

**BENEFITS OF THE *CONSTRUCTION INDUSTRY PAYMENT AND ADJUDICATION ACT 2012 (CIPAA)* AND ITS IMPACTS TO PAYMENT PROBLEM IN CONSTRUCTION INDUSTRY IN MALAYSIA**

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**A project report submitted in partial fulfilment of the requirement for the award of Master of Project Management**

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**May 2016**

## 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

I certify that this project report entitled “**BENEFITS OF THE CONSTRUCTION INDUSTRY PAYMENT AND ADJUDICATION ACT 2012 (CIPAA) AND ITS IMPACTS TO PAYMENT PROBLEM IN CONSTRUCTION INDUSTRY IN MALAYSIA**” was prepared by **YAT WENG CHEONG** has met the required standard for submission in partial fulfilment of the requirements for the award of Master of Project Management at Universiti Tunku Abdul Rahman.

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Specially dedicated to  
my beloved wife and children

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**ABSTRACT**

The construction industry has been troubled with payment problems for decades with issues of late payment, non-payment and under certified payment. Many countries have introduced construction payment act to alleviate this problem. Similarly, in Malaysia, CIPAA was gazetted and enforced upon the construction industry to resolve the payment issues. Literature review showed that studies were carried out and previous research has revealed the benefit of CIPAA and it is subsequently used to examine its impact towards the payment problems faced by contractors. The objectives of this study are to identify the benefits of CIPAA, investigate the impact of CIPAA's benefit to the payment issues in the construction industry and assess the relevancy of the provision in CIPAA clauses that resolve the payment issue in the construction industry. Survey questionnaire is used in this study to collect primary data and 35 contractors responded from the survey which is from the various categories of contractors via CIDB panel lists. These questionnaires were analysed using descriptive statistic method and they are subsequently analysed in detail with Statistical Package Social Science (SPSS). Research finding indicated the top three ranking for the benefit of CIPAA is "lower cost compared to arbitration", secondly "arbitration is a speedy process" and thirdly "able to revise under-valued claim". This paper also presented the impact of CIPAA's benefits towards the factors (from past research) for payment related problems faced by contractors. According to the feedback from the survey questionnaire, it is found that the agreeable index of the lower cost of adjudication in CIPAA is very significant, followed by CIPAA requires the payment to be made within thirty days from the date of invoice unless agreed otherwise and payment including a variation for accepted work-done can be adjudicated. The outcome of this research also provides a guideline for contractors to assess their contractual rights and increases their competitiveness due to a better cash flow.

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## LIST OF SYMBOLS / ABBREVIATIONS

P	rho
N <sub>5</sub>	Number of respondents with strongly agree
N <sub>4</sub>	Number of respondents with agree
N <sub>3</sub>	Number of respondents with fair
N <sub>2</sub>	Number of respondents with disagree
N <sub>1</sub>	Number of respondents with strongly disagree
CIPAA	<i>Construction Industry Payment and Adjudication Act 2012</i>
CIDB	Construction Industry Development Board
JCT	The Joint Contracts Tribunal
KLRC	Kuala Lumpur Regional Centre for Arbitration
PAM	Persatuan Akitek Malaysia
SPSS	Statistical Package Social Science
UK	United Kingdom
WG	Work Group

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Background

The construction industry being an important segment of the Malaysian economy contributing around 6% of the Gross Domestic Product with its indirect multiplier effect on other industry of the economy (KLRCAs 2012). It is a growing industry in Malaysia with market revenue potentially reached \$9 billion mark in 2015 (Leong 2010).

However, this industry had been troubled by payment related issues for decades and acknowledged by past researches (Wu 2010). The issues of late payment, non-payment, under certification of works were common in the construction industry. According to Thanuja and James (2015), non-payment and under-payment refers as never received of anticipated payment, or when it is considered as bad debt, written off or lost partially and/or fully. Whereas late payment is where payment is not made to contractors on time within the agreed contract timeline.

According to Azman et. al. (2014), employer had unruly delayed payment and this issues are paramount to the construction industry due to the long duration and relatively big size project. On top of that, payment is always on credit term to be paid upon service rendered and the amount is usually relatively large.

In an attempt to overcome this problem, CIDB started in 2003, collaboration with the construction industry in developing the CIPAA. One of the workgroup,



WG10 recommended for the enactment of the CIPAA to address the issues of payment and inefficiency in dispute resolution within the construction industry (CIDB 2008).

CIPAA was passed on 18 June 2012 and gazette on 22 June 2012 and on 15 April 2014, it came into operation (Fong 2012).

CIPAA encompasses mainly works and services inclusive of those involving the construction industry on payment related issues and the purpose is to:

- a. *“To facilitate regular payment”*.
- b. *“To provide a mechanism for speedy dispute resolution through adjudication”*.
- c. *“To provide remedies for the recovery of payment in the construction industry”*.

Adjudication has been long adopted throughout the world; in UK adjudication had been proved successful in resolving construction disputes (Syarifah and Zulhabri 2014) and is an established dispute resolution process in construction industry (Bingham 2002). It was available in the JCT Standard Form of Contract with Contractor’s Design in 1970s (Redmond 2001) and later introduced to other JCT contracts in 1996 by the Housing Grant, Construction & Regeneration Act (1996) in UK and subsequently extended to other countries such as Australia, Singapore, New Zealand, Sri Lanka and finally to Malaysia (Harmon 2003). Other similar acts were enacted in Australia, New Zealand and Singapore (Noushad 2016) such as:

- *Construction Contracts Act 2002 (New Zealand)*.
- *Building and Construction Industry Security of Payment Act 1999 amended in 2002 (New South Wales, Australia)*.
- *Building and Construction Industry Security of Payment Act 2002 (Victoria, Australia)*.
- *Construction Contracts Act 2004 (Western Australia)*.

- *Building and Construction Industry Payments Act 2004 (Queensland, Australia).*
- *Construction Contracts (Security of Payment) Act 2004 (Northern Territory, Australia).*
- *Building and Construction Industry Security of Payment Act 2004 (Singapore).*

Abdullah Habib and Abdul Rashid (2006) and Sahab and Ismail (2011) opine that Malaysia is following their footsteps by introducing statutory adjudication in Malaysia construction industry.

## **1.2 Problem Statement**

In the construction industry, contractors are facing a dilemma when they encounter payment difficulties from the owner as their cash flow is affected tremendously. Walton (2006) quoted Lord Denning in 1970,

*“There must be a ‘cash flow’ in the building trade. It is a lifeblood of the enterprise. Cash flow is so critical to the construction industry and this ease of the cash flow can ensure the timely delivery of the construction project.”*

The effect also goes down to the sub-contracting sector of the industry, where sub-contracting is usual as the main contractor is not able to carry out all the works by himself. A major problem with sub-contracting in Hong Kong when an upstream contractor has cash flow problems or becomes insolvent, affecting the payment to lower tier sub-contractors and workers' salary payment that eventually leads to project delay and sub-standard works (Francis and Joseph 2007).

Most sub-contractors are subjected to unfair terms, such as ‘pay-when-paid’ or ‘pay-if-paid’ by the main contractor. One of the main objectives of CIPAA is to eliminate this practice. *Clause 35, Part VI of CIPAA* removed the conditional

payment practices in the construction industry (Rajoo 2012). Although none of the standard form of contract available in Malaysia do not provide for this clause, special drafted domestic sub-contract contain this contract provision. CIPAA also allows for regular payment scheme in a contract without payment mechanism. The default provision in *Clause 36(4), Part VI of CIPAA* allows for progress payment shall be in monthly basis and payment to be made within thirty (30) days from the receipt of the invoice (Noushad 2006).

In Malaysia, PAM 2006 contain express provision for adjudication as a compulsory primary dispute resolution before arbitration proceeding. In comparison, arbitration is not in favour as an efficient dispute resolution due to its excessively formal procedure, high cost and time consuming. Also, most standard form of contract only allows for the disputing party to commence arbitration proceeding after the completion or termination of the project (Lim 2008).

### **1.3 Aims and Objectives**

The aim of this research is to identify the contributory factor for payment issues faced by the contractors in the construction industry.

In line with this aim, the research objectives are to:

1. Identify the benefits of CIPAA.
2. Investigate the impacts of CIPAA's benefit to the payment problems in the construction industry.
3. Assess the relevancy of the provision in CIPAA clauses that resolve the payment issue in the construction industry.

#### **1.4 Significant of Study**

CIPAA objective is to regulate a timely and regular payment, with adjudication as a speedy dispute resolution, and remedy for the recovery of payment in the construction industry and to provide for connected and incidental matters as specified in the Act.

The payment default can be intervened by adjudication during the construction stage of project. It is beneficial for the contracting parties to understand the process of adjudication by those adherence governments in respective construction industry.

#### **1.5 Scope of Study**

The research's scope will focus on the following areas:

1. The identification of the payment related problems in the construction industry in different countries and the benefits of construction act in the construction industry.
2. The investigation of the impact of CIPAA's benefit to payment related problem faced in the construction industry in Malaysia and to assess the relevancy of the provision in CIPAA for payment issue.

#### **1.6 Limitation of Study**

There is limitation in this study. This research focuses solely the opinion from contractors pertaining to the benefits of CIPAA including adjudication derived from past research based on literature review. The judgment of the actual performance of adjudication is difficult to be encountered due to the confidentiality of the actual outcome.

## 1.7 Chapter Outline

This report contains a total of five chapters. Each chapter carries a different main function and is summarized as below:

Chapter 1 - INTRODUCTION gives the overall view of the research studies that covers the payment related issues in the construction industry, the background of adjudication application, aims and objectives, scope, significance and limitation of the research in the constructions industry.

Chapter 2 - LITERATURE REVIEW provide a review on previous journals, article, reports, books, website and research to have greater understanding of the rationale of research and knowing the research gap to improve the research quality. The study of the benefits of CIPAA and similar act nationwide with the payment system in the construction industry and how it's impact affect the contractors and sub-contractors in the construction industry will be one of the topic that discuss in this chapter.

Chapter 3 – RESEARCH METHODOLOGY discuss in detail on the possible method that may be used to establish the relationship between benefits faced by the contractors and sub-contractors in the construction industry. The method of the data analysis, sequence to carry out the research and description of the selected data analysis method will be also being clearly stated in this chapter.

Chapter 4 - RESULTS AND DISCUSSION showing the result of the data analysis based on the data collected from the questionnaire survey and illustrate in the appropriate format. The questionnaire survey result will be revealed on the key selection criteria from contractors in the construction industry and discussion on the result with the suggestions on improvement of selection criteria in general. Furthermore, discussion on the strategy to overcome the challenges faced will also be cover in this chapter.

Chapter 5 - CONCLUSION AND RECOMMENDATIONS revisit previous chapters and give objective comment on the selection criteria for this analysis in the construction industry. This chapter also summarized the benefits and impact caused by CIPAA faced by contractors and sub-contractors in the construction industry. Based on the result results, recommendations for future research have to be including in this chapter.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

Analysis had shown that cash flow is extremely important for the contracting parties; its effect which greatly affect the progress of work. Hamzah et al. (2009) identified late payment as one factor causing delay to construction projects. Any delay in payment will severe the contractor's cash flow resulting in the slow progress of work done. Amer (1994) studied the causes of delay of construction project in Egypt and identified lack of owner's payment as one of the reasons. The late and non-payment issues are paramount to the construction industry in comparison to other industries. Mohamed Nor et al. (2014) cited the main reasons are due to the following facts:-

- i. the relatively long duration of construction projects,
- ii. the relatively big size of each construction project and often equally large progress payment sum involved;
- iii. payment on credit terms rather than payment on delivery,
- iv. progress payment is made after services are rendered, and
- v. the removal is not possible after products become fixtures.

Mansfield (1994) identified one major factor that caused project delays and overrun of cost in Nigeria were attributed due to financial and payment provisions. A study by Kumaraswamy and Yogeswaran (1998) provided a good reference that

payment is one of the common source of construction disputes. Kathleen (2003) also highlighted that limited money resources may develop conflicts.

## 2.2 Payment Problem

Payment problems such as under-paid, late and non-payment to the contractors are common disputes, contributes to 56.7% of construction disputes (Abdul Rashid et al. 2007).

Late and non-payment problem has been a long outstanding matter in the construction industry. Late payment was defined as owner's failure to execute payment to the contractor within the timeframe stated in the contract (Ameer 2005).

