

Economic Challenges on Micro Enterprise Contractors In Surviving Covid-19 Pandemic's Effects

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Abstract

The outbreak of Covid-19 pandemic has disrupted the global economy, leading Malaysia's economy to suffer. Since the start of lockdown, numerous construction companies have suffered in maintaining their financial business especially for micro business since they are financially fragile in contrast to large business. Hence, this study aims to investigate the economic challenges effected by Covid-19 towards micro enterprise contractor's survival. This study adopted mix method approach which is quantitative data and qualitative data. Both collection of data were handled via online medium to avoid the spread of Covid-19 virus. Financial issues factor, cost implication, and financial mitigation are the major variable variables that observed in the survey. This is based on a financial issue factors, which includes implementation of movement control order, standard operating procedure, material construction price increases, payment issues, and client-related factors. As the results the implementation of movement control order, increase price of construction material, new standard operation procedure, payment issue and client related factor has effected the most on the financial issues sides meanwhile on cost implication sides, the cost overrun has effectedmicro entreprise during pandemic. Results on financial mitigation were obtained to mitigate the impact of Covid-19, with the results indicating that invoking force majeure, government financial aid, joint venture plans, company termination, and risk sharing can help micro enterprises cope with the difficulty. Therefore, this helps micro enterprise to survive the economic impact and understand the challenges of the pandemic by adopting an effective strategy that will help improve the financial company management.

Keywords: Economic Challenges; Covid-19 Effects; Micro Entreprise; Construction Industry

INTRODUCTION

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The Covid-19 pandemic has made a huge impact on construction industry economy in Malaysia. Evidently,

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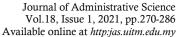
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Malaysia economy has shrunk by 5.6% in 2020 compared to 2019 with 4.3% (DOSM,2021). This is a result from the Movement Control Order implemented by government which halted most of the business and only permitted those categorized as critical and essential services to operate the business. It eventually resulted in a 30 percent reduction in manpower and income, as well as a 42 percent reduction in building material usage, which equivalent to RM4.6 billion (Afizah, 2021). The effect of during three phase of lockdown has cause Malaysia's construction sector to suffered RM18.5 billion losses (The Straight Times, 2021). Hence, this is resulted from the work cannot proceed since construction work required on site work and every project member should attend to check and monitor all the work activities. Other than loses on economy, construction industry also suffered with a limited additional time, tight budget and additional cost for following new standard operating procedure that have imposed by government (Farah, Muneera, & Ernawati, 2020). Micro business will suffer more than large business because they grow for a longer period of time when crisis happen rather than large corporation, which develop faster and more flexible (Bartz & Winkler, 2016). In order to curb the virus from spreading, Malaysia used a lockdown strategy known as Movement Control Orders (MCO). MCO, also known as *cordon sanitaire*, is a restriction on individuals moving from one location to another, either locally or internationally, in order to prevent the transmission of illness or viruses. Prime Minister Muhyiddin Yassin announced the implementation order in a television broadcast on March 16, 2020. The implementation of MCO in Malaysia has many phases:

- i) Phase 1 MCO 1.0 from 18th March 2020 till 3rd May 2020
- ii) Phase 2 Conditional MCO from 4th May 2020 till 9th June 2020
- iii) Phase 3 Recovery MCO from 10th June till 31st December 2020
- iv) Phase 4 CMCO in the areas with high COVID-19 cases from 14th December 2020 till 31_{st} December 2020
- v) Phase 5 RMCO nationwide from 1st January 2021 till 31st March 2021 certain states with high COVID-19 cases were placed under MCO 2.0 from 13th January 2021 till 4th March 2021
- vi) Current Measure Full MCO 3.0 nationwide from 1st to 28th of June 2021

Since the implementation of MCO in Malaysia, numerous sectors have been prohibited from working, and the government has encouraged workers to work from home in order to reduce virus transmission. The construction industry has been force to adapt with a significant challenge which cause by COVID-19. A research by Gamil and

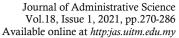




Alhagar (2020) conducted an exploratory interview with ten experts from the Malaysian construction industry to share and express their perspectives and views on the industry's current situation in the middle of pandemic.

