

Crucial conditions of domestic subcontract in Malaysian construction industry

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Abstract: In construction industry, almost every construction project has to deal with construction contract, due to the project complexity and high financial risk. The contracts are developed and published by various associations and professional bodies and are widely used in the construction industry. Contract conditions are intended to specify the duties and rights of the contractual parties and must be properly drafted. Contractual parties under a particular contract must be aware of the details of the contract conditions. In Malaysian construction industry, there are several standard forms of main contracts and nominated subcontracts. However, for domestic subcontract, main contractors prefer to use bespoke contract, which the parties modify the standard contracts by omitting several clauses or adding new clauses; thus, potentially compromise the completeness and accuracy of the contract. Hence, the aim of this study is to examine the crucial conditions in the domestic subcontract commonly approached by main contractor in construction projects. A quantitative research method is adopted and the data have been collected by survey questionnaires. There are a total of 100 valid responses received from the construction industry practitioners in Malaysia. The survey objective is to rank the conditions in domestic subcontract from the most to the less important. As the result, the top 5 of relatively important domestic subcontract conditions, out of 27 conditions, are the terms of payment and final account, extension of time, variation, contractor's and subcontractor's obligations, and performance bond. The results of these surveys will enhance the contractual knowledge of main contractor and domestic subcontractor and improve awareness of crucial conditions that are prerequisite for the development of domestic subcontract.

1 Introduction

In the construction industry, there are several standard forms of contracts for the use of different types of construction project requirements and objectives [1]. The main contract of construction project usually adopted by main contractor from client or consultant.

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The obligations and responsibilities of each party are clearly and fairly stated in the provisions of standard contract form [2]. A successful construction process can be achieved where terms and conditions of duties and risks to be borne by each parties are fairly distributed. Contractor may distribute part of the project work scope to several subcontracts. Due to the complexity and uniqueness of every construction project, main contractor will require a number of skilled crafts comprising various construction fields or different trade classifications. Domestic subcontractor is a party that engaged by main contractor to provide the service of specific scope of work in construction project, and their performance is entirely under the responsibility of the main contractor.

Domestic subcontract is a contract binding between main contractor and subcontractor, which the terms and conditions are appointed directly by main contractor [3]. By subcontracting the main contract of construction, main contractor may tend to distribute the risks and responsibilities that has been agreed to be achieved to the client, to the subcontractor. These terms must all be stated in the domestic subcontract agreement, which establish a contractual relationship between domestic subcontractor and main contractor [4]. Subcontractor's risks are fully depend on the terms and conditions specified in the subcontract agreement. Domestic subcontractor should aware of the potential dispute in the terms of subcontract, such as payment dispute, variation order issue, and terms of performance bond. In Malaysian construction industry, main contractors are usually using bespoke subcontract instead of draft equitable subcontract conditions, and those bespoke subcontracts are tend to protect the main contractor's rights and responsibilities [5].

The bespoke subcontract may exclude several important conditions to minimise the uncertainty that may lead to conflict between both parties. Payment issues is the major dispute in the bespoke subcontract [6]. In the construction dispute reports, it indicate that the construction disputes are commonly caused by poor contract administration, poor comprehension by employers, contractors and subcontractors about their contractual obligations, which lead to improper compliances [7]. In the contractual practice, the first party tends to avoid risks as much as possible by drafting the disclaimer clause in the contract condition to inappropriately allocate the risks to the second party as much as possible. These practice will impose costs to the second party and affecting their performance [8]. Against the drafted domestic subcontract, Construction Industry Development Board (CIDB) issued a standard form of subcontract that corroborate impartiality in risk allocation between contractor and subcontractor and integrate eloquent terms with certainty to avoid undue disputes arising during the contract period [5]. Pursuant to these, it indicate that the risks of each party and disputes between parties can be affected by the way terms and conditions are drafted. Although the terms and conditions in the subcontract can be flexibly drafted by the main contractor to suit a number of unique issues, but contractor may also draft the domestic subcontracts at their discretion.

Therefore, the details of the conditions specified in the domestic subcontract is significant for the subcontractor to consider before entering into the subcontract, particularly for the bespoke contract. Several researches have been conducted focussing on the use of the standard form of domestic subcontract in construction industry [9], and the problems arise from the domestic subcontractor using the bespoke subcontract, also how to minimise the problems using model terms of subcontract in construction industry [10]. However, there is yet a study on the crucial condition or the critical terms in the domestic subcontract. By knowing the crucial condition in domestic subcontract, it may help the domestic subcontractors to enhance their contractual knowledge and improve their awareness of the risks borne by domestic subcontract before they enter into a contract with main contractors. Main contractor can focus on the crucial conditions to draft their domestic subcontract. Hence, this study aim is to examine the crucial condition in the domestic subcontract that commonly used in bespoke contract.

