

VARIATION IN THE STANDARD FORM OF CONTRACT
IN MALAYSIA AND INDONESIA

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Specially dedicated to *Mama* and *Papa*
Thank you for your wonderful love and support

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ABSTRACT

Variation orders is one of the main causes of disputes in Indonesia's construction industry. The disputes become more complicated when such orders occur in the lump sum contracts where the contractor is contractually obliged to carry out the work according to the design at the specified sum. It appears that, unlike the Indonesian's Permen PU contract, the Malaysian Public Work Department's standard form of contract contains clearer variation order provision. The objective of this research is to make a comparison between the variation terms in Malaysia's, the PWD 203 (1/2010) lump sum contract and Indonesia's Permen PU No. 07/PRT/M/2011 Book 2A contract. It is hoped that the findings of this research may help to improve the Permen PU's standard form. The comparison is made based issues that arise in case law in Malaysia which are collected from the online database provided by Lexis Malaysia. From the further careful analysis of the cases, four main issues are identified, those are: one, whether or not there is a variation clause in the contract; two, whether the variation order is within the scope of variation clause; three, whether the variation order is issued according to the procedure set out in the contract; and four, whether the method of the valuation of the variation work used by the employer is the correct method. Based on those issues, the analysis found that there are similarities in the express variation order clauses in both standard forms, mainly they define the scope of work in the contract. However, while in Malaysia the procedures and the methods of valuation are clearly stated in the clauses of PWD Form 203 (Rev 1/2010), in Indonesia they are governed by regulation and not stipulated in the clauses of Permen PU No. 07/PRT/M/2011.

ABSTRAK

Arahan perubahan adalah salah satu punca utama pertikaian dalam industri pembinaan di Indonesia. Pertikaian menjadi lebih rumit apabila ianya berlaku di dalam kontrak, sekali gus kontraktor perlu bertanggungjawab untuk menjalankan kerja-kerja mengikut reka bentuk pada jumlah yang dinyatakan. Tidak seperti borang kontrak Permen PU Indonesia, borang kontrak setara Jabatan Kerja Raya Malaysia mengandungi lebih jelas peruntukan perintah variasi. Objektif kajian ini adalah untuk membuat perbandingan di antara syarat-syarat perbezaan perubahan, di antara borang kontrak JKR 203 (1/2010) dengan borang kontrak Permen PU No. 07/PRT/M/2011. Adalah diharapkan dapatan kajian ini boleh membantu untuk meningkatkan borang kontrak setara Permen PU ini. Perbandingan itu dibuat berdasarkan isu-isu yang timbul dalam kes undang-undang di Malaysia yang dikumpul daripada pangkalan data atas talian yang disediakan oleh Lexis Malaysia. Melalui analisa ke atas kes yang dibuat, empat isu utama dikenal pasti, ianya: satu, sama ada atau tidak ada klausa Perubahan dalam kontrak; dua, sama ada perintah perubahan adalah dalam skop fasal variasi; tiga, sama ada perintah perubahan itu dikeluarkan mengikut tatacara yang dinyatakan dalam kontrak; dan empat, sama ada kaedah penilaian kerja variasi yang digunakan oleh majikan adalah mengikut kaedah yang betul. Berdasarkan isu-isu tersebut, analisis mendapati bahawa terdapat persamaan dalam nyata fasal perintah Perubahan dalam kedua-dua bentuk borang kontrak, terutamanya menentukan skop kerja di dalam kontrak. Walau bagaimanapun, prosedur dan kaedah penilaian pada borang kontrak JKR 203 (1/2010) dinyatakan dengan jelas, manakala Indonesia ianya dikawal oleh peraturan dan tidak dinyatakan dalam fasal-fasal Permen PU No. 07/PRT/M/2011.

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CHAPTER 1

INTRODUCTION

1.1 Background of the Research

The word contract may be defined as an agreement enforceable by law.¹ Thus, a contract is an agreement which is legally binding between the parties. One of the functions of contract is to distribute the risks, by express provisions or by implication, between the contracting parties. Risks are inevitable and cannot be eliminated but they can be transferred.² The failure to manage risks effectively may lead to contractual disputes, delays and budget over-run.³

In construction industry usually involved large sums of money, therefore, contractual arrangement should always be legal and formal since the beginning of the project. The contract, called as construction contract, is between employer and the contractor. The main purpose of construction contract is for the employer to get the contractor's services for completion of construction project in consideration for payment of the contract sum.

