this research. The mixed method involves integration or combination of qualitative and quantitative research in a research study (Creswell, 2014). Qualitative data in this study include open-ended question where cannot be answered with a static response or a 'yes' or 'no' response whereas quantitative data includes closed-ended question requires static response in questionnaire survey (Worley, 2015).

A comprehensive literature review as reported in Chapter 2 established a preliminary list of causes of unethical issues in construction industry. It is used as an interview guide for the subsequent semi-structured interview. The semi-structured interviews were conducted to explore more specific examples and experiences in the local construction industry. A questionnaire survey was generated by considering both published literature and the stakeholders of the local construction industry. The questionnaire survey served as a purpose to collect the field data from the industry about existing unethical issues in the industry.

3.3 Sources of Data Collection

The two sources of data that are employed are primary data and secondary data.

3.3.1 Primary Data

Primary data collected in this research are through preliminary interviews and questionnaire. These are considered as original data source which has not been interpreted and has been gone through various methods to ensure the reliability of the data (Scherbaum, et al., 2015).

3.3.2 Secondary Data

Secondary data were collected in this research are a collection of written materials for literature review as reported in Chapter 2 which include journals, magazines, reports, government publications, books and other documents. These data are one of the sources that have been already produced by experts (Scherbaum, et al., 2015).

3.4 Sampling Design

Convenient sampling was used for the data collection of questionnaire design. It is about the gathering of information from sample size who are available to provide it conveniently (Kumar, Talib and Ramayah, 2013).

However, for the sample size of qualitative data collection, there is no specific method to obtain sample size for semi-structured interview as long as it meets with the principle of saturation (Mason, 2002). Data saturation is that no new findings, concepts or problems were found in the subsequent data collection (Yin, 2011).

This study assumes a level of confidence according to the standard normal distribution is 95 % with tolerated margin of error (e) of 5 %, where $z = 1.96$ (Cochran, 1977). A seven Likert scale is used in the questionnaire design, hence, the ρ value will be 0.14 for each statement. Thus, sample size (n) required in this study is 186 as shown in the following calculation:

$$n = \frac{Z^2 \rho (1 - \rho)}{e^2}$$

$$n = \frac{1.96^2 (0.14) (1 - 0.14)}{0.05^2} = 186 \quad (3.1)$$

The semi-structured interview was conducted with construction practitioners made up on consultancy firms which involved architects, quantity surveyors, project management consultants and engineers while construction players that involved clients,

main contractors, subcontractors, building material suppliers and plant and equipment suppliers are also included.

Secondly, questionnaire survey was conducted with similarly targeted respondents in the industry.

3.5 Research Instruments

The instruments used in this research for collecting the data and information are semi-structured interview and questionnaire survey.

3.5.1 Semi-structured Interview Design

The interview questions were formulated after extensive reviewing of the literature. This preliminary interview is considered appropriate because of the need to understand the existing unethical issues, its causes and level of ethical awareness in the Malaysian construction industry while each interviewee responded to the questions based on his/her own perspective, experience and points of view. The reality of what interviewees said was valued. Six questions were asked to allow more in-depth discussions on the topic to formulate questionnaire. The questions and its purposes are as presented in Table 3.1.

Table 3.1: Questions of Preliminary Semi-structured Interview

| No | Question | Purpose |
|----|--|--|
| 1 | In your opinion, what are the critical ethical issues in construction industry? | To identify the existing unethical issues in the Malaysian construction industry. |
| 2 | What are the causes of such issues? | To uncover the causes of the existing unethical issues. |
| 3 | What are your suggestions to improve such issues? | To recommend measures to deal with most of the unethical issues. |
| 4 | Are you aware of any code of ethics and conducts in your professions/organisation? | To examine the level of ethical awareness among construction industry practitioners. |
| 5 | Refer to Q4, if Yes, please list out the code of ethics and conducts. | To examine the level of ethical awareness among construction industry practitioners. |
| 6 | Do you think professional ethics is important in your daily conduct and practice? Why? | To examine the level of ethical awareness among construction industry practitioners. |

3.5.2 Questionnaire Survey Design

The transcripts of interviews were analysed to prepare and formulate the questionnaire.

The questionnaire included four sections (refer to Appendix A). Section A collected the agreement of respondents with the 20 statements on the causes of unethical issues in the Malaysian construction industry, Section B collected level of ethical awareness of respondents with 11 statements. A free text box at the end of the questionnaire survey was provided for respondents to suggest overcome measure in order to deal with unethical issues.

The 7-point Likert scales developed by Rensis Likert was used in Section A and B as more appropriate when there are more than two alternatives and the questionnaire is to seek degree of preference, interest and agreement regarding to causes of unethical issues and level of ethical awareness in the Malaysian construction industry (Cooper, et al., 2014). The respondents were asked to either agree or disagree with each statement ranging from one to seven. The ratings of agreement are listed in Table 3.2.

Table 3.2: Ratings of Agreement

| Rating | Description |
|--------|-------------------|
| 1 | Strongly disagree |
| 2 | Mostly disagree |
| 3 | Slightly disagree |
| 4 | Uncertain |
| 5 | Slightly agree |
| 6 | Mostly agree |
| 7 | Strongly agree |

Section C collected 3 statements on the measures to deal with most of the unethical issues and was asked based on 'Yes', 'No' or 'Not sure' on the current measures to deal with these unethical causes. Section D required the respondent's background information.

Few methods of delivering questionnaires were used, namely personally distribution, by mail and using social media applications. Personal delivery helped respondents to overcome difficulties with the questions, and a high response rate can

be ensured through personal persuasion. Such questionnaire has been distributed to respondents through Internet by accessing through Google form via email.

3.5.2.1 Section A: Causes of Unethical Issues in the Malaysian Construction Industry

Section A covered all the 18 issues reviewed in the literature and 2 issues obtained from the preliminary interview. Section A included 20 issues followed the numbering according to questionnaire (refer to Appendix A) are shown as in Table 3.3.

Table 3.3: Formulation of Questions on Section A

| Code | Statements | References | | | | | | | | | | | | | | Total | |
|------|--|------------|---|---|---|---|---|---|---|---|---|----|----|----|----|-------|----|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | 14 |
| A1 | Collusive tendering | | x | x | x | x | x | x | x | | | | | | | | 7 |
| A2 | Unfair treatment to contractors in tender/final account negotiations | x | x | | | x | | | | | x | | | | | | 4 |
| A3 | Unfair treatment to clients in tender/final account negotiations | x | x | | | x | | | | x | | | | | | | 4 |
| A4 | Under-pricing of tender | | x | x | x | | | | | | | | | | | | 3 |
| A5 | Over-pricing of work done | x | x | x | x | | | | | | | | | | | | 4 |
| A6 | Overstatement of capacity and qualifications to secure work | | | | | | | | | | x | | | | | | 1 |
| A7 | Late interim payment to main contractors or subcontractors | x | | | x | | | | | | | x | | | | | 3 |
| A8 | Acceptance of meal treats to maintain long term relationship | x | x | | x | | | | | | | | x | | | | 4 |
| A9 | Acceptance of cash to maintain long term relationship | x | x | | x | | | | | | | | x | | | | 4 |

Table 3.3 (Continued)

| | | | | | | | | | | | | | | | | | | |
|-----|---|---|---|---|--|---|--|---|---|--|--|---|--|---|--|---|--|---|
| A10 | Acceptance of gifts to maintain long term relationship | x | x | x | | | | | x | | | | | | | | | 4 |
| A11 | Project has a tight budget | x | | | | | | | | | | | | | | | | 1 |
| A12 | Project design ignored sustainability requirement | x | | | | | | | x | | | x | | | | | | 3 |
| A13 | Project execution ignored sustainability requirement | x | | | | | | | x | | | x | | | | | | 3 |
| A14 | Lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals | | | x | | x | | | | | | x | | | | | | 3 |
| A15 | Poor communication among staffs | x | | | | | | | | | | | | | | | | 1 |
| A16 | Incomplete or ambiguous documentation issue | x | | | | x | | | x | | | | | x | | x | | 5 |
| A17 | Fraudulence in document preparation | | | | | | | | | | | | | x | | x | | 2 |
| A18 | Lack of empathy in daily deals | x | | x | | | | x | | | | | | | | | | 3 |
| A19 | Opportunistic tendency is high | x | | | | | | | | | | x | | | | | | 2 |
| A20 | Lack of transparency in transaction | | | | | | | | | | | | | x | | x | | 2 |

Note:

0= Source from semi-structured interview

1= Vee and Skitmore (2003)

2= Shan, et al. (2016)

- 3= Azhar, et al. (2011)
- 4= Ehsan, et al. (2009)
- 5= CIOB (2013)
- 6= Ray, et al. (2010)
- 7= Adnan, et al. (2012)
- 8= Tabish and Jha (2011)
- 9= Ogbu and Asuquo (2018)
- 10= Bowen, et al. (2007)
- 11= Al-sweity (2013)
- 12= Sohail and Cavill (2006)
- 13= Rumaizah, et al. (2012)
- 14= Hassim, et al. (2010)

3.5.2.2 Section B: Level of Ethical Awareness in the Malaysian Construction Industry

There were 11 statements regarding ethical awareness among respondents generated as presented in Table 3.4. Out of 11, there were six statements formulated by semi-structured interviews. The statements are shown in this section followed the numbering according to questionnaire (refer to Appendix A).

