ADEQUACY OF CONTRACT PROVISION IN MANAGING CONSTRUCTION FAILURE

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DEDICATION

To my beloved parents Che Kamaruddin Che Hassan and Nik Hasnah Ibrahim, my siblings Naadiya,Naadilla,Naadifarin,Naadifan, Madeleyn, Nur Qamarina, Qariz Danial and Qurnia Danish.

Not forgetting, my late younger brother Allahyarham Mardief (20 July1996-15 May 2009).

To my love , Mohd Hanafi Bin Abdul Rashid and to all my friends.

Thank you for the supports, encouragement, wishes, sacrifice & patience.
May Allah S.W.T shower us with His blessing.

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ABSTRACT

In managing construction failure, normally efforts are made to identify the possible cause of failure and seek for the possible solution of the problems faced. Currently, there is no clear guideline available either within existing contract documents or legislations that can be used as a guide to resolve construction failure cases. Hence, this study has been undertaken to identify the limitations of current contract provisions which related to construction failure. It is conducted to evaluate the adequacy of contractual provisions in contract documents. The methodology adopted for this study includes literature research, interviews and questionnaire surveys with selected professionals in construction industry and legal sector. The findings of the study show that the limitations in current contractual provisions are eminent. It is also found that there is a need for consideration of inclusion of new provisions to be implemented into contract document. Despite there may be a difference of ideas between the respondents from construction industry and legal sector regarding to limitations of law and contract to solve construction failure cases. This study also made some proposal of important items that should be considered for improving current contract provisions.

ABSTRAK

Dalam menguruskan kegagalan pembinaan, lazimnya terdapat usaha-usaha yang dilakukan untuk mengenalpasti punca kegagalan dan mencari penyelesaian yang sesuai bagi masalah yang dihadapi. Pada masa kini, tiada garis panduan yang jelas boleh didapati sama ada melalui dokumen kontrak sedia ada mahupun dari segi perundangan yang boleh dijadikan sebagai panduan dalam menyelesaikan kes-kes kegagalan pembinaan. Justeru itu, kajian ini telah dijalankan untuk mengenalpasti kekangan yang terdapat dalam peruntukan kontrak pada masa kini yang mempunyai kaitan dengan kegagalan pembinaan. Ia dijalankan untuk menilai tahap kecukupan pada peruntukan kontrak yang terdapat dalam dokumen kontrak. Kaedah yang digunakan dalam kajian ini merangkumi kajian literatur , temubual dan kaji selidik dengan golongan professional daripada industri pembinaan dan sektor perundangan. Hasil daripada kajian ini menunjukkan bahawa kekangan yang terdapat dalam peruntukan kontrak merupakan punca utama kepada permasalahan ini. Selain itu juga, terdapat keperluan untuk memasukkan peruntukan baru ke dalam dokumen kontrak. Walaubagaimanapun, terdapat perbezaan pendapat di antara responden daripada industri pembinaan dan sektor perundangan terhadap kekangan tersebut. Melalui penyelidikan ini, beberapa cadangan yang penting telah dikemukakan dengan tujuan untuk memperbaiki kelemahan yang terdapat dalam peruntukan kontrak pada masa sekarang.

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LIST OF ABBREVIATIONS

CIDB	-	Construction Industry Development Board
DLP	-	Defects Liability Period
DPM	-	Damp Proof Membrane
FIDIC	-	Fédération Internationale des Ingénieurs Conseils (International Federation of Consulting Engineers)
IEM	-	Institute of Engineers Malaysia
JKR	-	Jabatan Kerja Raya
LAD	-	Liquidated Ascertained Damages
MBB	-	Maybank Berhad
MLJ	-	Malayan Law Journal
PAM	-	Pertubuhan Arkitek Malaysia
PWD	-	Public Work Department
RI	-	Relative Index
S.O	-	Superintending Officer
U.K	-	United Kingdom

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter is an overview of the study which emphasis on the problem statement, specifying aims and objectives, formulating of study methodology, report outlines and scope of the study.

1.2 Background of Study

Construction failures are impossible to eliminate completely, but it can be reduced. Janney (1986) defines the construction failure as a failure that occurs during construction project and after the project completed. They are considered to be either collapse, or distress of a structural system to such a degree that it cannot safely serve its intended purpose.

