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## LATE PAYMENT PRACTICES IN THE MALAYSIAN CONSTRUCTION INDUSTRY

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**Abstract:** Factors that influence contractors 'cash flow are the frequency of payment, delay, profit margin, retention fund, payment term to the supplier and subcontractor, advanced payment and others. Late payment from the client has become a habit in the construction industry and this practice had caused many implications such as bankruptcy, the higher contract sum due to higher risk, uncomfortable relationship between the payer and payee, disturbance of supply chain and others. The aim of this paper is to examine the late payment practices in the Malaysian construction industry. Thirty seven (37) sets of questionnaire had been collected among the Grade G7 contractors and subcontractors in the state of Selangor based on convenience sampling. The collected data were analysed by using frequency distribution and relative important index (RII). The Data then was tabulated and illustrated in the form of charts. The results of the study show that the late payment is one of the most critical problems in the Malaysian construction industry. The majority of the contractor experienced late payment quite frequently and even beyond the stipulated contract term. The top three impacts of the late payment problems are the negative chain effect on other parties, delay in project completion and lead to bankruptcy or liquidation.

**Keywords:** *Late payment, claim, work progress, impact, construction industry*

### 1.0 Introduction

Gross Domestic Product (GDP) from construction in Malaysia on average is RM 9.44 Billion from year 2010 until 2016, which is around 3% to 5% of our nation GDP. The construction industry is a catalyst to our nation's growth as it accelerates others industry, for example services, manufacturing, tourism, agriculture and others. Construction involves several parties, various process, different phases, and different stages of work and get a lot input from private and public sector (Sambasivan and Soon, 2007). There are many factors leading to a project's success, especially with regard to the payment system. There are many evidences that link project delay due to inefficiency of payment

system (Chin and Hamid, 2015; Hamid *et al.*, 2015). Payment default is considered as a major problem in the construction industry (Ye and Abdul-Rahman, 2009; Abdul-Rahman *et al.*, 2010).

The problem of delayed and non-payment in the Malaysia construction industry had affected the entire stakeholders, especially main contractor, subcontractor, supplier, labour contractor and society. These results in the issues of worker's livelihood and welfare and also on the continuity of the affected projects (Naseem, 2006). A planned and expected revenue flow is usually represented by an S-curve as shown in Figure 1(a). Figure 1(b) shows the aggravated cash required by the contractor when the late payment occurs during initial payment. Cash flow delays can have a major impact on the project (Naseem, 2006).

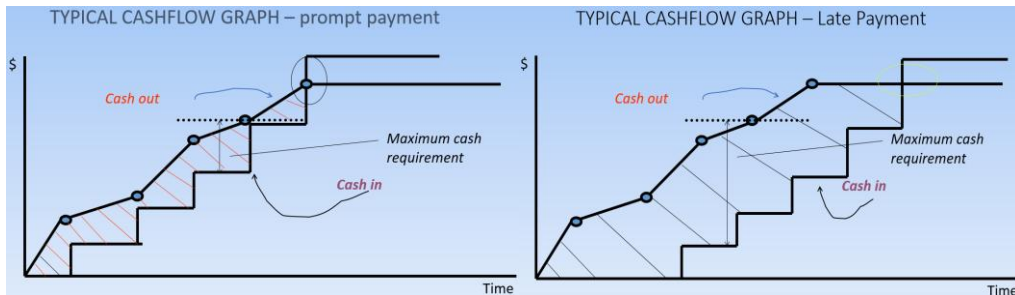


Figure 1: Typical cash flow graph for expenses and payment of (a) Prompt payment, (b) Late payment

The government had received many complaints from project contractor or service provider about the delay in receiving payments from the government agencies concerned. Also, the Government has long been aware of the problems faced by all in securing regular and timely payment that impacts cash flow during project implementation. A lack of cash flow, especially among the small and medium enterprise can result in liquidation. Even for a financially stable company, late payments can deplete resources, discontinuing them from advancing. Construction Industry Development Board (CIDB) Malaysia together with construction stakeholders had established the enactment of Construction Industry Payment Adjudication Act (CIPAA) 2012 to improve cash flow problem in the Malaysian construction industry (CIDB, 2012). The Malaysian construction industry master plan envisages that everyone in the construction industry pays the appropriate amounts due in timely manner. By learning from other countries, Malaysia is trying to improve the payment system to avoid the collapses of construction companies due to the bad payment practices.

