

PAYMENT PREDICAMENTS: EXPLORING FACTORS AND REMEDIES FOR MAIN CONTRACTOR-SUBCONTRACTOR DYNAMICS IN MALAYSIA

Mohd Ashraf Mohd Fateh^{a*}, Nik Aminatul Afzan Nik Mat^b, Ruzanna Abd Rahman^c

^aSchool of Construction & Quantity Surveying, College of Built Environment, Universiti Teknologi Mara, 40450 Shah Alam, Malaysia.

^bAntara Bagan Sdn Bhd, Plaza Danau 2, Taman Danau Desa, 58100 Kuala Lumpur, Malaysia.

^cSchool of Energy, Geo-science, Infrastructure and Society, Heriot-Watt University – Malaysia Campus, 62200 Putrajaya, Malaysia.

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*Corresponding author
mohdashraf@uitm.edu.my

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Abstract

Making timely and efficient payments is a key component of a project's success. In the Malaysian construction industry, payment delays by the principal contractor and client on construction projects are a major cause of worry. This research aims to address payment concerns that contractors frequently encounter on construction projects. The objectives of this research are to identify the factors that cause payment issues and to recommend potential solutions to improve the payment issues between main contractors and subcontractors. A questionnaire survey was deployed for this research, with 145 respondents involved. The collected data was analysed using the IBM Statistical Package for the Social Sciences (SPSS) software. The findings stated that post-Covid-19 is the main factor that causes payment issues between the main contractors and subcontractors. On the other hand, new payment mechanisms among developers or clients who unlawfully withhold payment are the potential solution agreed upon by the respondents as the potential solution to the issue. The findings of this research can be useful to the relevant party to minimise any issue with payment between the main contractor and subcontractors. This research is in line with Sustainable Development Goals (SDG) No. 8: Promote sustained, inclusive, and sustainable economic growth for all.

Keywords: Timely Payment, Main Contractors and Subcontractors, Post-COVID-19, SDG No.8, Malaysia Construction.

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1.0 INTRODUCTION

Malaysia's construction sector is a significant part of the country's economy. It is critical to guarantee that the construction sector continues to develop at a steady pace. The achievement of economic development will result in a rise in disposable income, which will drive demand for more building projects, as reported by Göksu et al. (2023). The construction industry has the potential to enhance people's lives while also providing enough job opportunities for future generations. Although the construction industry is one of the fastest-expanding businesses in the country [2], there are issues with

Malaysian construction projects, including payment issues for the contractors involved. This will be a source of concern for the project industry, particularly in the private sector. This was echoed by Kamil et al. (2023) stated that even though the construction industry is a long-established industry, it still faces significant payment issues. Either the main contractor or subcontractor is constantly highlighting their concern about late payment. As a result, numerous reasons that might be connected to payment issues that frequently arise in construction projects, causing disagreements with one another, cause work at the project site to often be delayed. Chadee et al. (2023) highlighted that timely and efficient payment in construction projects is a

crucial determinant of project performance, and it will help the contractor establish a healthy cash flow to navigate their business in the long run. Abeyasinghe & Jayathilaka (2022) reported that payment delays will also have an impact on project productivity.

COVID-19 has changed the business landscape, which includes the construction sector. All construction activity has been paused because of COVID-19. Gamil & Alhagar (2020) reported that some of the impacts of COVID-19 on the construction industry are project suspensions, manpower shortages, and schedule and expense overruns. Back in 2020, the Malaysian government imposed a Movement Control Order (MCO) throughout the whole country, and many organisations introduced working from home. Nevertheless, working from home may not be possible for a construction site since the physical activity must be conducted on-site. Zamani et al. (2021) added that due to the MCO, many payments were delayed. Small and medium organisations take heavy hits and suffer negative consequences as the work will not advance and payments are delayed, which leads to big losses and financial instability. This was agreed upon by Haron & Arazmi (2020) who reported that progress payment is extremely important for contractors and subcontractors as they need to pay their loans and operation expenditures.

A good relationship between the main contractors and subcontractors plays a vital role in the success of a project. Construction projects take a long time and entail numerous phases of labour and activities; therefore, it's critical to keep a competent relationship going to meet project goals, especially in terms of productivity. However, Haron & Arazmi (2020) underlined that the domestic subcontractor's ability to respond to the main contractor is limited in the construction sector. Hadi et al. (2018) added that due to the large number of parties involved in construction projects, any payment issues faced at higher hierarchies will create a chain of reactions through the lower hierarchies, which will have a significant financial impact.

Given the issues discussed, it is crucial to conduct this research to gain a better understanding of the payment issues that arise between the main contractor and subcontractors in construction projects. The objectives of this paper are to: 1) Identify the factors that cause payment issues between the main contractor and subcontractor in construction projects; and 2) Recommend potential solutions to improve the payment issue between both main contractors and subcontractors. It is hoped that the findings will serve as an eye-opener and provide some information about the current payment issue, as well as how to address this problem. It is in line with SDG No. 8: Promote sustained, inclusive, and sustainable economic growth for all.