Although the existing contract documents shall solve the claim cases due to construction failure, the provisions are only valid during contractual period. Currently, several statutory body and professional societies have being established their contract documents as guidelines to parties involve. There are a number of provisions that govern the quality of construction works. They also specify the role and responsibilities of parties in the contracts in respect of defects. Therefore, the party's rights and obligations to a contract are governed by the contract itself. Previous study also stated that most construction contracts specify certain extraordinary powers to a particular person. However, the effects of provisions are only limited during contractual period. Although there are governing laws to manage construction failure, the process is lengthy and costly.

Furthermore, failures in construction project mainly in building construction generate controversy and expensive argument. Hence, the urgency to overcome this failure issue has raised concerns among the practitioners in construction industry.

1.3 Problem Statement

Recently, several completed projects tend to be defective or even collapsed after the expiry of contractual period. Hence, parties involved have to seek for the relevant provisions to be referred in managing such situation. It has raised certain issues on party's liabilities. Moreover, contractual relations are not valid after the project completion. Therefore, parties have to seek for the justice to define their role and duty on failure loss and remedial cost based on the contract. These limitations of contract provisions are crucial as it will increase the number of disputes among construction practitioners. Therefore, this study has been conducted to identify those limitations in order to aid the parties in managing construction failure.

1.4 Research Objectives

This research aims to evaluate the adequacy of contractual provisions in managing construction failure. In order to achieve the aim, following objectives shall be pursued:

i. To identify the current contractual provisions and laws available in managing construction failure.

ii. To identify the limitations of the existing contractual provisions in managing construction failure.

iii. To identify and proposed new provisions to be considered in addressing claim cases related to construction failure.

1.5 Scope Of Study

This study covers the investigation on the provisions in the common contract document such as PWD 203/203A, IEM1989, CIDB 2000, PAM2006 and FIDIC conditions (red book) which applicable to Malaysia construction industry. The qualitative data collected in this study was made within Kuala Lumpur and Johor Bharu area only. Case study on claims related to construction failure cases were referred to literature sources only.

1.6 Significance of the Study

This study is significant in providing information relates to contract provisions in managing construction failure.