Table 3.4: Formulation of Question on Section B

| Code | Statements | References | | | | | | | | | Total | |
|------|---|------------|---|---|---|---|---|---|---|---|-------|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | 9 |
| B1 | I am aware of the code of ethics and conduct of my professional body | x | x | x | | | x | x | | x | | 6 |
| B2 | I have read the code of ethics and conduct of my professional body | x | x | x | | | x | x | | x | | 6 |
| B3 | I am taking ethics seriously in my daily deals | | x | | x | x | | x | | | | 4 |
| B4 | I have noticed at least one occasion on senior management compromised unethical conduct | x | | | | x | | | x | | | 3 |
| B5 | I have experienced at least one unethical conduct instructed by my superior | x | | | | x | | | x | | | 3 |
| B6 | I would be a whistle-blower if any wrongdoing is happening in my organisation | | | | | | | | x | x | x | 3 |
| B7 | It is not easy to follow organisational code of ethics and conduct | | x | | x | | | | | x | x | 4 |
| B8 | My organisation has code of ethics and conduct | x | | | x | x | | | x | | | 4 |
| B9 | Ethical issue is sensitive issue in my organisation | x | | | x | x | | | x | x | | 5 |
| B10 | My organisation has a weak ethical awareness | | x | | x | x | | | x | | | 4 |
| B11 | My organisation has a weak ethical atmosphere | | x | | x | x | | | x | | | 4 |

Note:

0= Source from semi-structured interview

1= Association for Project Management (2019)

2= Abdul-Rahman, Chen and Yap (2010)

3= Olatunji, Oke and Aghimien (2016)

4= Amin and Al-Haddad (2014)

5= CIDB (2017)

6= RICS (2017)

7= MACC (2016)

8= Vee and Skitmore (2003)

9= Cartlidge (2011)

3.5.2.3 Section C: Measures to Deal with Most of the Unethical Issues Faced by Construction Industry

Three statements in Section C were generated and presented in Table 3.5. The statements shown in this section followed the numbering according to questionnaire (refer to Appendix A).

Table 3.5: Formulation of Questions on Section C

| Code | Statements | References | | | | | Total |
|------|---|------------|---|---|---|---|-------|
| | | 0 | 1 | 2 | 3 | 4 | |
| C1 | My organisation provides employees with a way to report unethical conduct anonymously | x | x | | x | x | 4 |
| C2 | My organisation offers advice or any information helpline where employees could get advice about behaving ethically at work | x | x | | x | x | 4 |
| C3 | My organisation provides training in code of ethics and conduct | x | | x | | x | 3 |

Note:

0= Source from semi-structured interview

1= MACC (2016)

2= Vee and Skitmore (2003)

3= Cartlidge (2011)

4= Institute of Business Ethics

3.5.2.4 Section D: Background Information of Respondents

This section asked about background information of respondents which including nature of company's business, position in the company, years of working experience and professional body membership. This information was used to compare the

perception on the causes of unethical issues and level of ethical awareness among respondents.

3.6 Data Analysis

Two types of analysis were adopted, namely descriptive analysis and inferential analysis. Descriptive analysis involved reporting mean, frequency and rank of data collected. Inferential analysis included reliability analysis and statistical significance study on differences of respondents' perception.

3.6.1 Descriptive Analysis

The data collected was summarised and described in frequency and percentage. Friedman test was conducted to rank the mean scores in descending order for each statement in Section A and B (Junying, et al., 2016). It was used to test for differences between groups of statement when the dependent variable is ordinal (Laerd, 2018). In this case, ordinal variable is 7-point scale from strongly agree through strongly disagree.

3.6.2 Reliability Analysis

Reliability analysis was done to check the internal consistency of the constructed questionnaire for Section A and B by Cronbach's Alpha value respectively. Cronbach's Alpha value ranges from 0 to 1. Higher Cronbach's Alpha value indicates the questionnaire are highly correlated. The acceptability of Cronbach's Alpha is more than 0.70 (Sekaran, 2003).

3.6.3 Testing on Differences of Respondents' Perception

Kruskal-Wallis H test and Mann-Whitney U test were used to study statistically significant differences between groups of respondents' background information on the agreement of unethical issues and ethical awareness among respondents were found. The difference between Mann-Whitney U test and Kruskal-Wallis H test is that latter can accommodate more than two groups (Complete Dissertation, 2019).

Kruskal-Wallis H test was used to determine significant differences between respondents' background information which including nature of company's business, position in company and years of working experience on their agreement in questionnaire survey in Section A and B respectively. Subsequently, a post hoc test

was conducted to test pairwise comparisons. As respondents' professional body membership consisted of two groups of selection, Mann-Whitney U test was adopted in this case.

CHAPTER 4

RESULTS AND DISCUSSIONS

4.1 Introduction

The results and discussion are divided into two parts. Results of semi-structured interview and questionnaire are reported in Section 4.2 and Section 4.3 respectively while Section 4.4 focuses on the discussion of results.

4.2 Semi-structured Interview Results

In the semi-structured interview, 15 participants were invited. The background information of 15 participants are as shown in Table 4.1.

Table 4.1: Background Information of Participants

| No | Profession | Nature of business | Years of experience |
|----|------------------------------------|-----------------------|---------------------|
| 1 | BIM Modeller | Construction Business | 12 |
| 2 | Contracts Executive 1 | Construction Business | 2 |
| 3 | Assistant Project Manager | Construction Business | 12 |
| 4 | Site Supervisor | Construction Business | 10 |
| 5 | Contracts Manager | Construction Business | 24 |
| 6 | Contract Executive 2 | Consultancy | 15 |
| 7 | Mechanical and Electrical Engineer | Consultancy | 4 |
| 8 | Architect | Consultancy | 8 |
| 9 | Mechanical and Electrical Engineer | Construction Business | 20 |
| 10 | Project Manager | Construction Business | 27 |
| 11 | Sub-contractor 1 | Construction Business | 18 |
| 12 | Sub-contractor 2 | Construction Business | 21 |
| 13 | Civil Engineer | Consultancy | 6 |
| 14 | Technical Director | Consultancy | 26 |
| 15 | Sub-contractor 3 | Construction Business | 10 |

The interview identified 13 unethical issues as shown in Table 4.2.

Table 4.2: Summary of Interview Results for Unethical Issues

| Item | Statements |
|------|--|
| 1 | Unfair treatment to contractors in tender/final account negotiations |
| 2 | Unfair treatment to clients in tender/final account negotiations |
| 3 | Over-pricing of work done |
| 4 | Late interim payment to main contractors or subcontractors |
| 5 | Acceptance of meal treats to maintain long term relationship |
| 6 | Acceptance of cash to maintain long term relationship |
| 7 | Acceptance of gifts to maintain long term relationship |
| 8 | Project has a tight budget |
| 9 | Project design ignored sustainability requirement |
| 10 | Project execution ignored sustainability requirement |
| 11 | Poor communication among staffs |
| 12 | Incomplete or ambiguous documentation issue |
| 13 | Lack of empathy in daily deals |

The statements of ethical awareness used by the participants are shown in Table 4.3.

Table 4.3: Summary of Interview Results for Ethical Awareness

| Item | Statements |
|------|--|
| 1 | I am aware of the code of ethics and conduct of my professional body. |
| 2 | I have read the code of ethics and conduct of my professional body. |
| 3 | I am taking ethics seriously in my daily deals. |
| 4 | I have noticed at least one occasion on senior management compromised unethical conduct. |
| 5 | I have experienced at least one unethical conduct instructed by my superior. |
| 6 | I would be a whistle-blower if any wrongdoing is happening in my organisation. |
| 7 | It is not easy to follow organisational code of ethics and conduct. |
| 8 | My organisation has code of ethics and conduct. |
| 9 | Ethical issue is sensitive issue in my organisation. |
| 10 | My organisation has a weak ethical awareness. |
| 11 | My organisation has a weak ethical atmosphere. |

Participants were asked of suggestion to deal with the unethical issues. And the measures recommended by them included ethics training, regular monitoring of ethical behaviours by organisation and platform to report misconduct should be provided by organisation and development of two-way communication in workplace.

4.3 Questionnaire Survey Results

A total of 500 questionnaires were distributed and 192 valid responses were received. It indicated a response rate of 38.4 %. The demographic characteristics of respondents are summarised and presented in Table 4.4.

Table 4.4: Demographic Characteristics of Respondents (N = 192)

| Attributes | Categories | Frequency | Percentage |
|------------------------------|--|-----------|------------|
| | | (n) | (%) |
| Nature of company's business | Construction Business including main contractors, subcontractors, etc. | 92 | 47.9 |
| | Consultancy | 70 | 36.5 |
| | Manufacturers | 9 | 4.7 |
| | Construction Building Material Suppliers | 8 | 4.2 |
| | Property Development | 7 | 3.6 |
| | Plant and Equipment Suppliers | 6 | 3.1 |
| Position in company | Director | 36 | 18.8 |
| | Senior Manager | 25 | 13.0 |
| | Manager | 42 | 21.9 |
| | Supervisor | 24 | 12.5 |
| | Executive | 65 | 33.9 |
| | Other | 0 | 0.0 |
| Years of working experience | Less than 1 year | 12 | 6.3 |
| | 1-5 years | 46 | 24.0 |
| | 6-10 years | 41 | 21.4 |
| | 11-15 years | 26 | 13.5 |
| | 16-20 years | 33 | 17.2 |
| | Above 20 years | 34 | 17.7 |
| Professional body membership | Yes, registered with professional body | 111 | 57.8 |
| | No, did not register with any professional body | 81 | 42.2 |

The results showed construction business companies including main contractors, subcontractors, etc. were 47.9 % which was the majority of respondent. Executives were the highest group of respondents with 33.9 % and supervisors were the least with 12.5 %. It should be noted that only 6.3 % of respondents have less than one year of working experience. Among all the respondents, the highest years of

working experience group was between 1 - 5 years with 24 %. Out of 192 respondents, 57.8 % were registered with professional body.