In construction industry, the contract that is formed for the purpose of obtaining a contractor's services in the construction of projects are generally called

¹ Pheng, Lee Mei and Ivan Jeron Detta (2013). *Commercial Law 2nd Edition*. Selangor Darul Ehsan : Oxford Fajar

² Murdoch, John and Will Hughes (2000). *Construction Contracts : Law and Management*. Taylor and Francis, London

³ Tang, Henry (2001). *Construct for Excellence : Report of the Construction Industry Review Committee*.

‘construction contracts’. The contract may be a main contract between an employer⁴ and a main contractor. It may also include a subcontract between a main contractor and a subcontractor. The scope of construction contracts is even wider as defined in Construction Industry Payment and Adjudication Act.⁵

The main purpose of construction contracts, in relation to main contracts, is for the employer to get the contractor’s services to carry out and complete construction projects in consideration for payment of specified contract sums. The main contractor may subcontract some of the works to subcontractors. The construction works that contractors or subcontractors, as the case may be, are usually specified in contract documents that include drawings and specifications.

It is submitted that, substantial number of construction contracts now are found to be in standard forms. Many of these standard forms are well established and recognised by the construction industry, either nationally⁶ or internationally⁷ or both.⁸ There are also standard forms prepared by the government to be used exclusively for public works.⁹

One of the function of standard form of contract is to state the obligations of the parties and to set out with reasonable clarity the scope of the project.¹⁰ In Malaysia, there are several standard form of contract commonly used in construction industry namely Pertubuhan Arkitek Malaysia (PAM)¹¹, Construction Industry Development Board (CIDB)¹², and Public Work Department (PWD)¹³.

⁴ Generally, the project owner

⁵ Clause 4 Part I CIPAA 2012

⁶ PAM 2006, drafted by Pertubuhan Arkitek Malaysia; CIDB 2000, drafted by Malaysia’s Construction Industry Development Board; IEM Standard Forms of Contract (three forms), drafted by Institution of Engineers Malaysia.

⁷ JCT standard forms, produced by Joint Contract Tribunals (UK); ICE standard forms, produced by Institution of Engineers (UK); FIDIC suites of standard forms, produced The International Federation of Consulting Engineers (commonly known as **FIDIC**, acronym for its French name *Fédération Internationale Des Ingénieurs-Conseils*)

⁸ e.g. FIDIC (Red Book 1999) is frequently used in Malaysia and Indonesia

⁹ e.g. PWD 203A (Rev. 1/2010) (with quantities); PWD 203 (Rev. 1/2010) (without quantities); PWD DB/T (Rev. 1/2010)

¹⁰ Rajoo, Sundra (1999). *The Malaysian Standard Form of Building Contract (The PAM 1998 Form)*. Malaysian Law Journal Sdn.Bhd , Page : 3

¹¹ PAM Contract 2006 (With Quantities) & PAM Contract 2006 (Without Quantities)

¹² CIDB Standard Form of Contract for Building Works 2000

¹³ PWD Form 203A (Rev 1/2010), PWD Form 203 (Rev 1/2010), & PWD Form DB (Rev. 1/2010)

Meanwhile in Indonesia, despite the fact that there are already standard forms of contract readily available, they are, it is submitted, rarely used in the industry. For the public projects, their construction operations are managed by Ministry of Public Work based on The Standards and Guidelines for Procurement of Construction and Consultation Services. The latest provision being used is Peraturan Menteri Pekerjaan Umum (Permen PU) No. 07/PRT/M/2011. This document regulates the construction process from the procurement procedure stage until the implementation of construction projects.

It is submitted that the Permen PU standard form for public works retains the same format set out in FIDIC standard forms. Basically, the standard form is divided into two parts. Part one specifies the general conditions and Part two details out particular conditions of the contract. Permen PU standard form is exclusively used in government projects. In addition, private projects or international funded projects usually adopt FIDIC (*Federation Internationale Des Ingenieurs-Conseils*), or JCT (*Joint Contract Tribunals*) or bespoke contract to be used as the contract form.