2.0 LITERATURE REVIEW

2.1 Covid-19 and Payment Issues in Malaysia

The construction sector is a key contributor to the development of Malaysia's economy. Nowadays, the construction sector serves as the engine of a country's economic growth [10], with buildings and structures allowing humans to meet their unique requirements for shelter, economic growth, and corporate aims. Barbosa Júnior et al. (2023) added that construction industry activities must play an important function in achieving national socioeconomic development so that the country appears more

developed. One example is providing better housing and improving the infrastructure system, as well as ensuring employment opportunities in the construction industry, which is a significant contribution to improving the national economy.

In 2019, it was reported the rapid appearance of an infectious illness, the coronavirus, from Wuhan, China, which is the first time it has been recorded and caused by a severe respiratory illness [12]. The disease has had a huge global impact and was classified as a pandemic by the World Health Organisation (WHO) [13]. As a result, it had a huge impact on the construction industry. All everyday operations, including construction, were halted following government directives for the Movement Control Order (MCO). As most physical activities must be performed at the project site, the directives on working from home are quite unfeasible. It is no debate that workers at the project site need labour progress to submit payment claims. If a construction project is delayed, it will have a significant influence on Malaysia's economic development [14]. Furthermore, to mitigate the bad impacts of the COVID-19 outbreak, a significant solution to the country's poor economic growth is likely to culminate in an economic recession [15].

Payment is the foundation of each commercial transaction, and without it, no company can succeed in a project. This is especially important in the construction industry since the construction process takes longer, the materials are more expensive, and payment is given only when there is progress in the work done [8]. According to Mbala et al. (2019), project delays are caused by delayed payment, which is the second most common operational risk after financial failure. Payment delays are significant because they might prevent materials from being delivered to the project site and have a detrimental impact on worker productivity in the construction sector. As a result, the success of building projects and ultimately, the industry's sustainability are jeopardised [4]. Thus, financial issues in a project are bound to arise and become a major concern.

Issues surrounding payments between main contractors and subcontractors in the construction industry are imperative due to their significant impact on project performance, contractual relationships, and the overall impression of the industry. Payment issues between main contractors and subcontractors can result in project delays and disputes, as reported by Kshaf et al. (2022). This was agreed upon by Ullah et al. (2017b) who highlighted that payment issues between main contractors and subcontractors are a chronic problem in the Malaysian construction industry. It can have a significant impact on subcontractors' cash flow and profitability and can even lead to bankruptcy. These delays can lead to cost overruns and quality concerns, affecting the overall project performance. Investigating the root causes of payment issues is essential to developing strategies for improving project outcomes.

Based on the issues presented, research in this area is vital to improving the efficiency and effectiveness of the construction industry. Investigating the factors that cause payment issues against the main contractor and subcontractor in construction projects and recommending potential solutions to the issue might improve the overall impressions and sustainability of the construction industry.

2.2 Stages of Payment in Construction Project

Payment is money given to a person or organisation contracted upon completing the work on the construction project. The main

contractor or subcontractor is paid when the task is completed satisfactorily as stipulated in the contract, as stated by Che Haron & Arazmi (2020). The value of any labour, materials, or machinery involved in the work is included in the payment.

In the construction industry in Malaysia, payment is divided into three (3) categories: advance payment, interim payment, and final payment. Each payment is exercised at different stages of the construction ([20]. All payments need to be certified by the contract administrator with the help of quantity surveyors and engineers. Failure to pay can be deemed a breach of contract since payment is one of the most critical duties to be satisfied under the terms of a contract. It is the main obligation of the client to pay the contractor if the contractor can deliver the work according to the contract.

2.2.1 Advance Payment

This initiative was introduced by the Malaysian government to help contractors financially kick off the project, as reported by Haron & Arazmi (2020). According to PWD 203A clause 69, the value of the advance payment that the contractor shall pay is 25% of the builder's work and capped at RM1,000,000. This aid can be fully utilised by the main contractor to acquire raw materials, engage labourers, mobilise machinery, and establish the site as a working environment with all the temporary access and utilities.

2.2.2 Interim Payment

Interim or progress payments are payments that are paid at regular intervals throughout the construction period. The normal practice in Malaysia is once a month. The value of the interim payment is based on two things: progress of the work done and the raw materials on site [21]. Every month, the contractor will submit their claim to highlight the progress of the work done. Normally, the quantity surveyor will conduct a valuation based on the claim submitted by the contractor. Following the quantity surveyor's appraisal of the works, they will issue a certificate of interim payment for the client to release the payment. The client needs to pay the contractor within the timeframe specified in the standard form for the project.

