

# Recommendation of Construction Works Procurement Contract Administration Analysis Result at State-Owned Enterprises Projects Which Refers to Fidic and Presidential Decree No 54/2010 and its Amendments on Procurement of Government Goods/Services (Case Study : PT X)

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**Abstract-** Indonesian construction industry currently does not have a regulation concerning the applicable contract standard. But in practice, some of construction contracts used either refers to presidential decree (Perpres No 54/2010) and its amendments on procurement of government goods/services or international contract standards such as FIDIC, JCT etc. Case study in this research was conducted at an oil and gas company called PT X. It is one of the joint venture company whose majority shares are owned by one of the biggest Indonesian state-owned enterprises. PT X uses technical guidelines called *Juknis* as guidance in the procurement contract of good/services in which some of regulations used as reference are FIDIC and Perpres No 54/2010. Once construction contract is created and signed by employer and contractor, the important thing that must be conducted by both parties is to carry out contract administration. Some cases occurred in PT X were due to undisciplined of contract administration implementation, even though the construction contract had been well prepared. In the past ten years, the company has been experiencing dispute with several contractors which requires assistances of either court or dispute adjudication board. Besides such disputes result in substantial material losses to the company.

The problems to be solved in this research are: to examine what are important aspects of procurement contract of construction works according to FIDIC Silver Book (1999 edition) and Presidential Decree No 54/2010 along with the amendment. Furthermore, this research will focus on recommending the improvement of implementation on procurement contract of onstruction works in PT X with approach of FIDIC Silver Book and Presidential Decree No 54/2010 along with amendment. This research uses quantitative method with two variables whichs are contract administration as independent variable and procurement performance as dependent variable. These variables were then validated against 50 respondents in the company through distribution of questionnaires. Furthermore, data processing is conducted by

SPSS program (Statistical Packages for the Social Sciences) 24 version.

Result of analysis using SPSS 24 shows that important aspects of contract construction procurement administration which refers to FIDIC and Presidential Decree No. 54/2010 are variables X2, X28, X20, X6, X5, X1, X11, and X26. Based on these results, it is recommended to re-evaluate selection of dispute settlement that has been done through arbitration, and use of EPC contract types in procurement system of construction works.

**Index Terms-** contract, procurement, construction works, FIDIC

## I. THE BACKGROUND OF RESEARCH PROBLEMS

Procurement has a crucial role in the implementation of construction works in which includes procurement planning, selection of contractors, contract implementation and delivery of work. According to Davison and Wright (2004), contractual objective of any procurement process must successfully complete the project. The successful completion of project is defined by National Institute Government Purchasing (NIGP) as the right procurement in the right quantity, at the right price, at the right time, with the right quality or known as 5 "R's" (Thai, 2004). One of an important part in procurement process of construction works is contract making, which is a bond of work between employer and contractor.

Indonesian construction industry currently does not have a regulation concerning the applicable contract standard. But in practice, some of construction contracts used refers to presidential decree No 54/2010 and its amendments, PTK 007, FIDIC, etc. Procurement of goods and services using the State Revenue and Expenditure Budget (APBN) and /or Regional Revenue and Expenditure Budget (APBD) refers to Presidential Decree No. 54/2010 and its amendments. While procurement contract of construction works on some State-Owned Enterprises

refers to technical guidelines called Juknis made by each company. As for international contracts, many countries refer to FIDIC documents. Case study was conducted at PT X, a joint venture company whose majority share is owned by one of the biggest Indonesian state-owned enterprises. Contracts of construction works procurement on the company refer to Juknis, Presidential Decree No. 54/2010 and its amendments, FIDIC documents and other relevant regulations, where FIDIC document embraces a balanced risk sharing principle which is charging a risk to a party whose deemed as the most capable of controlling it.

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## II. RESEARCH PROBLEMS

This research will focus on solving the problems:

- To examine what are important aspects of construction contracts under FIDIC Silver Book and Presidential Decree No. 54/2010 and their amendments
- To recommend an analysis of improvements for procurement system in PT X based on results of the research

## III. LITERATURE REVIEW

Construction project implementation process began with an idea from owner which then translated by a designer in a form of construction design. The design is further constructed by observing and considering various things such as materials, mobilization, as well as technical development. Construction work has four constraints, which are cost, money, time and scope, and involves many parties such as employers, consultants as well as contractors. Relationship either between employers and contractors, or employers and consultants are legally regulated so that each party is disciplined in exercising its rights and obligations in order that construction implementation run well. Usually for some fairly complex construction work, the relationships between parties involved set in professional construction management in order to create synergies either in contractual, functional or structural relationships.

