

PROOF OF DOCUMENTATION IN CLAIMING EXTENSION OF TIME

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PROOF OF DOCUMENTATION IN CLAIMING EXTENSION OF TIME

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## DEDICATION

*To my beloved parents, supervisor and friends*

*Thanks for supporting, understanding, guiding and encouragement.*

*I extend my deepest appreciation to each of the above.*

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Thank you very much.

## ABSTRACT

Construction projects have become increasingly complex and are subject to various risks, thus delays or disruptions to project programmes become an unavoidable issue. In Malaysian Standard Forms of Contract, the lists of relevant events are provided to allow the contractor to claim for extension of time. The contractors carry a burden of proof to establish with credible evidence in order to prove his entitlement to the claims. However, a lack of knowledge amongst the contractors is the main reason of failure to prepare detailed supporting information and poor quality of documentations. It renders the extension of time claims becoming fatal. Therefore, this study aims to establish an extension of time claim checklist for relevant events identified, such as *Force Majeure*, exceptionally inclement weather condition, late instructions from architect, and delay by employer in giving site possession. These four relevant events have been selected because they are stated in the major standard form of contract in Malaysia. A total of nine previous court cases were analysed in order to investigate on the requirements highlighted in the judgement of the court in the context of extension of time claims. This is later followed with the analysis of real life projects, in order to find out what are the supporting documents submitted by the contractors in claiming extension of time under the identified events within Johor Bahru. A further comparative analysis and content analysis have been carried out to determine whether the supporting documents by contractors are in adherence to those required by the court in establishing an extension of time checklist for the relevant events chosen. As a result, there are a total of four requirements highlighted by the court case under *Force Majeure* and exceptionally inclement weather respectively, six requirements under late instructions from architect and two requirements under delay by employer in giving site possession. These requirements have been the salient points enunciated in the checklist which may act as a reference point by the contractors in submitting their extension of time claims for the relevant events identified.

## ABSTRAK

Projek-projek pembinaan menjadi semakin kompleks dan terdedah kepada risiko yang mengakibatkan kelewatan atau gangguan dalam perjalanan projek. Dalam “Malaysian Standard Forms of Contract”, senarai penyebab-penyebab yang berkaitan telah disediakan bagi membantu kontraktor menuntut lanjutan masa. Kontraktor bertanggungjawab untuk mengemukakan bukti yang kukuh bagi menuntut lanjutan masa. Walau bagaimanapun, kekurangan pengetahuan di kalangan kontraktor menjadi faktor utama kegagalan menyediakan maklumat sokongan yang terperinci dan kelemahan kualiti dokumentasi. Ia menyebabkan tuntutan lanjutan masa menjadi rumit. Oleh itu, kajian ini dilaksanakan untuk menghasilkan senarai semak bagi tuntutan lanjutan masa berdasarkan penyebab berkaitan seperti *Force Majeure*, cuaca buruk, arahan lewat daripada arkitek, dan kelewatan majikan dalam memberi pemilikan tapak. Keempat kejadian berkenaan dipilih kerana ia disebut berulang kali dalam pelbagai Kontrak Malaysia. Sebanyak sembilan kes mahkamah sebelum ini dianalisis untuk menyiasat keperluan dari penghakiman mahkamah dalam konteks tuntutan lanjutan masa. Berdasarkan analisis daripada projek sebenar, dokumen sokongan yang dikemukakan oleh kontraktor di bawah setiap kejadian berkaitan dalam kawasan Johor Bahru telah dapat dikenalpasti. Tambahan lagi, analisis perbandingan dan analisis kandungan dijalankan untuk mengkaji sama ada dokumen sokongan oleh kontraktor mematuhi syarat yang dikehendaki oleh mahkamah dalam usaha untuk mewujudkan senarai semak. Hasilnya, terdapat sejumlah empat syarat dengan kes mahkamah di bawah *Force Majeure* dan cuaca sangat buruk, enam syarat di bawah arahan lewat daripada arkitek dan dua syarat di bawah kelewatan oleh majikan dalam memberi pemilikan tapak, kontraktor terikat untuk memenuhi syarat-syarat itu di dalam tuntutan mereka, dan contoh-contoh dokumen-dokumen sokongan yang telah ditunjukkan ialah bagi menunjukkan kepada kontraktor bahawa mereka perlu membuat pengujahan mereka selaras dengan sampel yang diberikan.