According to Murali and Yau (2006), inadequate client's finance and payments for completed work is one of the causes and effects of delay in Malaysia construction industry. Jaffar (2011) further stressed that delayed payment is a factor to conflicts in the construction industry.

According to Hamzah et al. (2009) late payment is a factor contributing to project delays. Alaqhbari et al. (2007) shared the same view that the financial problem is one factor that cause delays in construction projects and this statement is supported by Sweis et al. (2007) that financial difficulties caused delay in construction project in Jordan.

According to Mohd Nor et al. (2014), ten factors identified that contributed to the late and non-payment are as follows:

- a. *Paymaster's poor financial management,*
- b. *Paymaster's withholding of payment,*
- c. *Conflict among the parties involve,*
- d. *The use of pay when paid clause in sub-contractor,*
- e. *Local culture/ attitude,*
- f. *Short of current year's project,*



- g. *Delay in certification,*
- h. *Disagree on the valuation of work done,*
- i. *Contractual provisions, and*
- j. *Technical problem”,*

Due to the above reasons, there is a need for an intervention of a third party such as adjudication to regulate the payment problem in the construction industry.

### 2.3 Statutory Adjudication implemented in other countries

As an effort to resolve these payment issues, other countries have already implemented their legislation for construction payment act. The main objective is to address these issues of prompt payment in order to get rid of the unhealthy payment practices to alleviate the contractors' cash flow (Ameer Ali 2005).

Payment acts from the respective countries and states worldwide for addressing late and non-payment problems, are listed as follows:

**Table 2-1:** Payment Related Act and Functions in Other Countries (Nik Mohd. Dhiyafullah and Zulhabri, nd)

No	Acts and Litigations	Functions
1	<i>Housing Grants, Construction and Regeneration Act 1996 (United Kingdom, England)</i>	To improve payment practices
2	<i>Entitlements to progress payment</i>	Reduce payment delay
3	<i>Building and Construction Industry Security of Payment Act 2002 (Victoria, Australia)</i>	Entitlements to progress payment
4	<i>The Construction Contracts Act 2002 (New Zealand)</i>	Facilitate regular and timely payment, speedy dispute resolution, provide remedies for non-payment
5	<i>Building and Construction Industry of Payment Act 2004 (Queensland, Australia)</i>	Entitlements to progress payment

6	<i>Construction Contracts Act 2004 (Western Australia, Australia)</i>	To ensure timely payment in order for the money to flow in the contractual chain.
7	<i>Construction Contracts (Security of Payment) Act 2004 (Northern Territory, Australia)</i>	To facilitate regular and timely payment, a speedy mean of dispute resolution, and provision of remedy for non-payment.
8	<i>Building and Construction Industry Security of Payment Act 2004 (Singapore)</i>	To expedite payment and improve cash flow
9	<i>Tasmanian Security of Payment Act 2009</i>	To reform payment behaviour in the industry

Similarly in Malaysia, CIPAA is introduced and its provisions are said to be comprehensive enough to resolve cash flow issues, facilitate payment and expedite dispute resolution (Ameer 2006 and Fong 2012). In general, CIPAA applies to all written construction contracts carried out either wholly or partly within Malaysia and granting statutory right for unpaid parties (claimant) for the work done to be paid.

Cleaver (2010) suggested the following as the benefits of the adjudication;

1. statutory right,
2. reputation,
3. costs,
4. speed,
5. flexible procedure, and
6. final decision.

Minter (2008) listed the following as benefits;

1. pre-agreement of selection of expert,
2. less costly,
3. streamlined, speedy and flexible procedures

Kamarulzaman (2015) listed the following as the benefits of adjudication:

1. speed,
2. confidentiality,
3. enforcement of adjudicator's decision and remedies of successful claimant
4. self-representation,
5. low cost and
6. ability to choose adjudicator

## **2.4 Benefits of Adjudication**

The following list of benefits is selected from the previous research mentioned above;

### **2.4.1 Speedy process**

Adjudication is the preferred alternative dispute resolution method as it offers a relatively faster process compared to litigation and arbitration due to its speedy process. It also allows the project to continue with the activities without any obstruction, while the adjudication process takes place. (Nik Mohd. Dhiyafullah and Zulhabri, nd).

Streatfield James (2003) quoted that **adjudication is a quick, enforceable interim decision which last until practical completion unless if not acceptable may be refer to litigation or arbitration.** Thomas and Michael (2005) mentioned that payment act introduces a speedy process for notification and adjudication of a disputed claim.

The important criterion for an effective dispute resolution is speed as it ensures that the objective of expediting the recovery of payment debt is not defeated (Uff 2009).

Jaffe and McHugh (2010) stressed that the key role of the Security Payment Act is to allow a

*“fast track interim adjudication procedure to resolve any dispute about the amount of any progress payment that is due and payable.”*

Mohd Suhaimi et al. (2012), argued that any delay in settlement of dispute could further worsen the financial capacity of the weaker party, thus causing serious cash flow to the contractor and further down its contractual chain. Kratzsch (2010), also argued that even interest are paid on top of the claim, the damages due to cash flow problem are usually much higher than the interest benefited.

Under *Clause 12 (2), Part II of CIPAA*, the adjudicator must make a decision within forty five (45) working days ensuring a speedy adjudication process (Rajoo 2012). The maximum timeframe for the adjudication in Malaysia is 95 days from commencement to conclusion as shown in the figure below and can be adopted while the work is still in progress. ***Clause 36(4), Part VI of CIPAA* requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.**

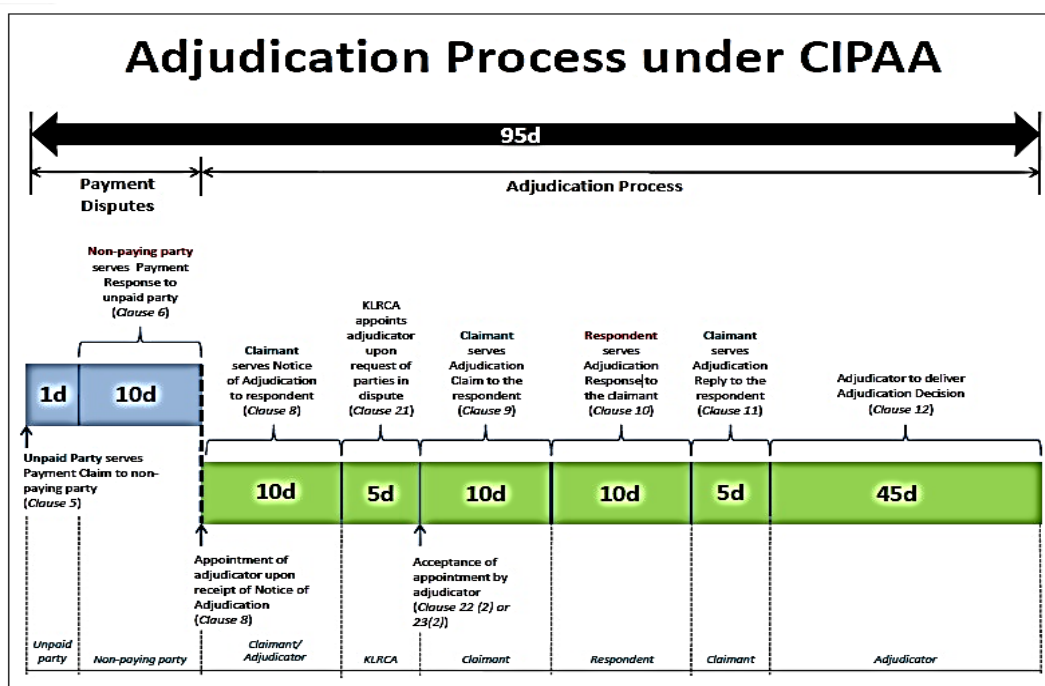


Figure 2-1: Adjudication Process under CIPAA (Rajoo 2012)

### 2.4.2 Lower Cost

**Cost of adjudication is also relatively lower compared to arbitration or litigation,** due to short time frame involved. It offers a relatively cheaper process by virtue of express provisions prescribed by the proposed Act itself (Rajoo 2012).

According to UK Essay (2013), arbitration cost tens or hundreds of Ringgit Malaysia which eventually erode into the already thin profit margin of contractors. The higher cost is due to the lengthy procedure which involves a detailed meticulous fact finding process.

Self-representation in the adjudication proceedings without the compulsory appointment of lawyer is able to save or reduce the company expenses (Kamarulzaman 2015).

Turner and Turner (1999) stated that one of the advantage of adjudication is the cost of adjudication is lower when compared to other methods. Agapiou (2011) describes the adjudication process as being a cheaper and quicker option than litigation or arbitration,

According to Thomas and Michael (nd), the ‘Security of Payment’ Act allows for a mechanism to resolve payment claim disputes in a quick and inexpensive ‘adjudication’ to be determined by a neutral adjudicator.

### 2.4.3 Statutory Right for Adjudication

Sieng (2015) defined adjudication as a dispute resolution method that allows an innocent party (claimant) to seek payment based on the adjudicator’s assessment, from the non-paying party (respondent). According to Hin (2011), legislative within

an act provides for the statutory adjudication which then provides a statutory right for adjudication.

Adjudication also defined as a process where an adjudicator delivers a binding decision on the contractual parties in dispute unless challenged in arbitration or litigation (Nicholas 2007).

Latham (1994) mentioned that legislation should provide statutory rights for adjudication and all the parties to construction contracts were allowed to refer any dispute to adjudication at any time.

Statutory adjudication is essentially an adjudication process prescribed by CIPAA as a platform for dispute resolution. Provision for statutory right for adjudication will apply to any construction contract even if the contract does not provide for it. This provision only allows for payment disputes for any work-done or service rendered and applies to all written construction, supplies and consultancy contracts (Lim CF, 2015). It is the right that is statutory and not the adjudication (Riches and Dancaster 1999).

Statutory adjudication is a mandatory and statutory process that can commence without the contracting parties' agreement and it shall prevail over any other contractual agreements to the contrary between the contracting parties. Under the mandatory statutory process, the claimant can start the adjudication under CIPAA and consent of the contracting parties is not required (Zicolaw 2014).

Thomas and Michael (2005) mentioned that among the benefits of statutory adjudication is the payment act override any provision contained in any agreement that attempts to exclude the payment right of the claimant.

Statutory adjudication allows the innocent party to exercise his/ her rights to invoke adjudication or alternatively opt for other alternative dispute resolution such as arbitration or litigation (Zuhairah, Azlinor and Rozina. nd).

#### 2.4.4 Confidentiality

**Parties in dispute are able to remain confidential** as adjudication is not an open hearing as litigation. **The whole adjudication process is conducted on a privately basis to ensure confidentiality.** (*Clause 20, Part II of CIPAA*). It is important for continuing the business in long run as all contractual matters between them will remain confidential and whatever dispute will be settled in a amicably manner (Kamarulzaman 2015).

Kennedy (2006) mentioned that confidentiality is a great difficulty faced by party during the dispute process. In adjudication, the whole adjudication procedure was carried out privately that would allow the parties in dispute to carry on with their business without fear of image tarnished.

Cushman et al. (2001) mentioned that open court litigation does harm and damage to any business relationship and exposes the danger of potential client staying away from them; depriving business opportunity.

According to Sharpe Focus Newsletter (2016), adjudication allows the parties in disputes to maintain privacy unless referred to court for enforcement of adjudicator decision in comparison with litigation which judgments are reported routinely and accessibly by public.

#### 2.4.5 Flexible Procedures

According to Abraham (2012) and Majid (2013), adjudication offers flexibility where adjudication will not hinder other dispute resolution.

**Any party involved in the adjudication can be self-represented or appoint any representative may not necessary be a lawyer unless it is referred to court proceeding for a stay of execution or the enforcement of the adjudicator's decision** (Sieng 2015).

Party in dispute has the flexibility to determine adjudication to be terminated upon written agreement or subsequent decision from arbitration or court (Rajoo 2012).

Under CIPAA, Adjudication is not a condition precedent to arbitration, litigation or other alternative dispute resolution but is an entitlement for statutory rights if any parties wish to invoke adjudication. Either party may still resort to other dispute resolution (Zuhairah, Azlinor and Rozina. nd).