2.2.3 Final Payment

The final payment is the last payment of the contract. This is the last stage to determine whether the client owns money under the contract or the other way around. Usually, the amount is not large since most of the payment was released in the interim payment. In this payment, all the adjustments to the contract are shown, thus the latest contract sum can be calculated. Issuing the final payment also indicates that the client or consultant has approved the contractor's work as stipulated in the contract [22].

2.3 Parties Involve in Construction Project

A construction project generally requires a large number of partners to achieve a high degree of production. The client's continuous engagement as owner, consultant, main contractor, and subcontractor is important to keeping the project on track and completed according to the owner's specifications. Schleyer et al. (2022) highlighted that a highly productive team may accomplish excellent outcomes by developing solid working

relationships and a favourable environment while minimising friction within the project team. Collaboration between parties as a team will ensure that all knowledge and experiences may meet the demands of today's world as well as those of the future. They work closely together, and financial difficulties might develop between them.

2.3.1 Client/Owner

The client/owner has the power to decide on the project's objectives, parameters, goals, and time when it may begin. Every project is distinct since each client has a unique viewpoint and concept that will be further developed by a team of consultants led by an architect. Seddeeq et al. (2019) highlighted that all construction projects are initiated and financed by the client, and they will constantly monitor the progress to guarantee that their investment is worthwhile.

2.3.2 Main Contractor and Sub Contractors

The main contractor is defined as a builder that bears the responsibility to build the project from start to finish as stated in the contract (Holm & Schaufelberger, 2021; Saif et al., 2021). Besides the responsibility to build the project, the main contractor's scope of work comprises planning, coordinating, and overseeing the subcontractors. The main contractor will produce a budget and planning schedule from the design phase to the project's final inspection. When an issue arises on the project site, the main contractor will act as a liaison between the consultant and the subcontractor. This is to ensure that the project is finished on time, on budget, and to all requirements to provide a high-quality end result.

Usually, the subcontractor is chosen through a bidding procedure, as reported by Martin & Benson (2021) and Mahmoudi & Javed (2022). It's critical to award a project to a competent subcontractor because it will have an impact on the project's overall success. Nevertheless, Olanrewaju et al. (2022) stated that the typical practice in the industry is to choose the subcontractor with the lowest price offer. The main contractor needs to be proactive by not simply using the price offer as the criteria of the subcontractor; it should go beyond that. The main contractor will need to investigate their subcontractor's financial situation, technical abilities, and relevant past experiences to ensure that the subcontractors have the expertise to do the work that is prepared for them. Aslan (2018) added that the main contractor needs to have a list of criteria to choose their subcontractors. The common criteria are: 1) the resource capacity of the subcontractor; 2) previous track performances; 3) the reputation of the organisation; and 4) the ability to complete a project on schedule.

Domestic subcontractors and nominated subcontractors are the two types of subcontractors. However, the focus of this research is on domestic subcontractors. The domestic subcontractor is a subcontractor who is sent to the project site by the general contractor to do specific tasks. According to Chadee et al. (2023), the contract is between the main contractor and the client, and the work of the subcontractor is the responsibility of the main contractor. Werneck et al. (2019) added that the main contractor usually appoints most domestic subcontractors directly, and the contract is between them, not involving the client. A domestic subcontractor will perform the job on behalf of the main contractor. The scope of work of a

domestic subcontractor covers all of the work stated in the subcontract in line with the request of the main contractor. Most of the standard forms of contract in the industry allow the main contractors to outsource some portion of the work as long as contractual criteria are followed [28]. Contractors and subcontractors need to agree on the scope of work, risk exposure, resource allocations and payments of the appointments as described by [32].

2.4 Factors That Cause Payment Issues Between Main Contractor and Subcontractor in Construction Projects

2.4.1 Communication

Communication, according to Mohd Fateh et al. (2023) is the exchange of ideas, views, feelings, facts, and information between two or more people. Receiving feedback is crucial since it confirms that the message was delivered to the target recipient appropriately. In most construction projects, a lack of communication will result in poor project timing, planning, and execution. This will result in a lack of project management and might jeopardise the quality of the final output. According to Gamage (2022), an effective communication system is essential for a seamless flow of information sharing since it may assist in resolving any misunderstandings or ensuring the integrity of the message transmitted, as well as receiving adequate reaction and feedback from the other side. Good communication and appropriate coordination are required to avoid any possible difficulties that may arise throughout any construction project. Due to the necessity for communication and coordination, many contract conditions require early notification of claims and full information on the cost and time implications. All the parties involved must communicate and exchange information at every stage of the construction. Nevertheless, some construction industry relationship issues arise from a lack of trust and inadequate communication among project participants, particularly when subcontractors are not part of the primary alliance, as highlighted by Mohd Fateh et al. (2023). Prompt and clear communication may assist in avoiding any potential future difficulties, but this can only be accomplished if all parties, including main contractors and subcontractors, communicate well. A relationship problem might arise from a lack of communication between the main contractor and the subcontractor.