4.3.1 Causes of Unethical Issues in the Malaysian Construction Industry

The reliability test on the 20 statements in Section A showed a Cronbach's Alpha value of 0.928, which was higher than 0.70 (Sekaran, 2003). It indicated that the constructed questionnaire was internally consistent. Table 4.5 showed the mean scores ranged from 12.35 to 8.52. The Friedman test showed the mean ranks were statistically significant with $\chi^2 = 204.461$, $p = 0.000$.

The top five causes are: 'late interim payment to main contractors or subcontractors' ranks highest (mean rank = 12.35), followed by 'incomplete or ambiguous document issue' (mean rank = 12.03), 'poor communication among staffs' (mean rank = 11.99), 'unfair treatment to contractors in tender/final account negotiations' (mean rank = 11.77) and 'lack of transparency in transaction' ranks the fifth among 20 causes (mean rank = 11.58).

The bottom five causes of unethical issues in the Malaysian construction industry are: 'acceptance of meal treats to maintain long term relationship' was ranked the lowest mean rank (mean rank = 8.52) followed by 'project design ignored sustainability requirement' (mean rank = 8.90), 'acceptance of gifts to maintain long term relationship' (mean rank = 8.93), 'project execution ignored sustainability requirement' (mean rank = 8.99) and 'acceptance of cash to maintain long term relationship' (mean rank = 9.56).

Table 4.5: Mean Ranking (N=192, df=19)

| Statements | Mean Rank | Chi-square | Asymp. sig. |
|---|-----------|------------|-------------|
| Late interim payment to main contractors or subcontractors | 12.35 | 204.461 | 0.000 |
| Incomplete or ambiguous documentation issue | 12.03 | | |
| Poor communication among staffs | 11.99 | | |
| Unfair treatment to contractors in tender/final account negotiations | 11.77 | | |
| Lack of transparency in transaction | 11.58 | | |
| Overstatement of capacity and qualifications to secure work | 11.32 | | |
| Over-pricing of work done | 11.07 | | |
| Collusive tendering | 11.04 | | |
| Lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals | 10.89 | | |
| Under-pricing of tender | 10.82 | | |
| Opportunistic tendency is high | 10.74 | | |
| Fraudulence in document preparation | 10.39 | | |
| Lack of empathy in daily deals | 9.77 | | |
| Project has a tight budget | 9.68 | | |
| Unfair treatment to clients in tender/final account negotiations | 9.67 | | |
| Acceptance of cash to maintain long term relationship | 9.56 | | |
| Project execution ignored sustainability requirement | 8.99 | | |
| Acceptance of gifts to maintain long term relationship | 8.93 | | |
| Project design ignored sustainability requirement | 8.90 | | |
| Acceptance of meal treats to maintain long term relationship | 8.52 | | |

Note: N = number of respondents, df = degree of freedom

(a) Differences of Respondents' Perception on Causes of Unethical Issues According to the Respondents' Background Information

Kruskal-Wallis H test was used to compare the differences of respondents' perception on causes of unethical issues according to their background information in term of nature of company's business, position in company and years of working experience. After that, a post hoc test was conducted to test the pairwise comparisons.

Meanwhile, Mann-Whitney U test was adopted to compare the differences of respondents' perception on causes of unethical issues according to the respondents' professional body membership. Both results were grouped accordingly to the existing unethical issues in the Malaysian construction industry, which are stated as follows:

(i) Corruption and Bribery

Table 4.6 is the list of statistical statements tested according to the respective groups of respondents' background information.

Table 4.6: List of Statistical Statement (N = 192)

| Respondents' background | Statements | Asymp. sig. | Chi-square, χ^2 |
|---------------------------------------|--|-------------|----------------------|
| Nature of company's business (df = 5) | Acceptance of meal treats to maintain long term relationship | 0.001 | 20.330 |
| Position in company (df = 4) | Late interim payment to main contractors or subcontractors | 0.001 | 19.150 |
| | Acceptance of meal treats to maintain long term relationship | 0.016 | 12.140 |
| Years of working experience (df = 5) | Late interim payment to main contractors or subcontractors | 0.001 | 20.691 |
| | Acceptance of meal treats to maintain long term relationship | 0.002 | 19.004 |
| | Acceptance of cash to maintain long term relationship | 0.003 | 17.787 |
| | Acceptance of gifts to maintain long term relationship | 0.000 | 22.357 |
| Professional body membership | Late interim payment to main contractors or subcontractors | 0.045 | |

Note: N= number of respondents, df= degree of freedom

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.7.

Table 4.7: List of Rejected Null Hypotheses

| No | Null hypothesis | Asym. sig. |
|-----|--|------------|
| (a) | The agreement of 'acceptance of meal treats to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between respondents involved in construction business and respondents involved in property development. | 0.007 |
| (b) | The agreement of 'acceptance of meal treats to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between manager and director. | 0.022 |

Table 4.7 (Continued)

| | | |
|-----|---|-------|
| (c) | The agreement of 'acceptance of meal treats to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between less than 1 year of working experience and 6 - 10 years of working experience. | 0.004 |
| (d) | The agreement of 'acceptance of meal treats to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between above 20 years of working experience and 6 - 10 years of working experience. | 0.024 |
| (e) | The agreement of 'acceptance of meal treats to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience and 6 - 10 years of working experience. | 0.043 |
| (f) | The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between directors and managers. | 0.002 |
| (g) | The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between directors and supervisors. | 0.018 |
| (h) | The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between above 20 years of working experience and 6 - 10 years of working experience. | 0.016 |
| (i) | The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between above 20 years of working experience and 6 - 10 years of working experience. | 0.002 |
| (j) | The agreement of 'acceptance of gifts to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between above 20 years of working experience and 6 - 10 years of working experience. | 0.005 |
| (k) | The agreement of 'acceptance of gifts to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between less than 1 year of working experience and 6 - 10 years of working experience. | 0.001 |
| (l) | The agreement of 'acceptance of cash to maintain long term relationship' is the cause of unethical issue in the Malaysian construction industry is same between above 20 years of working experience and 6 - 10 years of working experience. | 0.005 |
| (m) | The agreement of 'late interim payment to main contractors or subcontractors' is the cause of unethical issue in the Malaysian construction industry is same between respondents belong to professional bodies and not a member of a professional body. | 0.045 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their perception on causes of unethical issues were statistically significant:

‘Acceptance of meal treats to maintain long term relationship’ is one of the causes of unethical issues which is perceived higher by

- (i) respondents involved in construction business (mean rank = 110.55) than respondents involved in property development (mean rank = 35.64).
- (ii) directors (mean rank = 113.21) than managers (mean rank = 75.14).
- (iii) less than 1 year of working experience group (mean rank = 132.71) than 6 - 10 years (mean rank = 67.16).
- (iv) above 20 years of working experience group (mean rank = 107.34) than 6 - 10 years (mean rank = 67.16).
- (v) 1 - 5 years of working experience group (mean rank = 102.28) than 6 - 10 years (mean rank = 67.16).

‘Acceptance of gifts to maintain long term relationship’ is one of the causes of unethical issues which is perceived higher by

- (i) above 20 years of working experience group (mean rank = 115.75) than 6 - 10 years (mean rank = 70.30).
- (ii) less than 1 year of working experience group (mean rank = 141.88) than 6 - 10 years (mean rank = 70.30).

‘Acceptance of cash to maintain long term relationship’ is one of the causes of unethical issues which is perceived higher by

- (i) above 20 years of working experience group (mean rank = 121.65) than 6 - 10 years (mean = 76.13).

‘Unfair treatment to clients in tender/ final account negotiations’ is one of the causes of unethical issues which is perceived higher by

- (i) supervisors (mean rank = 129.92) than directors (mean rank = 77.49).
- (ii) supervisors (mean rank = 129.92) than managers (mean rank = 78.70).
- (iii) 1 - 5 years of working experience group (mean rank = 124.46) than above 20 years of working experience group (mean rank = 65.26).
- (iv) 1 - 5 years of working experience group (mean rank = 124.46) than 6 - 10 years of working experience group (mean rank = 88.26).

‘Late interim payment to main contractors’ is one of the causes of unethical issues perceived higher by

- (i) directors (mean rank = 119.49) than managers (mean rank = 74.30).
- (ii) directors (mean rank = 119.49) than supervisors (mean rank = 75.33).
- (iii) above 20 years of working experience group (mean rank = 111.32) than 6 - 10 years (mean rank = 70.63).
- (iv) 1 - 5 years of working experience group (mean rank = 114.32) than 6-10 years (mean rank = 70.63).
- (v) respondents belong to professional bodies (mean rank = 103.14) than respondents who are not a member of a professional body (mean rank = 87.14).

(b) Fraud

Table 4.8 is the list of statistical statements tested according to the respective groups of respondents’ background information.

Table 4.8: List of Statistical Statement (N = 192)

| Respondents’ background | Statements | Asymp. sig. | Chi-square, χ^2 |
|--------------------------------------|---|-------------|----------------------|
| Years of working experience (df = 5) | Over-pricing of work done | 0.035 | 11.975 |
| | Fraudulence in document preparation | 0.000 | 19.073 |
| Professional body membership | Overstatement of capacity and qualifications to secure work | 0.031 | |

Note: N = number of respondents, df = degree of freedom

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.9.