*Clause 37, Part VI of CIPAA* stated that a payment dispute may be referred to adjudication, arbitration and litigation proceeding at the same time.. The adjudication shall not end and the adjudication proceedings shall not be affected by the arbitration or litigation. However, when any decision on the disputed matter is made by arbitration or court, then the adjudication proceeding has to be terminated.

#### **2.4.6 Final Decision**

According to Ndekugri and Russell (2005), adjudication decision in United Kingdom is an interim solution, which may further subject to review by a judgment in arbitration, litigation, and agreement. Under this situation, the innocent party may not able to recover an adjudicated amount if the final decision is reversed and the defaulting party becomes insolvent by the time the decision is made.

**The adjudicator's decision is binding temporary if either or both the parties refer to an arbitration or litigation in court.** In the interim, adjudicator decision need to be complied by the parties and to pay for the disputed amount unless there is a stay of execution by High Court (Mohd Nor et al. nd). Payment act grants



security for any claim in disputes when adjudicator decision is determined and delivered (Thomas and Michael 2005).

Zuhairah, Azlinor and Rozina (nd) quoted that decision of adjudication is binding temporarily until finally determined by litigation, arbitration or mutual settlement between parties. Similarly, Gaitskell (2007) also mentioned that the adjudicator's decision is binding unless otherwise settled by agreement, litigation, or arbitration.

*Clause 13, Part II of CIPAA mentioned*

*“That decision of adjudication is binding and enforceable unless:*

- a) Set aside by High Court*
- b) Settled by way of a written agreement between the parties; or*
- c) The dispute is finally decided by arbitration or the court”*

#### **2.4.7 Pre-agreement of Adjudicator**

In order for adjudication to be more effective than other dispute resolution processes in resolving disputes, there is a need for its straightforward procedure to appoint an adjudicator for the dispute (Gould and Linnemen 2008). In United Kingdom, adjudicators can be either name in the contract, agreed upon by the parties, or appointed through an Adjudicator Nominating Body (Kennedy 2008).

*The International Federation of Consulting Engineers (FIDIC) and Institute of Construction, Training and Development (ICTAD) conditions of contract allows an adjudicator as a single person appointed by agreement between parties (FIDIC 1999; ICTAD 2007).*

CIPAA allows for the appointment of adjudicator by agreement by the parties to the adjudication and if no agreement is reached, then the director of KLRCA shall appoint an adjudicator (*Clause 21, Part III of CIPAA*).

Zuhairah, Azlinor and Rozina (nd) mentioned that an adjudicator must be appointed within seven days either by agreement of parties or nominated. Lim (2015) mentioned that the **parties can agreed to the choice of arbitrator but only a single adjudicator can conduct the adjudication**. The choice of parties is most likely be a registered quantity surveyor which is familiar with payment related matters.

#### **2.4.8 Enforcement of Adjudicator's Decision and Remedies**

Gaitskell (2007) opines that a statutory legislative provision for adjudication would be effective and also highlighted the need for a court system for enforcement of the adjudicator's decision. According to Abenayake and Weddikara (2012), adjudication proceeding is not commonly used in Sri Lanka due to the absence of court to enforce the adjudicator decision.

*Clause 28, Part IV of CIPAA* allows for the adjudicator decision to be converted as high court judgement in the event if the debt is not released to the successful party. **Upon the judgement, we may execute the judgement by way of writ of seizure and sale, writ of winding up proceeding or by way of garnishment proceeding** (Kamarulzaman 2015).

In *Subang Skypark Sdn Bhd v Arcradius Sdn Bhd [2016] 1 CIDB-CLR 291*, the judge dismissed the application for stay of enforcement of adjudicator decision on the basis that any grant of execution for enforcement should consider the primary objectives of CIPAA to provide for a speedy resolution of payment dispute for the cash flow needed to carry on with the construction works. It would be futile for a winning party in adjudication to be deprived of a successful claim just because of another pending proceeding.

Upon obtaining court judgement, Contractor can make a demand of claim by filing a winding up petition under the *Companies Act 1965*. Section 217(1) (b) allows any creditor, including a contingent or prospective creditor, of the company to file for a winding up petition against the defaulting company. Section 218(1) (e) allows the Contractor to file petition on the ground that the Employer's company is unable to pay its debt.

#### **2.4.9 Rights to Suspend or Slow Down Works without Any Breach of Contract**

According to Suhana and Rosli (2010), any unpaid Contractor or Sub-Contractor who decided to suspend the contractual work until payment is made but without an express contractual right to suspend the works, the Contractor is not entitled to suspend works even though the Employer has failed to pay him within the contractually permitted timeframe. In this respect, if the Contractor do suspends the works, he will be in breach of contract and maybe found guilty of repudiating the contract by the court. Similarly, the Contractor cannot not slow down his work due to any non-payment or any unduly delayed payment by the Employer, unless there is a express contractual provision.

Therefore **CIPAA allows the contractor to either slow down or suspend totally the work progress if the adjudicated amount is not paid, either partly or fully**. The contractor must issue a notice of intention to slow down or suspend the work if the adjudicated amount is not paid to the claimant within fourteen (14) days from the receipt of the notice. The contractor are further entitled for any extension of time and loss and expenses arising from the suspension or slowing down the works (Sieng 2015).

Chang (2015) states that *Clause 29(4), Part IV of CIPAA* safeguards the winning party who slow down or suspend the works would not breach of contract, be entitled for an extension of time and any subsequent loss and expense incurred due to the slow down or suspension of works.

It is similar to the *Building and Construction Industry Security of Payment Act 1999 (NSW)* where the claimant can suspend the work being carried out with at least two (2) working days' notice and the respondent will be liable for any loss and expenses incurred by the claimant in connection with the work during the duration of suspension of work (Minter 2008). Payment act allows claimant the statutory right to suspend works when payment is pending to the innocent party (Thomas and Michael 2005).

#### **2.4.10 Secure Direct Payment from the Principal**

According to Zicolaw (2014), the 'winning party' may request in writing directly from the principal of the 'losing party' against whom the adjudication decision is made when the 'losing party' failed to pay the adjudicated amount.

**Clause 30, Part IV of CIPAA allows for the successful claimant to ask for payment directly from the principal** (owner of the project) if the adjudicated amount is not paid by the defendant to the successful claimant.

*Clause 4, Part I of CIPAA* defines principal as

“a party who contracted with and is liable to make payment to another party where that other party has in turn contracted with and is liable to make payment to a further person in a chain of construction contracts”.

The definition above means any employer who entered a construction contractual agreement with the 'losing party' may have to pay the 'winning party' for any monies that would have to be paid to the 'losing party' for the amount due under the adjudication decision (Chang 2015).

## 2.4.11 Other Benefits

### 2.4.11.1 Prohibition of Conditional Payment

Late payments is a common problem between main contractors and subcontractors which contributes to loss of trust on the project (Arditi and Chotibhongs, 2005).

With this on mind, the mandatory adjudication was introduced with aim for prohibiting “pay when paid” and “paid if paid” clauses that enabling provision of quick adjudication for payment disputes ensuring low cost to relevant parties (Kennedy 2008).

One of the most beneficial would be the outlawing the conditional payment such as ‘pay when paid’ and ‘pay if paid’ clauses in the contract. ***Clause 35, Part VI of CIPAA prohibit conditional payment thus full payment must be made to all accepted work done*** As stated by Judi and Mohd Sabli (2010), these payment practice must be stopped as it may affect many parties due disruption of the chain of business. Abdullah Habib and Abdul Rashid (2006) mentioned that in any payment default at the chain point, it must be resolved there without transferring to another party.

According to Thomas and Michael (2005), payment act nullify the effect of any conditional payment such as ‘pay when paid’ and ‘pay if paid’ clauses found in any construction contractual agreement. Conditional payment clauses are aimed to be prohibited as well by the security payment act in Victoria, Australia. (Peter, Wang and Dennis, 2014).

This prohibition clause is beneficial to subcontractors either nominated or domestic, especially those small and medium size businesses. With regards to contrasting bargaining power between main contractor and the sub-contractor, these clauses are commonly used and difficult to be excluded from subcontracts (Wu, Kumaraswamy, and Soo, 2011).

### 2.4.11.2 Revision of Undervaluation Claim

*Clause 5, Part I of CIPAA* refers to submission of payment claim by the unpaid party. This payment includes the variation works accepted to be brought to the adjudication (Nik Mohd Dhiyafullah and Zulhabri, nd).

Majid (2013) mentioned that the adjudication allows for the contract sum is to be adjusted provisionally and variation works can be paid accordingly.

In *Bina Puri Construction Sdn Bhd v Hing Nyit Enterprise Sdn Bhd [2016] 1 CIDB-CLR 182*, the judge held that payment claim can be issued without the payment certificate under *Section 5, Part I of CIPAA*. The adjudicator has the power to “*decide or declare on any matter notwithstanding no certificate has been issued in respect of the matter*” under section 25(n). Under Section 25(m), the adjudicator also has the power to “*review and revise any certificate issued or to be issued*”. Therefore, the absence of the certificate for payment cannot deprive the unpaid party from seeking a fair payment for the assessment of work done by the adjudicator.

## 2.5 Impact of CIPAA’s benefits on the Payment Problems

From the shown data from past research, it is suggested that the common contributing factors for payment issues in construction industry and the CIPAA impact towards resolving the payment problems is as follows:

Table 2-2: Common contributing factor in payment problems

<b>Factors for payment problems</b> (derived from past research)	<b>Impact of CIPAA’s benefits on payment problem</b> (derived from literature review for benefits of CIPAA as highlighted in bold font)	<b>Citation</b>
Paymaster poor financial	Upon the judgement, we may execute the judgement by way of writ of seizure and sale,	(Kamarulzaman 2015)

management	writ of winding up proceeding or by way of garnishment proceeding.	
Paymaster's withholding of payment	CIPAA requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.	(Rajoo 2012)
Conflict among the parties involve	<p>Adjudication is a quick, enforceable interim decision which last until practical completion unless if not acceptable may be refer to litigation or arbitration.</p> <p>Parties in dispute are able to remain confidential as adjudication is not an open hearing as litigation. The proceeding is conducted privately and ensures confidentiality.</p> <p>The choice of arbitrator can be agreed by parties but the adjudication has to be conducted by a single adjudicator only.</p> <p>Payment includes the variation works accepted to be brought to the adjudication (Nik Mohd Dhiyafullah, nd).</p>	<p>(Streatfield 2003) (Clause 20, Part II of CIPAA).</p> <p>(Lim 2015)</p> <p>(Nik Mohd. Dhiyafullah and Zulhabri, nd)</p>
The use of pay when paid clause in sub-contractor	<p>CIPAA prohibit conditional payment thus full payment must be made to all accepted work done.</p> <p>CIPAA allows for the successful claimant to request for direct payment from the principal if the adjudicated amount is not paid by the defendant to the successful claimant.</p>	<p>(CIPAA Clause 35) (CIPAA Clause 30)</p>
Local culture/ attitude (Late payment at mercy of clients)	Contractor may suspend or slow down the work progress if the adjudicated amount is not paid either partly or fully.	(Sieng 2015)
Short of current year's project (client's credit beyond limit)	Upon the judgement, we may execute the judgement by way of writ of seizure and sale, writ of winding up proceeding or by way of garnishment proceeding.	(Kamarulzaman 2015)
Delay in certification	CIPAA requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.	(Rajoo 2012)
Disagree on the valuation of work done	<p>The payment for the variation works accepted to be brought to the adjudication</p> <p>The contract sum is to be adjusted provisionally</p>	(Nik Mohd. Dhiyafullah and Zulhabri, nd).

	and variation works can be paid accordingly.	(Majid 2013)
Contractual provisions	<p>Adjudication is a process where an adjudicator make a binding decision on the parties in dispute unless or until revised in arbitration or litigation.</p> <p>Cost of adjudication is also relatively lower A party to the adjudication may represent itself unless a stay or the execution is applied to the court proceeding.</p> <p>Decision of adjudication is binding and enforceable unless set aside by High Court, settled amicably between the parties; or overwrite by arbitration or court</p>	(Nik Mohd. Dhiyafullah and Zulhabri, nd). (Nicholas 2007) (Sieng 2015) (Clause13 Part II, CIPAA)
Technical problem (delay in approval processing)	CIPAA requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.	(Rajoo 2012)

## 2.6 Conclusion

This chapter presented the cash flow problems due to under payment, late payment and non-payment that caused the delay in the construction project. The implementation of the construction payment act in other countries is also referred to our similar act in Malaysia, CIPAA in particularly the statutory adjudication procedure.