The choice of contract form is usually based on contract sum of the projects, the particular nature of the projects and the contract strategies utilised to meet the project objectives. These several types of construction contracts that propose different ways of handling pricing, risk transfer, responsibility for performance, cost, certainty and complexity. For the contracting parties, it is important to understand the contract and their rights and obligation in the contract.

Lump sum contract in one of the construction contract by way of contractor rewarded for his services.¹⁴ Historically, the term of lump sum has been used from late 18th century, when the UK government decided that each job had to be controlled by single contractor.¹⁵ By definition, the term lump sum is a single payment for a single item of the work, for a selected group of items, or for the whole project.¹⁶ Alternatively, a lump sum contract means definitive and fixed price as agreed upon prior to contract award. This price is not subject to adjustment except

¹⁴ Norwati (2009). *Judicial Interpretations of the Term "Lump Sum" in Construction Contract..* Malaysia : Faculty of Built Environment Universiti Teknologi Malaysia

¹⁵ Hill, Christopher (1999) *Lump Sum : The Essentials*. Retrieved on April 1 2015 from www.building.co.uk

¹⁶ Clyde, James E. (2007) *Construction Inspection : A Field Guide To Practice*. John Wiley & Sons. Inc. Page : 210

for extras ordered by the owner and the changes in scope of work or performance conditions. The cost risk to the owner under lump sum agreement is minimal-given adequate binding and performance controls.¹⁷

Lump sum contract is commonly used in construction industry.¹⁸ It is usually used in building construction project and engineering work such as mechanical and electrical. It also used for civil engineering work where there is formal tendering but the quantities of the various types of work cannot be fixed or accurately defined initially at tender stage. Lump sum contract widely used in Indonesia construction industry especially in the building contract work in assumption the work has well planned and exact quantities of work items.¹⁹

In Indonesia, there is standard contract form for lump sum contract in construction project stipulates in Peraturan Menteri (Permen) PU No. 07/PRT/M/2011 Book 2A. Meanwhile in Malaysia there are several standard form of contracts commonly used in construction industry. Thus, for public project in lump sum contract, the Malaysia government use PWD Form 203 (Rev. 1/2010) Standard Form of Contract where Drawings and Specifications Form Part of The Contract

However, due to the absence of uniformity of standard forms of contract in Indonesian construction industry leads to many disputes. It is because of the difference of interpretation of contract clauses frequently occurs due to lack of ability to analyse its provisions. Djoko Kirmanto²⁰ stated that in order to create synergy and give the same understanding of the contract clauses, the understanding of contract between the contractor and employer must be enhanced.²¹ Therefore, a uniform standard form of contract is required in Indonesian construction industry to reduce disputes and claim, because of frequent usage of the same forms of contract will lead the parties to be more familiar and have more understanding in the interpretation of the clauses. One of the ways to achieve the uniformity of the

¹⁷ Gilbreath, Robert D. (1992) *Managing Construction Contract*. John Wiley & Sons. Inc.

¹⁸ Henkin, Henry (1988) *Drafting engineering contracts*. England : Elsevier Applied Science Publisher Ltd. Page : 120

¹⁹ Suanda, Budi. (2011) *Kontrak Lump Sum Berdasarkan Referensi*. Retrieved on April 1st 2015 from www.manajemenproyekindonesia.com

²⁰ Minister of Public Work period 2004 - 2014

²¹ Soewendo, Adi A. (2011) *Comparison between Construction Contract Used For Government Projects In Indonesia And Malaysia*. UTM Master Thesis

standard contract form that can be done is by improving the existing standard form of contract in Indonesia.