Table 4.9: List of Rejected Null Hypotheses

| No | Null Hypothesis | Asymp. sig. |
|-----|---|-------------|
| (a) | The agreement of ‘over-pricing of work done’ is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and above 20 years of working experience group. | 0.040 |
| (b) | The agreement of ‘fraudulence in document preparation’ is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and above 20 years of working experience group. | 0.004 |

Table 4.9 (Continued)

| | | |
|-----|--|-------|
| (c) | The agreement of 'fraudulence in document preparation' is the cause of unethical issue in the Malaysian construction industry is same between 16 - 20 years of working experience group and above 20 years. | 0.026 |
| (d) | The agreement of 'overstatement of capacity and qualifications to secure work' is the cause of unethical issue in the Malaysian construction industry is same between respondents belong to professional bodies and not a member of a professional body. | 0.031 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their perception on causes of unethical issues were statistically significant:

'Over-pricing of work done' is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 110.47) than above 20 years (mean rank = 73.88).

'Fraudulence in document preparation' is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 116.86) than above 20 years (mean rank = 72.34).
- (ii) 16 - 20 years of working experience group (mean rank = 113.77) than above 20 years (mean rank = 72.34).

'Overstatement of capacity and qualifications to secure work' is one of the causes of unethical issues which is perceived higher by

- (i) respondents belong to professional bodies (mean rank = 103.69) than respondents who are not a member of a professional body (mean rank = 86.65).

(c) Professional Negligence

Table 4.10 is the list of statistical statements tested according to the respective groups of respondents' background information.

Table 4.10: List of Statistical Statement (N= 192)

| Respondents' background | Statements | Asymp. sig. | Chi-square, χ^2 |
|--------------------------------------|---|-------------|----------------------|
| Position in company (df = 4) | Late interim payment to main contractors or subcontractors | 0.001 | 19.150 |
| Years of working experience (df = 5) | Late interim payment to main contractors or subcontractors | 0.001 | 20.691 |
| | Project has a tight budget | 0.024 | 12.943 |
| | Project design ignored sustainability requirement | 0.000 | 28.442 |
| | Project execution ignored sustainability requirement | 0.000 | 29.945 |
| | Lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals | 0.000 | 18.005 |
| | Poor communication among staffs | 0.000 | 28.267 |
| | Incomplete or ambiguous documentation issue | 0.000 | 35.130 |
| Professional body membership | Lack of empathy in daily deals | 0.002 | 19.291 |
| | Late interim payment to main contractors or subcontractors | 0.045 | |
| | Project has a tight budget | 0.007 | |
| | Lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals | 0.019 | |

Note: N= number of respondents, df = degree of freedom

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.11.

Table 4.11: List of Rejected Null Hypotheses

| No | Null Hypothesis | Asymp. sig. |
|-----|--|-------------|
| (a) | The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between directors and managers. | 0.002 |

Table 4.11 (Continued)

| | |
|---|-------|
| (b) The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between directors and supervisors. | 0.018 |
| (c) The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between above 20 years of working experience group and 6 - 10 years of working experience group. | 0.016 |
| (d) The agreement of 'late interim payment to main contractors' is the cause of unethical issue in the Malaysian construction industry is same between above 20 years of working experience group and 6 - 10 years of working experience group. | 0.002 |
| (e) The agreement of 'project design ignored sustainability requirement' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 6 - 10 years of working experience group. | 0.000 |
| (f) The agreement of 'project design ignored sustainability requirement' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and less than 1 year of working experience group. | 0.002 |
| (g) The agreement of 'project execution ignored sustainability requirement' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 6 - 10 years of working experience group. | 0.000 |
| (h) The agreement of 'project execution ignored sustainability requirement' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and less than 1 year of working experience group. | 0.010 |
| (i) The agreement of 'lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals' is the cause of unethical issue in the Malaysian construction industry is same between 16 - 20 years of working experience group and 6 - 10 years of working experience group. | 0.018 |
| (j) The agreement of 'lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 6 - 10 years of working experience group. | 0.002 |
| (k) The agreement of 'poor communication among staffs' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 11 - 15 years of working experience group. | 0.003 |
| (l) The agreement of 'poor communication among staffs' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 6 - 10 years of working experience group. | 0.000 |

Table 4.11 (Continued)

| | | |
|-----|--|-------|
| (m) | The agreement of 'poor communication among staffs' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and less than 1 year of working experience group. | 0.049 |
| (n) | The agreement of 'incomplete or ambiguous documentation issue' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 11 - 15 years of working experience group. | 0.001 |
| (o) | The agreement of 'incomplete or ambiguous documentation issue' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 6 - 10 years of working experience group. | 0.000 |
| (p) | The agreement of 'incomplete or ambiguous documentation issue' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and less than 1 year of working experience group. | 0.003 |
| (q) | The agreement of 'incomplete or ambiguous documentation issue' is the cause of unethical issue in the Malaysian construction industry is same between 16 - 20 years of working experience group and 6 - 10 years of working experience group. | 0.021 |
| (r) | The agreement of 'lack of empathy in daily deals' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and above 20 years of working experience group. | 0.006 |
| (s) | The agreement of 'lack of empathy in daily deals' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 6 - 10 years of working experience group. | 0.009 |
| (t) | The agreement of 'late interim payment to main contractors or subcontractors' is the cause of unethical issue in the Malaysian construction industry is same between respondents belong to professional bodies and not a member of a professional body. | 0.045 |
| (u) | The agreement of 'project has a tight budget' is the cause of unethical issue in the Malaysian construction industry is same between respondents belong to professional bodies and not a member of a professional body. | 0.007 |
| (v) | The agreement of 'lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals' is the cause of unethical issue in the Malaysian construction industry is same between respondents belong to professional bodies and not a member of a professional body. | 0.019 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their perception on causes of unethical issues were statistically significant:

‘Late interim payment to main contractors’ is one of the causes of unethical issues perceived higher by

- (i) directors (mean rank = 119.49) than managers (mean rank = 74.30).
- (ii) directors (mean rank = 119.49) than supervisors (mean rank = 75.33).
- (iii) above 20 years of working experience group (mean rank = 111.32) than 6 - 10 years of working experience group (mean rank = 70.63).
- (iv) 1 - 5 years of working experience group (mean rank = 114.32) than 6 - 10 years (mean rank = 70.63).
- (v) respondents belong to professional bodies (mean rank = 103.14) than respondents who are not a member of a professional body (mean rank = 87.14).

‘Project has a tight budget’ is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 112.76) than 6 - 10 years (mean rank = 75.82).
- (i) respondents belong to professional bodies (mean rank = 105.51) than respondents who are not a member of a professional body (mean rank = 84.15).

‘Project design ignored sustainability requirement’ is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 126.64) than 6 - 10 years (mean rank = 71.71).
- (ii) 1 - 5 years of working experience group (mean rank = 126.64) than less than 1 year (mean rank = 59.38).

‘Project execution ignored sustainability requirement’ is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 127.21) than 6 - 10 years (mean rank = 68.71).
- (ii) 1 - 5 years of working experience group (mean rank = 127.21) than less than 1 year (mean rank = 67.17).

'Lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals' is one of the causes of unethical issues which is perceived higher by

- (i) 16-20 years of working experience group (mean rank = 109.94) than 6 - 10 years (mean rank = 69.00).
- (ii) 1 - 5 years of working experience group (mean rank = 114.07) than 6 - 10 years (mean rank = 69.00).
- (iii) respondents belong to professional bodies (mean rank = 104.31) than respondents who are not a member of a professional body (mean rank = 85.80).

'Poor communication among staffs' is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 125.23) than 11 - 15 years (mean rank = 75.73).
- (ii) 1 - 5 years of working experience group (mean rank = 125.23) than 6 - 10 years (mean rank = 72.98).
- (iii) 1 - 5 years of working experience group (mean rank = 125.23) than less than 1 year (mean rank = 73.75).

'Incomplete or ambiguous documentation issue' is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 123.55) than 11 - 15 years (mean rank = 71.04).
- (ii) 1 - 5 years of working experience group (mean rank = 123.55) than 6 - 10 years (mean rank = 73.59).
- (iii) 1 - 5 years of working experience group (mean rank = 123.55) than less than 1 year (mean rank = 58.58).
- (iv) 16 - 20 year of working experience group (mean rank =113.61) than 11 - 15 years (mean rank = 71.04).
- (v) 16 - 20 year of working experience group (mean rank=113.61) than 6 - 10 years (mean rank = 73.59).
- (vi) 16 - 20 years of working experience group (mean rank =113.61) than less than 1 year (mean rank = 58.58).

'Lack of empathy in daily deals' is one of the causes of unethical issues which is perceived higher by

- (i) 1 - 5 years of working experience group (mean rank = 121.82) than above 20 years (mean rank = 78.32).
- (ii) 1 - 5 years of working experience group (mean rank = 121.82) than 6 - 10 years (mean rank = 82.05).

(d) Dishonest and Unfairness

Table 4.12 is the list of statistical statements tested according to the respective groups of respondents' background information.

Table 4.12: List of Statistical Statement (N = 192)

| Respondents' background | Statements | Asymp. sig. | Chi-square, χ^2 |
|--------------------------------------|--|-------------|----------------------|
| Years of working experience (df = 5) | Unfair treatment to clients in tender/final account negotiations | 0.000 | 25.135 |

Note: N = number of respondents, df = degree of freedom

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.13.