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**LIST OF ABBREVIATIONS**

<b>ABBREVIATION</b>	<b>FULL NAME</b>
CIDB	Construction Industry Development Board
CIOB	Chartered Institute of Building
CPM	Critical Path Method
EOT	Extension of Time
FCJ	Federal Court of Justice
JCT	Joint Contracts Tribunal
PAM	Pertubuhan Artitek Malaysia
PWD	Public Work Department
QS	Quantity Surveyor
RFI	Request for Information
RMK	Malaysian Plan
SO	Superintending Officer
STP	Sewerage Treatment Plant
TNB	Tenaga Nasional Berhad
UTM	Universiti Teknologi Malaysia

# CHAPTER 1

## INTRODUCTION



## CHAPTER 1

### INTRODUCTION

#### 1.1 Background of the Study

Construction projects have become more and more complicated. They are subjected to various risks and uncertainties, such as inclement weather conditions, soil conditions, the availability of resources and requirements by the employer, thus delays or disruptions to project programmes become an unavoidable issue. An employer thus imposes liquidated damages for contractor's failure to achieve the agreed completion date as a result of delaying circumstances<sup>1</sup>.

The delaying circumstances can be classified into two major kinds which are excusable events and non-excusable events. An excusable event is the event that beyond contractor's control and it is excused under the contract from meeting an agreed completion date, for which the contractor is therefore entitled to receive an extension of time<sup>2</sup>. Generally, the excusable events include variation orders, design problems and imposition of site restrictions. On the other hand, the non-excusable

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<sup>1</sup> Haidar, A. and Barnes, P. (2011). *Delay and Disruption Claims in Construction*. (pp. 1-107). London: ICE Publishing.

<sup>2</sup> *Ibid*

event is caused by contractor's actions or inactions. In these events, the contractor is most properly facing loss of entitlement to the extension of time. The non-excusable events, for example the contractor failed to complete work within the stipulated completion period, poor work coordination and lack of manpower or machineries<sup>3</sup>.

A contractor normally has an obligation to complete a project before or by a certain completion. If an employer prevents a contractor from executing his performance by the limited completion date, the contractor is no longer obliged to complete the works within the stipulated date. Nevertheless, contractor has to complete the construction works within a reasonable and fair time. Normally, this rule is called as the "prevention principle".<sup>4</sup> With reference to the case of *Perini Pacific Ltd v Great Vancouver Sewerage and Drainage District*<sup>5</sup>, if the performance of a party was rendered impossible to be performed by the wrongful act of another party, it caused a contracting party was released from continual performance of a contract.

According to a case in the Court of Appeal of *Dodd v Churton*<sup>6</sup>, the plaintiff who was a builder agreed to properly construct and complete the whole of building works by 1<sup>st</sup> June 1892. During the construction process, the defendant instructed additional work which necessarily involved a delay equal to 2 weeks from the agreed completion date. Nevertheless, the works were not completed by the builder in a respect of a delay of 25 weeks. The defendant claimed for liquidated damages against the builder. The court held that since there was lack of provision of extension of time in the contract, the defendant was not empowered to demand liquidated damages from the plaintiff. In this case, the defendant's prevention acts could set the overall completion period of a project at large.

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<sup>3</sup> Hackett, J. (2000). *Construction Claims: Current Practice and Case Management*. (pp. 27-43). London: LLP Professional Publishing.

<sup>4</sup> Davenport, P. and Durham, H. (2013). *Construction Claims*. Third Edition. (pp. 110-164). Australia: The Federation Press.

<sup>5</sup> [1967] S.C.R. 189

<sup>6</sup> [1897] 1 QB 562

Consequently, most of the construction contracts specify the extension of time provisions in respect of acts of prevention by the employer in order to avoid the impact of the prevention principle. The provision of extension of time clause in the contract is actually to be more benefit for the employer than the contractor. It is because it preserves the entitlement of an employer to demand liquidated damages if the contractor fails to meet the completion date due to acts of prevention by employer<sup>7</sup>.