In Malaysia, the construction sector is separated into two categories: general construction and specialty trade work. General construction which are building construction (residential and commercial) and civil engineering construction (sewers, roads, highways, bridges and tunnels). While, the second area is special trade works which consist of metal works, electrical works, tiling, flooring painting, glass works, and others. All local and foreign contractors are obligated to registered in one of the seven grades of registration before undertaking their business operation in Malaysia. On July 24, 1994, the Malaysian Construction Industry Development Board (CIDB) was established under the ACT 520 (Lembaga Pembangunan Industri Pembinaan Malaysia/LPIPM) as the governing body tasked with providing leadership and coordination to industry actors in Malaysia. The ISO 9000 QMS (Quality Management Systems) was introduced by CIDB in the year 2020. Contractors are graded according to their financial categories, from the smallest financial G1 (200,000 MYR) to the largest financial G7 (10,000,000 MYR) (Dwikojuliardi, 2015).

Financial issues factor (Nur, Salina and Lai, 2021), cost implication (Liew, 2021), and financial mitigation (Zamani et, al, 2021) are the three variables studied in this research. The growth of the variable in the literature review is shown in Table 1. There are five categories in the financial issues factor variable: movement control order, material price escalation, standard operating procedure implementation, payment issues, and client related factor. Construction operations have been disrupted as a result of the movement control order, which has harmed the project's timeline (Zamani, Rahman, Fauzi, and Yusof, 2021). Next, in the third quarter of 2020, the price of steel, PVC pipes, and aluminum alloys is expected to rise, raising alarm among all construction players. According to Farah et al. (2020), the implementing new standard operating procedures has increase cost spent for the project. Micro-entrepreneurs have been burdened by the amount of monthly loan payments due to the expansion of MCO, particularly for office building leasing and business load, which are regarded to contribute to a higher risk of bankruptcy (Nur, Salina, and Lai, 2021). According to Kamarudden et al (2020), a contract in the public sector is always awarded to the lowest bidder, which might lead to



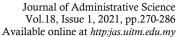


financial difficulties because the price is rising while the cost of the project will be paid lower than the actual amount of contractor has to spend.

Next, cost implication variable which is cost overrun. In their research studies, Zamani et al (2021) found that longer project duration causes cost overrun. They also suggested that cost overrun is caused by compliance with new standard operating procedures. Furthermore, the project will only be paid if it is completed, which will result in the contractor's business going bankrupt owing to a lack of capital. Following that, scope changes can lead to project delays, obstacles, and budget overruns (Warner, 2019). Many contractors were successful in obtaining extensions of time for the MCO period under the contract when projects were paused and all site activity ceased. However, many contractors have struggled to secure additional time extensions for events following the MCO, exposing them to liquidate damage (Liew, 2021). According to N. H Abdullah (2020), frequent design changes were associated with a shift in the scope of work by the owners. As a result, key reasons for Nigeria's high rate of building failures became apparent.

Financial mitigation variable is a strategy to combat Covid-19 effects it has five categories suggested by previous researchers; first category is force majeure. Hansen (2020) suggested the Covid-19 outbreak can be invoking under force majeure event in construction contracts. Zamani et al (2021) stated that the contractor who having financial problems should take opportunities seeking a financial aid that given by government. Spear (2014) suggested that collaboration with other organization can get benefits to access a variety of financial and organizational resources especially for micro enterprise to fight the financial obstacles during Covid-19. Cheng (2020) suggested that contractor should terminated their business if the effect severe to avoid the individual gone bankrupt. Zhang (2011) appointed that by negotiating with partner dividing risk, profit and control rights can manage the financial difficulties during economic challenges.

The three main variables were derived based on decades of studies that discussing on the economic challenges of construction industry players as per illustrated in Table 1. In this study Financial issues has been break down into A1 – Movement Control Order which suited to the phenomenal circumstances that disappoint the industry, A2 – Escalation of Material Rate scarcity on supply and high demand, A3- Standard Operating Procedure during pandemic that effected contractor's budget, A4- Payment Related Issues that includes client's decision to follow the payment scheme or not as all of the