2.4.2 Main Contractor Financial Problem

Construction projects will always be fraught with payment difficulties. This isn't a new issue; in fact, it's been noted in nearly every building project. According to Kshaf et al. (2022) the issue has worsened as the world economy has deteriorated, causing the main contractor to postpone payment to their subcontractor. The major rationale for this would be to safeguard the cash flow of the main contractor from the subcontractors. Furthermore, the main contractor might experience late payment from the claim. Late payment is usually caused by a lack of appropriate supporting paperwork, which differs from the original plan and is on-site, as well as payment rules clauses that enable the main contractor to defer subcontractor payment, as stated by Enshassi et al. (2019). These are just a handful of the excuses used by the main contractor to avoid paying the subcontractor. As a result, there may be a conflict between the contractor and his

subcontractors, possibly leading to a relationship issue between the main contractor and the subcontractor.

Therefore, the goal of this study was to determine the present state of knowledge about payment concerns between main contractors and subcontractors. According to Sam et al. (2022), the construction industry has become more reliant on subcontracting, and the operational connection between the main contractor and subcontractor is critical to project delivery success. Furthermore, the main contractor is more concerned with risk and cost-cutting, which has significantly harmed the relationship.

3.0 METHODOLOGY

This research was done using a quantitative methodology. The researchers utilised a questionnaire survey to collect reliable data from G7 contractors and subcontractors working with G7 contractors. The online questionnaire survey was sent to respondents who are directly involved in the subject matter of the research. The justification for using the online survey was that the respondents were expected to feel more at ease while filling out a self-administered survey than when speaking openly and honestly to interviewers since the subject matter might reveal the weaknesses of the organisation. The quantitative approach allows for the simultaneous acquisition of a large amount of information and data. Therefore, the online questionnaire was the main instrument that was utilised to collect primary data for this research. The questionnaire was divided into three (3) sections, as follows:

- **Section A** focuses on the respondent's background, which includes the respondent's experience in the industry, designation, and the years of establishment of the organisation.
- **Section B** records the factors that cause the payment issues and their effects on the main contractor and subcontractors in the construction projects, including how the post-COVID-19 contractor's financial situation and communication impacted the payment issues.
- **Section C** draws attention to the recommendation from the respondents on the potential solution to the payment issue between both main contractors and subcontractors for successful construction project deliverables.

The 5-point Likert scale is utilised in the questionnaire survey. Wu & Leung (2017) highlighted that the Likert scale is widely used in research and is commonly constructed with four to seven points. A range of 5 points is acceptable and understandable. The researchers were able to analyse how strongly the respondents agree or disagree with the statements presented, which can range from extremely positive to very negative. An open-ended question was provided for the respondents to express their views.

The G7 contractor is the highest-ranking contractor in Malaysia, with the highest level of commitment. The Construction Industry Development Board Malaysia (CIDB) (2021) reported that 875 contractor G7s are registered with CIDB Malaysia. The G7 contractor was chosen as the respondents due to its being the highest class of contractor; thus, the G7 is heavily involved in subcontracting exercises to execute a project. Therefore, 875 sets of questionnaires were distributed to the G7 contractors in the construction industry. The method of

distribution will be submitted via WhatsApp, emails, and other sources entered into Google Forms.

After the questionnaires were sent out, the respondents were reminded to fill out the questionnaire survey with a phone call to confirm that they had completed and submitted it accordingly. After all the data has been collected, it will be compiled and analysed in the form of a table. The data collected were analysed using Microsoft Excel and SPSS software to summarise the variables to give a better understanding and context, as well as the identification of appropriate payment issues between the main contractor and subcontractors in a construction project. Table 1 summarises the research methodology used for this research work.

Table 1 Summary of the research methodology.

Elements	Contents
Survey Type	Online Survey (Google Forms)

4.0 RESULTS AND DISCUSSION

4.1 Cronbach Test and Response Rate

The Cronbach's alpha test is commonly used in questionnaire surveys to determine the internal correctness or reliability of multiple Likert scale questions. The questionnaire scored 0.81, which is good. According to Bujang et al. (2018) the closer the score to a value of 1, the better the internal consistency of the questionnaire. Thus, the 0.81 score is convincing. From the 875 questionnaires that were sent out, 150 responded and submitted accordingly, which translates to 17% of the response rate. One of the reasons why the response rate is low is that the questionnaire is designed for people who are truly knowledgeable about payment problems. As a result, many dropped out and did not finish the questionnaire survey.