Table 4.13: List of Rejected Null Hypotheses

| No | Null Hypothesis | Asymp. sig. |
|-----|---|-------------|
| (a) | The agreement of 'unfair treatment to clients in tender/ final account negotiations' is the cause of unethical issue in the Malaysian construction industry is same between supervisors and directors. | 0.002 |
| (b) | The agreement of 'unfair treatment to clients in tender/ final account negotiations' is the cause of unethical issue in the Malaysian construction industry is same between supervisors and managers. | 0.002 |
| (c) | The agreement of 'unfair treatment to clients in tender/ final account negotiations' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and above 20 years of working experience group. | 0.000 |
| (d) | The agreement of 'unfair treatment to clients in tender/ final account negotiations' is the cause of unethical issue in the Malaysian construction industry is same between 1 - 5 years of working experience group and 6 - 10 years of working experience group. | 0.028 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their perception on causes of unethical issues were statistically significant:

‘Unfair treatment to clients in tender/ final account negotiations’ is one of the causes of unethical issues which is perceived higher by

- (i) supervisors (mean rank = 129.92) than directors (mean rank = 77.49).
- (ii) supervisors (mean rank = 129.92) than managers (mean rank = 78.70).
- (iii) 1 - 5 years of working experience group (mean rank = 124.46) than above 20 years (mean rank = 65.26).
- (iv) 1 - 5 years of working experience group (mean rank = 124.46) than 6 - 10 years (mean rank = 88.26).

4.3.2 Ethical Awareness among Respondents in the Malaysian Construction Industry

A Cronbach’s Alpha value of 0.759 indicated the internal consistency of the constructed 11 statements. Table 4.14 showed the ranking of ethical awareness among respondents in descending order. Friedman test was conducted and the mean ranks are statistically significant with $\chi^2 = 379.86$, $p = 0.000$.

The top three statements of ethical awareness are ‘I am taking ethics seriously in my daily deals’ (mean rank = 8.01), ‘my organisation has code of ethics and conduct’ (mean rank = 7.43) and ‘I am aware of the code of ethics and conduct of my professional body’ (mean rank = 7.11).

The last three statements of ethical awareness are ‘my organisation has a weak ethical awareness’ (mean rank = 4.36), ‘my organisation has a weak ethical atmosphere’ (mean rank = 4.38) and ‘It is not easy to follow organisation code of ethics and conduct’ (mean rank = 5.16).

Table 4.14: Mean Ranking (N = 192, df = 10)

| Statements | Mean Rank | Chi-square | Asymp. sig. |
|--|-----------|------------|-------------|
| I am taking ethics seriously in my daily deals | 8.01 | 379.86 | 0.000 |
| My organisation has code of ethics and conduct | 7.43 | | |
| I am aware of the code of ethics and conduct of my professional body | 7.11 | | |
| I have read the code of ethics and conduct of my professional body | 6.78 | | |

Table 4.14 (Continued)

| | |
|---|------|
| I would be a whistle-blower if any wrongdoing is happening in my organisation | 6.32 |
| Ethical issue is sensitive issue in my organisation | 5.88 |
| I have noticed at least one occasion on senior management compromised unethical conduct | 5.34 |
| I have experienced at least one unethical conduct instructed by my superior | 5.23 |
| It is not easy to follow organisational code of ethics and conduct | 5.16 |
| My organisation has a weak ethical atmosphere | 4.38 |
| My organisation has a weak ethical awareness | 4.36 |

Kruskal-Wallis H test was used to compare the differences of respondents' perception on ethical awareness according to the respective groups of respondents' background information in term of nature of company's business, position in company and years of working experience. After that, a post hoc test was conducted to test the pairwise comparisons.

Both results were grouped accordingly to the existing unethical issues in the Malaysian construction industry, which were shown as follows:

(a) Differences of Respondents' Perception on Ethical Awareness according to the Their Nature of Business

The list of statistical statements tested in Kruskal-Wallis H test according to their nature of business is shown in Table 4.15.

Table 4.15: List of Statistical Statement According to Respondents' Nature of Business (N = 192)

| Respondents' background | Statements | Asymp. sig. | Chi square, x^2 |
|-----------------------------------|--|-------------|-------------------|
| Nature company's business (df= 4) | My organisation has a weak ethical awareness | 0.032 | 12.215 |

Note: N = number of respondents, df = degree of freedom

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.16.

Table 4.16: List of Rejected Null Hypotheses

| No | Null hypothesis | Asymp. sig. |
|-----|---|-------------|
| (a) | The agreement of 'my organisation has a weak ethical awareness' is same between respondents involved in construction building material suppliers and consultancy. | 0.048 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their perception on ethical awareness are statistically significant:

- (i) respondents involved in construction building material suppliers (mean rank = 147.69) than respondents involved in consultancy (mean rank = 87.70).

(b) Differences of Respondents' Perception on Ethical Awareness according to the Their Position in Company

The list of statistical statements tested in Kruskal-Wallis H test according to their nature of business is shown in Table 4.17.

Table 4.17: List of Statistical Statement According to Respondents' Position in Company (N = 192)

| Respondents' background | Statements | Asymp. sig. | Chi square, χ^2 |
|-------------------------|---|-------------|----------------------|
| Position in company | I am aware of the code of ethics and conduct of my professional body | 0.000 | 27.203 |
| | I have read the code of ethics and conduct of my professional body | 0.000 | 21.333 |
| | I am taking ethics seriously in my daily deals | 0.000 | 27.461 |
| | I have noticed at least one occasion on senior management compromised unethical conduct | 0.006 | 14.326 |
| | I have experienced at least one unethical conduct instructed by my superior | 0.003 | 16.097 |
| | I would be a whistle-blower if any wrongdoing is happening in my organisation | 0.000 | 27.827 |

Note: N = number of respondents, df = degree of freedom

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.18.

Table 4.18: List of Rejected Null Hypotheses

| No | Null hypothesis | Asymp. sig. |
|-----|--|-------------|
| (a) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between directors and managers. | 0.049 |
| (b) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between directors and supervisors. | 0.001 |
| (c) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between senior managers and supervisors. | 0.016 |
| (d) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between senior managers and executives. | 0.016 |
| (e) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between directors and executives. | 0.000 |
| (f) | The agreement of 'I have read the code of ethics and conduct of my professional body' is same between directors and supervisors. | 0.010 |
| (g) | The agreement of 'I have read the code of ethics and conduct of my professional body' is same between directors and executives. | 0.000 |
| (h) | The agreement of 'I am taking ethics seriously in my daily deals' is same between directors and managers. | 0.022 |
| (i) | The agreement of 'I am taking ethics seriously in my daily deals' is same between directors and executives. | 0.001 |
| (j) | The agreement of 'I am taking ethics seriously in my daily deals' is same between senior managers and managers. | 0.013 |
| (k) | The agreement of 'I am taking ethics seriously in my daily deals' is same between senior managers and supervisors. | 0.044 |
| (l) | The agreement of 'I am taking ethics seriously in my daily deals' is same between senior managers and executives. | 0.001 |
| (m) | The agreement of 'I have noticed at least one occasion on senior management compromised unethical conduct' is same between executives and directors. | 0.007 |
| (n) | The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between directors and supervisors. | 0.024 |
| (o) | The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between senior managers and supervisors. | 0.008 |
| (p) | The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between directors and managers. | 0.008 |

Table 4.18 (Continued)

| | |
|--|-------|
| (q) The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between senior managers and managers. | 0.003 |
| (r) The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between directors and executives. | 0.005 |
| (s) The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between senior managers and executives. | 0.002 |
| (t) The agreement of 'I have experienced at least one unethical conduct instructed by my superior' is same between executives and senior managers. | 0.007 |
| (u) The agreement of 'I have experienced at least one unethical conduct instructed by my superior' is same between directors and executives. | 0.033 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their perception on ethical awareness are statistically significant:

'I am aware of the code of ethics and conduct of my professional body' is one of the statements which is perceived higher by

- (i) directors (mean rank = 127.56) than managers (mean rank = 92.87).
- (ii) directors (mean rank = 127.56) than supervisors (mean rank = 72.35).
- (iii) directors (mean rank = 127.56) than executives (mean rank = 81.01).
- (iv) senior managers (mean rank = 121.34) than supervisors (mean rank = 72.35).
- (v) senior managers (mean rank = 121.34) than executives (mean rank = 81.01).

'I have read the code of ethics and conduct of my professional body' is one of the statements which is perceived higher by

- (i) directors (mean rank = 128.63) than supervisors (mean rank = 81.46).
- (ii) directors (mean rank = 128.63) than executives (mean rank = 80.44).

'I am taking ethics seriously in my daily deals' is one of the statements which is perceived higher by

- (i) directors (mean rank = 123.40) than managers (mean rank = 86.00).
- (ii) directors (mean rank = 123.40) than executives (mean rank = 79.61).
- (iii) senior managers (mean rank = 129.54) than managers (mean rank = 86.00).

(iv) senior managers (mean rank = 129.54) than supervisors (mean rank = 85.85).

(v) senior managers (mean rank = 129.54) than executives (mean rank = 79.61).

'I have noticed at least one occasion on senior management compromised unethical conduct' is one of the statements which is perceived higher by

(i) executives (mean rank = 113.41) than directors (mean rank = 79.97).

'I would be a whistle-blower if any wrongdoing is happening in my organisation' is one of the statements which is perceived higher by

(i) directors (mean rank = 123.18) than supervisors (mean rank = 79.58).

(ii) senior managers (mean rank = 131.56) than supervisors (mean rank = 79.58).

(iii) directors (mean rank = 123.18) than managers (mean rank = 81.90).

(iv) senior managers (mean rank = 131.56) than managers (mean rank = 81.90).

(v) directors (mean rank = 123.18) than executives (mean rank = 83.92).

(vi) senior managers (mean rank = 131.56) than executives (mean rank = 83.92).

'I have experienced at least one unethical conduct instructed by my superior' is one of the statements which is perceived higher by

(i) executives (mean rank = 113.41) than senior managers (mean rank = 69.76).

(ii) executives (mean rank = 113.41) than directors (mean rank = 79.97).