The benefits of adjudication from past research is further investigated with the factor and impact on payment problem identified that contributed to the late and non-payment as described in Table 2-2



## CHAPTER 3

### METHODOLOGY

#### 3.1 Introduction

Research Methodology adopted for this research is systematically intended as way to solve the research problem. The purpose of the research methodology is illustrated in figure below;

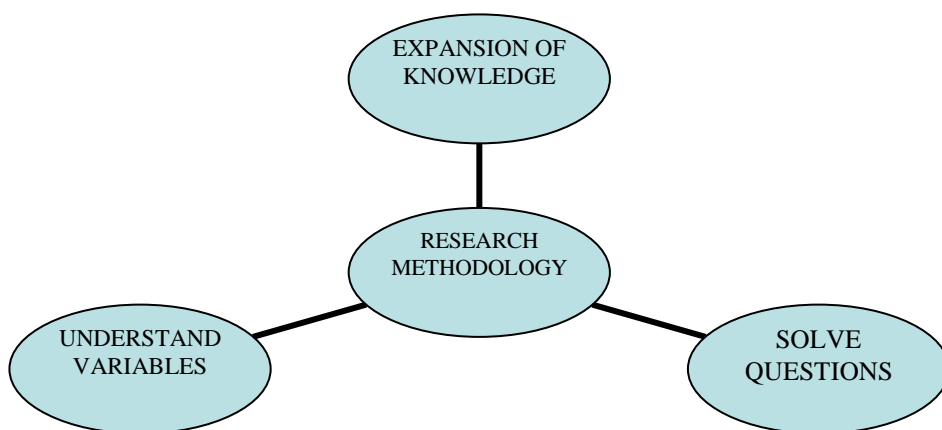


Figure 3-1: Purpose of Research Methodology

### **3.2 Research Strategy**

Research strategy is defined as the way on how to question the research objectives. Generally, there are two types of research strategies; quantitative research and qualitative research. Quantitative research can be further categorised as objective measurement and placement of theory (Naoum 2013). For this research, quantitative method will be adopted.

### **3.3 Quantitative Research**

In nature, quantitative research is objective which enquires into a social or human problem, based on a theory composed of variables, measured with numbers and to be analysed with statistically (Naoum 2013).

### **3.4 Data Collection**

#### **3.4.1 Primary Data**

Primary data are collected mainly by three associated approaches namely surveys, case study and problem solving, to be used for the research. In this research, survey questionnaire method is adopted to obtain information from the various category of contractors in Malaysia. These data are possible to be gathered by respondents working faraway because it is obtained through e-mail which is cheaper but may require a longer time for respondent to respond.

##### **3.4.1.1 Questionnaires**

Questionnaire comprises of a list of questions forwarded to a group of people working for construction companies for their feedback or answer (Naoum 2013).

This set of questions was sent by e-mail to the respondents to collect their

information. The standardized results will then be tabulated and treated statistically. The researcher would have to rely on the answer provided by the respondents, and not the information collected by him.

In this research, close ended questionnaires are adopted. Closed-ended questionnaire are those questions that require a specific responses in the pre-determined form of 'Yes' or 'No', and/or in ranking form by the agreeable which are prepared in advance of the questioning process (Naoum 2013). Closed-ended questionnaires are much easier to be analysed. Each answer can be coded with a value for the statistical representation to be assessed. Therefore, close-ended questionnaire can be more specific and more likely to convey similar meanings. As a result, close-ended questionnaire requires less time from the respondents compared to the open-ended questionnaire.

### **3.4.2 Secondary Data**

Secondary data are collected mainly from other sources namely statistical format and descriptive documents. Secondary data has advantages over primary data in terms of cost and time as it is always cheaper than to conduct a primary research investigation.

Collection of secondary data is done by other person and the sources commonly referred are journals, surveys, reports and information from past researches.

Analysis of secondary data is able to save time that would otherwise be spend collecting data, provides larger database that is not feasible for any individual researchers' own collection.

### 3.5 Research Design

The flowchart of the research procedure is shown in the figure below.

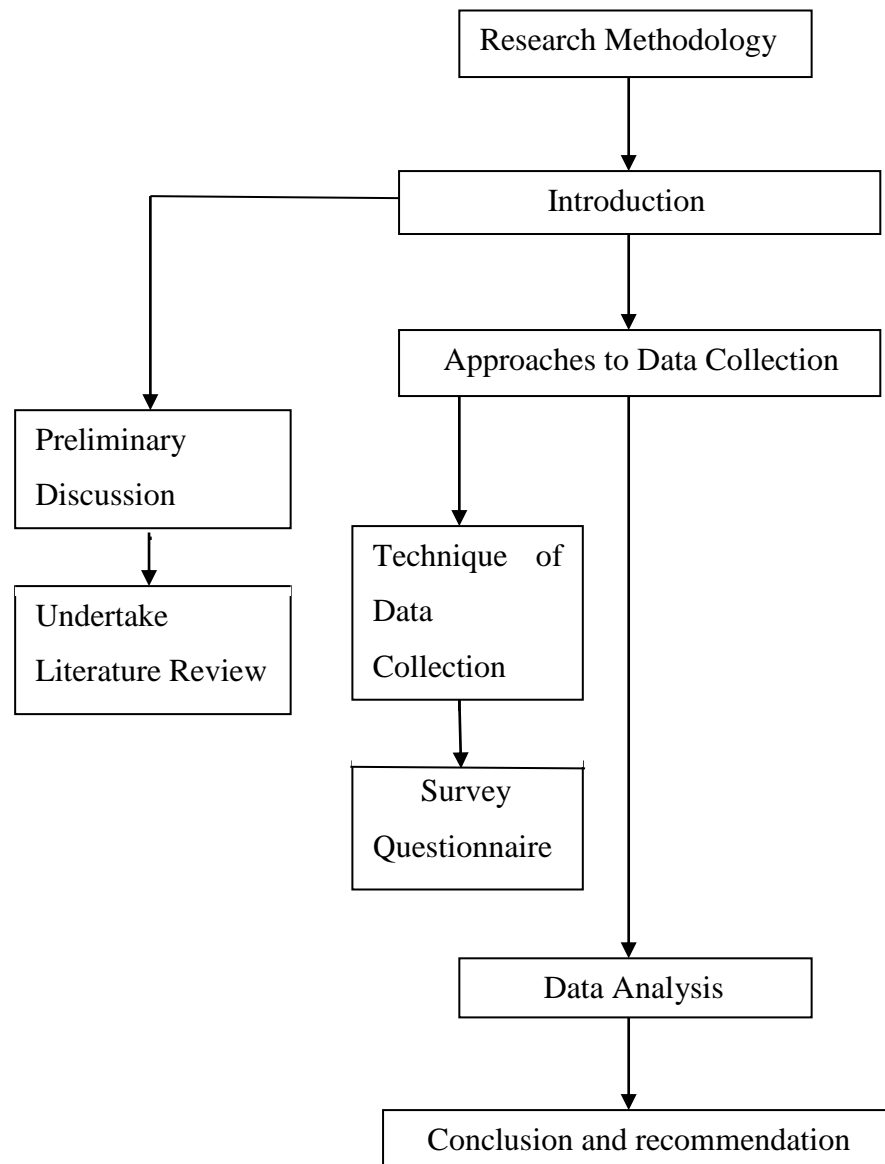


Figure 3-2: Flowchart of research methodology

### **3.5.1 Introduction**

Research design is defined as a planned sequence of the whole process for conducting research studies (Miller and Salking 2002). It plans, structures, and strategies the investigation to gain solutions to research problems and enabling the control of variances.

In general, it is formulated in stages in relation to their functions and priorities. The research work is further separated in a logical ways and coherent orders. It should also provide answer under the scope of the research.

#### **3.5.1.1 Preliminary discussion**

This discussion relates to the broad view on the issues related to the research study. It is of great important to discuss with the supervisor, enabling him to lead or guide along with the process of the research and to exchange ideas.

### **3.6 Approached to Data Collection**

Survey Questionnaire

Questionnaires are commonly used for gathering data in research (Sharp et. Al. 2002) and is a systematic way for collection of data from a pool of respondents (Krysik and Finn 2010).

The questionnaire was formulated to obtain replies that could be easily analysed with the adoption of the closed-ended questions with suggested answer on the ordinal scales (Naoum 2013).

The questionnaires will focus on the CIPAA benefits and its impact towards payment issues in Malaysia. A total of 35 survey questionnaires were received for data analysis from the respondents.

The questionnaire consists of three (3) sections with a total of 30 questions. Section A consists of 6 questions which were about the respondents' background. Section B consists of 12 questions to the benefits of CIPAA. All questions will be set as closed-ended questions.

Section C consists of 12 questions related to CIPAA impact towards the payment issues in construction industry in Malaysia. All questions will be set as closed-ended questions.

The questionnaire sample was attached in appendices (Appendix A).

### **3.7 Data Analysis**

The collected information from the previous stage will be gathered and summarized according to the research findings. These duly completed questionnaires will be analysed in detail with Statistical Package for the Social Science (SPSS).

Two methods are used to analyse the results: the descriptive statistic method and formula using Likert scale. According to Naoum (2013), the simplest analysis is the descriptive statistic method which is able to provide general overview of the results.

All information collected in the survey forms were all recorded and the results will be analysed in terms of percentage and illustrated into pie chart and holograms. Analysis is also carried out qualitatively and quantitatively by using Likert Scale.

Likert Scale is measured using a 5 point measurement scale. These qualitative data was converted to a quantitative data using the formula adopted from Lim and

Alum (1995). Named after Rensis Likert, it is widely used itemized scale where respondent(s) indicate their degree of agreement in one of the response categories (Malhotra 2004b).

$$\text{Conversion Formula} = \frac{5N_5 + 4N_4 + 3N_3 + 2N_2 + N_1}{5(N_5 + N_4 + N_3 + N_2 + N_1)}$$

Where

- $N_5$  = Number of respondents with strongly agree
- $N_4$  = Number of respondents with agree
- $N_3$  = Number of respondents with fair
- $N_2$  = Number of respondents with disagree
- $N_1$  = Number of respondents with strongly disagree

### 3.8 Cronbach's Alpha Coefficient

Cronbach's Alpha coefficient is used for indication of internal consistency and/ or reliability. Its purpose is to measure the scale of correlation of each individual item with the sum of the remaining items (Dornyei and Taguchi 2010). Cronbach's alpha that is equal to or greater than 0.700 indicates that the strength of data is normally distributed and shall be accepted.

### 3.9 Correlation Analysis

According to Kerr et al. (2002), Coefficient of Correlation is used to measure two variables linearly related and if the data is ordinal, a Spearman's rank correlation is more appropriate. In this research, Spearman's correlation coefficient is adopted to analyse the linear correlation and also the significance level for the hypothesis testing.

The coefficient rho lies between -1 and 1.

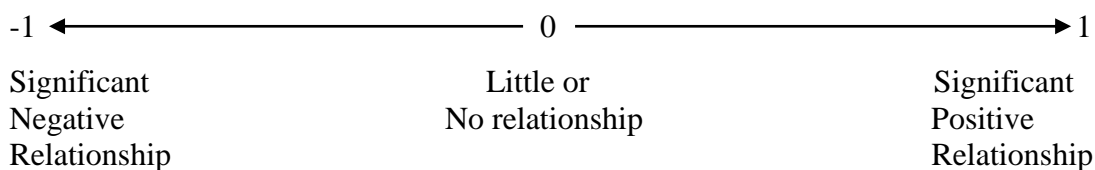


Figure 3.3: Linear relationship of Spearman's Coefficient of Correlation

The positive or negative relationship indicates the direction of the relationship. So, when the relationship is positive, the variables are in the same direction. When the coefficient level is zero, it means there is no linear relationship between the two variables.

### **3.10 Analysis of Past Documents**

This involves summarizing all relevant information from the past research. The data collection related to the construction payment act, is sourced from internet, articles, and journals.

### **3.11 Data collection, Analysing, and Conclusion**

Data collected through survey questionnaire would be analysed. From the data collected, the recommendation can be suggested to improve the payment related issues in the construction industry.