stakeholders are effected during pandemic and A5-which represent the Client's Needs and Action which can cause the monetary adjustment towards contractor's budget. Meanwhile for Cost Implication, it has been divided into B1- Cost Overrun that typically effecting contractor's business even without the pandemic moment, B2 – Project Income Deficit where contractor cant mark up the profitable rate on profit and overhead calculation for built up rates, B3 - Variation of Work Scope where the omission and addition of the work scope will be held due to client's budget and material scarcity, B4 – Exposure to Liquidated Ascertain Damage (LAD) where the larger the project sum and the base lending rate, larger rates to be paid to client on the LAD, B5 – Changes of Design where, the design subjected to change according to client's budget which considere the most economic solution. Other than that, on the Financial Mitigation perspective the subvariables has been identified via code of C1 – Force Majeure Clause where in the standard form of contracts used in construction; be it public or private projects there will be an allocation for the contractor's to finish the work at at-large timeframe, C2 – Financial Aid whereby the injection from the government to help the small and medium entreprise survived during the pandemic, C3 – Partnering and Collaboration in between suppliers, C4- Termination of Bussiness to put end on the prolong and devastating effects, and C5 Risk Sharing in between stakesholders.



Table 1: Economic Challenges Variables Tabulation

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Variables	Codes	Description	Zamai et al. (2021)	Zazali et al. (2021)	Farah et al. (2021)	Nur et al. (2021)	Kamaruddin et al (2021)	Spear (2014)	Warner (2019)	Liew (2021)	Hansen (2020)	Cheng (2020)
Financial Issues Factor	A1	Movement Control Order	/									
	A2	Escalation Material Rate		/								
	A3	Standard Operatation of Procedure			/							
	A4	Payment Related Issue				/						
	A5	Client's Needs and Action					/					
Cost Implication	B1	Cost Overrun	/									
	B2	Project Income Deficit	/						/			
	В3	Variation of Work Scope						/				
	B4	Exposure to Liquidated Ascertain Damages								/		
	B5	Changes of Design									/	
Financial Mitigation	C1	Force Majeure Clause									/	/
	C2	Financial Aid	/									
	C3	Partnering and Collaboration					/					/
	C4	Termination of Bussiness										
	C5	Risk Sharing										/



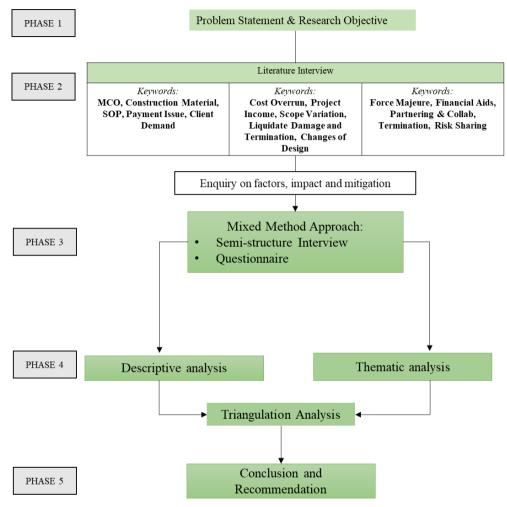
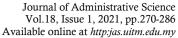


Figure 1: Research Methodology Flowchart
Sources: Authors

This study reports on the financial issues factor effected by Covid-19, cost implication and strategist of micro enterprise to combat the Covid-19 effects as stated in Figure 1. The results are gathered by quantitative analysis and thematic analysis run through IBM SPSS. Participants of this research study is Contractor grade G1 in Southwest Penang. This study scope covers the construction industry in Pulau Pinang concerning the grade G1 contractor. G1 contractor is categorized as micro-enterprise business which is an enterprise with full-time employees of less than 5 or with annual sales turnover of less than RM200,000. Bartz and Winkler (2016) in their study discovered that microenterprises develop slowly during times of crisis, showing fragility,



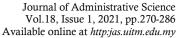


compared to largerenterprises, which expand faster and more adaptable. Crises, it is believed, are harmfulto micro-enterprises; as a result, entrepreneurs must devise ways to manage and plan for alternate approaches to mitigate the crisis' impact on their firm. This study is focusing on how contractors deal with financial challenges that arise during pandemic COVID-19. As we all know COVID-19, has impacted many industries and causing business failure. A measuring control is required for business survival in dealing with the current challenge. The study has three independent variables which is factor of financial issue, cost impact and financial mechanism.

This study is using mix method approach as shown in Figure 1. The first method was by conducting quantitative approach by distributing questionnaire to micro enterprise to assess the level of economic impact using a five Likert scale. A total of 86 respondents out of 205 have participated in answering the questionnaire survey. The second approach is by conducting exploratory interview. Interview is done with one contractor grade G1 has expertise in construction industry to answer the question about mitigation on impact of Covid-19. One contractor Grade 1 has been selected due to the case oriented analysis which the contractor has chosen the project termination approach to survive pandemic situation for small and medium entreprise.