2 Domestic subcontract

2.1 Characteristics of domestic subcontract

Different type of construction project require different type of contract delivery system in accordance with the nature and the complexity of the construction project. Construction contract play a role in binding the obligations and the risks provision of the parties involved, preventing potential disputes, and ensure the goal of the construction project successfully delivered [1]. Drafting a proper construction contract may also reduce the risk of potential dispute due to the ambiguity of contract conditions [11]. There are several characteristics that must be considered in preparing a proper construction contract, which are elaborated in detail in the next subsections.

2.1.1 *Involve several parties*

The first important characteristic of the construction contract is that it must involve at least two parties to enter into agreements, those parties must be in mutual consensual relationship and each party is voluntarily to be bound by the terms and conditions in the agreements. A contract makes an exchange relationship between each party to achieve their essential purpose of the agreement [12].

2.1.2 *Written agreement*

Besides, due to the long duration and complexity of construction projects, contract should be in written agreement instead of oral agreement. A written contract can precisely determine the obligations of the parties involved in the agreement. Each party involved must agree with the terms and conditions elaborated in the contract and record their agreement by signing the contract in order for it to be enforced [13]. Written agreement helps to force each party to comply with the requirements that stated in the contract. It also helps in resolving any major legal disputes that may arise. Written terms will help facilitate the judicial proceeding process so that it runs fairly and equitably [14]. This process will be challenging with oral agreement as each party's recollections regarding the terms and conditions might fade over time and there is a potential dishonesty about the discussions before and during the disputes arise, even those parties have trusted each other [8].

2.1.3 *Unambiguous contract*

A good construction contract must be written concisely, clearly, and in business jargon [15]. The terms and conditions must be easily comprehended by each party involved in the project and also the third party who are not familiar with the construction industry, such as arbitrator. In precisely written contract, the terms and conditions regarding the agreements, obligations, requirements, and risks allocation of each party can be defined clearly and carefully[16]. Ambiguous agreement may lead to different understandings by each party; therefore, they may have different expectation from the contract agreement and further may lead to emergence of disputes between parties.

2.1.4 *Clearly defined scope of work*

Other than that, the descriptions of the work scope must be fully developed and defined as clearly as possible since the dispute from the construction scope of work are commonly emerge in construction industry[15]. Before enter into agreement, the contract terms and conditions must address and consider all the potential dispute that may arise during the project period, and provide solutions if those potential disputes indeed arise [17].

2.1.5 Fairly risks allocation

Besides, one of the construction contract characteristic is the fairness of the risks allocation to the party capable of controlling the risks [18], if the particular risk is positioned to the party who incapable to control the risk, the particular party will impose the risk in an exchange price. This practice are not economical for the particular project. For example, the performance and the market condition risk should be allocated to contractor, and the site and environment condition risk should be allocated to the owner of the project. Other than the right position of risks, the balance of the risks of each party also can be good characteristic in construction contract, if the contract is heavily favouring one side, it will lead to disputes and uneconomic price. Unfair risks allocation will also break down a good contractual relationship between the parties, and they are less likely to solve problems effectively throughout the project[19].

2.1.6 Well considerations

In addition, construction contract should take into consideration all aspect of the insurance program. Each party must be addressed of the limits and coverages of specific insurance, and provide waiver of subrogation [16]. Moreover, the consideration in preparing construction contract must include the clause on the comprehensive resolution of potential disputes, including the choice of the law which subject to arbitration and litigation, and permitting the third party to involve in the disputes between contractor and owner[20].

2.1.7 Consistent condition

Last but not least, all the terms and clauses must be consistent throughout the whole contract, the drafted contract must completely explain the important provisions to the contractor team, ensure the project team have fully understood those provisions and how to preserve their company's rights [16].

2.2 Crucial conditions of domestic subcontract

The duties and responsibilities of the parties signing the contract are bound by the terms specified in the contract as agreed in the early stage. Well-written construction contract specifies full description of the extent of work, timing, quality standards, and price. This involves the composition of contract conditions, which will allow the contract to be administered and future contract disputes can be resolved [21]. General conditions stating the general project rules and relevant commercial terms are usually expressed in a standardised prepared printed contract form, known as standard form. It is developed and published by different professional associations and bodies, and widely used throughout the construction industry[22]. Table 1 clearly specified the most crucial clauses for subcontract gathered from previous research. Based on the intensive analysis of the documents, it can be concluded that the most important clauses in the construction contract are payment provision, liquidated damages, delay, variation order, and termination. These five conditions are extracted from twenty (20) published articles from year 1988 to 2021.