### **3.12 Conclusion**

In this study, the structured questionnaire survey was adopted and feedbacks were collected from the contractors in the construction industry in Malaysia. After the



pilot test, the questionnaire with closed-ended questions were send and returned with collection of data from thirty five (35) completed responses.

This chapter described the research methodology, including the sample format, data collection instruments and strategies used to ensure the reliability and validity of the study

## **CHAPTER 4**

### **RESULTS AND DISCUSSION**

#### **4.1 Survey Questionnaire**

##### **4.1.1 Introduction**

In this chapter, we present the results of the survey questionnaires. It is then analysed with a statistical technique and discussion of the results will be carried out.

A total of thirty five (35) sets of survey questionnaires were received from the respondents and it is aimed to obtain their opinion on the benefit of CIPAA and its impact on payment problems faced by contractors in Malaysia.

The returned questionnaires represented a response rate of 34% out of 102 sent out. According to Owen and Jones (1994), the average satisfactory rate of questionnaires returned is minimum 20%; therefore the response rate of 34% is considered good for this research paper.

## 4.2 Recording of Data

The questionnaires returned are compiled and tabulated into data summary sheet. Recording scheme or production coding is the process of transferring the data from questionnaires into a data summary form (Naoum, S., 2013).

In Table 4.1, the data summary form shows the respondents' background. The first column is designated for the respondent's number and the rest of the columns are for the respondent's detail such as gender, academic qualification, years of involvement, CIDB grading licence and their job position there are currently holding.

Similarly in Table 4.2, first column referred to the same respondent in the list of table 4.1, with the balance of the columns represent the coded answers to the questions in the survey questionnaires.

**Table 4-1:** Data Summary of the Respondents' particular

espondents	Gender		Academic Qualification					Years Involvement						CIDB License Grade							Job Position				
	Male	Female	SPM	Diploma	Degree	Master	Phd	<3	3 - 5	6 - 10	11 - 15	16 - 20	20	NIL	G1	G2	G3	G4	G5	G6	G7	Supervisor	Executive	Site Manager// Agent	CEO// Director
1	1					1			1												1			1	
2	1			1							1										1		1		
3	1			1						1									1				1		
4	1				1						1										1			1	
5	1					1				1											1			1	
6	1				1						1									1				1	
7	1			1								1									1			1	
8	1				1			1													1		1		
9	1				1					1											1			1	
10		1			1					1							1								1
11	1			1					1											1			1		
12	1				1						1										1			1	

13	1			1								1								1			1		
14	1					1				1											1			1	
15		1			1					1											1			1	
16	1		1										1									1	1		
17	1				1								1									1			1
18	1				1						1											1			1
19	1				1						1											1			1
20		1		1							1											1		1	
21	1				1						1											1			1
22	1			1							1											1			1
23		1			1						1											1			1
24	1				1							1										1			1
25	1				1							1										1			1
26	1		1										1										1		1
27	1		1								1											1		1	
28	1				1						1											1			1
29	1				1							1										1			1
30	1		1							1													1	1	
31	1			1							1											1			1

32	1			1						1										1		1			
33	1				1						1									1			1		
34	1					1				1										1			1		
35	1		1										1				1							1	
	31	4	5	9	17	4	0	2	3	13	10	3	4	0	0	0	2	0	1	6	26	3	10	18	4

**Table 4-2:** Data Summary from the respond to the question (based on likert scale)

Respondents	RESPONDS FOR BENEFITS OF CIPAA (based on Likert scale)												RESPOND FOR IMPACTS OF CIPAA ON PAYMENT PROBLEM (based on Likert scale)											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	5	5	5	4	3	3	3	4	3	5	5	5	4	5	5	4	4	5	3	3	5	4	4	3
2	4	3	4	4	3	3	3	4	4	4	4	4	4	4	4	4	4	4	2	4	3	3	3	3
3	4	4	4	3	3	3	3	3	4	4	4	4	4	4	3	4	4	4	4	3	4	3	3	3
4	5	5	5	5	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4
5	5	5	4	4	4	4	4	4	5	5	5	5	5	5	4	4	5	5	5	4	5	4	4	4
6	2	3	2	2	1	3	3	2	2	3	3	2	2	2	3	2	3	3	2	3	3	1	2	3
7	4	4	3	3	3	3	3	3	4	4	4	3	4	4	3	3	4	4	4	3	4	3	3	3
8	3	3	3	3	3	3	3	3	4	4	4	4	3	3	3	4	4	4	4	3	3	3	3	3
9	4	4	4	4	4	4	4	4	5	5	5	5	4	4	4	5	5	5	5	4	4	4	4	4
10	4	3	3	4	3	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	3	3	4	3
11	4	4	3	3	3	3	3	3	4	4	4	3	4	4	3	3	4	4	4	3	4	3	3	3
12	5	5	4	5	4	4	4	5	5	5	5	4	5	5	4	4	5	5	5	4	5	4	4	4
13	3	4	3	3	3	3	3	3	4	4	4	4	3	3	3	3	4	4	4	3	4	3	3	3
14	5	5	4	4	4	4	4	5	3	3	3	4	5	5	3	4	5	3	3	4	5	4	4	4

15	4	4	4	3	3	3	4	4	3	3	3	4	4	4	3	3	5	3	3	3	4	3	3	3	
16	3	3	3	3	3	3	3	3	2	2	2	2	3	3	3	2	2	2	2	3	3	3	3	3	
17	5	5	5	5	5	5	4	4	5	4	5	4	5	5	5	5	5	4	5	5	5	5	4	4	
18	3	4	3	4	4	3	3	3	4	4	4	4	3	3	4	4	4	4	4	4	4	4	3	4	3
19	5	5	5	4	4	4	4	4	5	5	5	5	5	5	4	5	5	5	5	4	5	4	4	4	
20	4	4	4	3	3	2	3	3	4	4	4	4	4	4	3	4	4	4	4	4	2	4	3	3	3
21	4	4	4	4	3	4	4	4	2	2	2	4	4	4	4	4	2	2	2	4	4	4	4	4	
22	4	4	4	4	4	4	4	3	3	3	3	4	4	4	3	4	3	3	3	4	4	4	4	3	
23	5	5	4	4	4	4	4	4	3	3	3	5	5	5	4	5	2	2	2	4	5	4	4	4	
24	3	4	4	4	3	2	4	4	4	4	4	4	3	3	3	4	4	4	4	2	4	4	4	4	
25	5	5	4	4	4	5	4	5	5	5	5	5	5	5	4	5	5	5	5	5	5	4	4	4	
26	3	2	1	3	3	3	1	3	2	2	4	2	3	3	3	3	2	2	4	3	2	3	3	1	
27	2	3	3	3	3	3	3	3	4	4	4	4	2	2	3	3	4	4	4	3	3	3	3	3	
28	4	5	5	4	4	4	4	5	3	1	2	4	4	4	4	5	2	1	3	4	5	4	4	5	
29	4	4	4	4	4	4	4	4	1	1	2	5	4	4	4	5	2	1	5	4	4	4	4	4	
30	4	4	3	3	3	3	3	3	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3	
31	4	4	4	3	3	4	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3
32	3	3	3	2	2	2	2	2	4	4	4	4	3	2	4	4	4	4	2	3	2	2	2	2	
33	3	3	3	2	2	2	2	2	4	3	5	2	4	4	4	2	4	3	5	4	4	4	4	4	
34	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	
35	2	4	3	3	3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	4	3	3	3	



## 4.2.1 Summary of Respondents' Particular

### 4.2.1.1 Respondents' Gender

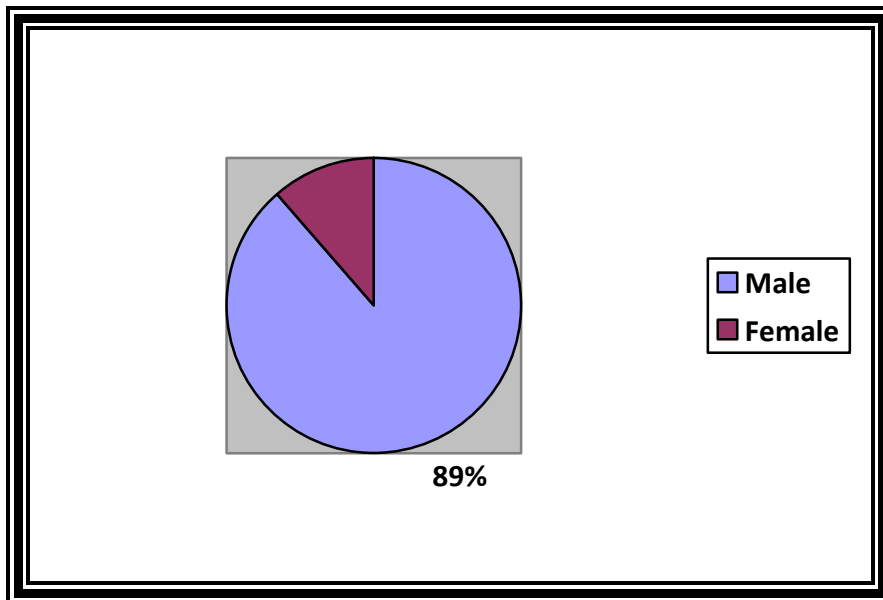


Figure 4-1: Respondents' Gender

Figure 4.1 indicates the gender of the respondents participated in the survey questionnaire. Among the 35 respondents, male respondents constitutes 89% ie 31 persons in total. The balance female respondent representation is only 11%.

#### 4.2.1.2 Respondents' Academic Qualification

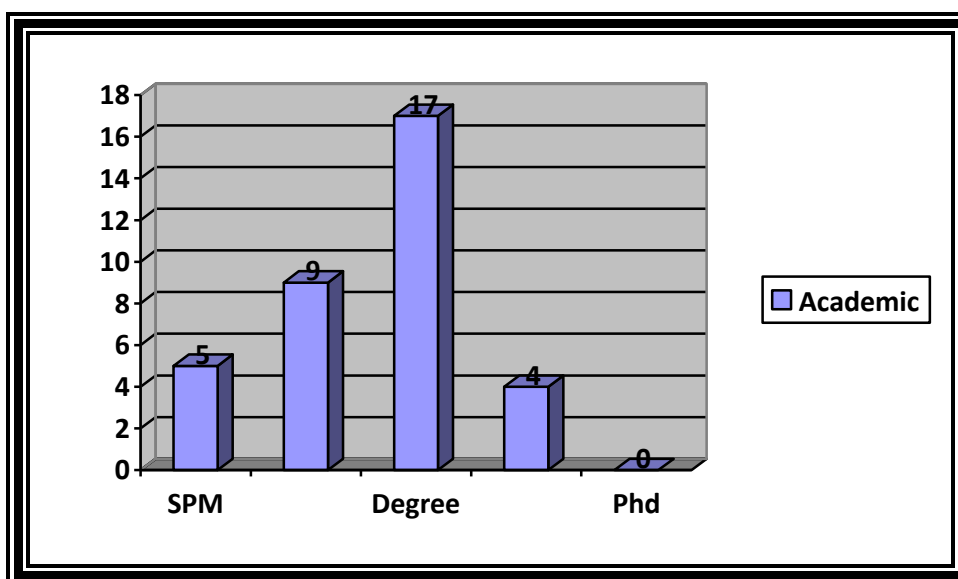


Figure 4-2: Respondents' Academic Qualification

Figure 4.2 shows the academic qualification of the respondents; 5 are SPM holder (14.3%), 9 are Diploma holder (25.7%), 17 are degree holder (48.6%), 4 master degree holder (11.4%) and none Phd holder(0%).