4.2 Demographic Background

This section recorded the respondents' backgrounds and general information, such as type of contractor, company registration category, age of the construction firm where the respondents have worked, job experience in construction, and positions in the organisation. Frequency analysis was performed in this section to create a tabular representation of a survey data set, which was then used to better organise and summarise the data for the research. Table 2 clarifies that respondents are working with the main contractor or subcontractors. 70 respondents were working with the main contractor out of a total of 150 in this study, representing 46.7% of the total. Subcontractor responses made up 80 of the totals, or 53.3%. As subcontractors dominated the construction industry more than main contractors, the percentage of subcontractors was high.

Table 2 Types of Contractors

Types of Contractors	Frequency	Percentage (%)
Main Contractor	70	46.7
Sub Contractors	80	53.3
TOTAL	150	100

Source of References	Construction Industry Development Board (CIDB) database.
Sampling Strategy	Simple random sampling method.
Respondents	Owner (Top Management), Project Manager (Managerial), Architect/Engineer/Quantity Surveyor (Supporting).
Data Collection Period	3 months
Analysis Instrument Software	Microsoft Excel and SPSS.
Types of Analysis	Statistical analysis (descriptive, Independent Sample T- Test)
Size (Population)	875 questionnaires
Total Number of respondents	150 respondents

Table 3 records the years of establishment of the respondent's organisation. Based on findings, 56 (37.3%) of the organisation was established for more than 21 years, while 37.3% was established more than 21 years ago. Table 4 records the years of experience of the respondents. The majority of the respondents have more than 21 years of experience, with 72 respondents (48.0%). The findings show that the respondents in the research are significant, and their input is reliable for the research. Quantity surveyors made up the majority of the respondents, accounting for 67 respondents (44.7%) of the total. Engineers have the second-greatest percentage of respondents, at 46 respondents (30.7%). The research focuses on payment issues, which are frequently related to quantity surveyors. This is because the role of quantity surveyor requires a high level of expertise in payment difficulties. Table 5 summarises the designation of the respondents for the questionnaire survey.

Table 3 Years of Respondent's Establishment

Years of Establishment	Frequency	Percentage (%)
Less than 5 years	21	14.0
6 - 10 years	22	14.7
11 - 20 years	51	34.0
More than 21 years	56	37.3
TOTAL	150	100

Table 4 Years of Respondent's Experience

Years of Experience	Frequency	Percentage (%)
Less than 5 years	5	3.3
6 - 10 years	19	12.7
11 - 20 years	54	36.0
More than 21 years	72	48.0
TOTAL	150	100

Table 5 Designation of the Respondents

Designation of the Respondents	Frequency	Percentage (%)
Project Director	6	4.0
Project Manager	21	14.0
Engineer	46	30.7
Quantity Surveyor	67	44.7
Other	10	6.7
TOTAL	150	100

4.3 Factors That Cause Payment Issues Between the Main Contractor and Subcontractors in Construction Projects

This section presented three (3) factors of recent payment issues that happened, namely, post-COVID-19, the financial condition of the contractors, and communication between the main contractor and subcontractor. In each factor, five (5) sub-factors support it. The respondents were required to rate the questionnaire according to the Likert scale. The choices on the scale ranged from strongly disagree (1) to strongly agree (5).

4.3.1 Factor No. 1: Post-COVID-19

Based on Table 6, the COVID-19 pandemic included consequences such as stringent Standard Operating Procedure (SOP), shutting down of the economic sector, financial issues in sustaining the operation, and suspended on-site work activities. The financial issues to sustain the operation during the COVID-19 pandemic rank first in payment issues in the construction project, with a mean of 4.15. The impact of the pandemic, according to extracts from Hook (2020), may drive some engineering and construction enterprises to restructure debt, investigate alternate sources of capital, or face bankruptcy. This is due to a lack of early planning to deal with an infectious pandemic that affects the finances of any contractor, particularly young contractors who are just getting started in the construction industry and want to expand their firm.

The second sub-factor is stringent SOP, with a mean of 4.14, which is not much different from the financial issue to sustain the operation. SOP is a new thing in the world of the construction industry when there is an outbreak of disease. This is reinforced when an infectious disease strikes the project site, as M.Lingham (2020) points out: "On the 30th of May, 28 workers at a building site in Jalan Ampang were infected with COVID-19." To avoid a rise in the number of infections, this must be stopped. As a result, SOPs must be introduced to help a project run smoothly.

The third rank for the COVID-19 pandemic issue related to the payment issue is that the economic sector was shut down during the pandemic, with a mean of 4.10. According to Helm (2020) explanation, COVID-19's whole shutdown has slowed economic activity greatly. Many smooth project procedures are disturbed and delayed when the economy stops, resulting in no work being performed owing to a shortage of raw materials for building.

The mean value of 4.08 indicates the fourth rank, which is lost productivity due to a lack of resources. According to Ivanov (2020), the consequences of the outbreak on the supply chain were explored, and it was determined that the industry had been significantly harmed and that recovery may take longer. As a result, the project site building process is too constrained, requiring activities linked to raw materials for the supply chain to provide the raw materials. There will be work done on the project site that is unrelated to the supplier's supplies.