1.2 Statement of Issues

According Sumaryanto Widayatin, Head of Badan Pembinaan Konstruksi (BAPEKON) Ministry of Public Work, 47% of disputes were resolved in Badan Arbitrase Nasional Indonesia (BANI) are construction contract related disputes. According to Soewendo, these disputes arise mainly because of lack of understanding the terms and conditions of construction contracts. In addition, he also attributes the disputes to want of uniformity in the standard forms of contract to be used as guidelines by the parties in construction industry.²²

A study in Indonesia shows that the disputes in construction projects could be classified into four classifications:²³

1. Cost-related disputes, specifically due to:
 - *Changes in contract sum*
 - *Changes in unit price*
 - *Changes in interim payment*
2. Time-related disputes, specifically caused by:
 - *Changes in contract time*
 - *Changes in schedule of work*
 - *Changes in schedule of payment*
3. Scope of Work, specifically due to:
 - *Changes in type of work*
 - *Changes in volume*

²² Ibid 15

²³ Soekirno, P. Mutiasari, I., Puri, E.R, Wirahadikusumah, R.D, Abduh, M (2006) Sengketa Konstruksi dan Alternatifnya. Proceeding 1st Indonesian Construction Industry Conference, Asosiasi Kontraktor Indonesia. Page : 221-228

- *Changes in specification*
- *Changes in construction method*

4. The combination of Cost, Time, and Scope of Work

Based on the study, the likelihood of construction dispute arising because of the combination of Cost, Time, and Scope of Work is the highest (60%), followed by Cost-related (15%), Time-related (15%) and Scope of Work (10%), as seen in Figure 1.1.

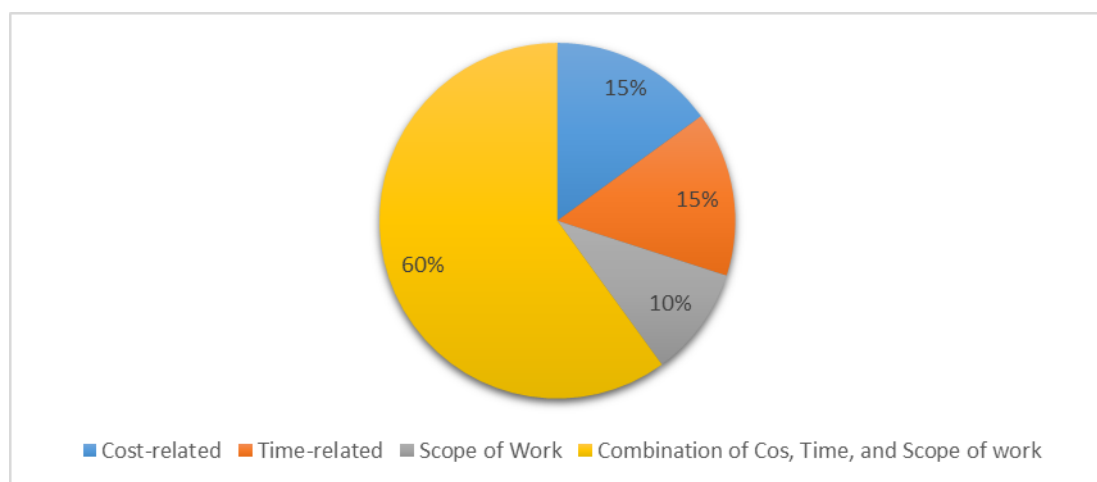


Figure 1.1. Construction Dispute in Indonesia

From the classification, it can be conclude that the main cause of disputes is because there were variation orders in the project. The dispute become more complicated because of lack of comprehension of the contractors and the stake holders in the Indonesian construction industry when such orders occur in lump sum contract where the contractor is contractually obliged to carry out the work according to the design at the specified sum.²⁴

In order to improving the existing standard form of contract in Indonesia, a comparison between existing Indonesia's standard contract form and another standard contract form may is one of the way that can be done. The comparison, especially regarding the variation in lump sum contract where most disputes in

²⁴ Suanda, Budi. (2011) *Kontrak Lump Sum Berdasarkan Referensi*. Retrieved on April 1st 2015 from www.manajemenproyekindonesia.com

Indonesian construction industry occurs, is necessary to reduce or avoid more disputes occurs in the industry.

In addition, Malaysian construction industry has several standard forms of contract commonly used in construction projects. One of them could be used as the basis for the comparison. The outcome of this exercise may be of a great beginning to improve the existing Indonesia standard contract forms.