The aim of this study is to examine late payment practices as experienced by contractors in the Malaysian construction industry. This study focused on the contractor grade G7 (the highest grade where there is no monetary limit on tendering capacity) in the state of Selangor where a regular disbursement of interim payment is the main method of payment to the contractor.

## 2.0 Late Payments

Late payment happens when a business has been providing services or products, yet neglects to pay inside the concurred term. Late payment stops organizations, particularly little and medium size organizations from putting resources into development, making new occupations, and contributing completely to nation building. In the most pessimistic scenarios, a late payment can prompt to bankruptcy. There is a strain between activity on late payment and the standard of opportunity of agreement. On the off chance that organizations apply a 'zero sum game' to deal with opportunity of agreement with all the more capable organizations forcing unreasonable terms on others, then the economy all in all endures.

Over numerous decades, there has been a link between the construction industry and its numerous payment methods. Expenses and payment are the soul of the business and they are the foundation of the issues (Pettigrew, 2005). The operation of the payment system is not for the most part smooth and exposed parties along the bottom of the supply chain to a greater risk of insolvency. The client regularly postpones payment to the main contractor which in this way influenced the supplier and subcontractors. This unfavourable influences the efficiency and soundness of the whole business. What is required is an agreed system to ensure that payment is made reliably and rapidly. Late payment may influence the execution and monetary capability of the contractors. This issue should be solved once and for all since it impedes the accomplishment of the project success (Supardi *et al.*, 2011). Latham (1993; 1994), revealed that contractors and specialist contractors afraid the most when the client financially incapable or practice improper and insufficient payment.

Master Builders Association of Malaysia (MBAM) had conducted a survey among its members who comprised of contractors and sub-contractors to examine about late and non-payments. About 80.3% indicated that they had encountered slow progress payment similarly in government and private sector's projects. The contractors are facing delays of payment for more than 91 days and up to 12 months compared to the contractual date.

The analysis revealed that the issue of late and non-payment has persisted in the Malaysia construction industry for quite some time, but have yet to be fully resolved (Naseem, 2006; Judi and Abdul Rashid, 2010).

Construction Industry Development Board (CIDB) Malaysia also conducted a survey in relation to late and non-payment issues encountered by main contractor, sub-contractors and consultants in the local industry. About 44.1% of the contractors reported that they had encountered late payment situations in government funded projects while 53.5% had experienced late payment in a privately funded project. About 14.4% of the contractors indicated that they had experienced non-payment situation in government funded projects and 33.3% pointed out they had not been paid by their private clients (Naseem, 2006; Judi and Abdul Rashid, 2010). Based on the consultant's responses, 63.3% and 73.5% reported that they had encountered late payment of professional fees in government funded projects and private funded projects respectively. Also, 16.3% indicated that they had experienced non-payment of fees in government funded projects while 61.2% reported that they had not been paid for the services rendered by their private clients (Naseem, 2006; Judi and Rashid, 2010).

Problems on payment range from (Naseem, 2006; Judi and Rashid, 2010) "failure to pay; refusal to pay; setting-off from sums certified or due; allegations of under and over certifications and failure to certify; delayed payments; and associated problems of getting paid even with certificates in hand including significant delays in enforcing rights to payment". Naseem (2006) concluded that unlike many other industries, the long durations of construction projects, the large size of each construction project, huge amount of each progress payment sum and credit payment terms has contributed to the late payment issues.

Payment in any industry has generally been an issue of concern as mention in the European Payment Report 2013 (Intrium, 2013). Average payment terms range from 20 to 90 days and the time customers actually take to pay in days range from 26 to 110 days. The late payment ranges from 6 to 43 days. In the construction industry payment is an issue of major concern. A survey of payment performance conducted in the United Kingdom revealed that construction is clearly at the lower end of payment periods with payment taking on average 56.51 days after invoices or applications for payment have been rendered (Experian, 2003). Figure 2 shows a typical payment processes duration for government project under Public Work Department guidelines. Interim certificates must be issued within fourteen (14) days from valuation date. Payment shall be made within thirty (30) days from the date of Issuance of Interim Certificate in accordance with the Conditions of Contract (The Entrusty Group, 2008). This guideline may not be necessarily adhered during the real practices due to various circumstances. If there was a technical error or documents submitted by the contractor during the project payment claim not complete it causes payment cannot be made according to the required period.

