Mitigating delay and non-payment in the Malaysian construction industry

N Mohamad¹, A S Suman¹, H Harun¹, H Hashim¹

¹Centre of Quantity Surveying Studies, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia

*nors564@salam.uitm.edu.my

Abstract. Construction industry is one of the industries that have contributed towards the rapid growth of development and economics in Malaysia. However, the industry is inundated with delay and non-payment issues between the two parties in contract that is the clients and contractors. Even though there are contractual and administrative provisions in the standard forms of contract in Malaysia regarding payments, delay and non-payment issues still occur between them. The aim of the study is to develop measures to mitigate delay and non-payment issues between contractors and clients in the Malaysian construction industry. Questionnaire survey was conducted with clients and contractors in Klang Valley. Results from data analysis identified significant measures to mitigate delay and non-payment issues between contractors and clients which include contractors should submit their progress work invoicing with adequate documents; contractors should follow up constantly with client regarding payment; proper understanding of requirements with regards to payment; mutual discussion of problems with client to address problems in a timely manner and proper use of payment provisions in the standard form of contract. This study is significant to contractors and clients and to other construction players in order to reduce and minimise delay and non-payment issues for the growth of economy in the Malaysian construction industry.

1. Introduction

The practice of efficient and timely payment in construction project is a significant factor for a project’s success [1]. According to [2], payment is the crucial lifeblood of the construction industry. It is needed to pay for preliminaries, materials, labour, plant, subcontractors’ work and general overheads during the progress of the work [3].

Major problems faced by construction industry are late payment and non-payment. Previous researches have shown that payment disputes that arise are due to default by clients, and contractors are victimized by this scenario. According to [4] in the Malaysian construction industry, not getting paid or payments have been delayed by the clients purposely are common contractor’s arguments. [5] cited from [6] stated that this is may be due to certain clients that like to delay the contractor’s payment for his own benefit such as to fund their other projects. Another reason for delay and non-payment is due to client’s poor financial management [7]. On the other hand, delay or non-payment can also be due to the fault by the contractors. A common issue is when contractors fail to agree with the valuation of work at site [8]. Other issues form the contractor which can cause delays in payment...
are errors in submitting claim documents, insufficient document submitted by contractor for claims and delay in submitting the claims itself [1].

As pointed out by [9] construction payment can have domino effects since the whole chain of payment flow is affected by delayed payment by the client. [4] highlighted the consequences from the failure by contractors receiving regularly and timely payment from clients are i) project delays, ii) reduced profitability and, iii) the company may go into liquidation in the worst case scenario. This is agreed by [10] where late payments by clients affect the cash flow of a company which can affect the overall progress at site and may eventually lead to company’s insolvency. Hence, to ensure sustainable performance for both parties, the aim of this study is to develop mitigation measures to reduce payment issues in the Malaysian construction industry.

2. Literature Review
What is payment? It plainly means the money given or to be given to a person in return for the goods sold or services delivered. Payment in construction is the monetary consideration for the contractor’s performance or work done [4]. Payment is further defined by Suman (2016) as what needs to be paid by the client within a stipulated time - which is the value of work done by the contractor at project site and/or material by the supplier which is delivered to site as specified in the contract. Failure in timely and regular payment from clients can disrupt the contractor’s overall progress of work at site. Liability on delay or non-payment should be distributed equally to both contractors and clients. Therefore, mitigation measures must be taken by both parties in construction projects.

Previous researches have highlighted measures that both contractors and clients can take to mitigate late payment issues. It is crucial that payment provisions in the standard form of contract are followed and used properly [12]. The standard forms of construction contract used in Malaysia clearly state the client’s responsibility to pay the contractors, which is stipulated within a certain time frame or a specific time given. For instance, the PWD 203A (2010) Standard Form of Contract used for public projects funded by the Government, states 30 days from the date of the issuance of the certificate as the period for honouring the certificate. As for private projects, the PAM (2006) Standard Form of Contract is normally used. This contract states 21 days after the issuance of the certificate as the period of honouring certificate. Period of honouring certificate means the period where payment should be made to the contractor. Hence, what is considered as late or delayed payment is any payment made later than the time frame or period of honouring the payment certificate as stipulated in the provisions of the contract [4]. According to [10], in order to benefit the contractors and clients, one of the measures to address late or non-payment issues between both parties is to engage in mutual discussion between them. In addition, payment terms or clauses in the contract should be properly understood by the contractor especially for particular projects as clients sometimes have particular requirements that contractors should follow in order to receive payment.

According to [1] in order to avoid delay in payment, contractors have to make sure that documentation for payment claim is complete with adequate documents before submitting to the clients. Contractors should also liaise with clients constantly regarding payment, in other words, the contractors should communicate with the clients to keep informed of their payment status [10].

3. Research methodology
To achieve the aim of study, the measures investigated are to mitigate delay and non-payment for payments issues which arise during the construction stage. They are administrative measures to encourage both parties to take precautionary steps before payment issues are brought up to Alternative Dispute Resolution (ADR) techniques such as mediation or adjudication provided in the contract, or statutory Construction Industry Payment Adjudication Act (CIPAA), or arbitration and even to litigation.