However, Indonesia and Malaysia have different legal system. This will lead us to the issue of the differences and similarities between both terms and conditions stipulated in the standard form of construction contract of two countries. The differences and similarities may be used to develop and improve the existing Indonesian contract, encourage the scenario of drafting the standard form of contract and can further improve the provisions in construction contracts for the Indonesian government construction projects.

1.3 Objectives of the Research

The objective of this research is to make a comparison between the variation terms in lump sum contracts standard form PWD 203 (Rev. 1/2010) with Permen PU No. 07/PRT/M/2011 Book 2A based on certain issues regarding the variation in the lump sum contract.

1.4 Scope of the Research

This study is limited to the terms and conditions of PWD Form 203 (Rev. 1/2010) and the general condition of Peraturan Menteri PU No. 07/PRT/M/2011 related to the variation. The comparison is made according to issues that arise in case law regard to variation order in lump sum contract in Malaysia. The cases are collected from the online database provided by Lexis Malaysia.

1.5 Significance of the Research

Variation orders become the main cause of dispute in Indonesian construction industry. Furthermore, this become more complicated because of the contractors' Indonesia stakeholders' poor comprehension of the terms and conditions of construction contracts. The problem is further aggravated by lack of uniformity in the standard forms of contract that are being used as guidelines by the parties.

This study is expected to enhance the understanding of parties involved in Indonesian construction industry, specifically, in relation to variation provisions. In this way it is hoped that disputes in construction projects in Indonesia may be reduced or avoided. Furthermore, hopefully this study can be used to develop and improve the existing Indonesian contract, encourage the scenario of drafting the standard form of contract and improve the provisions in construction industry for Indonesian construction industry.

1.6 Previous Research

After initial observation on the Master thesis collections database from the UTM online library, it is found some similar previous research that have been done within this topic, those are:

1. Comparison between Construction Contract Used For Government Projects in Indonesia and Malaysia by Adi Argo Soewendo in 2011. The objective of the study is to compare the terms and conditions of the standard form of contract in Indonesia and Malaysia. The method used to conduct the study is comparing each clause in PWD Form 203A (Rev. 2007) Bill of Quantities and Permen PU No.43/2007 Unit Price to identify the similarities and differences.
2. Comparison between The Standard Forms Of Building Contract Used In Nigeria And Malaysia by Bawa Mustapha in 2011. The objective of the study is to identify the difference between PAM 2006 and JCT 2009

Standard Forms regarding payment methods and the ways to improve payment methods based on the standard contract forms. The method used to conduct this study is identifying various payment clause under PAM 2006 and JCT 2009 Standard Form of Contract then analyzing and interpreting the issue regarding payment method based on common law.

3. Variation in Lump Sum Contract by Noor Amalina Mohayidin in 2014. The objective of the study is to identify the issues regarding variation order in lump sum contract. The method used to conduct this study is literature study on the lump sum and variation then analyzed the case law on the issue variation in lump sum contract arouse as well as judgment made by the court,

In the situation where there are three similar previous study, this research will be focused on the comparison of contract clauses stipulated in both standard forms of contract deal with the issues commonly happen in variation in lump sum contract. The similarity from the previous studies is that this study also used comparative analysis method to compare the clauses between both standard form of contract but limited to the clause that related to variation only.

The cases which happen in Malaysia construction industry related to issues in variation in contract lump sum will be the basis of the comparison of the clauses of both standard form of contract. This method considered has not been done by the previous studies. While Indonesia and Malaysia have different legal basis, the purpose of using Malaysian standard form of contract and cases is solely to improve the Indonesian standard form of contract, whether the finding of this study could be adapted in Indonesia standard form of contract and also provision that governs the contract in the scope of government project.

1.7 Chapter Organization

This study is composed of five chapters as follow:

Chapter 1 - Introduction

This chapter presents the introduction of the research. The content includes the background of the study, the statement of issues or problem statement, the research questions, the research objective, the scope, the significant and the methodology used.

Chapter 2 – Variation in Construction Contract

This chapter is the theoretical or literature review chapter. It discusses the theories and issues in relation to variation orders in construction contracts from various literatures. The discussion gives special emphasis to those matter that relate to variations in lump sum contracts. The related terms in construction contract documents will be analysed and the findings will be identified and presented in organized manner

Chapter 3 - Research Methodology

This chapter describes the methodology adopted to conduct this research. It describes the objective of the study, explains the data required, the method of acquiring the data. Finally it explains the method of analysis used in the research.