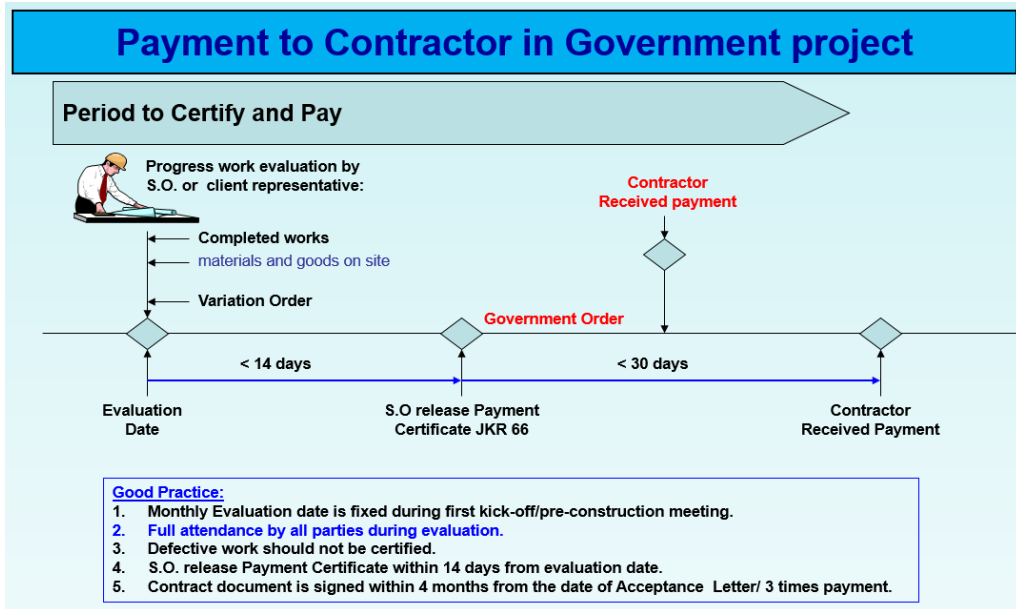


Figure 2: Typical timeline payment to contractor on the Malaysian government project.

Based on previous research, many impacts of late payment happen, for example, the negative chain effect on other parties, delay in project completion, leads to bankruptcy or liquidation, project delay, affect the contractor's reputation and profitability of the project as shown in Table 1.

### 3.0 Methodology of Study

In this study, a survey had been done to determine the scenario and impact of late payment in the Malaysian construction industry from the perception of the grade G7 contractors and sub-contractors. The questionnaire is divided into two (2) sections which are Section A which focused on the Respondent Information (5 Questions) while Section B focused on the scenario (10 Questions) and impacts of late payment (17 Questions). A Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) is used to identify the impacts of late payment in the Malaysian construction industry. The method of data analysis used are percentage frequency distribution and relative important index (RII) method and scale rating as shown in Table 2. Percentage frequency distribution is a method that specifies the percentage for the grouping data point. It is useful to express the relative frequency of the data. The data will be illustrated in many forms such as table, pie charts and bar charts. The process by dividing the number of observations within each data point or grouping of data points by

the total number of observations. The sum of the percentage should be 100%. The percentage frequency distribution formula (Eq. 1):

$$\% = \frac{\text{Number of observations}}{\text{Total number of observations}} \times 100 \quad (1)$$

Information gathered from the questionnaire was analysed using Relative Importance Index method that represent 0.2 to 1.0 for each question, which 1.0 reflect to 100% strongly agree with all respondents and 0.2 reflect to 100% strongly disagree. Proportion to the questionnaire is important to assist in reviewing payment practices in construction. Azhan (2004) explained that the relative important index formula (Eq. 2).

$$RII = \frac{\sum(1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5)}{5(n_1 + n_2 + n_3 + n_4 + n_5)} \quad (2)$$

where, RII = relative index of inequality;  $n_1, n_2, n_3, \dots$  = total respondents agreed with x