Lastly, the element of suspended on-site work activities is located at the fifth rank with a mean of 4.02. This was because the government had ordered all work at the project site to be suspended immediately. All work on the project site was forbidden until it was completed, which has an impact on payment claims because no claims were submitted while the project was inactive.

Table 6 Factors on Post-COVID-19

Factors	Sub-Factors	Mean	Ranking	Overall Mean
Pre/Post Covid-19 Issues	Financial issues to sustain the operation	4.15	1	4.098
	Stringent Standard Operating Procedure (SOP)	4.14	2	
	The economic sector was shut down	4.10	3	
	Lost productivity due to lack of resources	4.08	4	
	Suspended on-site work activities	4.02	5	

4.3.2 Factor No. 2: Contractor's Financial Condition

Based on Table 7, the contractor's financial condition issues included a delayed payment from the client, the main contractor postponing payment to their subcontractor, a lack of financial arrangements for the project, difficulty in making payments owing to economic circumstances, engineering and construction firms consolidating debt, and the client not paying in advance, such as a shortage of cash to begin work at the start of the project. The current situation for the payment issues involving the contractor's financial problem is delayed payment from the client, with a mean value of 4.18 ranking first. According to Do et al. (2023), the four key causes of the construction delay were the clients'/contractors' problems, the service provider's problems, uncontrollable objective problems, and the bidding issues. Due to non-payment to the primary contractor, the main contractor must hold a claim against the subcontractor, which might lead to a dispute between the two parties. As a result, the main contractor is exposed to this payment issue, but it might also come from the customer or other parties.

The second rank is the main contractor who postpones payment to their subcontractor, with a mean value of 4.12. Payment issues will always be a part of construction projects. This is not a new issue. It has been noted on almost every construction project. According to K.V. et al. (2019) and Ahmadiheykhsarmast & Sonmez (2020), the problem has gotten worse as the global economy has worsened, prompting the principal contractor to delay payment to their subcontractor. The major purpose of this is to safeguard the principal contractor's cash flow from subcontractors.

Next, at the third rank is the lack of financial arrangements for the project with a mean value of 4.09. Usually, small contractors who are just starting a construction business do not have as much experience as other contractors. Therefore, they cannot organise finances more carefully due to their condition being in the start-up phase. With this newly rising company, they need more experience to avoid fraud and bankruptcy. In addition, good financial arrangements are important in the construction world so that the project runs smoothly.

At the fourth rank are difficulties in making payments owing to economic circumstances, with a mean value of 3.93. One of the reasons for late payments is that the contractor does not have sufficient financial resources in the event of an emergency, forcing him to terminate the contract. Due to the country's unpredictable economy and a lack of previous

preparation to cope with financial issues, this is frequently the case in the building industry [46]. Positioning at fifth rank are engineering and construction firms that consolidate debt with a mean value of 3.81. According to King et al. (2022) and Y. et al. (2022), the pandemic's impact may force some engineering and construction enterprises to restructure debt, look for alternate sources of funding, or file for bankruptcy. The engineering and construction sectors will confront a new environment in the future, which will involve a market change as well as infrastructure expenditures by select "national governments" to assist them in achieving their goals and surviving. Those on the opposing sides, on the other hand, will be constrained in their resources.

Table 7 Factors on Contractor’s Financial Condition

Factors	Sub-Factors	Mean	Ranking	Overall Mean
Contractor’s Financial Condition	Delay payment from the client	4.18	1	4.03
	The main contractor postponed payment to their subcontractor	4.12	2	
	A lack of financial arrangements for the project	4.09	3	
	Difficulty to make payments owing to economic circumstances	3.93	4	
	Engineering and construction firms to consolidate debt	3.81	5	

4.3.3 Factors No. 3: Communication Between Main Contractors and Subcontractors

Based on Table 8, communication between the main contractor and subcontractor included disagreements between the main contractor and subcontractor related to poor quality of workmanship and low pricing, reports on any problems on site between the main contractor and subcontractor, suppliers and subcontractors to be able to interact with one another via the main contractor, a lack of trust and inadequate communication, and arguments between the main contractor and subcontractor. Communication is an important aspect that involves the occurrence of payment issues in the construction industry. Disagreements between the main contractor and subcontractor related to poor quality of workmanship and low pricing are at the first stage, with a mean of 3.99. According to previous research by Bäckstrand & Fredriksson (2022), a subcontractor's low productivity owing to a lack of construction supplies would damage project construction profitability and, as a result, the project team's and stakeholders' relationship. As a result, productivity should be prioritised, and not only the price should be stressed, but also quality must be maintained to avoid issues at the project site, such as payment delays due to subcontractor quality.