Chapter 4 - Comparison of PWD Form 203 (Rev. 1/2010) and Permen PU No. 07/PRT/M/2011

This chapter discusses the general comparison of terms and conditions between PWD Form 203 (Drawing and Specification) and Permen PU 07/2011. This

chapter also discusses analysis on the clause related to issue on variation in lump sum contract in detail

Chapter 5 - Conclusion

This chapter describes the methodology adopted to conduct this research. It describes the objective of the study, explains the data required, the method of acquiring the data. Finally it explains the method of analysis used in the research.

REFERENCES

- Arain, Faizal Mansoor, Low Sui Pheng (2006). *The Potential Effects of Variation Orders on Institutional Building Projects*. Singapore : National University of Singapore. Retrieved on July 14th 2015 from <http://www.emeraldinsight.com/doi/pdfplus/10.1108/02632770510618462>
- C.K, Fong (2004). *Law and Practice of Construction Contract*. Singapore: Sweet & Maxwell.
- Chapell, David, Derek Marshall, Vincent Powell-Smith, Simon Cavender (2001). *Building Contract Dictionary (Third Edition)*. Oxford : Blackwell Science
- Clyde, James E. (2007). *Construction Inspection : A Field Guide To Practice*. John Wiley & Sons. Inc.
- Elliot, Fenwick. (2012). *Dictionary of Construction Terms*. Routledge : Informa Law
- Elliot, RF (1993). *Building Contract Litigation*. London : Longman Professional
- Fletcher, Leonard, Reginald Lee & John A Tackaberry (1980). *Construction Contract Dictionary*. London : E & FN Spon
- Fong, C.K. (2004). *Law and Practice of Construction Contract third edition*. Singapore : Sweet & Maxwell Asia.
- Gilbreath, Robert D. (1992). *Managing Construction Contract*. John Wiley & Sons. Inc.
- Gorse, Christopher A., David Johnston, Martin Pritchard, BEng (Hons) PhD (2012). *Oxford Dictionary of Construction, Surveying, & Civil Engineering*. Oxford : Oxford University Press
- Henkin, Henry (1988). *Drafting Engineering Contracts*. England : Elsevier Applied Science Publisher Ltd.

- Hill, Christopher (1999). *Lump Sum : The Essentials*. Retrieved on April 1 2015 from <http://www.building.co.uk>
- Kerzner, Harold R. (2010). *Project Management : A System Approach To Planning, Scheduling, And Controlling – Eleventh Edition*. New Jersey : John Wiley & Sons. Inc.
- Kiong, Robert H.W. (2009). *Variation Orders in Design and Build Contracts*. Malaysia : Faculty of Built Environment, Universiti Teknologi Malaysia
- Lee, Mei Pheng and Ivan Jeron Detta (2013). *Commercial Law 2nd Edition*. Selangor Darul Ehsan : Oxford Fajar
- Memon, Aftab Hameed, Ismail Abdul Rahman, and Mohamad Faris Abul Hasan (2014). *Significant Causes and Effects of Variation Orders in Construction Projects*. Malaysia : Faculty of Civil and Environmental Engineering, Universiti Tun Hussein Onn Malaysia. Retrieved on July 13th 2015 from <http://maxwellsci.com/print/rjaset/v7-4494-4502.pdf>
- Mohayidin, Noor Amalina (2014). *Variation in Lump Sum Contract*. Malaysia : Faculty of Built Environment Universiti Teknologi Malaysia
- Murdoch, J.R. & Will Hughes (2000). *Construction Contract-Law and Management Third Edition*. London : Spoon Press
- Murdoch, John & Will Hughes (2008). *Construction Contract. 2nd Edition*. London: Taylor & Francis.
- Murdoch, John and Will Hughes (2000). *Construction Contracts: Law and Management*. Taylor and Francis, London
- Norwati (2009). *Judicial Interpretations of the Term “Lump Sum” in Construction Contract..* Malaysia : Faculty of Built Environment Universiti Teknologi Malaysia
- Payne, Michael H. *Cardinal Changes*. Retrieved on July 16th 2015 from <http://www.cohenseglia.com/federal-contracting-database/cardinal-change>
- Peraturan Menteri Pekerjaan Umum No. 07/PRT/M/2011 tentang Standar dan Pedoman Pengadaan Pekerjaan Konstruksi dan Jasa Konsultansi