(c) Differences of Respondents' Perception on Ethical Awareness according to the Their Years of Working Experience

The list of statistical statements tested in Kruskal-Wallis H test according to their years of working experience is shown in Table 4.19.

Table 4.19: List of Statistical Statement According to Respondents' Years of Working Experience (N = 192)

| Respondents' background | Statements | Asymp. sig. | Chi square, χ^2 |
|--------------------------------------|---|-------------|----------------------|
| Years of working experience (df = 5) | I am aware of the code of ethics and conduct of my professional body | 0.000 | 35.102 |
| | I have read the code of ethics and conduct of my professional body | 0.000 | 29.564 |
| | I am taking ethics seriously in my daily deals | 0.011 | 14.890 |
| | I have noticed at least one occasion on senior management compromised unethical conduct | 0.000 | 25.644 |
| | I have experienced at least one unethical conduct instructed by my superior | 0.001 | 21.373 |
| | I would be a whistle-blower if any wrongdoing is happening in my organisation | 0.000 | 25.097 |
| | My organisation has code of ethics and conduct | 0.001 | 21.119 |
| | My organisation has a weak ethical awareness | 0.014 | 14.266 |
| | I would be a whistle-blower if any wrongdoing is happening in my organisation | 0.000 | |
| | My organisation has code of ethics and conduct | 0.001 | |

Note: N = number of respondents, df = degree of freedom

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.20.

Table 4.20: List of Rejected Null Hypotheses

| No | Null hypothesis | Asymp. sig. |
|-----|--|-------------|
| (a) | The agreement of 'my organisation has a weak ethical awareness' is same between less than 1 year of working experience group and above 20 of working experience group. | 0.037 |
| | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between above 20 of working experience group and 16 - 20 years. | 0.043 |

Table 4.20 (Continued)

| | | |
|-----|--|-------|
| (b) | The agreement of 'I am aware of the Code of Ethics and Conduct code of ethics and conduct of my professional body' is same between above 20 of working experience group and 11 - 15 years. | 0.009 |
| (c) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between above 20 of working experience group and 6 - 10 years. | 0.000 |
| (d) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between above 20 of working experience group and 1 - 5 years. | 0.000 |
| (e) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between above 20 of working experience group and less than 1 year. | 0.002 |
| (f) | The agreement of 'I have read the code of ethics and conduct of my professional body' is same between above 20 of working experience group and 6 - 10 years. | 0.009 |
| (g) | The agreement of 'I have read the code of ethics and conduct of my professional body' is same between above 20 of working experience group and 1 - 5 years. | 0.000 |
| (h) | The agreement of 'I have read the code of ethics and conduct of my professional body' is same between above 20 of working experience group and less than 1 year. | 0.002 |
| (i) | The agreement of 'I am taking ethics seriously in my daily deals' is same between above 20 years of working experience group and 1-5 years. | 0.004 |
| (j) | The agreement of 'I have noticed at least one occasion on senior management compromised unethical conduct' is same between 1 - 5 years of working experience group and above 20 years. | 0.000 |
| (k) | The agreement of 'I have noticed at least one occasion on senior management compromised unethical conduct' is same between 1 - 5 years of working experience group and 11 - 15 years. | 0.014 |
| (l) | The agreement of 'I have noticed at least one occasion on senior management compromised unethical conduct' is same between 1 - 5 years of working experience group and 6 - 10 years. | 0.008 |
| (m) | The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between above 20 years of working experience group and 6 - 10 years. | 0.000 |
| (n) | The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between above 20 years of working experience group and 1 - 5 years. | 0.006 |
| (o) | The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between above 20 years of working experience group and 6 - 10 years. | 0.041 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their perception on ethical awareness are statistically significant:

'I am aware of the code of ethics and conduct of my professional body' is one of the statements which is perceived higher by years of working experience group with

- (i) above 20 years (mean rank = 141.96) than 16 - 20 years (mean rank = 102.35).
- (ii) above 20 years (mean rank = 141.96) than 11 - 15 years (mean rank = 93.40).
- (iii) above 20 years (mean rank = 141.96) than 6 - 10 years (mean rank = 87.40).
- (iv) above 20 years (mean rank = 141.96) than 1 - 5 years (mean rank = 75.05).
- (v) above 20 years (mean rank = 141.96) than less than 1 year (mean rank = 71.63).

'I have read the code of ethics and conduct of my professional body' is one of the statements which is perceived higher by years of working experience group with

- (i) above 20 years (mean rank = 136.29) than 6 - 10 years (mean rank = 92.68).
- (ii) above 20 years (mean rank = 136.29) than 1 - 5 years (mean rank = 74.96).
- (iii) above 20 years (mean rank = 136.29) than less than 1 year (mean rank = 65.17).

'I am taking ethics seriously in my daily deals' is one of the statements which is perceived higher by years of working experience group with

- (i) above 20 years (mean rank = 120.59) than 1 - 5 years (mean rank = 76.18).

'I have noticed at least one occasion on senior management compromised unethical conduct' is one of the statements which is perceived higher by years of working experience group with

- (i) 1 - 5 years (mean rank = 130.11) than 11 - 15 years (mean rank = 85.56).
- (ii) 1 - 5 years (mean rank = 130.11) than 6 - 10 years (mean rank = 89.30).

'I would be a whistle-blower if any wrongdoing is happening in my organisation' is one of the statements which is perceived higher by years of working experience group with

- (i) above 20 years (mean rank = 130.12) than 6 - 10 years (mean rank = 71.87).

(ii) above 20 years (mean rank = 130.12) than group of 1 - 5 years (mean rank = 86.46).

(iii) 16 - 20 years (mean rank = 109.98) than 6 - 10 years (mean rank = 71.87).

'I have experienced at least one unethical conduct instructed by my superior' is one of the statements which is perceived higher by years of working experience group with

(i) 1 - 5 years (mean rank = 125.29) than above 20 years (mean rank = 74.90).

(ii) 1 - 5 years (mean rank = 125.29) than 11 - 15 years (mean rank = 80.12).

(iii) 1 - 5 years (mean rank = 125.29) than 6 - 10 years (mean rank = 89.38).

'My organisation has code of ethics and conduct' is one of the statements which is perceived higher by years of working experience group with

(i) above 20 years (mean rank = 79.50) than 16 - 20 years (mean rank = 77.26).

(ii) above 20 years (mean rank = 79.50) than 6 - 10 years (mean rank = 92.22).

(iii) above 20 years (mean rank = 79.50) than 1 - 5 years (mean rank = 98.64).

(d) Differences of Respondents' Perception on Ethical Awareness according to the Their Professional Body Membership

Mann-Whitney U test was adopted to compare the differences of respondents' perception on ethical awareness according to the respondents' professional body membership. The list of statistical statements tested is shown in Table 4.21.

Table 4.21: List of Statistical Statement According to Respondents' Professional Body Membership (N = 192)

| Respondents' background | Statements | Asymp. sig |
|------------------------------|--|------------|
| Professional body membership | I am aware of the code of ethics and conduct of my professional body | 0.000 |
| | I have read the code of ethics and conduct of my professional body | 0.000 |
| | I am taking ethics seriously in my daily deals | 0.000 |

Table 4.21 (Continued)

| | |
|---|-------|
| I have noticed at least one occasion on senior management compromised unethical conduct | 0.030 |
| I have experienced at least one unethical conduct instructed by my superior | 0.025 |
| I would be a whistle-blower if any wrongdoing is happening in my organisation | 0.000 |
| My organisation has code of ethics and conduct | 0.001 |

Note: N = number of respondents

The null hypothesis rejected by post hoc pairwise comparisons are listed in Table 4.22.

Table 4.22: List of Rejected Null Hypotheses

| No | Null hypothesis | Asym. sig. |
|-----|---|------------|
| (a) | The agreement of 'I am aware of the code of ethics and conduct of my professional body' is same between respondents belong to professional bodies and not a member of a professional body. | 0.000 |
| (b) | The agreement of 'I have read the code of ethics and conduct of my professional body' is same between respondents belong to professional bodies and not a member of a professional body. | 0.000 |
| (c) | The agreement of 'I am taking ethics seriously in my daily deals' is same between respondents belong to professional bodies and not a member of a professional body. | 0.000 |
| (d) | The agreement of 'I have noticed at least one occasion on senior management compromised unethical conduct' is same between respondents belong to professional bodies and not a member of a professional body. | 0.030 |
| (e) | The agreement of 'I have experienced at least one unethical conduct instructed by my superior' is same between respondents belong to professional bodies and not a member of a professional body. | 0.025 |
| (f) | The agreement of 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is same between respondents belong to professional bodies and not a member of a professional body. | 0.000 |
| (g) | The agreement of 'my organisation has code of ethics and conduct' is same between respondents belong to professional bodies and not a member of a professional body. | 0.001 |

The rejection of null hypothesis proved the differences of the following pairs of respondents in their agreement are statistically significant:

- (i) 'I am aware of the code of ethics and conduct of my professional body' is one of the statements which is perceived higher by respondents belong to professional bodies (mean rank = 113.47) than respondents who are not a member of a professional body (mean rank = 73.24).
- (ii) 'I have read the code of ethics and conduct of my professional body' is one of the statements which is perceived higher by respondents belong to professional bodies (mean rank = 113.10) than respondents who are not a member of a professional body (mean rank = 73.75).
- (iii) 'I am taking ethics seriously in my daily deals' is one of the statements which is perceived higher by respondents belong to professional bodies (mean rank = 112.90) than respondents who are not a member of a professional body (mean rank = 74.03).
- (iv) 'I have noticed at least one occasion on senior management compromised unethical conduct' is one of the statements which is perceived higher by respondents who are not a member of a professional body (mean rank = 89.18) than respondents belong to professional bodies (mean rank = 106.52).
- (v) 'I have experienced at least one unethical conduct instructed by my superior' is one of the statements which is perceived higher by respondents who are not a member of a professional body (mean rank = 106.88) than respondents belong to professional bodies (mean rank = 88.93).
- (vi) 'I would be a whistle-blower if any wrongdoing is happening in my organisation' is one of the statements which is perceived higher by respondents belong to professional bodies (mean rank = 109.00) than respondents who are not a member of a professional body (mean rank = 79.37).
- (vii) 'My organisation has code of ethics and conduct' is one of the statements which is perceived higher by respondents belong to professional bodies (mean rank = 92.90) than respondents who are not a member of a professional body (mean rank = 99.13).