With reference to Pertubuhan Artitek Malaysia (PAM) standard form of building contract 2006 or PAM 2006 which was officially launched on 05 April 2007, the extension of time provision is based on Clause 23.0. Under Clause 23.0 of PAM 2006<sup>8</sup>, the obligation of the contractor was stated and it contained the list of relevant events which allowed the contractor to claim for extension of time. In addition, Public Work Department 203A (Rev. 1/2010) or PWD 203A discussed the provision of delay and extension of time under Clause 43.0<sup>9</sup>. While the delay and extension of time clause can be read from Clause 24 of Construction Industry Development Board Act 2000 or CIDB 2000<sup>10</sup>.

Although the extension of time has been legally governed, it is not generally relevant to every particular contract term which could help to reduce the number of disputes. For example, in determining an extension of time for a delayed event, the architect is responsible to assess whether the causes of delay enable the contractor to claim extension of time under the contract and whether the contractor has used his best endeavor to prevent and reduce the consequences of the delay<sup>11</sup>.

Whilst all are important to be discussed, it is mostly the information concerning project progress and change control that are likely to be in issue. Chartered Institute of

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<sup>7</sup> Abbott, N. and Biggers, C. (2015). *Time and Construction Contracts: Extensions of Time and the Prevention Principle*. (pp. 1-8). United States: Navigant Consulting, Inc.

<sup>8</sup> Clause 23.0, PAM 2006

<sup>9</sup> Clause 43.0, PWD 203A

<sup>10</sup> Clause 24.2(a), CIDB 2000

<sup>11</sup> *Ibid.*

Building (CIOB) identifies that the records of the project progress will be used to identify the activities from the beginning of the project until the completion, and used to identify the productivity actually achieved. Besides that, it also can be used for reviewing the timing of the lost productivity as a result of disruption. In simple words, the records of the project progress are essence of effective time management<sup>12</sup>.

## 1.2 Problem Statement

Time is one the most important factor of ascertaining whether the construction project is successful or fail<sup>13</sup>. In construction contract, time is referred to either the specified date or a construction completion period. It is important to all contracting parties to agree to a specified completion date for the project. Nevertheless, the mandatory of the contracting parties to perform within the contractual completion date gives rise to one of the fundamental risks of any building project, which is claiming for extension of time<sup>14</sup>.

According to Federal Highway Administration's Report, there was almost one claim in five had a scheduled related problem as a root cause and half of the scheduled related claims were resulted by poor schedule controlling<sup>15</sup>. In Malaysia, local practice in the process of claiming and assessing the extension of time is immature due to lack of knowledge<sup>16</sup>.

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<sup>12</sup> Bechtel National Inc (1990) NASABCA no 1186-7, 90 BCA (Board of Contracts Appeals Decisions) para 13, 558.

<sup>13</sup> C.K. Oon (2002). *Standard Construction Contracts in Malaysia- Issues and Challenges*. (pp. 1-17)

<sup>14</sup> *Ibid*.

<sup>15</sup> Federal Highway Administration Report (FHWA) *Comparative Analysis of Time and Schedule Performance on Highway Construction Projects Involving Contract Claim*. (pp.23-24).

<sup>16</sup> Y. K., Lew, Hassim, S., Muniandy, R. & M. L., Tan (2012). *The Assessment of Applications for Extension of Time Claims in Malaysian Construction Industry*. Volume 4. (pp. 1-5).

The procedure of claiming and assessing the extension of time actually had been discussed in an English case of *London Borough of Merton v Stanley Hugh Leach Ltd*<sup>17</sup>. The case was summarised as follows:

- (i) The architect owed a duty to estimate the delay and grant a reasonable extension of time when he was of his own opinion that the work progress was most likely to be delayed over the agreed completion date.
- (ii) A failure to serve a notice of delay by the contractor to the architect or provide the information about the cause of delay was a factor that the architect could consider in granting the extended time.