Table 1. Conditions of domestic subcontract

	Khalef et al., (2021)	Ho (2021)	Assaad et al. (2020)	Abdul-Malak et al., (2019)	Youssef et al., (2018)	El-Hoteiby et al. (2017)	Walsb, (2017)	Mervin et al. (2014)	Nee et al. (2014)	Ya-zhuo & Fan (2011)	Soewendo, (2011)	Nystén-Haarala et al., (2010)	Chui & Bai (2010)	Podvezko et al. (2010)	Yik et al. (2006)	Fisher et al. (2005)	Zaghoul & Hartman (2003)	Hartman & Snelgrove (1996)	Uher (1991)	Ibbs (1988)	TOTAL
Payment provisions		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12
Liquidated damages	1				1	1	1	1	1	1	1	1			1	1	1	1	1	1	12
Delay	1	1			1	1	1	1	1	1	1					1	1				10
Variation order					1	1		1		1								1	1	1	7
Termination			1		1	1		1			1			1		1					7
Dispute settlement				1						1	1				1	1		1			6
Indemnification	1					1	1					1				1	1				6
Claims and disputes			1	1	1											1					4
Entitlements to extra time				1		1					1					1					4
Site conditions	1						1	1								1					4
Change orders			1					1										1		1	4
Rights and obligations		1											1	1							3
Scope of work															1			1		1	3
Cost						1							1	1							3
Insurance						1								1		1					3
Suspension of work			1		1									1							3
Project delivery systems and contractors' design responsibilities						1										1				1	3
Contract sum										1		1								1	3
Warranty								1				1		1							3
Quality													1								2
Review and inspection of the work																		1		1	2
Performance Bond						1		1													2
Time limit of project						1				1											2
Subcontracting						1								1							2
Delay drawings or instructions					1	1															2
Arbitration				1		1															2
Sufficiency of Contract documents	1																1				2
Completion dates and progress of work																			1		1
Defect								1													1
Process													1								1
Administration													1								1
Security deposits and retentions																			1		1
Flow Down							1									1					2
Unforeseeable physical conditions					1																1
Employer taking order					1																1
Mediation							1														1
Design Liability							1														1
Uncertainty of Work conditions																	1				1
Force majeure						1															1
Disruptions and interferences in the subcontractor's execution of work		1																			1
Performance of subcontractor's work		1																			1

3 Methodology

The validity of the research topic and the accuracy of the analysed result are based on the research methodology. It is important to use accurate and efficient method to conduct the research in order to collect reliable data from target source. In order to obtain more accurate primary data for this study, quantitative method is used as it is more suitable to adopt an adequate number of samples. In this study, questionnaire is adopted as the research instrument, which requires Statistical Package for the Social Sciences (SPSS) to analyse piles of data. Descriptive statistic is adopted to calculate the mean of the variables and to acquire the ranking and central tendency of the variables from Likert scale questions. The scale is set to five general measures, from '1' as the lowest rate level to '5' as the highest rate level. The ranking of the variables is in the overall ranking instead of ranking in the different categories of respondents. This analysis is used to rank the factors based on the mean ranking. Sample population is selected based on Krejcie and Morgan [23]. The size of samples and respondents' details have been retrieved from the Real Estate & Housing Developers' Association (REHDA), Board of Quantity Surveyors Malaysia (BQSM), and CIDB website. Total number of main contractors, subcontractors, consultants and developers are more than 100000. Krejcie & Morgan (1970) recommended the size of sample for this study is 384 samples. The total sample size of this study is 400 respondents, consisting of top management, directors, chief information officers, and individuals involved in domestic subcontract. The questionnaires were distributed via emails and submitted in person. Hundred (100) responses of valid questionnaire were received. 46% of respondents are main contractors, 28% are subcontractors, 19% are consultants, and 7% are developers. The response rate is considered satisfactory since assessing managers are usually difficult due to lack of their availability and accessibility [24]

4 Research finding

The Cronbach's alpha value has been calculated, and the result is 0.895, which classified as 'good' reliability, while the Cronbach's Alpha Values are in the range of 0.80-0.89. These results indicate that the data collected from various respondents are internally consistent, and the response scale is consistent to each sample.

Table 2. Descriptive statistic of domestic subcontract condition.

Conditions of Domestic Subcontract	Mean	Rank
Payment and Final Account	4.70	1
Extension of Time (EOT)	4.63	2
Variations	4.51	3
Contractor's and Subcontractor's Obligation	4.48	4
Performance Bond	4.43	5
Injury to Persons or Property and Indemnity to Contractor	4.38	6
Date of Commencement & Completion	4.32	7
Architect Instructions and Compliance	4.28	8
Mediation & Arbitration	4.28	8
Damages for Non-Completion	4.24	9
Testing and Inspection on Materials, Goods, and Workmanship	4.23	10
Loss and Expenses	4.20	11