Table 1: Impacts of Late Payment

Reference	Impact	Description
Mohamad <i>et al.</i> (2012)	Creates a negative chain effect on other parties	The construction payment blues have domino effects. A delayed payment by one party may affect the whole supply chain of payment on a construction project. For instance, if an employer delays in making payment to the contractor this in turn will result in a contractor's delay in making payment to the sub-contractors and suppliers.
Abdul Rahman <i>et al.</i> (2009); Haseeb <i>et al.</i> (2011)	Delay in project completion	Late payment causes cash flow problems which in turn can affect the overall progress of works. Financial problem is confirmed by the top management as the main cause of delay in addition to manpower shortages.
Ab. Halim <i>et al.</i> (2010)	Leads to bankruptcy or liquidation	Late payment may affect the financial status of the contractor. It will influence a company's cash position.
Judi and Rashid (2010)	Project delay	A failure of the Contractor getting regular and timely payment could result in project delay, reduced profitability and in the extreme case, the company may go into liquidation.
Hasmori <i>et al.</i> (2012)	Affect the contractor's reputation	Frequent late payments could result in loss of reputation, trade credit constraints, and reduced credit ratings
Hasmori <i>et al.</i> (2012)	Profitability of the project	The profit margin is small and this situation can lead a player to go on bankruptcy and there goes another project on abandoned list

RII categorized by the range of 0.2 to 1.0, where it reflects the tendency RII feedback from the level of agreement on the facts presented. RII value approaching 0.2 indicates a low likelihood of consent of the facts presented and vice versa for RII approaching 1.0 based on Nesan (1997) and Holt *et al.* (1996). This method was chosen as the most appropriate method to analyse the questions using a Likert scale. In addition, the results produced are more specific and precise. To ease the analysis carried out, computer software was utilized. This software analyses the data collected statistics. It also presents the analysis results in the form of graphs, tables and charts that are easier to understand. The classification scale of the index is as shown in Table 2:

Table 2: Scale of the index

Relative Index Range	Attributes
$0:00 \leq \text{relative index} < 0.20$	Strongly Disagree
$0:20 \leq \text{relative index} < 0.40$	Disagree
$0:40 \leq \text{relative index} < 0.60$	Neutral
$0.60 \leq \text{relative index} < 0.80$	Agree
$0.80 \leq \text{relative index} \leq 1.00$	Strongly Agree

#### 4.0 Results and Discussion

About 100 questionnaires sets were distributed, but only 37 construction companies responded. The results from the questionnaire obtained are discussed below based on the objective of the study.

##### 4.1 Respondents Background

Figure 3 shows the respondents' gender. Respondent mostly been dominated by 62% female, while male respondent only 38%. Figure 4 shows the respondents' age. The majority of the respondents' (57%) age between 21 to 25 years old, followed by 25 to 30 years old which is 41%, while 30 to 35 years old is only 3% and no respondent above 35 years old. Figure 5 shows the respondents' working experience. About 95% of the respondents' had been working for less than 5 years while the remaining 5% already worked between 5 to 10 years. Figure 6 shows the respondents' position in the company. The majority of respondent (68%), which is from another position such as architect, quantity surveyor and contract administrative followed by 27% of the respondent is Engineers and 5% is Project Manager. There is no response from director position. About 92% of the respondents were working with the main contractor while the remaining 8% were working with sub-contractor.