As concluded by the case of *London Borough of Merton v Stanley Hugh Leach Lt*, for examples, according to Clause 23.1(a) of PAM 2006, it is stated that *the contractor shall provide written notice of delay to the architect in order to claim EOT together with an initial calculate of the EOT he may require supported with all particulars of the cause of delay*<sup>18</sup>... and Clause 23.3 of PAM 2006 stated that *if the architect is of his opinion that the particulars submitted by the Contractor are not enough to enable him to decide on the application for EOT*<sup>19</sup>...

With reference to Clause 43.1 of PWD 203A, *the contractor shall give a written notice of delay to the SO promptly as to the causes of delay and relevant information with supporting documents*<sup>20</sup>...

In addition, according to Clause 24.2(a) of CIDB 2000, *...that within 30 days of the occurrence of relevant events, the Contractor shall provide the appropriate*

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<sup>17</sup> [1985] 32 BLR 51

<sup>18</sup> Clause 23.1(a), PAM 2006

<sup>19</sup> Clause 23.3, PAM 2006

<sup>20</sup> Clause 43.1, PWD 203A

*Contract references to such event of delay; the estimated length of the delay and of the extension of time required and the details of the effect of the event of delay on the programme of work*<sup>21</sup>.

The wording of the contract determined whether the non-submission of proper notice of delays and supporting documents or details could influence a contractor or sub-contractor losing their right to claim for extension of time<sup>22</sup>. If the contract stated that the submission of a notice and supported with all particulars was a condition precedent to claim extension of time, therefore, a lack of information would be fatal.

In the case of *Opat Decorating Service (Aiist) Pty Ltd v Hansen Yuncken (SA) Pty Ltd*<sup>23</sup>, a subcontractor claimed additional time for completing his works under the subcontract due to the delay arose. With reference to the provision of relevant clause that requested the subcontractor to submit the notice in writing and statement of the facts which he wished to claim within 14 days after the event of delay arose. The court stated that it was a mandatory provision that the subcontractor to submit the notice together with the full particulars in written forms not later than 14 days after the date of occurrence of the events. Therefore, the subcontractor had failed to comply with the provision, the court held that this was fatal to the claim.

In another case of *City Inn Ltd v Shepherd Construction Ltd*<sup>24</sup>, the contractor argued that he was permitted to an extended time for 11 weeks from 25<sup>th</sup> January 1999 to 14<sup>th</sup> April 1999 due to the late instructions from architect. However, the employer argued that there was no extension of time should be given and the liquidated damages should be payable since the contractor had failed to comply to submit the notices and particulars within the stipulated time. The court concluded that the architect's decision on granting the days of extension of time must be referred to the evidence that was

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<sup>21</sup> Clause 24.2(a), CIDB 2000

<sup>22</sup> Harbans, S. (2007). *Demystifying Direct Loss and/or Expense Claims*. Volume 4. (pp. 1-18). Malaysia: Malaysian Law Journal Articles.

<sup>23</sup> [1994] 11 BCL 360

<sup>24</sup> [2002] SLT 781



available and the evidence must be reasonable. As a result, a valid claim must be supported by the comprehensive records and particulars in order to prove the entitlement of time.

Moreover, it was generally summarised that the contractors had to prove the delays events were at the risk of the employer in order to recover their rights to extension of time. Besides that, the contractor also proved the delay events affected the project completion date with the basis for providing the critical path method of scheduling.<sup>25</sup>

In another example in the case of *Royal Brompton Hospital NHS Trust v Frederick Alexander Hammond & Ors*<sup>26</sup>, it is stated that in ascertaining a fair and reasonable extension of time as a cause of delay, the architect should carry out the investigation of the critical path of the contractor's activities in order to recognise whether the relevant event affected or was possibly to affect the date of completion. The schedules were important part of proving the delay because they provided a detailed information for comparing and measuring the time.

However, the contractor always failed to prove their entitlements to the extension of time because there was lack of evidence to demonstrate the causes or effects of the problems.<sup>27</sup> For examples, the case of *Lucerne Construction Corporation*<sup>28</sup> held that the contractor should record delay-causing events that may have an impact on the contract work. On a project for the Veterans Administration, the court held that the Lucerne Construction Corporation did not present evidence as to the actual weather at the site and its effect towards the work, therefore, the contractor's entitlement for delay and disruption claims was denied.