#### 4.2.1.3 Respondents' Years of Involvement in Construction Industry

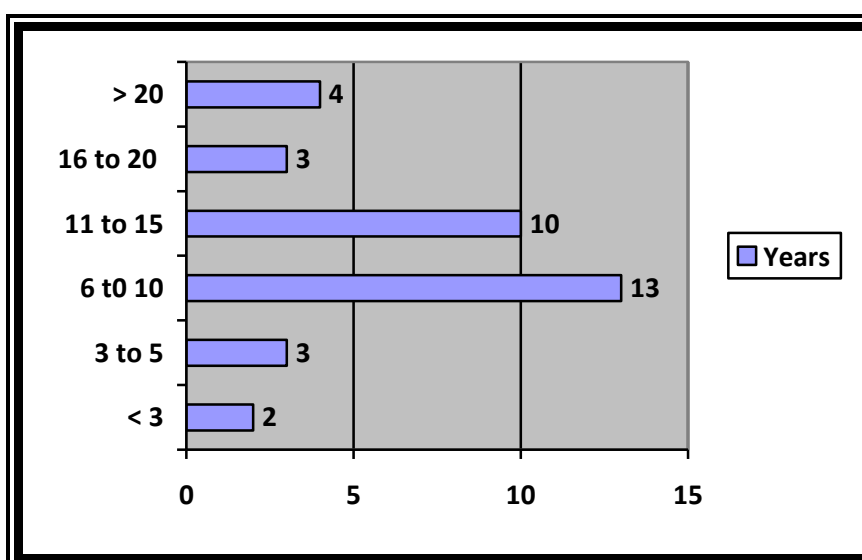


Figure 4-3: Respondents' years of involvement in construction industry

Respondent with 6 to 10 years involvement in the construction industry constitutes the highest group in this survey i.e. 13 out of total 35 respondents representing 37.1%, the second group are those with 11 to 15 years involvement with 10 respondents (28.6%). Another 4 respondents are having more than 20 year (11%) followed by 3 respondents each with 3 to 5 years and 16 to 20 years both representing 8.6% respectively. Finally the smallest group is those with less than 3 year with only 2 persons (5.7%).

#### 4.2.1.4 Respondents' CIDB License Grading

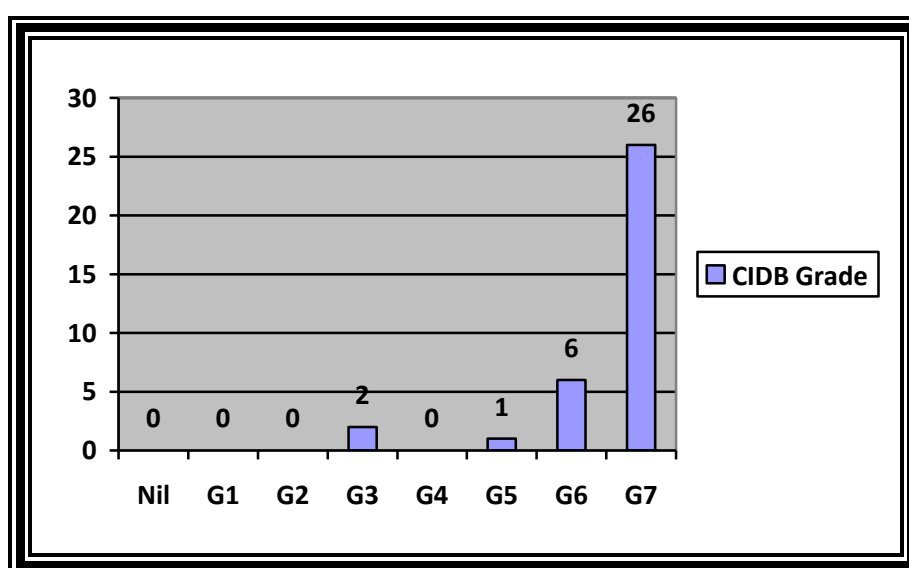


Figure 4-4: Respondents' CIDB Licence Grading

Contractor having grade G7 representing the biggest group with 26 out of a total of 35 respondents ie (74.3%) followed by 6 persons with G6 (17.1%) , 2 from G3 (5.7%) and finally 1 from G5 (2.8%). None representation from G4, G2, G1 and 'non grading'

#### 4.2.1.5 Respondents' Job Position in Organization

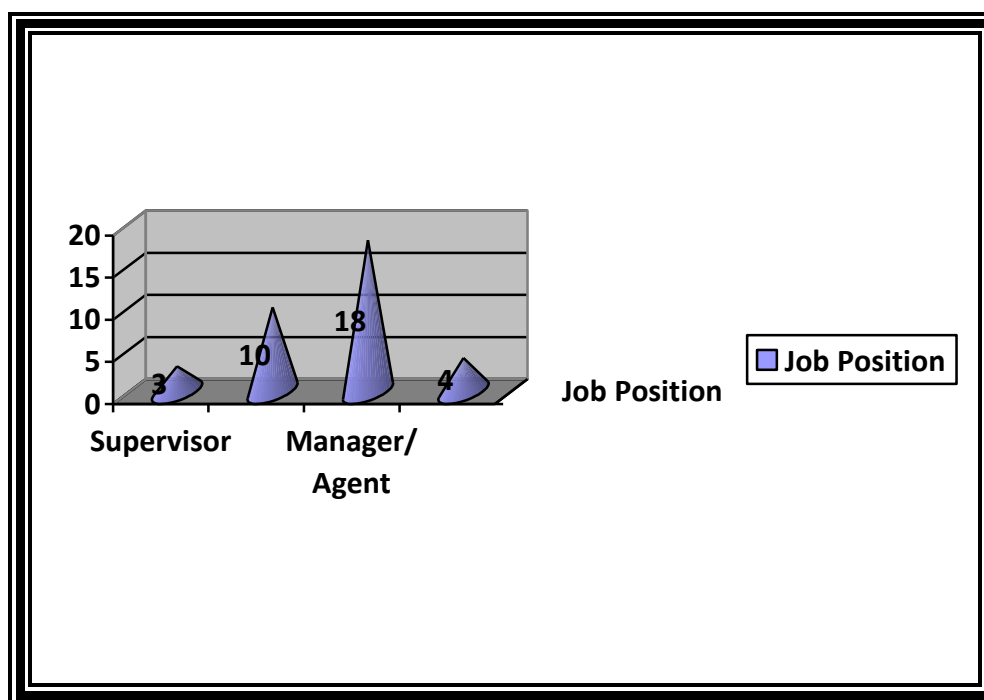


Figure 4-5: Respondents' Job Position in Organization

18 site manager/ agent participate in this survey representing 51.4% out of 100% being the highest group participant. Second is 10 respondents working in executive level with 28.6%. CEO/ Director of company with 4 out of the 35 representing 11.4% and finally 3 site supervisor being the smallest group with 8.6%.

### 4.3 Reliability of Data

After the recording of data, Cronbach's alpha is applied to check the reliability of the collected data. The purpose of applying Cronbach's alpha is to measure the internal consistency to identify the closeness of the relation of a set of items in a group (Dornyei, Z. and Taguchi, T. 2010). Cronbach's alpha is a coefficient of reliability (or consistency) and any Cronbach's Alpha that equals to or greater than 0.7000 is often regarded as satisfactory.

The collected data was computed with SPSS software individually on both factors (benefit and impact). The results were attached in the appendices. I have tabulated them in the table below;

Table 4-3: Cronbach's Alpha Value for the Benefit factor

**Reliability Statistics for benefit factors**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.917	.923	12

Table 4-4: Cronbach's Alpha value for the Impact factor

**Reliability Statistics for impact factors**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.905	.916	12

The Cronbach's Alpha value for 'benefit' and 'impact factors are 0.917 and 0.905 respectively which indicated a high level of internal consistency among the group of variables.

#### 4.4 Validity of Data

The test for validity is by using the 'Spearman' test and the result for benefit and impact factor is shown in table 4,5 and 4.6 below.

Table 4-5: Correlation coefficient between the benefit factors

<b>Sig.</b>	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	<b>B5</b>	<b>B6</b>	<b>B7</b>	<b>B8</b>	<b>B9</b>	<b>B10</b>	<b>B11</b>	<b>B12</b>
<b>B1</b>	-	.000	.000	.000	.000	.000	.000	.000	.037	.052	.071	.000
<b>B2</b>	.000	-	.000	.000	.000	.000	.000	.000	.034	.071	.264	.000
<b>B3</b>	.000	.000	-	.000	.000	.000	.000	.000	.035	.124	.316	.000
<b>B4</b>	.000	.000	.000	-	.000	.000	.000	.000	.068	.156	.231	.000
<b>B5</b>	.000	.000	.000	.000	-	.000	.000	.000	.052	.403	.365	.000
<b>B6</b>	.000	.000	.000	.000	.000	-	.000	.000	.308	.661	.751	.006
<b>B7</b>	.000	.000	.000	.000	.000	.000	-	.000	.218	.417	.670	.000
<b>B8</b>	.000	.000	.000	.000	.000	.000	.000	-	.182	.419	.615	.000
<b>B9</b>	.037	.034	.035	.608	.052	.308	.218	.182	-	.000	.000	.022
<b>B10</b>	.052	.071	.124	.156	.403	.661	.417	.419	.000	-	.000	.012
<b>B11</b>	.071	.264	.316	.231	.365	.751	.670	.615	.000	.000	-	.110
<b>B12</b>	.000	.000	.000	.000	.000	.006	.000	.000	.022	.012	.110	-

Table 4-6: Correlation coefficient between the impact factors

<b>Sig.</b>	<b>I1</b>	<b>I2</b>	<b>I3</b>	<b>I4</b>	<b>I5</b>	<b>I6</b>	<b>I7</b>	<b>I8</b>	<b>I9</b>	<b>I10</b>	<b>I11</b>	<b>I12</b>
<b>I1</b>	-	.000	.001	.000	.020	.166	.029	.000	.000	.000	.000	.001
<b>I2</b>	.000	-	.001	.000	.031	.146	.027	.000	.000	.000	.000	.001
<b>I3</b>	.001	.001	-	.000	.164	.107	.111	.000	.004	.001	.001	.001
<b>I5</b>	.000	.000	.000	-	.205	.261	.057	.001	.001	.000	.000	.002
<b>I5</b>	.020	.031	.104	.205	-	.000	.001	.177	.033	.263	.360	.298
<b>I6</b>	.166	.146	.107	.261	.000	-	.004	.541	.163	.684	.658	.967
<b>I7</b>	.029	.027	.111	.057	.001	.004	-	.052	.022	.005	.006	.083
<b>I8</b>	.000	.000	.000	.001	.177	.541	.052	-	.002	.000	.000	.001
<b>I9</b>	.000	.000	.004	.001	.033	.163	.022	.002	-	.000	.000	.000
<b>I10</b>	.000	.000	.001	.000	.263	.684	.005	.000	.000	-	.000	.000
<b>I11</b>	.000	.000	.001	.000	.360	.658	.006	.000	.000	.000	-	.000
<b>I12</b>	.001	.001	.011	.002	.298	.967	.083	.001	.000	.000	.000	-

The result shown that the p-value is less than 0.05 except for 'B9', 'B10' and 'B11' for the benefit factor and 'I5', 'I6' and 'I7' for the impact factor, therefore the correlation coefficient among the other factors is statistically significant within the factor at 0.05 significant level. Therefore, it is concluded that those factors are consistent and valid to be measured what they are intended to measure.

## 4.5 Data Analysis

After the verification on the reliability of data, the results were analysed with application to the raw data. The method adopted for the analysis of the questionnaires is by applying quantitative measurement and Likert Scale in the analysis process of the result. The data analysis is presented in charts and table of tabulation.

### 4.5.1 Correlation Analysis

The coefficient rho,  $\rho$  lies between -1 and 1.

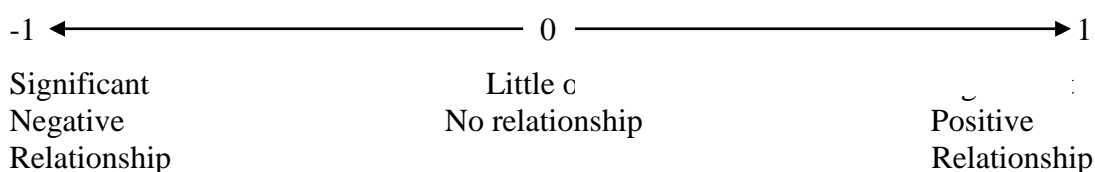


Figure 4-6: Linear relationship of Spearman's Coefficient of Correlation,

The positive or negative relationship indicates the direction of the relationship. So, when the relationship is positive, the variables are in the same direction. When the coefficient level is zero, it means there is no linear relationship between the two variables.