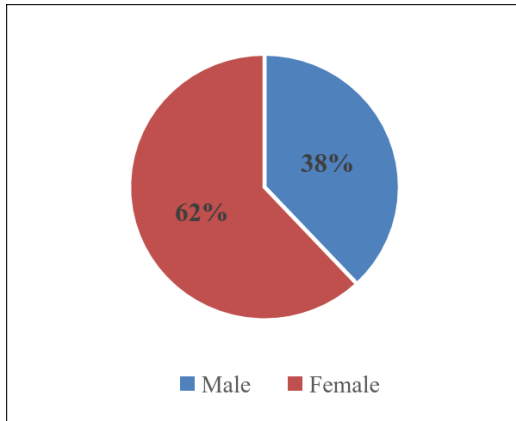


Figure 3: Respondents' gender

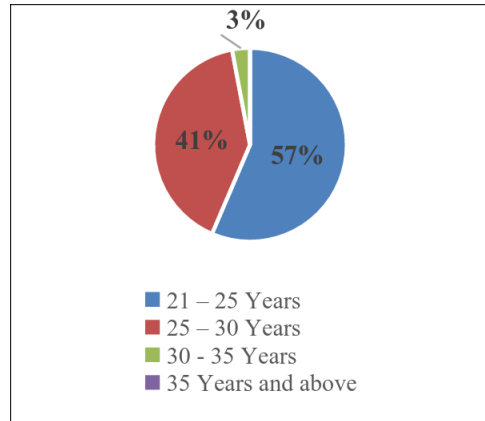


Figure 4: Respondents' age

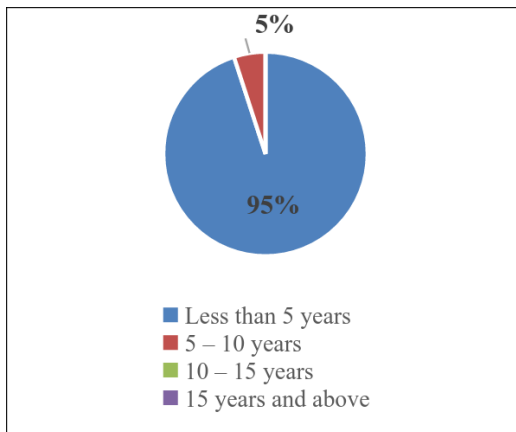


Figure 5: Respondents' working experience

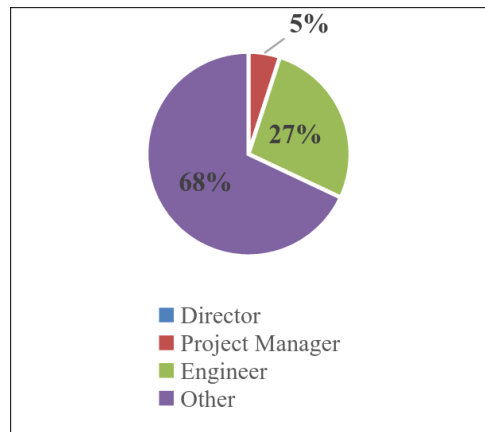


Figure 6: Respondents' position

#### 4.2 Scenario of Late Payment

Figure 7 shows whether the late payment is a critical problem or not. About 92% of the respondent said that late payment is critical problem while the remaining 8% is not agreeing with the statement. Figure 8 shows late payment faced by the respondents' company. About 81% of the respondents' organization faced late payment and the other 19% did not face the late payment.



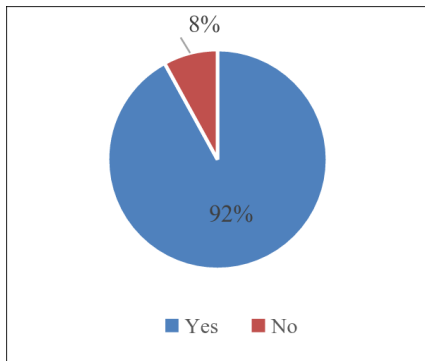


Figure 7: Criticality of late payment

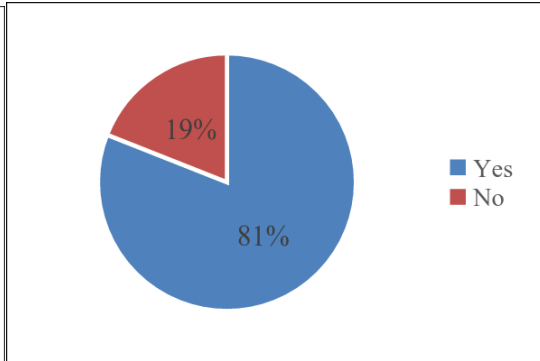


Figure 8: Late payment existence

Figure 9 shows the late payment experienced by the respondents' company over the last 2 years. About 51% of them experienced less than 25% of the late payment followed by 32% experience about 25% to 50% of the late payment. The remaining 14% experienced 50% to 75% late payment and 3% experienced more than 75% late.

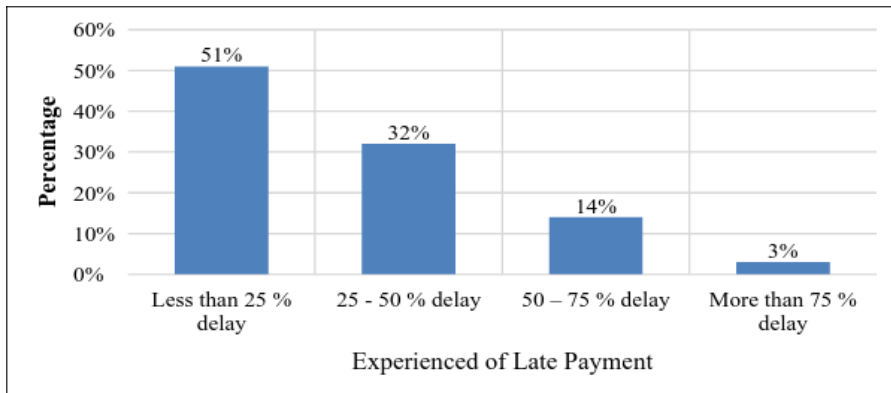


Figure 9: Experienced of late payment in the last two years

Figure 10 shows the summary of agreed contractual terms in respondents' company. About 43% of the respondents have 25 to 35 days of the payment term followed by 38% have 15 to 25 days of the payment term. 19% of the respondents' company have 35 to 45 days of contractual payment term.