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<sup>25</sup> Issaka, N., Nuhu, B., & Rod, G. (2008). *Delay Analysis within Construction Contracting Organisations*. (pp. 1-46). University of Wolverhampton: School of Engineering and Built Environment.

<sup>26</sup> [2002] 88 Con LR 1

<sup>27</sup> Powell-Smith, V. & Sims, J. (1989). *Building Contract Claims*. Chapter 8. (pp. 191-225). London: BSP Professional Books.

<sup>28</sup> [1982] 82-2 BCA 16.101

Most of the projects in Malaysia, the contractor also failed to prepare detailed information and records, especially a proper programme of works<sup>29</sup>. The poor project information management decreases the opportunity of obtaining an extension of time claim of being approved by the architect or superintending officer and increases the likelihood of a disputes.

It was very clear that the contractor's claims for extension of time under the standard form of building contract was under the legal and burden of proof. As a result, it was important that all contractors prepared a detailed and accurate work programme record with proper connections of the activities and easily identifiable critical activities in order to prove the cause and effect of the relevant events<sup>30</sup>. For example, an exceptionally adverse weather claim's case of *Walter Lawrence v Commercial Union Properties*<sup>31</sup>, an exceptionally inclement weather conditions allowed the contractor for claiming extension of time. The contractor had to prove that the number of rainy days encountered exceed the number of rainy days recorded in the meteorological averages. In addition to that, the contractor was also requested to prove that the nature of the construction operations directly affected by these exceptional rainfall condition.

Table 1.1 below shows the mean values of the reasons for delays in submitting the details of the claims for extension of time, and these reasons were ranked in accordance with the highest mean value to the lowest mean value. From the table, it showed that lack of experience and knowledge amongst the staff in contract procedures and tasks was rated as the main reason for delay in submitting the details of extension of time claims. The following reasons ranked at second and third place are if the claim is regarding to inclement weather and contract administrator request additional details. Whereas, the reason of contractor would like to maintain good relationship with the employer was at the last place.

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<sup>29</sup> Entrusty Group. (2006). *Is The Contractor Still Entitled To Extension Of Time When There Is Concurrent Delay?* Third Quarter. (pp. 101-103). Master Builders Journal.

<sup>30</sup> Najib E.S., Mahathir V.A., & Razif I. (2014). *Legal Advances on Evaluation of Contractor's Right to Extension of Time*. Volume 1(3). (pp. 50-57). International Journal of Law and Legal Studies.

<sup>31</sup> [1984] 4 ConLR 37

**Table 1.1: Reasons for Delays in Submitting the Details of Claims for Extension of Time**

No	Reasons of delays	Mean Score	Malaysia's Rank
1	Lack of experience and knowledge amongst the staff in contract procedures and tasks. They need more time to understand claim situation.	3.31	1
2	Weather-related claim	3.25	2
3	Contract Administrator requests additional details	3.19	3
4	Poor information management and control by contractor	3.17	4
5	Policy to submit global claims	3.14	5
6	Poor project management by the contractor	3.06	6
7	Failure to determine the actual delay until end of delay or construction	3.03	7
8	General lack of details	3.00	8
9	The unforeseeable events would cause a delay	2.67	9
10	Lack of staff to deal with EOT claims	2.58	10
11	Contractor would like to maintain good relationship with the employer	2.50	11

Adapted from “The Assessment of Applications for Extension of Time Claims in Malaysian Construction Industry,” by Y.K. Lew, Hassim S., Muniandy R., & M.L. Tan (2012). Volume 4. (pp. 1-5).<sup>32</sup>

### 1.3 Objective of The Study

1. To establish an extension of time claim's checklist for relevant events identified.

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<sup>32</sup> *Ibid*, n16

#### 1.4 Scope of The Study

Relevant events identified as per stated in the objective are *Force Majeure*, exceptionally inclement weather condition, late architect or SO's instructions and delay by employer in giving site possession.

This study focuses on the application of extension of time claim by the contractors under the Malaysian standard form of building contract which are PAM 2006, PWD 203A and CIDB 2000. There are some references made to other standard form of building contract, especially PAM 1998 and JCT 2011.