The second rank is the number of problems reported on-site between the main contractor and subcontractor, with a mean of 3.98. The data they supply will be sent to the main contractor, who will share it with subcontractors, suppliers, and other third-party players. This is to avoid misunderstandings

that will arise if there is a variation in order. A report is an important thing to do before performing an activity to ensure the smooth running of a project in the construction industry. Other than that, the third rank is suppliers and subcontractors being able to interact with one another via the main contractor, with a mean of 3.86. To avoid any delays in work completion, information gathered afterwards must be communicated to the owner and architect via the main contractor. It is also crucial for suppliers and subcontractors to communicate with one another through the main contractor.

At the fourth rank is lack of trust and inadequate communication, with a mean of 3.83. Prompt and clear communication may avoid future problems, but only if all parties, including contractors, subcontractors, and specification suppliers, work together. A lack of communication between the main contractor and the subcontractor could cause a relationship problem.

Lastly, arguments between the main contractor and subcontractor had a mean of 3.81. This should not happen because it will disrupt the progress of work at the project site. Usually, this occurs due to a delay in payment. Payment is an important criterion for the continuity of the project. Finance is also an important factor in building a successful project because it is the main source for determining the performance of contractors in the eyes of the construction industry.

Table 8 Factors of Communication Between Main Contractors and Subcontractors

Factors	Sub-Factors	Mean	Ranking	Overall Mean
Communication between Main Contractors and Subcontractors	Disagreement between the main contractor and subcontractor related to poor quality of workmanship and low pricing	3.99	1	3.89
	Reports on problems on-site between the main contractor and with subcontractor	3.98	2	
	Suppliers and subcontractors to be able to interact with one another via the main contractor	3.86	3	
	Lack of trust and inadequate communication	3.83	4	
	Arguments between the main contractor and subcontractor	3.81	5	

In conclusion, of the three main factors presented to respondents, the majority of the respondents agreed that the main factor causing payment problems is the issue of post-COVID-19, which hit Malaysia, and globally, the whole world is affected by the presence of the said epidemic of infectious diseases. It dramatically reduces the GDP of Malaysia since all activities related to foreign activities in Malaysia have been closed to prevent the spread of disease outbreaks from abroad,

including from within Malaysia itself. In addition, the government has declared a movement control order (MCO) to ensure that all activities at the project site are halted. After MCO for three (3) months, activities at the project site can be implemented, but they must follow a SOP that has been set up by the government. However, many are opposed to said SOPs as they will slow down any activities that have been formerly scheduled by the construction company. Among the factors that cause the payment problem, which also affects the smooth running of a project, is the delay from the pre-fixed schedule. It is well known that the delay of any previous project has already occurred, but with the presence of COVID-19, the number of delayed projects has increased. Thus, a breach of contract may occur due to a lack of understanding with each other and financial deterioration caused by a lack of productivity from project construction. Table 9 summarises the ranking of the main factors that cause payment issues between the main contractor and subcontractor in construction projects.

Table 9 Factors that cause payment issues between the main contractor and subcontractor in construction projects

Factors	Mean	Ranking
Pre/Post Covid-19 Issues	4.09	1
Contractor’s Financial Condition	3.84	2
Communication between Main Contractors and Subcontractors	3.89	3

4.4 The Recommendation on The Potential Solution of Late Payment Issues Between Both Main Contractors and Subcontractors

This section elaborates on the recommendations made by the respondents regarding the potential solution to late payment issues between both main contractors and subcontractors for successful construction projects. The respondents were required to rate the potential solution according to the Likert scale. The choices on the scale ranged from strongly disagree (1) to strongly agree (5).

Based on Table 10, there are five (5) potential solutions to late payment issues in the construction industry. Based on the findings, most of the respondents agreed that the new payment mechanism among developers or clients who unlawfully withhold payment had the highest rank due to the highest mean score of 3.99. This conclusion is supported according to Chadee et al. (2023), where one technique to prevent lateness and non-payment is to offer a new payment mechanism among developers or clients who are illegally withholding payment. If it is determined that workers are illegally withholding funds, personal sanctions will be imposed. The second highest mean score of 3.90 is that parties involved have contractual obligations to check on the claim and whether it is filed in compliance. Contractors must use caution while accepting contracts and choosing a paymaster. This was agreed by Yap et al. (2017) who stated that a committee should have a contractual duty to check that the claim is filed in line with the terms, product delivery, and other criteria specified before any payment is certified.

