A STUDY ON IDENTIFYING FACTORS AFFECTING PROJECT PERFORMANCE ON ROAD CONSTRUCTION PROJECTS

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I dedicate my thesis to my late father, my mother, my brothers, and my sisters who have supported me through one year of my study.

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ABSTRACT

This study identifies the project performance of road construction projects which are owned by Government of Indonesia and focuses only on the owner's perspective. The objectives of the owner are the project completed within specified time and actual cost is not exceed the budget and, which differs from contractor's point of view in which they want to obtain more profit. Project performance of the road is very crucial for the end-user who travel from one place to another place in order to fulfill the need of transportation of people, good, and service therefore it can increase the economic's growth of local people around the road and so does national economic growth. From the literature review, the success of the project can be measured from 13 categories, namely: internal complexity, external complexity, supervision and control, owner involvement, design effectiveness, schedule management, budget management, quality management, human resource management, construction resource management, construction method, communication and report and team relationship. That categories will be elaborated into 65 questions. Data collected from the owner's project manager who located in one of four provinces, namely South Sumatra, Lampung, Bangka Belitung and Bengkulu. Before analyzing data, that data must be tested its reliability by Cronbach's alpha to find out its validity. Then, data analyzed by the the Pearson correlation and Multiple regression analysis. The result shows that the sechedule management and budget management are highly affected the project performance.

ABSTRAK

Kajian ini mengenal pasti prestasi projek-projek pembinaan jalan raya yang dimiliki oleh Kerajaan Indonesia dan memberi tumpuan hanya pada perspektif pemilik. Objektif pemilik projek siap dalam masa yang ditetapkan dan kos sebenar tidak melebihi bajet dan, yang berbeza dari sudut pandangan kontraktor di mana mereka mahu mendapatkan keuntungan yang lebih. Prestasi projek jalan sangat penting bagi yang pengguna akhir-yang mengembara dari satu tempat ke tempat lain dalam usaha untuk memenuhi keperluan pengangkutan orang, baik, dan perkhidmatan itu ia boleh meningkatkan pertumbuhan yang ekonomi yang penduduk tempatan di sekitar jalan dan begitu juga pertumbuhan ekonomi negara. Dari kajian literatur, kejayaan projek ini boleh diukur dari 13 kategori, iaitu: kerumitan dalaman, kerumitan luaran, penyeliaan dan kawalan, penglibatan pemilik, keberkesanan reka bentuk, pengurusan jadual, pengurusan bajet, pengurusan kualiti, pengurusan sumber manusia, sumber pembinaan pengurusan, kaedah pembinaan, komunikasi dan laporan dan hubungan pasukan. Kategori yang akan dihuraikan kepada 65 soalan. Data yang dikumpul dari pengurus projek pemilik yang terletak di salah satu daripada empat wilayah iaitu Sumatra Selatan, Lampung, Bangka Belitung dan Bengkulu. Sebelum menganalisis data, data mesti diuji kebolehpercayaannya oleh alfa untuk mengetahui kesahihannya Cronbach. Kemudian, data yang dianalisis oleh korelasi Pearson dan analisis regresi berganda. Hasilnya menunjukkan bahawa pengurusan sechedule dan pengurusan bajet sangat dipengaruhi prestasi projek.

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CHAPTER 1

INTRODUCTION

1.1. Background of The Study

According to Decree of Ministry of Public Works of Republic of Indonesia No. 92/2011 concerning the national road which are not toll roads, the cummulative length of national roads in Indonesia in the end of 2010 is 38,570 Km. The development of road construction is influenced by the movement of goods and people which has increased from time to time. Accordingly, these existing roads must be maintained in oder to reduce the defects of the roads. The responsibility to handle these roads are undertaken by the Directorate General Highways, as a representative agency of Government of Republic of Indonesia.

In line with time, the condition of the roads are cumulatively decreased due to several inevitable factors i.e. weather, overloading of the vehicle, landslide, the surface of water level, etc. Meanwhile, in order to fulfill the movement of people, goods, and is definitely inevitable. Good road can be implemented by a team of people representing the owner, the designer, and the contractor, who manage the construction process phase.

A project can be defined as a group of interrelated activities constrained by a specific budget, scope, schedule and other related factors. According to the International Standard Industrial Classification issued by the United Nation (1998)

defines construction as constructing, altering, repairing and demolishing building; roads, street, bridge, railways, airports, dams, etc.

Project can also be defined as the entire process required to produce a new product, new plant, new system, or other specified result (Archibald, 2003). It also be defined as a narrowly defined activity which is planned for finite duration with a specific goal to be achieved (General Electric Corporation, 1983).

In this research, the definition of cost performance is the actual cost paid from owner's perspective to the contractor based on the works that had been done. The cost performance can be called success if the actual cost that has been paid to the contractor is less than budget planned in that particular of time. Moreover, time performance can be called success if the actual duration of project to complete the work is less than time planned. Meanwhile, the definition of time perfomance is the actual work performed by the contractor can be completed in specified time.

1.2. Problem Statement

The completion of the project without any cost overrun and time delay are the objectives of the owner. In this study, the owner comes from the public sector which has different objectives with the owner from private sector regarding to the cost. The owner has focuses only on cost,time, and quality performance callled project performance. These three factors will affect the scope i.e. outcome which are the ultimate objective of the owner.

1.3. Objective of Study

The objectives of this study are:

a) to identify what are the significant factors affecting the success of project on highway construction project;
b) to identify the correlation between factors affecting project performance in multiple regression analysis;

1.4. Research Questions

This study investigates the project performance of road projects from the viewpoint of the public owner. A total of 13 success factors will be identified from literature and the opinions of project managers and other experienced engineers. Data was collected from various projects handled by the Directorate General of Highways (DGH) in Indonesia.

1.5. Significance of Study

Owners need to know what factors affecting project performance from literature review. Hopefully, the project participants would be aware of these factors when making a choise of decision. These factors also affect on outcome and impacts of the road project performance.

1.6. Scope and Limitation of the Study

To identify the objective of the study, the reseacher will distribute questionnaire who are in charge as owner's project manager. Projects relating to this study are on going when the researcher doing the study. Even though, the project

were not completed yet but the project keeps maintain good performance without any delay and cost overrun issues and other causes on project performance.

According to Odusami (2003) some of measures are perplexing due to the inconsistency of the respondent's judgement. Based on previous research, the parameter of success projects is limited and focuses on cost and time performance. However, there are questions relating to quality performance but not as much as cost and time performance. Actually the contractor have their own criteria of project performance, which can be different with the owner's perspective. The projects is still on progress when the study was conducted.

1.7. Thesis Structure

This study is composed of five chapters as follows:

Chapter 1 presents the introduction which is including background of the study, problem statement, objective of the study, scope, importance and methodology

Chapter 2 will reviews literature review relating factors affecting project performance.

Chapter 3 describes the methodology that adopted to conduct this research, which describe the object of study, finding data method, analysis method.

Chapter 4 presents the results of analysis from questionnaire and data collection.

Chapter 5 presents the conclusion of this research and recommendations for future research.

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