- PWD Form 203 (Rev. 1/2010) Standard Form of Contract where Drawings and Specifications Form Part of The Contract
- Rajoo, S & H. Singh (2012). *Construction Law in Malaysia*. Malaysia: Sweet & Maxwell Asia
- Rajoo, S. (1999). *The Malaysian Standard Form of Building Contract (The PAM 1998 Form)*. Malaysian Law Journal Sdn.Bhd
- Singh KS, H. (2004). *Engineering and Construction Contract Management: Law and Principle*. Singapore : Lexis Nexis.
- Singh, H & Kandan, K. S (2005). *Variation Claims – Pitfalls and Pratfalls*. Bulletin Engenieur, p. 36-42
- Soekirno, P. Mutiasari, I., Puri, E.R, Wirahadikusumah, R.D, Abduh, M (2006). *Sengketa Konstruksi dan Alternatifnya*. Proceeding 1st Indonesian Construction Industry Conference, Asosiasi Kontraktor Indonesia. Page : 221-228
- Soewondo, Adi Argo (2011). *Comparison between Construction Contract Used for Government Project in Indonesia and Malaysia*. Malaysia : Faculty of Built Environment Universiti Teknologi Malaysia
- Speaight, Anthony and Gregory Stone (2010). *Architect's Legal Handbook*. Singapore : Routledge
- Stephen Furst & Vivian Ramsey (2001). *Keating On Building Contracts, Seventh Edition*. London : Sweet & Maxwell
- Suanda, Budi (2012) *Lump Sum Vs Pekerjaan Tambah Kurang*. Retrieved on April 1st 2015 from <http://www.manajemenproyekindonesia.com>
- Tang, Henry (2001). *Construct for Excellence : Report of the Construction Industry Review Committee*.
- Wallace, I.N. Duncan Q.C., M.A. OXON. (1995). *Hudson's Building And Engineering Contracts*
- Yin, R. K. (1994). *Case Study Research : Design and Methods (2nd ed.)*. Thousand Oaks, CA : Sage Publishing

BIBLIOGRAPHY

- Arikunto, Prof. Dr. Suharsimi (2013). *Manajemen Penelitian*. Jakarta : Rineka Cipta
- Istiami, Amik T. (2015). *Cara Lebih Mudah Membaca Peraturan Pengadaan Barang dan Jasa Pemerintah*. Jakarta : Penerbit Primaprint
- Mudjisantosa (2014). *Memahami Kontrak Pengadaan Pemerintah*. Yogyakarta : Primaprint
- Mudjisantosa, Arif Rahman (2014). *Pengantar Pengadaan dan Kotrak jasa Konstruksi*. Yogyakarta : Primaprint
- Mudjisantosa (2015). *Catatan Pengadaan 2014*. Yogyakarta : Primaprint
- Mudjisantosa (2013). *Ruang Lingkup Pekerjaan Kontrak Lump Sum*. Retrieved on April 1st 2015 from <http://www.mudjisantosa.net>
- Peraturan Pemerintah Republik Indonesia No. 29 Tahun 2000 tentang Pelaksanaan Jasa Konstruksi
- Peraturan Pemerintah Republik Indonesia No. 45 Tahun 2013 tentang Tata Cara Pelaksanaan Anggaran Pendapatan Belanja Negara
- Peraturan Presiden Republik Indonesia No. 54 Tahun 2010 tentang Pengadaan Barang / Jasa Pemerintah
- Peraturan presiden Republik Indonesia No. 70 Tahun 2012 tentang Perubahan Kedua atas Peraturan Presiden No. 54 Tahun 2010
- Suanda, Budi. (2011) *Kontrak Lump Sum Berdasarkan Referensi*. Retrieved on April 1st 2015 from <http://www.manajemenproyekindonesia.com>