Conditions of Domestic Subcontract	Mean	Rank
Determination by Contractor and Subcontractor	4.19	12
Governing Law	4.18	13
Duty of Subcontractor to Insure	4.16	14
Practical Completion and Defect Liability Period	4.15	15
Quality	4.14	16
Subcontract Sum	4.13	17
Subcontract and other Document	4.12	18
Service of Notices of Document under Subcontract and Construction Industry Payment and Adjudication Act (CIPAA)	4.10	19
Material or Goods not to be Removed	4.04	20
Assignment or Subcontracting	4.01	21
Statutory Obligations, Notices, Fees, Levies, and Charges	3.94	22
Waiver	3.86	23
Royalties and Intellectual Property Rights	3.84	24
Access for Subcontract Works and General Attendance	3.80	25
Site Agent	3.78	26

Table 2 shows the ranking of each condition, the most important condition in the domestic subcontract is the ‘payment and final account’, which ranked as the first place with the mean of 4.70. Almost all respondents ranked payment condition as the most important, it may be because all parties in the construction tend to maximise their profits. Payment condition is a sensitive condition that must be included in the domestic subcontract. Payment and final account conditions provide clear guide regarding payment arrangement procedures in order to avoid unnecessary dispute regarding the issue [25]. Without payment or cash flow, the entire subcontract work of construction project could not proceed smoothly. Therefore, it may be the reason for the majority of respondents ranked it as very important. Similar result shown in Table 1, which clearly stated that payment provisions is considered as the most important clause according to 12 out of 20 published articles.

Second important condition ranked by the respondents is the ‘extension of time (EOT)’ with the mean of 4.63. Time management is one of the most important factors that contribute to the success of construction projects [26]. Extension of time usually occur in the construction project, and if EOT is caused by the builder, liquefied damage will be imposed to them. The amount of liquefied damage is extremely burdensome to the builder, and the contractor or employer may suffer losses from the EOT[27]. Most of the respondents may think by involving well defined EOT clause in the domestic subcontract can clearly define the obligations of each party regarding the EOT issues. Disregard EOT clause in the subcontract will arise dispute when there is delay in project progress due to any defects. Therefore EOT condition is very important to respondents.

‘Variation’ on the domestic subcontract work has been ranked as third place by the respondents with the mean of 4.51. Variations works are commonly occur in construction project. There is a possibility that subcontractor may claim unreasonable price for variation or contractor refuse to pay for extra works to subcontractor if variation clause are not included in the subcontract [28]. Thus, this variation condition has been ranked as very important by the respondents.

The fourth important condition is ‘contractor and subcontractor’s obligations’ with the mean of 4.48. The obligation of each party specified in the subcontract can ensure that each contractual party have complied with their scope of work, in order to proceed with the project smoothly [29]. This condition is ranked as very important as it is to clarify what they should do and what they should not do under the particular domestic subcontract, or to prevent the other party disregard their scope of work.

The condition of ‘performance bond’ in domestic subcontract has been ranked as fifth place with the mean of 4.43. The performance of the construction works may partly maintained by the performance bond, contractor may forfeit the performance bond when project suffers any defects or failures caused by subcontractor. Domestic subcontractor may want to ensure the time to return performance bond by contractor stated in the subcontract. Therefore, it may be the reason for the respondent ranked it as important.

Lastly, in the lowest rank of the condition of domestic subcontract is the ‘site (26th) agent’ with the mean of 3.78. The condition of site agent positioned at the lowest rank may be due to this condition more concern about the duty of third party rather than the contractual parties themselves. The respondents may reckon that duty of third party shall bind with another contract but not under the subcontract. Although site agent is raked at the lowest place of all the domestic subcontract conditions, yet it is still considered as significant by the respondents.

5 Conclusion

Twenty seven (27) conditions have been summarised from the literature review and those conditions are then structured in the questionnaire survey using Likert scale for target respondent to grade the level of importance of the domestic subcontract conditions. The results from one hundred (100) responses suggest that the top 3 of most important conditions are ‘payment and final account (rank 1)’, ‘extension of time (EOT) (rank 2)’ and ‘variation (rank 3)’. The findings present the significant conditions in domestic subcontract and these survey results will enhance the contractual knowledge of domestic subcontractor, which is important before entering into contractual relationship with the main contractor. Subcontractor must be fully aware of the risk in the construction that they must bear before accepting subcontract work and signing contract with main contractor[1]. The predictable risk can be presented in the subcontract conditions, while the main risk can be reallocated by drafting the subcontract conditions in various way. Therefore, this study contributes a better understanding that assist parties of domestic subcontract to ensure the awarded contract is written clearly and define their scope of works in all significant conditions. The identification of domestic subcontract crucial conditions provides an idea of the most important clauses to the industry in complete contract, which free from gaps and unambiguous clauses [30]. With all contractual parties are well aware on the risk allocated by various conditions, the project contract may minimise the risk of dispute under the contract [31].

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