#### 4.5.1.1 Correlation Coefficient between Respondents' Background against Benefit factors

Table 4-7: Correlation coefficient between respondents' background and benefit factors

Factor	Gender	Academic	Experience	CIDB licence grade	Job Position
B1	0.145	0.524	-0.124	0.214	0.129
B2	-0.030	0.578	-0.040	0.218	0.309
B3	0.074	0.519	-0.088	0.258	0.130
B4	0.031	0.566	0.110	0.246	0.446
B5	0.031	0.461	0.081	0.225	0.336
B6	0.035	0.448	0.077	0.070	0.333
B7	0.261	0.614	-0.015	0.000	0.307
B8	0.142	0.612	0.034	0.235	0.335
B9	-0.239	0.209	0.008	0.232	0.193
B10	-0.234	0.278	-0.130	0.195	0.151
B11	-0.286	0.278	0.049	0.301	0.284
B12	0.149	0.518	-0.194	0.253	0.070

From the analysis above, respondents' gender and experience do not have a constant correlation coefficient against "benefit factors" consisting of a combination of weak negative and positive relationship.

Respondents' academic qualification is having the highest value of correlation coefficient,  $\rho$  with a moderate significant positive relationship. Respondents' CIDB licence grading and job position has a lower correlation coefficient with a weak positive relationship.

#### 4.5.1.2 Correlation Test between Respondents' Background and Impact factors



Table 4-8: Correlation efficiency of respondents' background and the impact factors

	Gender	Academic	Experience	CIDB licence grade	Job Position
I 1	0.152	0.505	-0.054	0.214	0.137
I 2	0.129	0.557	-0.086	0.222	0.169
I 3	0.004	0.550	0.071	0.368	0.419
I 4	0.168	0.486	-0.064	0.265	0.255
I 5	-0.129	0.419	-0.057	0.192	0.207
I 6	-0.272	0.264	-0.116	0.212	0.164
I 7	-0.046	0.265	0.162	0.284	0.387
I 8	-0.049	0.486	0.184	0.217	0.404
I 9	-0.026	0.653	0.045	0.208	0.390
I 10	-0.049	0.632	0.094	0.334	0.381
I 11	0.064	0.708	0.053	0.246	0.532
I 12	-0.005	0.665	0.107	0.314	0.379

From the analysis above, respondents' gender and experience do not have a constant correlation coefficient against "impact factors) consisting of a combination of negative and positive relationship. Respondents' academic qualification is having the highest value of correlation coefficient,  $\rho$  with a moderate significant positive relationship. Respondents' CIDB licence grading and job position has a lower correlation coefficient with a weak positive relationship

#### 4.5.2 The Benefit of CIPAA

According to Peter (2016), the significance of Agreeable Index is interpreted as a rating of results as shown in Table 4.9 below.

Table 4-9: Significance rating resulting from Agreeable Index

<b>Agreeable Index</b>	<b>Result rating</b>
0.8 to 1.0	Very Significant
0.6 to < 0.8	Significant
0.4 to < 0.6	Neutral
0.2 to < 0.4	Little Significant
0.0 to < 0.2	Very Little Significant

The twelve 'benefit' factors were analysed and rank according to mean value derived from SPSS and majority of the respondents agreed that the following factors are crucial to the problem statement, as indicated in Table 4.9 and 4.10 below

Table 4-10: Ranking of 'benefit' factors using mean value

	<b>Benefits of CIPAA</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Rank</b>
1	Speedy process	3.8571	.91210	2
2	Lower cost compared to arbitration or court	4.0286	.82197	1
3	Statutory rights for adjudication	3.6571	.87255	5
4	Confidential hearing	3.5429	.78000	9
5	Flexible procedure	3.3143	.75815	12
6	Final decision unless set aside by High Court, settled by agreement, or dispute decided by arbitration or court	3.4000	.77460	10
7	Allow for pre agreement of adjudicator	3.3714	.73106	11
8	Enforceable by court judgement	3.5714	.85011	8
9	Remedies: can slow or suspend work	3.6571	1.02736	5
10	Remedies: can secure direct payment	3.6286	1.08697	7
11	Prohibition of conditional payment	3.8286	.95442	4
12	Revision of under-valuation claim	3.8571	.91210	2

Alternatively, the ranking of the factors can also be rank according to the Agreeable Index.

Table 4-11: Acceptable Index for ‘benefit’ factors derived from Likert Scale

Rank	Benefits of CIPAA	Degree agreeable respondents					of by	Agreeable Index	Result rating
		5	4	3	2	1			
1	Lower cost compared to arbitration or court	11	15	8	1	0		0.8057	Very significant
2	Speedy process	9	15	8	3	0		0.7714	Significant
2	Revision of under-valuation claim	8	18	5	4	0		0.7714	Significant
4	Prohibition of conditional payment	9	15	7	4	0		0.7657	Significant
5	Statutory rights for adjudication	5	16	12	1	1		0.7314	Significant
5	Remedies: can slow or suspend work	7	15	8	4	1		0.7314	Significant
7	Remedies: can secure direct payment	7	15	8	3	2		0.7257	Significant
8	Enforceable by court judgement	5	13	14	3	0		0.7143	Significant
9	Confidential hearing	3	16	13	3	0		0.7086	Significant
10	Final decision unless set aside by High Court, settled by agreement, or dispute decided by arbitration or court	2	14	15	4	0		0.6800	Significant
11	Allow for pre agreement of adjudicator	0	17	15	2	1		0.6743	Significant
12	Flexible procedure	1	13	18	2	1		0.6629	Significant

The above data analysis examines the degree of agreeable criteria under the issues pertaining to benefit of CIPAA.

All the benefit factors fall within the “Very Significant” and “Significant” range as defined by Peter (2016), One factor is within “**Very Significant**” i.e. ‘lower cost compared to arbitration/ litigation’ is very significant at an Agreeable Index of 0.8057.

All other factors fall under “**Significant**” rating within an Agreeable index of 0.6 to < 0.8. are as follows:

- ‘speedy process’ and ‘revision of under value claim’ (0.7714) both in Rank 2,
- ‘prohibition of conditional payment’ (0.7656) in Rank 4,
- ‘Statutory rights for adjudication’ and ‘Remedy: can slow or suspend work’ (0.7314) both in Rank 5.
- ‘Remedies: can secure direct payment’ (0.7257) in Rank 7
- ‘Enforceable by court judgement’ (0.7143) in Rank 8
- ‘Confidential hearing’ (0.7086) in Rank 9
- ‘Final decision unless set aside by High Court, settled by agreement, or dispute decided by arbitration or court’ (0.6800) in Rank 10
- ‘Allow for pre agreement of adjudicator’ (0.6743) in Rank 11 and
- ‘Flexible procedure’ (0.6629) in Rank 12.

From the survey done, feedback from the respondents according to the hierarchy, indicated that adjudication is inexpensive and a speedy process with the ability to revise or correct any under claim or certified claim amount.

CIPAA prohibits the conditional payment such as ‘pay if paid’ and ‘pay when paid’ even though contains in the contract in particularly sub contract between contractor and sub-contractor. CIPAA also allows for statutory rights for adjudication when no adjudication clause contain in the contractual agreement, and remedy to allow contractors to slow down or suspend works without any breached of contract while payment is pending.

Another remedy allowed in CIPAA is the ability by the innocent contractor to request for direct payment from the principal of the party in the event the losing party could not pay the adjudicated amount. Upon the adjudication decision, enforcement could be carried out by High Court judgment and adjudication is a private proceeding which will be confidential within the two parties in dispute unless the judgment is heard at High Court.

Finally, the adjudicator is final unless set aside by the High Court, dispute referred to arbitration or litigation, or mutually settled between parties. Pre agreement of adjudicator can be agreed by parties which is beneficial if the adjudicator is of QS background when the dispute matter involved monetary issues. Adjudication also allow for flexible procedures where lawyer are not required for the adjudication proceeding. Adjudication haring can also be terminated anytime with the agreement of both parties and adjudication is not a condition precedent to arbitration and/or litigation as stated in CIPAA.

#### 4.5.3 The Impact of CIPAA's benefit towards Contractors in Malaysia

The factors for payment problem in the construction industry in Malaysia were derived from the past research and feedback from the respondents on the impact of CIPAA towards these problems are adopted and rated as shown in the Table 4.8 below.

Table 4-12: Impact factor Agreeable Index and result rating

<b>Factors for payment problems</b>	<b>Impact of CIPAA's benefit on payment problem</b>	<b>Agreeable Index</b>	<b>Result rating</b>
<i>Paymaster poor financial management</i>	Upon the judgement, we may execute the judgement by way of writ of seizure and sale, writ of winding up proceeding or by way of garnishment proceeding.	<b>0.7257</b>	<b>Significant</b>
<i>Paymaster's withholding of payment</i>	CIPAA Clause 36(4) requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.	<b>0.7714</b>	<b>Significant</b>
<i>Conflict among the parties involve</i>	1. Adjudication is a quick, enforceable interim decision which last until practical completion unless if not acceptable may be refer to litigation or arbitration.	<b>0.7029</b>	<b>Significant</b>
	2. Parties in dispute are able to remain confidential as adjudication is not an open hearing as litigation. The proceeding is conducted privately and ensures confidentiality.	<b>0.6971</b>	<b>Significant</b>
	3. The choice of arbitrator can be agreed by parties but the adjudication has to be conducted by a single adjudicator only.	<b>0.6743</b>	<b>Significant</b>

	4. payment includes the variation works accepted to be brought to the adjudication	<b>0.7657</b>	<b>Significant</b>
<i>The use of pay when paid clause in sub-contractor</i>	1. CIPAA prohibit conditional payment thus full payment must be made to all accepted work done.	<b>0.7600</b>	<b>Significant</b>
	2. CIPAA allows for the successful claimant to request for direct payment from the principal if the adjudicated amount is not paid by the defendant to the successful claimant.	<b>0.7200</b>	<b>Significant</b>
<i>Local culture/ attitude (Late payment at mercy of clients)</i>	Contractor may suspend or slow down the work progress if the adjudicated amount is not paid either partly or fully.	<b>0.7429</b>	<b>Significant</b>
<i>Short of current year's project (client's credit beyond limit)</i>	Upon the judgement, we may execute the judgement by way of writ of seizure and sale, writ of winding up proceeding or by way of garnishment proceeding	<b>0.7257</b>	<b>Significant</b>
<i>Delay in certification</i>	CIPAA Clause 36(4) requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.	<b>0.7714</b>	<b>Significant</b>
<i>Disagree on the valuation of work done</i>	The payment for the variation works accepted to be brought to the adjudication. The contract sum is to be adjusted provisionally and variation works can be paid accordingly.	<b>0.7657</b>	<b>Significant</b>
<i>Contractual provisions</i>	1. Adjudication also defined as a process where a neutral third party gives a decision, which is binding on the parties in dispute unless or until revised in arbitration or litigation	<b>0.6971</b>	<b>Significant</b>
	2. Cost of adjudication is also relatively lower	<b>0.8000</b>	<b>Very Significant</b>
	3. A party to the adjudication may represent itself unless a stay or the execution is applied to the court proceeding.	<b>0.6857</b>	<b>Significant</b>
	4. Decision of adjudication is binding and enforceable unless set aside by High Court, settled amicably between the parties; or overwrite by arbitration or court	<b>0.6971</b>	<b>Significant</b>
<i>Technical problem (delay in approval processing)</i>	CIPAA Clause 36(4) requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.	<b>0.7714</b>	<b>Significant</b>

From the data analysis shown in Table 4.8 above, all the impact factors are within the “Very Significant” and “Significant” rating. This result indicated that all these impact factors towards the payment problems faced by the contractor in Malaysia are valid and relevant based on the feedback from the respondents.

#### **4.6 Analysis of Impact factors to Payment Problems faced by Contractors in Malaysia**

The clause contained in CIPAA is derived to resolve the payment problems faced by the contractors in Malaysia. From what is agreed in this research paper, these factors are assessed to be relevant as shown in the analysis below:

##### **4.6.1 Paymaster Poor Financial Management**

- Upon the judgement, we may execute the judgement by way of writ of seizure and sale, writ of winding up proceeding or by way of garnishment proceeding.
  - **Clause 28 (1)** allows the enforcement of the adjudication decision as the High Court judgment or order.
  - **Clause 28 (2)** - The high court may order for either the wholly or partly of the adjudication decision and also impose interest on the adjudicated amount payable
  - **Clause 28 (3)** – The order made under Clause 28 (2) may be executed upon the execution of the High Court order or judgment.

##### **4.6.2 Paymaster’s Withholding of Payment**

- CIPAA requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.
  - **Clause 36 (4)** – the payment due date is thirty (30) calendar days from the receipt of invoice.