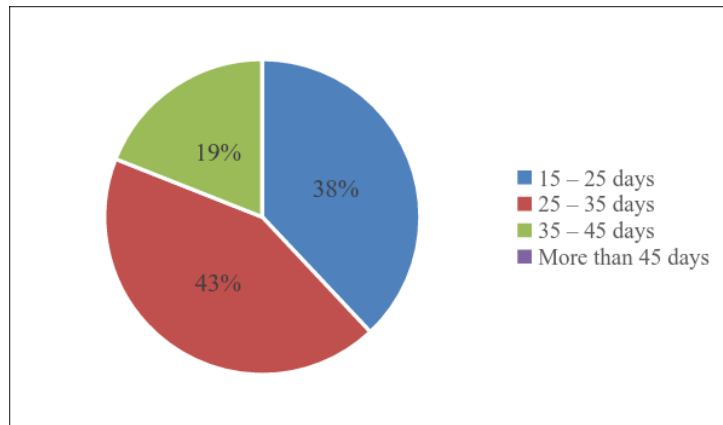


Figure 10: Agreed Contractual Payment Terms

Figure 11 shows the duration of payment to be made by the paymaster. About 41% of the respondents received the payment in the range of 15 to 25 days followed by 27%, which received their payment within 25 to 35 days. The remaining 19% received payment 35 to 45 days and another 14% received payment more than 40 days. Figure 12 shows the type of clients that always delay the payment to the contractors. About 51% of respondents said that private client always caused the late payment.

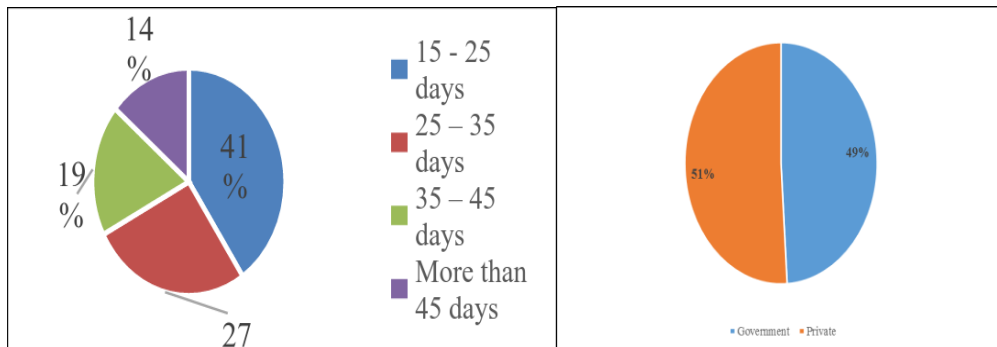


Figure 11: Payment duration

Figure 12: Type of client with late payment

Figure 13 shows the how frequent that late payment occurred. About 5% of respondent experienced the occurrence of late payment very frequently. While, 43% of respondent frequently faced the late payment problem followed by 27%, which only experienced an

occasional case of late payment by the paymaster. The remaining respondent, 16% experienced rarely and 8% on very rare of late payment.