The next potential solution to late payment has two items, which are that the law should be changed to send a clear message to builders and clients about payment issues and return processes, as well as that withholding the payment will

cause a penalty, ranked third with a 3.87 as its mean score. The legislation should be modified to give a clear message to contractors and clients regarding payment concerns and return procedures. Bäckstrand & Fredriksson (2022) stated that a contract may only be terminated under common law if one of the parties breaks it and the crime is repudiatory. If a party expresses his decision not to be bound by the contract or to fulfil his responsibilities through his words or actions, he is regarded as having rejected it. In addition, for the second item in the same mean score, withholding the payment will cause a penalty. Using this method can help small subcontractors resolve their payment issues. As discussed above, if there is a rejection of the contract, it is considered a breach of the agreement. In addition, the issue of payment can be reduced if penalties are applied to any party who does not make the payment; in other words, parties can sue for a breach of contract.

Other than that, the fourth rank with a mean score of 3.86 is a main contractor or subcontractor who needs to be informed if they are late in making payment in writing. Informing about late payment in writing will help any contractor who lacks a budget for rolling, especially new contractors who want to grow, because they will make initial preparations so that the work on the project site can run smoothly, from resolving financial hassles to buying raw materials. Moreover, construction or other facilities can be used during the project when there is an early acknowledgement of payment. In addition, if there is a written notice, it will facilitate the work of other contractors to keep it as evidence and data if there are problems at the project site, while disputes about the payment will not occur if the correct method is used.

Finally, the potential solution with the lowest mean score of 3.81 is applying a payment bond between the bank and the client. In terms of cash flow management, this remark is comparable to Chadee et al. (2023), who suggested that clients be taught about cash flow and financial management, while contractors should learn about risk management in material, transportation, labour, and maintenance management. Establishing a payment bond between the bank and the client is another option to explore.

Table 10 Potential Solution of Late Payment Issues Between Both Main Contractors and Subcontractors

Potential Solution	Mean	Std. Deviation	Ranking
New payment mechanism among developers or clients who unlawfully withhold payment	3.99	.924	1
Parties involved have contractual obligations to check on the claim whether it is filed in compliance	3.90	.861	2
The law should be changed to send a clear message to builders and clients about payment issues and return processes	3.87	.995	3
Withholding payment will cause a penalty	3.87	1.002	3
The main contractor or subcontractor needs to inform if late in making payment in writing	3.86	.965	4
Applying a payment bond between the bank and the client	3.81	.866	5

Both the main contractor and subcontractor should establish a format and process in a very effective way. It will help anyone new to claiming a construction project and facilitate the work and the claims submitted to be in line as prescribed. Both parties need to highlight their claim that it is the due date. It is the safest measure to avoid late payment issues. The subcontractors should submit complete claims, including any supporting documents to support the claims to avoid delay in certifying the said claims. As for the main contractor, they should cooperate with the client to be paid on time and should also create a system within their organisation to reduce the time taken to verify claims until they are approved while the payment is transferred to the subcontractor's account. Moreover, the issue of late payment will not arise if there is a systematic and orderly system of organisation. If there is an initial preparation, the party cannot dispute it as it is in accordance with the contract and the details have been made in advance before claiming late payment.

Planning to make a claim is a thoughtful proposal, as this helps the main contractor process the payment of the claim quickly, for example, before any upcoming festival. This is because it has become a trend in Malaysia that the claim payment process is slow due to many people celebrating the upcoming festival. In addition, a proper claim should be performed carefully to avoid incomplete documents being sent to be claimed. If the documents provided are incomplete, it will make the claim payment process time-consuming or late, and this problem will prolong and lead to a misunderstanding between the two (2) parties, including the main contractor and subcontractor.

4.0 CONCLUSION

The factors that cause payment issues between the main contractor and subcontractor in construction projects have been identified and analysed. This research is in line with SDG No. 8, which is decent work and economic growth. Relevant industry players can utilise this research as input to strategize the improvement of payment difficulties between main contractors and subcontractors for successful construction projects. The findings might be able to help subcontractors who often feel oppressed and who are just starting a construction industry business yet do not have much capital, or, in other words, people who intend to build small companies. If the problem of payment at the project site can be reduced, this means that the country's economic sector can be improved, and the country will be more advanced with the ongoing development that is exercised and performed in the eyes of the world.

In conclusion, the post-COVID-19 era has undeniably introduced a myriad of challenges to the construction industry, significantly impacting the payment dynamics between main contractors and subcontractors. The financial strain experienced by businesses in the construction sector was badly impacted. The economic fallout from COVID-19 has led to a greater focus on cost containment, which has sometimes translated into delayed or reduced payments to subcontractors. This has the potential to create a vicious cycle where subcontractors, struggling to maintain their financial stability, might cut corners or reduce the quality of work, further exacerbating project delays and disputes. The pandemic, with its far-reaching effects, has heightened the

need for more robust and adaptive approaches, such as the acceleration of digital solutions, to improve transparency and timeliness in payment processes. Moving forward, stakeholders in the construction sector must engage in proactive dialogue and reform efforts to ensure that such payment issues are addressed comprehensively and effectively, fostering a more resilient and collaborative industry in the face of future disruptions.

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