Procurement process according to Charles L. Huston encompasses all activities necessary to procure goods or services required for a project, with purpose to control the performance of contractors and suppliers in terms of cost, quality, time and technical implementation of work. Procurement methods or processes within projects vary depending on size and complexity of the project as well as the organizing party.

According to PMBOK (Project Management Institute Body of Knowledge), contracts are documents that legally bind buyers and sellers. Meanwhile, according to Ir. H. Nazarkhan Yasin, in the book of *Mengenal Kontrak Konstruksi di Indonesia* (2006), construction contracts can be reviewed from various aspects, such as from terms of cost calculation, service calculation, method of payment, and division of tasks. It is necessary to regulate in contract management so that contract management run properly. In other words, contract management is a process of managing all aspects related to agreements made between parties involved. In the journal of "A Detailed Analysis of The Relationship between Contract Administration Problems and Contract Types", mentioned that contract management process consists of six phases which are: procurement planning, solicitation planning, solicitation, source selection, contract administration, as well as contract closeout. Contract Administration is an effort to manage contracts during its implementation so that the rights and obligations of each party can be executed in accordance with the terms stated in the contract. Main point in applying a good contract administration is to understand the roles and responsibilities of each party in construction contract. According to Sherman (1996), Contract Administration is a term used to describe functions performed after each party signs contract.

Legal aspects of construction contracts are further stipulated in legislation issued by the State of Indonesia, among others: UU No 18 Tahun 1999 tentang Jasa Konstruksi; PP No 92 Tahun 2010 tentang Perubahan Kedua atas PP No 28 Tahun 2000 tentang Usaha dan Peran Masyarakat Jasa Konstruksi; PP No 79 Tahun 2015 tentang Perubahan Kedua atas PP No 29 Tahun 2000 tentang Penyelenggaraan Jasa Konstruksi; PP No 30 Tahun 2000 tentang Penyelenggaraan Pembinaan Jasa Konstruksi; PP No 4 Tahun 2015 tentang Perubahan Keempat Perpres No 54 Tahun 2010 tentang Pengadaan Barang/Jasa Pemerintah

FIDIC is an abbreviation of *the Federation Internationale Des Ingenieurs-Consseils* (International Federation of Consulting Engineers), an association of consulting engineers, founded in 1913 by the French, Belgian and Swiss and based in Lausanne, Switzerland. FIDIC Silver Book (1999) Conditions of Contract for EPC/Turnkey Projects is a contract form commonly used for private infrastructure projects where contractors are fully responsible for project design and implementation. Risks regarding project completion include cost, time and quality charged to contractors but risks such as force majeure and war are responsibility of employers. The following are various research results relevant to this research:

- a. **Hernu Suyoso, Agoes Soehardjono, As'ad Munawir, Factors Affecting Performance of Procurement Committee of Physical Construction Works in Jember Regency**, Journal of

Civil Engineering, Brawijaya University, Indonesia. This journal uses SPSS software, with validity and reliability test, multiple linear regression analysis, F as well as t test result analysis which is relevant to this research.

- b. **Kumarul Aripin, Kristina Sembiring, Sempurna Bangun, Evaluasi Contract administration and Monitoring of Construction Project implementation on Potential Rural Engineering Management Consultant Project**, Journal of Main Science and Technology, Tama Jagakarsa University, Indonesia. According to this journal, contract administration activities shall include: monitoring administration of bidding activities, monitoring of financial progress, as well as monitoring of physical progress of infrastructure development.
- c. **Bill Davison and Richard J. Sebastian, A Detailed Analysis of the Relationship between Contract Administration Problems and Contract Types**, Journal of Public Procurement, St. Cloud State University, Minnesota, USA. According to this journal, type of contract administration problem is divided into: Proposal Risk, Surety and Liability Risk, Schedule Risk, Contractual Risk, Performance Risk as well as Price Risk.
- d. **Herman Susila, Analysis of Contractor's Inhibiting and Supporting Factors in Understanding Construction Contract Document**, Engineering Faculty journal of Tunas Pembangunan, Surakarta, Indonesia. Theories and research methods used in this journal have similarities to the research being conducted.
- e. **Satrio Agung Utomo, Yanuar Asmara Putra, Arif Hidayat, Frida Kristiani, Evaluasi Hak & Kewajiban antara Perjanjian Kontrak Nasional Dengan Persyaratan Standar FIDIC (Studi Kasus: Proyek Pembangunan Gedung Pemuda Dan Kebudayaan Temanggung**, Jurnal Fakultas Teknik Universitas Diponegoro, Semarang, Indonesia. This journal compares each verse between national contract agreement and FIDIC standard, which is similar to the research undertaken.