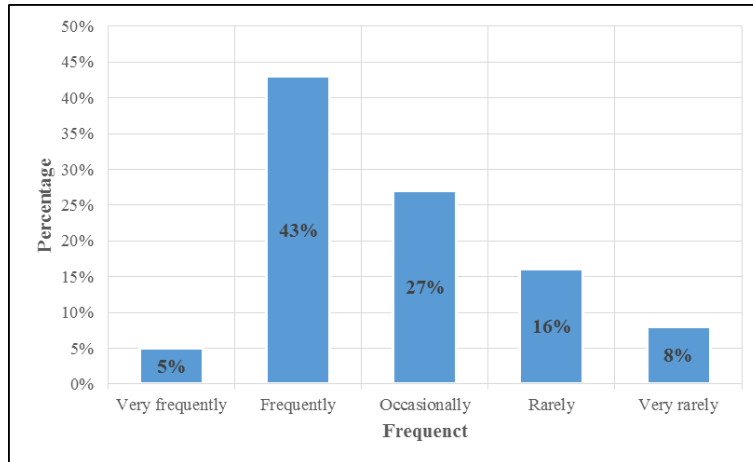


Figure 13: Frequency of the Late Payment Occurrence

Figure 14 shows the period to chase payment from the paymaster. About 46% of the respondent chased about 1 to 2 weeks, followed by 27%, which chase about less than 1 week. About 16% of the respondent chase the payment about more than 4 weeks in a year and the remaining chase about less than 1 week in a year for payment. Figure 15 shows the late payment is a cause of delay in paying the supplier. About 73% of the respondents have problem delay in paying the supplier because of the late payment.

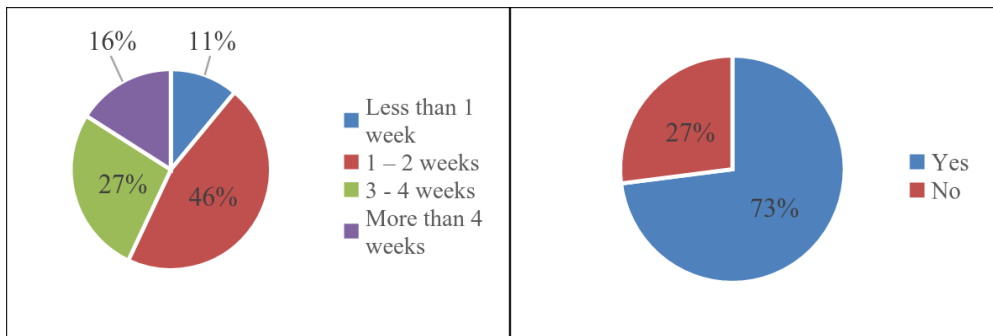


Figure 14: Period to Chase the Late Payment

Figure 15: Delay in Paying the Supplier

### 4.3 Impact of Late Payment

Table 3 shows the impact of late payment to the contractors. Most of the respondents agreed that late payment will create a negative effect to the other parties in the construction project (RII=0.827) and results in delays in project completion (RII=0.827). Besides that, late payment also will slow the company growth (RII=0.778). Other than the impact that had been described before, late payment also will affect the contractor's reputation (RII=0.773), reduce the profitability of the project (RII=0.757), leads to bankruptcy or liquidation (RII=0.719) and lastly reduce the job opportunity (RII=0.703).

Table 3: Impact of Late Payment

No.	Impacts	RII	Overall Rank
1	Creates a negative chain effect on other parties	0.827	1
2	Delay in project completion	0.827	2
3	Slow in company growth	0.778	3
4	Affect the contractor's reputation	0.773	4
5	Profitability of the project	0.757	5
6	Leads to bankruptcy or liquidation	0.719	6
7	Reduce job opportunity	0.703	7

## 5.0 Conclusion

Most respondents (91%) agree that late payment is one of the most critical problems. In fact, 81% of them are facing late payment especially from the private client (51%) than to the government client. About 51% of the respondents experienced late payment for less than a quarter from the contract. The highest agreed contractual payment term is between 25–35 days (43%) but the duration payment will be made between 15-25 days (41%). About 43% of respondents frequently faced late payment and the period of chasing late payment in a year is between 1-2 weeks (46%). About 73% of respondents agreed that late payment by paymaster will delay in paying suppliers. The top three impacts of late payment are negative chain effect on other parties (RII = 0.827), delay in project completion (RII = 0.827) and sluggish company growth (RII = 0.778). Payment problems are not new to the Malaysian construction industry. Contractors and other parties often complain either not getting paid or payments have been delayed by the employer. Payment delays could create financial problems for contractors who have borrowed money from financial institutions to carry out the project. If the delay was caused by the actions of certain parties who intentionally delaying payment, it is not only inconvenient to the contractors, but can pose unfavourable perception of the government or client. The issues of late and non-payment become a normal situation in the construction industry as compared to other industries. The culture of late payment

needs to be overhauled as it could help to promote business, generate jobs, increase productivity and efficiency through the supply chains. Therefore, the practice of efficient and timely payment in construction projects is a major factor leading to a project's success.

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