Qualitative research experts argue that there is no forthright answer to the question of 'how many' and that sample size is reliant on a number of factors relating to epistemological, methodological and practical issues. The qualitative sample sizes are large enough to allow the recitation of a 'new and richly textured understanding' of the phenomenon under study, but small enough so that the 'deep, case-oriented analysis (Vasileiou. et al, 2018). Therefore, the deep and case oriented analysis grade 1 contractor has been chosen for interview section.

The collection of data used in this research is by online medium which is distributing questionnaire through WhatsApp application and Gmail. Thus, a semi-structured interview via telephone as a current situation where pandemic outbreak still ongoing, the safest way to curb the virus form transmitting is by using an online medium as a communication channel (Che Omar et al., 2020). In collecting the relevant data, stratified random sampling technique is used and the population of this study is comprised on micro enterprise contractor that register with Construction Industry Board Malaysia (CIDB).





Before distributing questionnaire, questionnaire was thoroughly reviewed by 2 expert panel through validity test. The survey is then distributed to 30 respondents for a pilot study to determine reliability with a Cronbach Alpha score of above 0.8. The data is then screened to see if there is any missing information on the entry. The data in this study, on the other hand, is not missing. Proceed to the normality test to assess the data distribution for each variable, and all data in this study is normal and evaluated graphically.

FINDINGS

The findings for this study are stipulated as follows:

Factor of Financial Issues

Table 2 shows the results of a descriptive analysis of the factor of financial issues affecting micro enterprises in Penang, Malaysia, as a result of covid-19. The majority of respondents agree with the statement because mean analysis scores more than "3.00" for all the variable in factor of financial issues. In this study, the client-related factor ranked first in relation to a financial issue factor, with a mean of 4.11 and a standard deviation of 0.397. One of the reasons it is ranked first is that, all of the respondents agree that the action by contract be awarded to the lowest bidder, resulting in cost overruns. Following, with a mean of 3.95 and a standard deviation of 0.490, payment issue is rated second among financial issue factors. This is due to the fact that contractors waste money on non-productive assets such as idle facilities and equipment, as well as rent and utility expenses.

Other than that, movement control order is ranked third with a mean of 3.94 and a standard deviation of 0.397. The MCO according to the majority of respondents, plays a key part in financial issues because it is the cause of all projects being temporarily delayed and disrupted. Various factors have been disturbed as a result of MCO's deployments, including time, cost, human resource availability, and resource availability. The next category is construction materials, which have a mean of 3.72 and a standard deviation of 0.497. Raw material price fluctuations were ranked fourth among the overall factors. The majority of respondents believed that a rise in material costs was a factor in their financial problems. In most projects, raw materials make for a significant amount of the total cost. As a result, if the cost of raw materials rises, so will the cost of construction.



Finally, the contractor will have to spend money on face masks, sanitizer, and other goods in order to comply with the new standard operating procedure. They must also adhere to social separation, which necessitates workers taking turns working and takes a lengthy time.

Table 2: Descriptive Analysis of Financial Issue

Variables	Means	Std.	Rank	Mean
		Deviation		Value
Movement	3.94	0.397	3	Good
Control Order				
Construction	3.72	0.497	4	Good
Material				
New	3.39	0.643	5	Acceptable
Standard Operating				
Procedure				
Payment	3.95	0.490	2	Good
Issue				
Client	4.11	0.340	1	Good
Demand				

Cost Implication

Table 3 indicates the descriptive analysis of the five variable for cost implication. The mean score for all of the items is greater than 3.00. This implies that the majority of respondents agreed with the claims made about the items based on each variable, viewing those items as the roots of Covid-19's cost implication on Micro Enterprise Contractors. In this study, changes in design were ranked highest as a cost implication influenced by covid-19. The mean value is 3.98 and the standard deviation is 0.541. In order to prevent overpaying on materials that have escalated in price, the contractor prefers to downgrade the material quality when there is a cost overrun. A reduction in the building's lifespan, a payment delay due to the client's dissatisfaction with the construction, and a complaint are all possible outcomes of changing the design.