### 4.6.3 Conflict among Parties Involved

- Cost of adjudication is also relatively lower.
  - Cost is lower due to speedier process: total duration required for a complete cycle of adjudication is ninety days.
  
- Adjudication is a quick, enforceable interim decision which last until practical completion unless if not acceptable may be refer to litigation or arbitration.
  - **Clause 5** – Unpaid party (claimant) may serve a payment claim on a non-paying party (defendant) for payment.
  - **Clause 6 (3)** – payment response shall be served on the unpaid party within ten working days of the receipt of payment claim.
  - **Clause 8** – claimant can serve a written notice of adjudication to initiate adjudication proceedings.
  - **Clause 21**- appointment of adjudicator by agreement of the parties within ten working days from the service of the notice of adjudication by claimant.
  - **Clause 9** – the claimant within ten working days from the receipt of the appointment of adjudicator, serve an adjudication written claim.
  - **Clause 10 (1)** – the respondent shall within ten working days from the receipt of the adjudication claim, serve a written adjudication response.
  - **Clause 11 (1)** – The claimant may, within 5 working days from the receipt of the adjudication response , serve a written reply to the adjudication response together with any supporting document on the respondent.
  - **Clause 12 (2)** – the adjudicator shall make a decision on the dispute and to deliver the adjudication decision within forty five working days.

Total duration required for a complete cycle of adjudication is ninety days.

- **Clause 28** – allows for enforcing the adjudication decision as court judgment.
- **Clause 13** – the adjudication decision is binding unless the dispute is finally decided by arbitration or the court.



- Parties in dispute are able to remain confidential as adjudication is not an open hearing as litigation. The proceeding is conducted privately and ensures confidentiality.
  - **Clause 20** – the adjudicator and any party to the dispute shall not disclose any statement, admission of document made or produced for the purposes of adjudication to another person.
  
- The choice of arbitrator can be agreed by parties but the adjudication has to be conducted by a single adjudicator only.
  - **Clause 21** – an adjudicator may be appointed by agreement of the parties in dispute.
  
- payment includes the variation works accepted to be brought to the adjudication
  - **Clause 5** – Unpaid party (claimant) may serve a payment claim on a non-paying party (defendant) for payment.

#### **4.6.4 The use of pay when paid clause in sub-contractor**

- CIPAA prohibit conditional payment thus full payment must be made to all accepted work done.
  - **Clause 35 (1)** – any conditional payment provision in a construction contract in relation to payment under the construction contract is void.
  
- CIPAA allows for the successful claimant to request for direct payment from the principal if the adjudicated amount is not paid by the defendant to the successful claimant.
  - **Clause 30** – the claimant may request for direct payment of the adjudicated amount from principal.

#### **4.6.5 Local culture/ attitude (Late payment at mercy of clients)**

- Contractor may suspend or slow down the work progress if the adjudicated amount is not paid either partly or fully.
  - **Clause 29** – allows for reduction of rate of progress of work or suspension of performance.

#### **4.6.6 Short of current year's project (client's credit beyond limit)**

- Upon the judgement, we may execute the judgement by way of writ of seizure and sale, writ of winding up proceeding or by way of garnishment proceeding.
- **Clause 28 (1)** allows the enforcement of the adjudication decision as the High Court judgment or order.
- **Clause 28 (2)** - The high court may order for either the wholly or partly of the adjudication decision and also impose interest on the adjudicated amount payable
- **Clause 28 (3)** – The order made under Clause 28 (2) may be executed upon the execution of the High Court order or judgment.

#### **4.6.7 Delay in certification Disagree on the valuation of work done**

- The payment for the variation works accepted to be brought to the adjudication. The contract sum is to be adjusted provisionally and variation works can be paid accordingly.
  - **Clause 5** – Unpaid party (claimant) may serve a payment claim on a non-paying party (defendant) for payment.

#### 4.6.8 Disagree on the valuation of work done

- The payment for the variation works accepted to be brought to the adjudication. The contract sum is to be adjusted provisionally and variation works can be paid accordingly.
  - **Clause 5** – Unpaid party (claimant) may serve a payment claim on a non-paying party (defendant) for payment.

#### 4.6.9 Contractual provisions

- Adjudication also defined as a process where a neutral third party gives a decision, which is binding on the parties in dispute unless or until revised in arbitration or litigation
  - **Clause 13** – the adjudication decision is binding unless the dispute is finally decided by arbitration or the court.
- A party to the adjudication may represent itself unless there is reference for a stay or the enforcement or the adjudicator's decision to the court proceeding.
  - **Clause 16 (1)** – a party may apply to the High Court for a stay of an adjudication decision
- Decision of adjudication is binding and enforceable unless: set aside by High Court, settled by way of a written agreement between the parties; or the dispute is finally decided by arbitration or the court
  - **Clause 13** – the adjudication decision is binding unless the dispute is finally decided by arbitration or the court.

#### **4.6.10 Technical problem (delay in approval processing)**

- **Clause 36(4)** requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.
  - **Clause 36 (4)** – the due date for payment is thirty calendar days from the receipt of invoice.

#### **4.7 Conclusion**

This chapter has produced detailed analysis of all sections of questionnaire. The Cronbach's Alpha test for both the benefit and impact factors were reported greater than 0.700 at 0.923 and 0.916 respectively. This indicates the data collected from the survey was interrelated and reliable.

Firstly, the correlation analysis is conducted between the respondents' background against the benefit factors and subsequently followed with respondents' background against the impact factors.

Secondly, the Agreeable Index derived from the conversion of the Likert Scale is rated according to the respective result rating from Very Significant to Very Little Significant for both the benefit and impact factors. The data examines the degree of agreeable criteria under the issue pertaining to the benefit of CIPAA and the validity of the impact factors towards the payment problems faced by contractors in Malaysia.

The provision of CIPAA clause is also examined to check relevancy to the various payment problems as derived from past research.

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

In general, this chapter summarizes the findings collected from the execution of this research study. The conclusion for the overall analysis result was summarized based on the research objective and aims. The problems and limitation arose during execution of this research were also stated in this chapter.

#### **5.2 Conclusion**

In this research paper, it is stated that the main aim is to investigate issues relating to the benefits of CIPAA and its impact towards the payment problem in the construction industry in Malaysia. In line with this aim, the research objectives identified the possible factors that have impact to the payment related issues. It is obvious that CIPAA is highly beneficial to resolve the payment problems faced by the contractors in Malaysia.

Analysis is then carried out to a rank set of twelve ‘benefit’ and another twelve ‘impact’ factors issues, and subsequently suggestion of possible proposal is being introduced for future implementation.

### **5.3 Analysis of these factors and their issues**

Each issue of these factors was then analysed by converting them with a Likert scale conversion formula. Those with agreeable index above 0.8 are categorised as very significant from the respondents. The analysis was carried based on the data sample collected by thirty five (35) respondents from various background working for different grading of contractors in the construction industry and the results are taken as consideration for this study.

### **5.4 Research Contribution to the Property Industry**

The benefit of CIPAA is identified and its impact towards the payment problem faced by contractors in Malaysia is examined for this research paper. With the data from this research, the industry players in the construction industry can further develop themselves in particularly those small and medium class contractors to explore this alternative dispute resolution when facing cash flow problem due to late and/ or non-payment from their client.

### **5.5 Difficulties and Barrier Faced**

Overall, this research study was executed with its objective achieved. However, there are also constraints to the limitation to the outcomes of this research.

Among the main problems faced in this research were the difficulties to obtain lady respondents to participate in this survey as the contractor company in Malaysia are mostly male predominant. Some of them seems to be not aware of the new CIPAA act already being implemented for safeguarding their interest.

## **5.6 Recommendation for Continuation Research**

In order for the CIPAA to be successfully implemented, it is recommended for Government to conduct more awareness scheme.

- Educating the contractors to create awareness is an important aspect to enhance their perception on CIPAA implication.

## **5.7 Conclusion for Overall Research Results**

Based on the requirement in the research objective, this research results gathered and analysed are able to achieve the requirements needed which is regarding the benefits and impact factors and issues pertaining CIPAA in Malaysia.

The findings include what is the practicality in Malaysia and its correlation to the backgrounds' of the respondents.

In the conclusion, the author of the research wish that the information in the paper is able to assist any future researchers to embark researches pertaining to this area of study of CIPAA and use the above suggestions for ideas in the research direction.

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## **APPENDICES**

### **APPENDIX A: Questionnaire**

# **THE BENEFITS OF CIPAA AND ITS IMPACT ON PAYMENT PROBLEM FACED BY CONTRACTORS IN MALAYSIA**

Dear Valued Respondent(s),

I am a Master Degree student at Lee Kong Chian Faculty of Engineering & Science, Sg Long Campus, University Tunku Abdul Rahman, Malaysia. For my Master dissertation, I am conducting a study on the benefits of Construction Industry Payment and Adjudication Act (CIPAA) and its impacts on the payment problems faced by contractors. This research paper is under the supervision of Ir. Dr. Lee Wah Peng, (Assistant Professor, Lee Kong Chian Faculty of Engineering and Science)

This questionnaire consists of three sections:

Section A: Respondent's Particulars.

Section B: Benefits of CIPAA.

Section C: CIPAA impacts on the payment problems in construction industry.

Your kind assistance is absolutely vital to my success of this study. I shall be grateful if you could spare about 10 to 15 minutes of your valuable time in filling up the questionnaire.

I assure you that the information collected from you will not be disclosed to a third party and used only for my research work. Summary results will be shared with you when the study completed. If you have any queries or comments regarding this survey, please do not hesitate to contact the undersigned at 012-3792525, or [wcyat111@gmail.com](mailto:wcyat111@gmail.com)

Thank you for your kind cooperation

Best regards,

Master student  
Yat Weng Cheong.  
May 2016

### Section A – Respondent’s particulars

1. Name : .....(optional)
2. Email address: .....
3. Gender (Please tick ‘x’ at the appropriate column)  
 Male  Female
4. Academic qualification  
 SPM  Diploma  Degree  Master  Phd
5. Years of involvement in construction industry  
 < 3  3 - 5  6 - 10  11 - 15  16 - 20  > 21
6. Contractor CIDB License Grade  
 Nil  G1  G2  G3  G4  G5  G6  G7
7. Position in the company  
 Supervisor  Executive  Site Manager/Agent  Director/CEO



**Section B – CIPAA benefits**

(Please tick 'x' at the appropriate column)

	<b>Do you agree that adjudication provided by CIPAA is</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly</b>
1	Speedy process					
2	Lower cost compared to arbitration or court					
3	Statutory rights for adjudication					
4	Confidential hearing					
5	Flexible procedure					
6	Final decision unless set aside by High Court, settled by agreement, or dispute decided by arbitration or court					
7	Allow for pre agreement of adjudicator					
8	Enforceable by court judgement					
9	Remedies: can slow or suspend work					
10	Remedies: can secure direct payment					
11	Prohibition of conditional payment					
12	Revision of under-valuation claim					

### Section C – CIPAA impact on payment problem

(Please tick 'x' at the appropriate column)

No	CIPAA impact on payment problem	Strongly agree	Agree	Neutral	Disagree	Strongly
1	Adjudication is a quick, enforceable interim decision to resolve payment issue which last until practical completion unless if not acceptable may be refer to litigation or arbitration.					
2	CIPAA requires the payment to be made within thirty (30) days from the receipt of invoice unless otherwise agreed.					
3	CIPAA allows for court judgement to execute writ of seizure and sale, writ of winding up proceeding or by way of garnishment proceeding.					
4	Payment includes revalue of the variation order of accepted works and certified progress claim, can be brought to the adjudication					
5	CIPAA prohibit conditional payment thus full payment must be made to all accepted work done.					
6	CIPAA allows for the successful claimant to request for direct payment from the principal.					
7	Contractor may suspend or slow down the work progress if the adjudicated amount is not paid either partly or fully.					
8	Adjudication decision is binding on the parties in dispute unless revised in arbitration or litigation					
9	Cost of adjudication is also relatively lower compared to arbitration/ Litigation					
10	A party to the adjudication may represent itself (without lawyer) unless there is reference for a stay of the enforcement/ adjudicator's decision to the court proceeding.					
11	Parties in dispute are able to remain confidential as adjudication proceeding is conducted privately.					
12	The choice of arbitrator can be agreed by parties but must be a single adjudicator only.					