The first step taken after formulating research problems is to dig information from related sources (e.g direct interview, website, Juknis, and some construction work contracts) to get an idea of how portrait of procurement contracts of construction works in State-Owned Enterprises, especially PT X which refers to FIDIC and Presidential Decree No. 54/2010 and its amendments. Based on these sources then obtained the factors and variables in the procurement of construction works. These variables subsequently are packaged in a form of questionnaire to be distributed to the minimum of 50 employees of PT X who have backgrounds and competencies relevant to the research topic whom respondents were selected based on certain criteria. Data obtained from the questionnaire were then summarized and processed using SPSS. In addition, various tests such as validity, reliability, correlation, intercorrelation, factor, regression, and F and t test analysis were conducted to see what are the important aspects of construction contracts under FIDIC and Perpres No. 54/2010 and their amendments. This research then ends with recommendation of improvement to PT X based on result of this research.

## 2. Survey Respondents

The respondents chosen in this research were homogeneous respondents who came entirely from the employee of PT X with these criteria: having minimum education of Diploma, having at least three years work experiences related to civil engineering and contracts, as well as having minimum age of 25 years. These requirements are given to ensure that respondent understands the research topic so that the answers given are in accordance with the assumptions specified. The technique used is total sampling wherein samples taken involving the entire population. with the consideration that population in this research is under 200 persons.

## 3. Factors and Research Variables

This research focuses on factors and variables associated with FIDIC Silver Book and Presidential Decree No. 54/2010 and its amendments in relation to contract administration. Based on comparison of two documents above, as well as other related journals and references, there are obtained 10 factors and 40 variables (X) as follows:

- Preparation of contract implementation which consists of: determining communication procedures/correspondence between parties involved before commencement date of contract (X1); conducting contract implementation and coordination meetings to monitor project progress (X2); reviewing the completeness of contract documents before commencement date of contract (X3); determining system and archive storage for all contract documents during execution period of contract (X4); carrying out contract administration in an EPC contract that refers to FIDIC or Presidential Decree No. 54/2010 and its amendments (X5).
- Management of variation and adjustments, which consists of: limiting the amount of variation and adjustments in order to run an orderly contract administration (X6); managing variation and

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adjustments in order to run an orderly contract administration (X7); minimizing the possibility of change due to scope and volume of work (X8); as well as minimizing any changes due to administrative issues (X9).

- Management of payment, which consists of: performing detailed and clear financial and/or payment documentation and administration during term of contract (X10); managing payment in accordance with agreement specified in contract (X11); monitoring payments in accordance with the currency agreed in contract (X12); determining payment procedure prior to commencement date of contract (X13); managing payment well in relation to contract administration (X14); determining all taxes, duties, and fees payable by contractors (X15); managing payments for construction works based on the work already installed (X16); monitoring the implementation of indemnities for employers in accordance with contract due to late of payment to contractors (X17).
- Management of bond, which consists of: managing payment of performance bond (X18); monitoring validity period of performance bond since commencement date of contract until handover of other goods/services or first handover of construction works (X19); managing advance payment with a guarantee in relation to the orderly contract administration (X20); monitoring return of maintenance bond/retention to contractors once maintenance period is completed, usually six months for permanent works, and three months for semi-permanent works (X21); monitoring return of performance bond after the work is one hundred percent completed (X22); managing payment of maintenance bond (X23); managing payment of retention (X24).
- Settlement of disputes, which consists of: managing settlement of disputes between parties by prioritizing it through deliberation (X25); managing dispute settlement through arbitration/court if deliberation is not reached (X26).
- Implementation of sanctions/penalties, which consists of: defining the category of violations in the contract (X27); administering sanctions/penalties for them who commit a violation (X28); administering financial sanctions in case of a violation committed by contractors (X29); monitoring the implementation of the same sanctions if employers commit a violation (X30).
- Anticipation of force majeure, which consists of: anticipating force majeure in the contract (X31); managing delay of works due to force majeure (X32); determining notification procedure of force majeure by contractor to the employer (X33).
- Termination of contract, which consists of: managing termination of contract by employers (X34), managing termination of contract by contractors (X35); ensuring that contract termination basis and criteria are clearly stated in the contract (X36).
- Final hand over, which consists of: managing signing of final handover (X37); anticipating if the contractor

does not sign final handover (by being blacklisted or disputed) (X38).