1.7 Brief Methodology

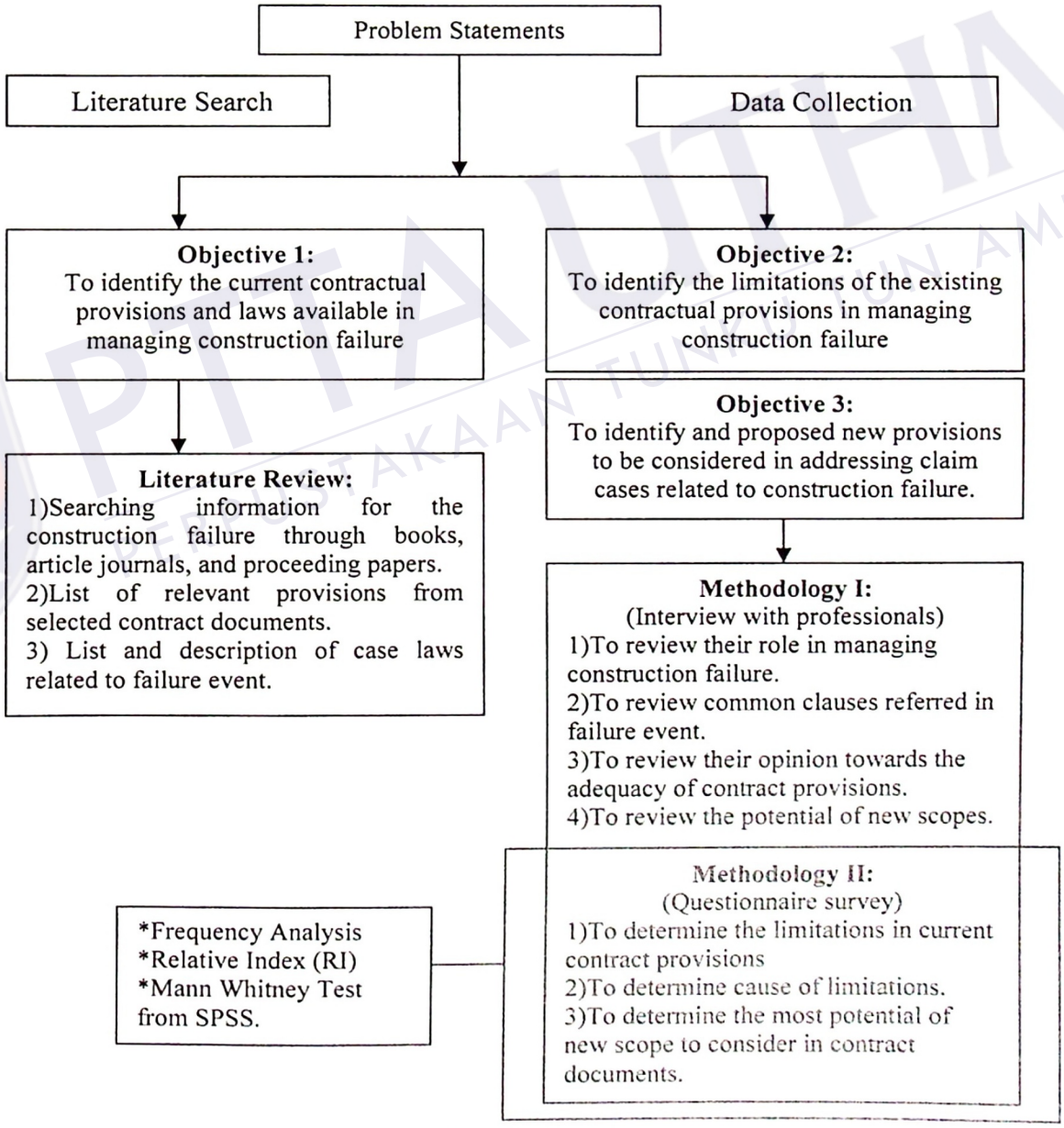

Figure 1.1: Brief Methodology

CHAPTER 2

CONSTRUCTION FAILURE

2.1 Introduction

This chapter covers general information relates to construction failure such as definitions, scenarios of failure throughout the world, failure causes and methods to minimize the incidence. This information is important to provide better understanding on the construction failure.

2.2 Definitions

There are several definitions of failure interpreted by various researchers. The popular definition of failure in civil engineering is defined by Shepherd *et al.* 1995 as "an extreme form of damage which itself constitutes a material, nontrivial change in the safety, serviceability, appearance or reparability of the constructed facility". Next, the level and nature of defects in building (Ransom, 1987) is capable in causing failure due to its continuous impact.

Leonards (1982) defines failure as an "unacceptable difference between expected and observed performance". It occurs because of lack in supervision during construction activities. Failure also occurs in a component that already cannot functions as it should. While the definition for construction failure is presented by Janney (1986) who defines construction failure as "a failure that occurs during construction and they are considered to be either collapse, or distress, of a structural system to such a degree that it cannot safely serve its intended purpose".

Most of failures in construction project mainly in building construction generate controversy, long and expensive argument (Jacob *et al.,* 1997). This will follow by litigation process to resolve those issues. Therefore, failure in construction project has close relations to the ability of building structure to receive such massive loads and also depends on the quality of the material applied.

2.3 Failure in Building Structural Elements

Most building consists of combination of three basic elements such as walls, roofs and floors. These elements are arranged to create both space division and unobstructed space (Ambrose, 1993) according to building's functions. Commonly, the causes of structural collapse include poor workmanship, lack of supervision just to name a few which leads to serviceability problems such as distress, excessive deformation, leaking roofs and facades, and also inadequate interior environmental control system. Below are the brief explanations of each building structural elements and how their deteriorations may lead to total or partly of structure failure

2.3.1 Wall Defects

Walls are the structure that supporting the roofs and floors. Thus, the design development of spanning roof and floor systems must begin with consideration of the wall systems over which they are span. Some basic categories of the wall are structural wall, non structural wall, exterior wall, and interior wall. The wall commonly is the most affected element during bad weather such as heavy rain. The rain penetration shows as damp patches on the internal face of the wall usually within a few hours of rain failing and when the wall dries, a stain is often left. Main factor for this low quality of wall installation is due to poor workmanship. However, failures may be prevented by designing cavity trays carefully in relation to the details of the construction involved (Ransom, 1987).

Other damages to the wall were caused by cracking and spalling due to improper construction of structure element and lack of supervision in design stage. Next, damages by chemical attack as most ordinary clay bricks contain active chemical ingredients. It can react with ordinary Portland cement and made it became defective. Lastly, damage to building wall mainly occurs to brick, stone and mortar thus concrete is seldom affected through bad weather, movement and chemical attack. Based on these factors, special precautions need to apply at the early stage of construction to prevent unintended failure.

2.3.2 Roof Defects

Roof have two primary functions which are it acts as a skin for the top of the building and also as protection for the building and its content from effects of weather. There are two common types of roof such as flat roofs and pitched roofs. In comparison, pitched roofs have given few problems than flat roofs because to use flat

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