The populations for this study are clients and G7 contractors of construction projects in Klang Valley. Since construction projects are diversified in nature, the clients will include public (for public projects) and private clients (for private projects). Public clients are represented by local authorities
and Public Work Department (PWD) Malaysia; while, private clients are represented by developers. Contractors registered with Construction Industry Development Board (CIDB) under G7 are considered appropriate to represent the contractors as they are in the CIDB’s highest classification based on financial capabilities of contractor to tender for projects, hence payment matters will be of the most significant. The respondents are from both the contractors’ and clients’ organisations to ensure fairness and unbiased response; and also viability of the research since payment are transacted between them. Both points of view must be taking into consideration in order to obtain significant results from the study. The limitation of the study is that data collection is conducted within Klang Valley area. It is justifiable to use Klang Valley as locality for this study due to active construction development that takes place in Klang Valley as compared to other locations.

3.1. Research process
The research process is divided into three (3) phases; Phase1 - Secondary data collection, Phase 2 - Pilot survey and Phase 3 - Primary data collection.

3.1.1. Phase 1: Secondary data collection. Secondary data is important to build up the literature review and questions in the questionnaire for this study. The secondary data is obtained from: i) published printed sources – which include the Standard Form of Building Contracts, government and statutory body circulars, standards and other publications; Acts, other construction industry related publications and books not available on-line, ii) published electronic sources - this include articles in journals, conference proceedings, updates on news related links and others alike.

3.1.2. Phase 2: Pilot survey. The pilot survey is used to pre-test the research instrument. In order to ensure the validity of the research, this research instrument is tested first - before the final questionnaire survey is constructed and distributed to the target respondents. The pilot survey consisting of 15 questions was tested to five selected respondents. The respondents for the pilot survey are from the same background to the targeted population for this study. The demography of the pilot survey respondents is shown in Table 1.

| Respondent | Organisation | Profession | Position      | Working experience | Projects completed |
|------------|--------------|------------|---------------|--------------------|--------------------|
| 1          | Contractor   | Quantity surveyor | Senior executive | More than 10 years | More than 10 projects |
| 2          | Contractor   | Engineer   | Executive     | 1 year - 5 years   | Less than 5 projects |
| 3          | Contractor   | Quantity surveyor | Executive     | 1 year - 5 years   | Less than 5 projects |
| 4          | Private client | Quantity surveyor | Manager       | More than 10 years | More than 10 projects |
| 5          | Contractor   | Engineer   | Manager       | 1 year - 5 years   | Less than 10 projects |

The results from the pilot survey were tested using Cronbach’s coefficient alpha (α) to determine the consistency and reliability of the questions. Based on Cronbach’s coefficient alpha (α) rule of thumb where the acceptable values range from 0.70 to 0.95 (Cohen, 2010), the results of the reliability test on Cronbach’s coefficient alpha (α) is 0.860 (good) This shows that the questions in the pilot survey are consistent and reliable. Therefore, no significant changes were made for the questionnaire survey. However, based on the response and recommendation from the respondents from the pilot survey, the questions was reworded and rephrased to improve the understanding and reliability of the questions before distribution to target population for questionnaire survey.
3.1.3 Phase 3: Questionnaire survey. This research adopted a quantitative research design. Data is collected through a structured questionnaire survey. 120 questionnaire surveys were distributed through direct walk in and e-mail to the organisations of G7 contractors, public and private clients, in Klang Valley. From the 120 samples, 48 respondents were received through e-mail and another 36 from ‘walk in office’ making a total number of 84 respondents, which is a 70% response rate, which is considered creditable.

4. Data analysis and discussion
Data from questionnaire survey was analysed using SPSS to determine the frequency and mean. The reliability of data is tested by using Cronbach’s coefficient alpha (α). Then, data collected were interpreted in the form of tabulations.

4.1. Demography
Table 2 shows the demography of the respondents. Contractors make up the majority of the respondents (53.60% = 45), then the public clients (23.80% = 20) and private clients (22.60% = 19) Contractors make up the most respondents as compared to others. The contractors’ perceptions toward payment issues are significant as they are normally the casualty of the payment issue in the construction project. The data collected has also taken into consideration the clients’ perception in order to improve viability and the fairness of the results obtained for this study.

| Category            | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| Type of organisation| Contractor| 45  | 53.60 |
|                     | Public client | 20 | 23.80 |
|                     | Private client | 19 | 22.60 |
| **Total**           |           | 84  | 100.00 |
| Working experience  | Less than 1 year | 1 | 1.20  |
|                     | 1 year – 5 years | 44 | 52.40 |
|                     | 5 years – 10 years | 19 | 22.60 |
|                     | More than 10 years | 20 | 23.80 |
| **Total**           |           | 84  | 100.00 |
| Projects completed  | 1 project  | 14  | 16.70 |
|                     | 2-5 projects | 33  | 39.30 |
|                     | 6-10 projects | 11  | 13.00 |
|                     | More than 10 projects | 26 | 31.00 |
| **Total**           |           | 84  | 100.00 |