- Evaluation of contract, which consists of: evaluating the completed contract (X39); providing recommendations for subsequent contracting based on the experience of the previous contracts (X40).

## V. DISCUSSION

Based on the data gathered, only 39 out of 50 respondents met the required qualifications which have minimum education background Diploma, while eleven other respondents have high school education background. However the the eleven respondents have quite long working period as follows: two respondents have between 15 to 20 years working period, eight respondents have between 21 to 30 years working period, and one respondent has above 30 years working period. Assuming that the longer working period of an employee the higher the employee's competence in its field, it is decided that the eleventh of respondent's data will be taken into account in the analysis. However after recapitulation of respondent's answers, some of answers given seem to have an extreme numbers (outliers) compared to the average answers of other respondents. Those numbers are probably due to lack of respondent's understanding to the questions given. Unfortunately the existence of extreme numbers will disrupt stability of model created. Therefore, it is conducted validity, reliability, correlation and intercorrelation test using SPSS 24, to eliminate these outliers data, then followed by regression analysis to determine the model of equation formed. Based on assumptions used at the beginning of research, there are ten factors and 40 variables affecting the procurement performance of construction works in PT X. However, the results of data analysis questionnaire using SPSS 24, as well as various tests described above show that only eight variables whose significantly influence on the procurement performance. Those eight variables are X2 with the contribution value of 46.9%, X28 with the contribution value to the model of 18.2%, X20 with a contribution value of 7.9%, X6 with a contribution value of 5.7%, X5 with the contribution value 4.9%, X1 with a contribution value of 2.1%, X11 with a contribution value of 1.5%, X26 with a contribution value of 0.9%. It shows that all the model-forming variables have contributed 88.1% to the model.

Based on results of discussion above, the following points are recommended to PT X for improvement of procurement performance in the company such as, the selection of dispute settlement which has been done through arbitration as stated in construction works procurement contracts in PT X, seems no longer relevant to do, considering in some recent cases PT X always lose. Although theoretically dispute resolution through arbitration has several advantages over other alternative settlements such as litigation, but it does not seem to be appropriate for PT X. Therefore, there should be a re-evaluation in selecting alternative dispute resolution in accordance with the characteristics of company. In addition, among some cases disputed, it turns out using EPC contract where contractor performs design, procurement and construction. But apparently not every contractors have a good access to suppliers, due to location of PT X in remote area so that access to the supplier is

not as easy as on java island or other developed cities. Unlike if the procurement is conducted by PT X who has good access and agreements with suppliers. Therefore it need to be further evaluated whether type of EPC contract still relevant to do in PT X, especially for small projects.

## VI. CONCLUSION AND SUGGESTIONS

Form the result of discussion above, it can be concluded that:

1. Important aspects of contract administration of construction works procurement referring to FIDIC and Presidential Decree No 54/2010 on procurement of government goods/services (case study: PT X) as follows: variable X2 (conducting contract implementation and coordination meetings to monitor project progress); X28 (administering sanctions/penalties for them who commit a violation); X20 (managing advance payment with a guarantee in relation to the orderly contract administration); X6 (limiting the amount of variation and adjustments in order to run an orderly contract administration); X5 (carrying out contract administration in an EPC contract that refers to FIDIC or Presidential Decree No. 54/2010 and its amendments); X1 (determining communication procedures/ correspondence between parties involved before commencement date of contract); X11 (managing payment in accordance with agreement specified in contract) and X26 (managing dispute settlement through arbitration/court if deliberation is not reached).
2. Based on results of discussion above, the following points are recommended to PT X for improvement of procurement performance in the company such as, the selection of dispute settlement which has been done through arbitration as stated in construction works procurement contracts in PT X, seems no longer relevant to do, considering in some recent cases PT X always lose. Therefore, there should be a re-evaluation in selecting alternative dispute resolution in accordance with the characteristics of company. In addition, among some cases disputed, it turns out using EPC contract where contractor performs design, procurement and construction. But apparently not every contractors have a good access to suppliers, due to location of PT X in remote area so that access to the supplier is not as easy as on java island or other developed cities. Therefore it need to be further evaluated whether type of EPC contract still relevant to do in PT X, especially for small projects.

This research only deals with aspects of contract referring to FIDIC Silver Book so as to obtain a more comprehensive picture of the effect of contract administration on procurement performance, it is also advisable to look at other FIDIC documents such as Red and Yellow Book. In addition, to complete this research, it is necessary to see how procurement performance of PT X from the aspect of contract management.

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