The cost overrun category follows, with a mean of 3.85 and a standard deviation of 0.479. Lack of cash, contract termination, inability to complete the project, and a low budget are all consequences of cost overruns. With a mean of 3.84 and a standard deviation of 0.570, variation of scope is ranked third. The contractors will adjust the scope due to the cost implication, according to the respondents. They will decrease the scope of work, and because payment is late, the issue of labor termination will become more serious, as the contractor will be unable to pay salaries.



Low project income is listed fourth, and it is one of the cost implication of Covid-19 since the project has not yet been completed; the construction project gets paid only until it is completed, but the project has been delayed until the MCO has begun. Termination is rated fifth, with a mean of 3.65 and a standard deviation of 0.647. A big number of construction enterprises have temporarily shut down and laid off workers due to a lack of funding and financial instability.

Table 3: Descriptive Analysis of Cost Implication

	Variables	Means	Std.	Rank	Mean
			Deviation		Value
	Cost Overrun	3.85	0.479	2	Good
	Low in Project	3.66	0.564	4	Good
Income					
	Variation of	3.84	0.570	3	Good
Scope					
	Termination	3.64	0.647	5	Good
	Changes of	3.98	0.541	1	Good
Design					

Financial Mitigation

Table 4 illustrate the variables that was subjected to triangulation analysis in order to determine whether the suggested practice is reliable with an involvement of G1 contractor in Penang. In this triangulation study, the semi-structured interview is being compared to the questionnaire. The semi-structure interview is done by asking an expert panel a validation content on questionnaire in order to compare the answer with quantitative data. There are 86 respondents has involved in answering the questionnaire.

Table 4: Triangulation Analysis of Financial Mitigation

Code	Variable	Descriptive Data		Exploratory Data	
	_	Mean	Std. Dev	Responses	
A1	Force Majeure	4.40	0.378	X	
B1	Financials Aids	3.96	0.525	X	
C1	Partnering and Collaboration Business	4.22	0.528	/	
D1	Termination of Business	4.05	0.454	/	
E1	Risk Sharing	4.32	0.339	/	



According to Table 4, the majority of respondents agree with the suggested financial mitigation in the questionnaire. With a mean score of 4.40 and a standard deviation of 0.378, force majeure is rated first. Hansen (2020) finding was in line, stating that the adoption of a force majeure clause is required to avoid conflicts and disputes emerging from non-performance due to force majeure conditions. A force majeure clause is an attempt to limit future damages due to unusual circumstances, even if the party has taken all reasonable means and done due care to avoid or lessen the impacts. During the interview, however, the participant stated that they do not employ force majeure and that he is uninformed of the clause. As a result of the interview, the respondents do not agree with using the clause because they can still communicate and resolve the issue. The similarities are shown from previous studies and survey result. However, exploratory data has different response. Table 5 reflects the viewpoint of the expert panel.

Table 5: Perception on Force Majeure

Variable 1	Question	Answer
Force Majeure	Did your company have invoked Force Majeure Clause during having a project delay?	"Usually in this situation client usually understand the circumstance and tries to communicate rather than using a legal way" "Explanation still can tolerate" "Usually this clause will invoke by bigger company since they have big client and bigger project with huge amount of loss"

Next the 2nd ranked with the highest mean value is risk sharing (4.32). According to Holland and Knight (2020), claim risk assessment and insurance can help contractors avoid having to spend their own money. Taking insurance, in a similar vein to the panel's response, can help to reduce financial risk. The data acquired reveals that all of the cases are related. Recommendations from an expert council on risk sharing can be seen in Table 6:

Table 6: Perception on Risk Sharing

Variable 2	Question	Answer
Risk Sharing	What is your opinion regarding risk sharing?	"taking insurance for business purpose is a must because we don't know the risk we might face"

The business of partnering and collaboration came in third place. The majority of respondents agree with the mean value of 4.22 because collaborating as in joint ventures



can assist in lowering business risk, pooling information resources, gaining social capital without spending money on marketing, and lowering costs by sharing machineries, warehouse capacity, and materials. Spear (2014) supports up this argument, claiming that there are multiple benefits to managing a collaborative business where risk is shared. However, throughout the interview, the respondent expressed concern that sharing business would lead to greater conflict. The only connections in this study are descriptive data and previous studies, however the expert panel's answer is opposite. The perspective of an expert panel on the business of partnering and collaboration is as stated in Table 7:

Table 7: Partnering and Collaboration Business

	Tueste i i i continer una	and Condicordinal Business		
Variable 3	Question	Answer		
Partnering and Collaboration Business	What is your opinion on joining business with other contractors to helps your company in lowering a business risk?	misunderstand, especially in dividing the project profit		
	Do you agree by collaborating business can help expand your capacities on machineries, warehouse and materials?	"Sharing machineries by giving rent to business partner might be good, this is because it can benefit each other"		

Following that, business termination has a total agreement of 4.05. Because of the severe effects of covid-19, the contractor should consider terminating operations to avoid cost overruns and bankruptcy. In order to avoid bankrupt, small business is suggested to close their operation permanently and restructure their business (Cheng, 2020). However, the expert panel has strongly opposed the opinion since he said that the action would lead to licence blacklist. Terminating machinery, on the other hand, is acceptable because it prevents the need to pay an extra charge. Result shows, descriptive and past research is related with one another while response from interview is different. Here is what an expert panel has to say about it in Table 8:

Table 8: Perception on Termination of Business

Variable 4	Question	Answer
Termination of Business	Do you agree with terminating contract between parties in order to prevent from liquidate damage?	"I don't like the concept of cancelling the contract because the licence would be blacklisted, so we'd rather postpone the project by communicating with the client and having both parties agree to the postponement"



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Do you support the idea of employment termination by mutual agreement can help in preventing conflict?

What do you think on terminating machineries contract?

"permit worker will be given chance to work with other company or any work they like, usually we hold them rather than terminating"

"if the work delay, we will terminate the machineries to avoid the extra charge"

Finally, financial aids rank fifth in the financial mitigation category, with a mean of 3.95 and a standard deviation of 0.525. However, according to Zamani et al. (2021), because of the application's conditions, the majority of contractors who were not eligible did not receive any financial aid. This matches the exploratory data, which said that he received zero government help. This means that the panel application did not match specific criteria, resulting him being rejected in getting aids. In this variable, the expert panel's response matched previous research, despite descriptive analysis indicating otherwise. Recommendations from a financial aid expert panel as per illustrated in Table 9:

Table 9: Perception on Financial Aids

Variable 5	Question	Answer
Financial Aids	Do you get any financial aids from government	"I don't get any aids from government"
	Did your company get any free mass testing to all your workers?	"Large companies normally receive free tests from the government because they employ a large number of people; small businesses, on the other hand, employ a small number of people, thus the test will be paid for independently."
	Do you think help paying for workers salary?	"I don't have any work during Covid-19, therefore I can't tell that the wage of the workers has an impact on me."

CONCLUSION

Micro Enterprise has experience financial issues due to five factors which is implementation of movement control order, fluctuation of construction material price, implementation of standard operating procedure, payment issues and client related factor. This factors has cause contractors struggle in controling their changes in design as it brought greater impacts towards financial implication. Covid-19's cost implication can be categorised as an overrun cost, a lack of project income, a change in scope, exposure to liquidate damage and termination, and design adjustments. As a result, it's important for practiced parties to focus on the most essential factors that influence cashflow so that contractors may understand what's causing it. Financial mitigation, it is vital for



contractors to take corrective measures in their financial management to prevent further damage from the impact. The best practised suggested in this findings is by business partnering and collaboration, business termination, and risk sharing to ensure contractor's preparedness in combating unexpected economic downturn situation. Recommendation for future work: to include other geoghraphical location participation for the interview session to gain a diverse range of opinions from the expert panel. This can aid researchers in collecting stimulating study data.

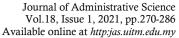
This study contributed to the contractor awareness by exposing the factors that cause financial problems when a pandemic strike. Financial management is important for contractor because it helps improving the profitability of organisations, increase the overall value of the firms and organisation and provide economic stability. Hence, policymakers and construction players will take appropriate measures and mitigation to boost their financial development. By revealing these factors, information about best practice to plan for unexpected future and emergencies can be gained. In terms of industry contribution, the findings of this study will serve as a guideline for construction companies to manage their finances. It also serves to inform construction players about the policy decisions they can make and take as a result of contracts and government. Other than helping in finding a good policy to survive the pandemic, the contribution also helps in informing the financial relief that provides by government.

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