Majority of the respondents’ working experience is 1-5 years (52.40% = 44 no.), followed by more than 10 years (23.80% = 20), 5-10 years (22.60% = 19) and less than 1 year (1.20% = 1). The working experience of the respondents gives significant impact to the study as respondents who have more experience in the construction industry will have more exposure and understanding on payment issues. This improves the reliability and validity of the findings for this study. Majority of the projects completed by the respondents are: 2-5 projects (39.30% = 33), followed by more than 10 projects (31.00% = 26), 1 project (16.70% = 14) and 6-10 projects (13% = 11). This shows that most of the respondents have a sound experience in number of projects completed, reflecting their experience on payment issues which enhances the viability and reliability of date collected.
4.2 Measures to mitigate delay and non-payments issues between clients and contractors

4.2.1 Reliability test. The result of Cronbach’s coefficient alpha (α) on measures to mitigate delay and non-payments issues between clients and contractors is equal to 0.768 (acceptable). Hence, the data collected for the questionnaires survey is reliable and viable. This shows that the findings for this study have significant value as the reliability of data collected is acceptable.

4.2.2. Measures to mitigate delay and non-payment issues in construction industry - Descriptive analysis. The measures are divided into three (3) different categories; i) measures by client and contractor (both parties), ii) measures by client, iii) measures by contractor. Table 3 shows the overall ranking of measures to mitigate delay and non-payment issues.

| Rank | Measure by | Measures | Mean  |
|------|------------|----------|-------|
| 1    | Contractor | The latest progress work invoicing submitted must be with adequate documents | 1.58  |
| 2    | Both parties | Understanding the terms or clauses of payment in the project | 1.89  |
| 3    | Both parties | In order address the problem in a timely manner, mutual discussion of problems with client | 1.91  |
| 4    | Contractor | The payment matter should be followed up constantly with the client | 1.92  |
| 5    | Both parties | Payment provision in the standard form of contract is applied properly | 1.94  |
| 6    | Both parties | Statutory enactment must be implemented to deal with payment in construction industry | 2.01  |
| 7    | Both parties | People mentality and attitude must be changed in order to achieve timely payments | 2.03  |
| 8    | Client | Financial management must be implemented to mitigate cash flow problems | 2.09  |
| 9    | Client | Setting an established time frame for payment | 2.15  |
| 10   | Both parties | The effect of payments issues on the project progress must be understood by all parties and personnel involved | 2.17  |
| 11   | Contractor | Right for contractors to suspend work in the event of late or non-payments to be established | 2.19  |
| 12   | Both parties | The provision of ‘pay when paid clause’ to be introduced in the construction contract | 2.21  |
| 13   | Contractor | Right of contractors to charge interest on late payment to be established | 2.33  |
| 14   | Client | The limit of amount that client can hold the money to be established | 2.35  |

The measures to mitigate delay and non-payment are ranked in ascending order. This is based on Likert scale i.e. strongly agree (mean = 0.00 ≤ a< 1.00), agree (mean 1.01 ≤ a < 2.00), undecided (2.01 ≤ a < 3.00), disagree (3.01 ≤ a < 4.00) and strongly disagree (4.01 ≤ a < 5.00) of the respondents’ perception on the variable. This discussion highlights five (5) measures (in the categories of strongly agree and agree; mean = a < 2.00) to mitigate delay and non-payment issues. As shown in Table 3, two (2) of the measures are by contractor, and other three (3) by both parties, the contractor and client. The two (2) measures by the contractor are: the latest progress work invoicing submitted must be with adequate documents (rank 1, mean = 1.58); and the payment matter should be followed up constantly with the client (rank 4, mean = 1.92). The other three (3) measures by both the client and contractor are; understanding the terms or clauses of payment in the project (rank 2, mean = 1.89); in order address the problem in a timely manner, mutual discussion of problems with client (rank 3, mean = 1.91); payment provision in the standard form of contract is applied properly (rank 5, mean = 1.94). Hence, it can be said that the contractor himself and both the contractor and client must cooperate together to mitigate delay and non-payment issues. The advantages of cooperation between both parties will initiate an efficient process of certification by the client and releasing payment to the contractor leading to a timely project completion.
5. Conclusion
This study focuses on measures that clients and contractors can implement towards mitigating delay and non-payment issues in the Malaysian construction industry. They are administrative measures encouraging both parties to take preventative steps during the construction stage before payment issues are bought up to Alternative Dispute resolution (ADR) techniques such as mediation or adjudication, or the statutory CIPAA, arbitration or even to litigation.

This study is significant since insights from both parties in construction contracts in the industry, that is, the contractor and the client are considered, which provides fairness and reliability on the measures identified. It is also useful to other construction players in the endeavour to reduce payment disputes in the Malaysian construction industry. Having timely payment to the contractor provides efficient project management of a construction project, hence, the project can complete on time, within budget and achieving the quality specified. This domino effect will contour a rapid growth of development in the construction sector resulting in economic growth in Malaysia.

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