It is important to note that the relevant events, which are *Force Majeure*, exceptionally inclement weather condition, late architect or SO's instructions and delay by employer in giving site possession will be studied. With reference to Malaysian Standard Form of Building Contract ("Contracts"), such as PWD 203A, PAM 2006 and CIDB 2000, these four relevant events have common characteristic in the sense that they are stated in these Contracts whilst other relevant events are not. For example, the relevant event of delaying on the part of nominated sub-contractor or supplier was only mentioned in PWD 203 and PAM 2006, instead of CIDB 2000.

In addition, both the primary data and secondary data of this research referred to the court cases, include Malaysia, Singapore, Hong Kong, Australia, United States and English cases. The relevant court cases are all available in the database of *Lexis Nexis* website through the search engine in all the times.

The documentary analysis for this study relate to the analysis on the supporting documents submitted by contractors in claiming their extension of time under the relevant events, such as *Force Majeure*, exceptionally inclement weather condition, late architect or SO's instructions and delay by employer in giving site possession were

to be obtained from the contractors whose construction projects are within the district of Johor Bahru. The construction projects must also adopt Malaysian standard form of building contract, such as PAM 2006, PWD 203A and CIDB 2000.

### **1.5 Significance of The Study**

The significance of the study is to identify the supporting documents that are required to be submitted by contractors in order to succeed in their extension of time claims. The study is a reference to increase the knowledge of the contractors in relation to the extension of time claims. It provides a guideline for the contractors on preparing the required information and details to be submitted under specified relevant event.

Besides, this study is important to the quantity surveyor who is a person making assessment whether an extension of time may be granted or not. The quantity surveyor can easily assess on whether the contractors have submitted their extension of time claims in accordance to the checklist which is the final aim of this study. For examples, according to the case of *Walter Lawrence & Son Ltd v Commercial Union Properties (UK) Ltd*<sup>33</sup>, it stated the contractors had exhibit the records of both temperature and rainfall from Meteorological Weather Centre in their extension of time claims. Therefore, if the contractor failed to submit the said records, the quantity surveyor would conclude that the contractor's supporting document was insufficient, either the quantity surveyor could further request the information from the contractors, or the days of granted was being reduced, or eliminate the contractor's entitlement from claiming extension of time.

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<sup>33</sup> [1984] 4 ConLR 37

Lastly, this study helps to interpret the wordings of “*particulars, relevant information with supporting documents, and appropriate Contract references*” in Malaysian standard form of building contract, as follows:

Clause 23.1(b) of PAM 2006<sup>34</sup> stated that,

“... *the Contractor shall send to the Architect his final claim for extension of time duly supported with **all particulars** to enable the Architect to assess any extension of time to be granted ...*”

Clause 43.1 of PWD 203A<sup>35</sup> stated that,

“... *the Contractor shall forthwith give written notice to the S.O as to the causes of delay and **relevant information with supporting documents** ...*”

Clause 24.2(a) of CIDB 2000<sup>36</sup> stated that,

“... *Contractor shall also provide the **appropriate Contract references** to such event of delay, the estimated length of the delay and of the extension of time required and details of the effect of the event of delay on the works programme ...*”

It helps to mitigate ambiguous terms in the contract as the checklist would be able to help clarify to the contractor what are the nature of documents for extension of time claim submission. For example, the contractor may argue that the employer deduct his liquidated damages even if the contractor had provided prompt notice with supporting documents, nonetheless if contractor had actually failed to submit in

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<sup>34</sup> Clause 23.1(b), PAM 2006

<sup>35</sup> Clause 43.1, PWD 203A

<sup>36</sup> Clause 24.2, CIDB 2000

accordance to the checklist by this study, then the contractor should know that he is not entitled to the extension of time claim, since he had failed to fulfil some of the requirements or tasks required.

## **1.6 Research Methodology**

A systematic research methodology need to be carried out in order to ensure the data collected and analysis of data is in accordance with the research objectives. The research process is classified into 5 major stages, includes the identification issues and problem statements, writing up literature review, data collection, analysis of data and conclusion and recommendation.