4.3.3 Measures to Deal with Most of the Unethical Issues

The causes of unethical issues and ethical awareness has been identified, this section focused on findings for overcome measures obtained from questionnaire survey. Table 4.23 showed the overcome measures of the unethical issues.

Table 4.23: Current Overcome Measures (N = 192)

| Measures | Description | Frequency, N | Percentage, % |
|---|-------------|--------------|---------------|
| My organisation provides employees with a way to report unethical issues anonymously | Yes | 72 | 37.5 |
| | No | 75 | 39.1 |
| | Not Sure | 45 | 23.4 |
| My organisation offers advice or any information helpline where employees could get advice about behaving ethically at work | Yes | 77 | 40.1 |
| | No | 85 | 44.3 |
| | Not Sure | 30 | 15.6 |
| My organisation provides training in code of ethics and conduct | Yes | 75 | 39.1 |
| | No | 77 | 40.1 |
| | Not Sure | 40 | 20.8 |

Based on the results, it is shown that 39.1 % of respondents indicated that their organisations did not provide them a way to report unethical issues anonymously while 23.4 % were not sure about this. Moreover, 44.3 % of respondents' organisations did not offer advice or any information helpline where they could get advice about behaving ethically at work. Lastly, 40.1 % of respondents stated that training in code of ethics and conduct is not provided in their organisations.

4.4 Discussion

4.4.1 Causes of Unethical Issues in the Malaysian Construction Industry

(a) Most common causes in the Malaysian Construction Industry

The inducer of 'late interim payment to main contractors or subcontractors' was ranked top of the cause of unethical issue. The result agreed with Samuel (2010), late interim payment by clients are not only happened in developed countries but also in a developing country, Malaysia. Payment is lifeblood of project. Delays in payment could cause critical cash flow problems to contractors and subcontractors. Hence, they tend to misconduct to solve financial problems. According to Azhar, et al. (2011), late

interim payment accelerates small-medium size contractors to engage in corruption to survive.

The cause of ‘incomplete or ambiguous documentation issue’ seen as the second most significant cause which compatible with Peglowski, who has mentioned the trend of poor documentation issue has been increasing. Construction industry required large forms of documentation for every single detail. Failure to report in black and white allows practitioners to cut corners and failed to comply with regulations and meet quality requirement. It could be explained by Tilley and Barton (1997) that completeness of documentation affects the efficiency of construction stage.

‘Poor communication among staffs’ was in third place. Based on semi-structured interview, the complex nature relationship in construction industry created lack of mutual trust and respect between consultant and main contractors. As mentioned by one of the interviewees, lack of cooperation and ineffective communication among staffs resulting in an adversarial relationship among project stakeholders. It directly infects the behaviour of the staffs and the way they perform jobs.

‘Unfair treatment to contractors in tender/final account negotiations’ was ranked at fourth place. This results indicated the same issues with Vee and Skitmore (2003). Most of the industry practitioners perceived that criteria to enter a particular tender are created with the purpose to benefit only certain ‘favourite’ tenderers. Contractors tend to go out of their way to secure the tender in order to maintain shortlisted by offering bribe.

Another important cause of unethical issue was ‘lack of transparency in transaction’. Hassim (2010) stated that lack of transparency in transaction especially in tenderer selection process was one of the factors contribute to corruption. The nature of the process allows issue as unethical issues happen in planning stage which involves concession of contractual agreement that eventually lead to sub-optimal results.

(b) Differences of Respondents’ Perception on Causes of Unethical Issues according to Their Background Information

Based on the findings, respondents belong to professional bodies had a higher perception that ‘collusive tendering’ was one of the causes of unethical issues. They may perceive that members of professional body are guided by their respective professional Code of ethics and conduct regardless position within the organisation in

their daily deals. Even when necessity, collusive tendering could not be undertaken by contractors to maintain shortlisted.

Although, it is understandable that gifts giving and receiving are part of normal business practices to maintain long term relationship. 'Acceptance of meal treats, gifts and cash to maintain long term relationship' were the causes of unethical issues that perceived higher by the respondents from different background.

In this case, respondents involved in construction business perceived higher than respondents from property development that acceptance of meal treats to maintain long term relationship were forms of corruption and bribery. Gifts and hospitality are the forms of corruption and bribery who perceived higher by directors and respondents who have above 20 years of working experience. Respondents belong to professional bodies also had the perception that corruption and bribery were caused by acceptance of cash. More senior level feel that when its primary purpose is to gain special benefits, it is likely to influence someone in their position.

Professions had higher perception that overstatement of capacity and qualifications to secure work is considered as a fraud. 42.2 % (111) who belong to members of professional body agreed with RICS and CIDB. Code of ethics and conduct that they must be honest and integrity in carrying out duties.

More senior level and professions perceived higher that professional negligence caused late and short payments. This was perceived higher by respondents with above 20 years of working experience as compatible with Bowen, et al. (2007). They perceived that misconduct in business may be aroused eventually due to the consequences of delay in payment would cause company a critical cash flow problem to pay expenses and overhead.

Most of the fresh graduates perceived higher professional negligence were the most common unethical issue in the industry compared to senior level. They perceived when project design and execution ignored the authority requirement and building plan was approved without proper procedure, it is a break of rules.

Besides, 111 members of professional body perceived it was inevitable that lack of relevant work experience of superior in monitoring staffs in daily deals caused professional negligence. Furthermore, respondents with 1 - 5 years of working experience had higher perception that lack of guidance from superior caused professional negligence. As being a profession or a fresh graduate in the industry, they believed construction professions are required to practice high level of professional

standard which including work field relevant knowledge and skills. This is consistent with APM (2019).

Supervisors perceived higher than directors and managers on ‘unfair treatment to clients in tender/ final account negotiations’ caused unethical issues. Supervisors are not usually involved in the tendering processes and final negotiations due to the confidentiality of price. However, supervisors perceived that embedded cultural practices and economic recession could lead to unfair treatment to clients by contractors in order to remain in the business.

4.4.2 Ethical Awareness in Construction Industry

(a) Existing Ethical Awareness among Respondents

The top mean ranking was ‘I am taking ethics seriously in my daily deals’. Respondents perceived that they follow moral or ethical convictions and doing the right thing in their circumstances.

‘My organisation has code of ethics and conduct’ was ranked second. Existence of the code can significantly affect an organisational ethical behaviour.

‘I am aware of the code of ethics and conduct of my professional body’ attained third place whereas ‘I have read the code of ethics and conduct of my professional body’ was ranked at fourth place. There were 57.8 % of respondents registered as part of professional body. They perceived understand and practice the concepts covered in the code of ethics and conduct is the priority as a professional body member.

Another statement was ‘I would be a whistle-blower if any wrongdoing is happening in my organisation’. As a result, most of the respondents assumed themselves have the courage to speak up if they are aware of any wrongdoings.

(b) Differences of Respondents’ Perception on Ethical Awareness according to Their Background Information

There were divergences in perception towards ethical awareness among respondents. The more senior level especially directors hold a positive view towards their ethical awareness. As a senior leader in their organisation, they are required to walk the talk. Thus, they believed that demonstrated good ethical leadership could set an example to their subordinates (Sakyi and Bawole, 2009).

However, the fresh graduates and junior level hold a different view. They perceived lesser that they are taking ethics seriously in their daily deal, lower degree

of ethical awareness because they have not learned code of ethics and conduct of professional body. It can be explained it took more than five years to be a profession in this industry due to the complex environment nature and higher standard of specialist knowledge. Being a fresh graduate, they were yet exposed to professional body. However, both junior level and fresh graduates perceived higher that they had experienced at least one unethical conduct instructed by their superior.

Suppliers perceived that their organisation has a weak ethical awareness compared to consultants. As involved in the complex nature relationship in this construction industry with their role in the supply chain, suppliers perceived they are in the higher risks of bribery, corruption or collusive tendering (Murray, et al., 2013).

Based on the perception of respondents with above 20 years of working experience, they were aware of their professional code of ethics and conduct and they had read it. Moreover, they perceived higher that their organisation has code of ethics and conduct. If any wrongdoing is happening in their organisation, they would be whistle-blower. As have been working in industry for more than 20 years, it can conclude that they were not worried about forms of retaliation or losing their jobs even careers if reporting misconduct. They were senior staffs with high level of ethical knowledge to know how to report formally and believed they were protected by whistle blowing protection.

4.4.3 Measures to Overcome Unethical Issues

Whistle blowing policy served as important tool in order for employees to feel confident to report any wrongdoings in the organisation as well as it served as a platform for employees to raise their concerns about ethical practices in business. While 37.5 % of respondents stated that their organisation did not provide them with a way to report unethical issues anonymously. 37.5 % are yes and 23.4 % are not sure. The effectiveness of Whistle-blower Protection Act 2010 could be exercised in the organisation (MACC, 2010).