### **1.6.1 Stage 1 – Identification Issues and Problem Statements**

The study was initiated by searching for issues related to the construction industry through various supplements such as journals, articles and relevant court decisions. Once the particular issue had been identified, the problem statement was further discussed and analysed. Then, the research objectives were formed and followed by the scope and significance of the study.

### 1.6.2 Stage 2– Literature Review

The second stage of this study was literature review whereby a conceptual framework was developed. The researcher needed a lot of reading and reviewing on the literature relevant to extension of time claims in order to grasp ideas from the previous research. The reading and reviewing materials include journals, theses, articles, books, sources from website, and various standard forms of contract. It is crucial to ensure that the information gained during the literature survey is accurate and valid.

### 1.6.3 Stage 3 – Data Collection

The third stage of research methodology discussed the technique used to collect the primary data and secondary data. It was to ensure the information obtained was relevant to the research objective as stated.

Primary data collection will be carried out through documentary study method as it provides real information required to understand the issues under the study. The documentary study method became useful where the researcher required to understand some particular problem or situation in great depth<sup>37</sup>. The documentary study method utilised to get all the related extension of time claims' supporting documentations and records from the main contractors or subcontractors whose projects are within district of Johor Bahru. The data must be specified under the scope of relevant events, such as *Force Majeure*, exceptionally inclement weather condition, late architect or SO's instructions and delay by employer in giving site possession in order to achieve the objective.

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<sup>37</sup> Piperopoulos, P. (2010). *Qualitative Research in SMEs and Entrepreneurship: A Literature Review of Case Study Research*. (pp. 1-19).



The secondary data related to extension of time in terms of interpretation of wordings and pre-requirement will be collected from previous court cases via different resources, for instances, English Law Reports, Malayan Law Journals, Singaporean Law Report and so on through UTM library electronic database, namely *Lexis Nexis* Legal Database.

#### **1.6.4 Stage 4 – Research Analysis**

After the data was collected, the process of analysing data was to convert the data collected into the useful information.

In order to achieve the objective in the study, the collected data from court cases have been closely examined to find out the relevant and suitable court cases. Thereafter, the court case analysis have been conducted to study the supporting documents or the contents of the documents requested by the previous court cases in claiming the extension of time. It is important to find out the requirements from the judgement of the court cases because the results from court cases will be used as basis for comparative analysis later.

The following steps is the documentary analysis. The documentary analysis has been conducted to find out the supporting documents submitted by the every contractor under each relevant event, such as *Force Majeure*, exceptionally inclement weather condition, late architect or SO's instructions and delay by employer in giving site possession.

Thereafter, the results from the documentary analysis have been compared to the results from the court cases in order to investigate whether the contractors aware

of what are the supporting documents to be submitted in order to succeed in their extension of time under each different relevant event in accordance with the requirements of the court cases.

The content analysis was conducted in order to further study the contents of supporting documents which submitted by contractors. The purpose of content analysis was to develop a checklist for preparation of required documents by contractors in their future extension of time claims. The criteria of choosing the results from documentary analysis for further investigation was based on the supporting documents that submitted by contractors which had successfully fulfilled the requirements of court cases.