Furthermore, 40.1 % of respondents indicated that their organisations offered advice or any information helpline where they could get advice about behaving ethically at work. Worryingly, 44.3 % of respondents indicated 'No' while 15.6 % not sure. The helpline could assist top management with corporate governance as well as provide a mechanism for employee to alert the organisation to and lessen the unethical or misconduct issues.

Of the 39.1 % of respondents stated that their organisations provided training in code of ethics and conduct, 40.1 % were not. 40 % of respondents were not sure. Holme (2008) revealed ethics can be governed if want to. With the training, employees are informed specifically what is and what is not acceptable in the organisation. Training allows them to know the consequences of poor decision, should they make if any.

Some respondents suggested that organisations to include the employee's ethical performance in their key performance indicator (KPI) evaluation. This appraisal system could act as a critical preventive role.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This chapter reflects the achievement of research objectives in Section 5.2. Section 5.3 discusses research contribution, Section 5.4 states the research limitations and Section 5.5 provides the research recommendations.

5.2 Achievement of Research Objectives

In this research, six unethical issues were identified after a comprehensive literature review. There were: collusive tendering, corruption, bribery, fraud, professional negligence and dishonest and unfairness. 20 causes of unethical issues were uncovered and each of the causes was ranked based on the mean value. The top five causes of unethical issues were ‘late interim payment to main contractors or subcontractors’, ‘incomplete or ambiguous documentation issue’, ‘poor communication among staffs’, ‘unfair treatment to contractors in tender/final account negotiations’ and ‘lack of transparency in transaction’.

Different groups had different degree of similarities in their perceptions. As a result, causes of unethical issues that lead to professional negligence were perceived higher by 1-5 years of working experience group. Besides, causes of unethical issues that lead to corruption and bribery were perceived higher by years of working experience group of above 20 years as well as directors.

Although, cash, gifts and hospitality giving and receiving are not uncommon in construction industry in dealing with business relationship. Contractors, top management, fresh graduates and senior level perceived that ‘acceptance of cash to maintain long term relationship’, ‘acceptance of gifts to maintain long term relationship’ and ‘acceptance of meal treats to maintain long term relationship’ were the forms of corruption and bribery.

Meanwhile, it was found that ethical awareness and causes of unethical issues are interrelated. With ethical awareness, ethical contexts and dilemmas can be identified. Lack of ethical awareness could lead to causes of unethical issues.

A comprehensive overcome measures to deal with these unethical issues were then identified after the level of ethical awareness among the respondents were

examined. The top three statements of ethical awareness were 'I am taking ethics seriously in my daily deals', 'my organisation has code of ethics and conduct' and 'I am aware of the code of ethics and conduct of my professional body'.

To sum up, the senior level, top management and respondents with professional body's membership hold a positive view towards the ethical awareness in the industry and believe they are taking ethics seriously. They were more likely to be whistle blower when dealing with ethical dilemmas. However, the fresh graduates and junior level hold a contrasting view.

Last but not least, based on the results from ethical awareness, overcome measures to deal with most of the unethical issues were recommended in this research, namely enforcement of code of ethics and conduct, ethics education and whistle blowing policy.

The aim of this research is to explore the existing unethical issues in the Malaysian construction industry. This research had revealed the existing unethical issues in the Malaysian construction industry, causes of the unethical issues. After that, overcome measures to deal with most of the unethical issues were recommended.

5.3 Research Contribution

Other than corruption, construction industry is embedded with other unethical issues. While unethical issues are an issue that is unacceptable by the community as it might affect lives of human being and the value of human life. With the research outcome, the causes of unethical issues were uncovered and the overcome measures to deal with the unethical issues were recommended. Besides, existing ethical awareness among respondents was examined. The existence of the dispersion of views among junior level and fresh graduates towards ethical awareness should not be neglected.

The construction industry will benefit from this research. First of all, industry practitioners are already aware of these unethical issues. Secondly, construction companies could adopt overcome measures to solve the unethical issues within their companies. For instance, companies could enforce code of ethics and conduct or ethics education to provide guidance when one's making decision in business.

By knowing the causes of unethical issues, industry practitioners could avoid making misconduct by understanding the unethical issues and they could develop their own strategy to mitigate the unethical issues.

5.4 Research Limitations

There are few limitations in this research. First of all, the questionnaire survey was not properly developed due to inadequate preparatory work and did not adequately probe particular issues. The questionnaire survey consisted of many questions which disperse the concentration on particular topics. Besides, convenient sampling was used for quantitative data collection. It was a sampling bias and that the sample was not the representative of the entire population.

5.5 Research Recommendations

An adequate construction of a questionnaire which highly structured could be adopted for future research. Moreover, stratified random sampling can be used for future research as its sample size truly represent the population. Stratified random sampling focus on a subgroup within the population that do not overlap so that members in the subgroup is different. Every member of the subgroup get equal opportunity to be selected (Sekaran, 2003).

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APPENDIX

APPENDIX A: Sample of Questionnaire

To explore the unethical issues in the Malaysian construction industry

Dear Sir/Madam,

Sincere greetings and best regards to you.

I am a final year undergraduate student pursuing Bachelor of Science (Hons) Quantity Surveying in University Tunku Abdul Rahman (UTAR). I am currently doing a research on '**To Explore the Unethical Issues in the Malaysian Construction Industry**'.

The questionnaire is designed to be completed within 15 minutes. Your participation and cooperation in this survey form are greatly appreciated. All the information collected through this survey will be treated strictly private and confidential and used for academic purpose only. Should you require any clarification, please do not hesitate to contact me at lijun0507@1utar.my or 012-290 3988.

Your precious time and effort in participating the survey are deeply appreciated.

Thank You.

Yours faithfully,

Yap Li Jun

Email address*: _____

Please fill in all the fields.

1. Are you a member of the professional body? (Please tick all relevant)

- Yes
 No

Please check (✓) and rate based on the given statements using the following scales:

(Strongly Disagree =1, Mostly Disagree= 2, Slightly Disagree= 3, Uncertain=4, Slightly Agree=5, Mostly Agree = 6, Strongly Agree = 7)

| A | Do you agree with the following statements are the causes of unethical issues in the Malaysian construction industry? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|---|---|---|---|---|---|---|---|
| 1 | Collusive tendering | | | | | | | |
| 2 | Unfair treatment to contractors in tender/final account negotiations | | | | | | | |
| 3 | Unfair treatment to clients in tender/final account negotiations | | | | | | | |
| 4 | Under-pricing of tender | | | | | | | |
| 5 | Over-pricing of work done | | | | | | | |
| 6 | Overstatement of capacity and qualifications to secure work | | | | | | | |
| 7 | Late interim payment to main contractors or subcontractors | | | | | | | |
| 8 | Acceptance of meal treats to maintain long term relationship | | | | | | | |
| 9 | Acceptance of cash to maintain long term relationship | | | | | | | |
| 10 | Acceptance of gifts to maintain long term relationship | | | | | | | |
| 11 | Project has a tight budget | | | | | | | |
| 12 | Project design ignored sustainability requirement | | | | | | | |
| 13 | Project execution ignored sustainability requirement | | | | | | | |

| | | | | | | | | | |
|----|---|--|--|--|--|--|--|--|--|
| 14 | Lack of relevant work experience of superiors in monitoring, supervising or controlling staffs in their daily deals | | | | | | | | |
| 15 | Poor communication among staffs | | | | | | | | |
| 16 | Incomplete or ambiguous documentation issue | | | | | | | | |
| 17 | Fraudulence in document preparation | | | | | | | | |
| 18 | Lack of empathy in daily deals | | | | | | | | |
| 19 | Opportunistic tendency is high | | | | | | | | |
| 20 | Lack of transparency in transaction | | | | | | | | |

| B | To what extent do you agree with the following statements? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----------|---|---|---|---|---|---|---|---|
| 1 | I am aware of the code of ethics and conduct of my professional body | | | | | | | |
| 2 | I have read the code of ethics and conduct of my professional body | | | | | | | |
| 3 | I am taking ethics seriously in my daily deals | | | | | | | |
| 4 | I have noticed at least one occasion on senior management compromised unethical conduct | | | | | | | |
| 5 | I have experienced at least one unethical conduct instructed by my superior | | | | | | | |
| 6 | I would be a whistle-blower if any wrongdoing is happening in my organisation | | | | | | | |
| 7 | It is not easy to follow organisational code of ethics and conduct | | | | | | | |
| 8 | My organisation has code of ethics and conduct | | | | | | | |
| 9 | Ethical issue is sensitive issue in my organisation | | | | | | | |
| 10 | My organisation has a weak ethical awareness | | | | | | | |
| 11 | My organisation has a weak ethical atmosphere | | | | | | | |

| | | |
|----------|---|-----------------|
| C | To recommend measures to deal with most of the ethical issues faced by construction industry | |
| 1 | My organisation provides employees with a way to report unethical conduct anonymously | Yes/No/Not sure |
| 2 | My organisation offers advice or any information helpline where employees could get advice about behaving ethically at work | Yes/No/Not sure |
| 3 | My organisation provides training in code of ethics and conduct | Yes/No/Not sure |
| 4 | Any other measure to recommend in order to deal with most of the ethical issues faced by construction industry? If yes, please state: | |

Respondent Background

1. Which of the following best described the nature of your company's business:

- Consultancy
- Construction Business including main contractors, subcontractors, etc.
- Property Development
- Construction Building Material Suppliers
- Plant & Equipment Suppliers
- Manufacturers

2. Which of the following best described your position in your company?

- Director
- Senior Manager
- Manager
- Supervisor
- Executive
- If others, please state:

3. What is your years of experience in the construction industry?

- Less than 1 year
- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- Above 20 years