### **1.6.5 Stage 5 – Conclusion and Recommendation**

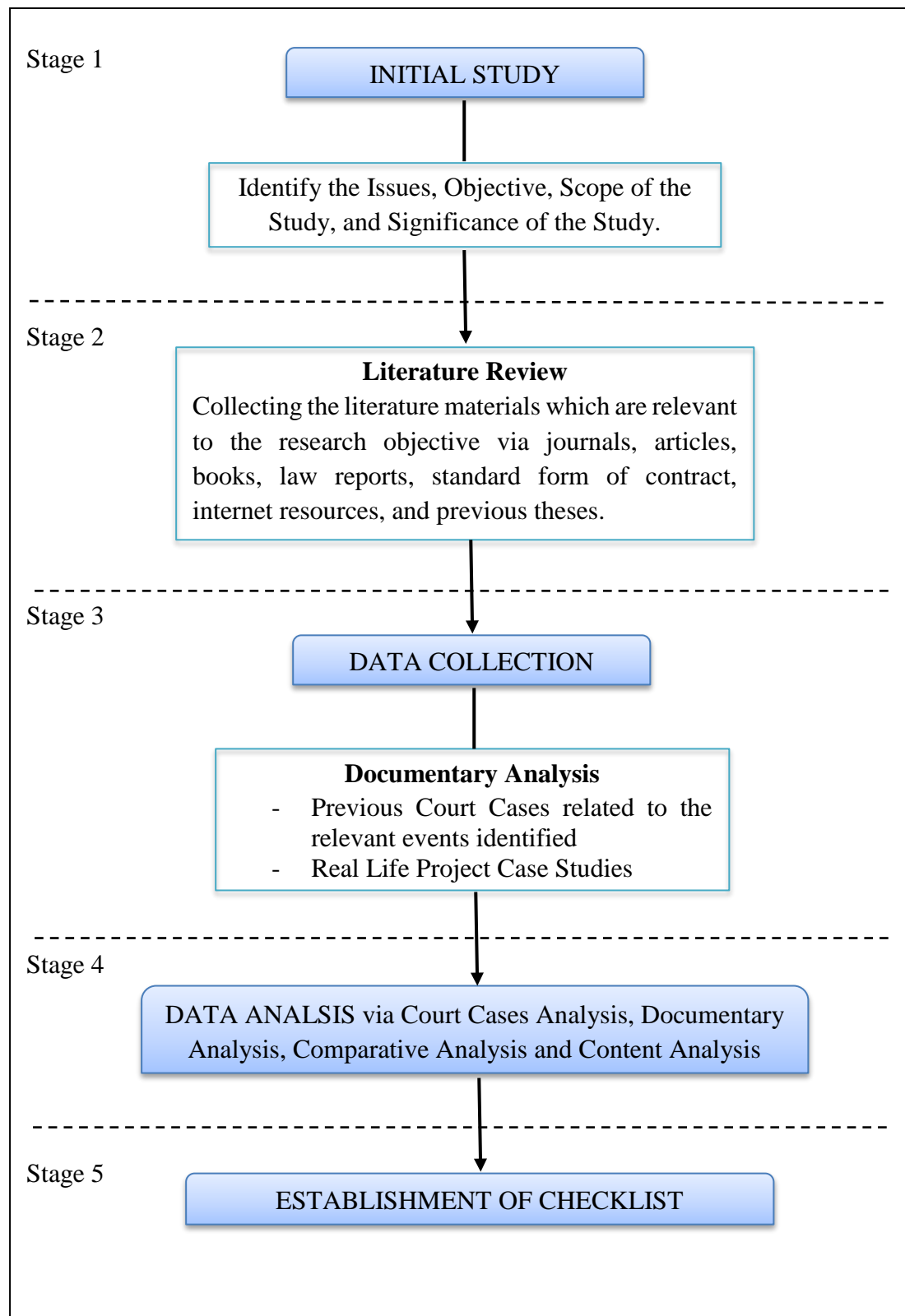
In this stage, generalisation and interpretation of the collected data was drawn. It was important to ensure that the data collected accomplish objectives of the study. Therefore, a checklist was established which elaborated the findings based on the analysed evident. Recommendation was made for future reference.

## **1.7 Chapter Organisation**

Chapter 1 provides the whole concept of the research which includes background of study, problem statement, research objectives, significance and scope of research. Chapter 2 and Chapter 3 provide a literature review about the research. Chapter 2 will clarify the definition, theory about delays and extension of time, clauses

of extension of time, types of delays, and relevant events. Chapter 3 introduces proof of contractual entitlement for an extension of time, burden of proof, documentary evidences, detailed particulars and documentation to be submitted by contractor, and the contract administrator's assessment on granting extension of time claims.

Chapter 4 describes the research methodology of the study. It describes how the research is carried out, instrument of the research, and techniques of data collection. Chapter 5 describes the techniques of data analysis, further this chapter involves with analyses and discusses the findings from the data collected. Chapter 6 discusses the conclusion of the research and outlines recommendations for future research.



**Figure 1.1: Research Process and Methods of Approach**

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