

Efficiency as a Variable Intervening in Activity Based Management of Change Order and Economic Value Added to Improve Project Cost Performance on Building Construction

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Abstract

In this paper, research on the cost performance of building construction projects in the city of Surabaya. The main variables that become the starting point are Activity Change Management Base Orders (ABMCO) and Economic Value Added (EVA) with efficiency as intervening variables. This research method uses quantitative and qualitative approaches, while the sample selection method uses nonprobability sampling method with purposive sampling technique. This study used a sample of 100 respondents. Power is processed using SEM (Equational Structure Modeling) with AMOS version 18.

Keywords

Efficiency, Intervening Variable, Activity-Based Management Change Order, Economic Value Added, and performance of construction project cost building

1. Introduction

Building construction work activities must perform efficiency in order to obtain the lowest cost. In the activities of building construction in Surabaya, East Java, the number of changes in the type of work due to adjustments between plans and reality carried out caused the cost performance to be low. Change activities must always provide economic added value. Measurement of Change in Activity-Based Management Sequences (ABMCO) and Economic Value Added (EVA) together on the performance of building construction projects. conducted to find out what activities do and do not contribute to the project, and added value to improve the performance of building construction projects.

2. Literature Review

Activity Based Management Change Order (ABMCO)

Activity Based Management Change Order (ABMCO) is a concept to know that if the company uses its resources, then the company must first understand the activities that occur within the company, the activities that consume resources through the identification of cost drivers or cost drivers. Activity Based Management Change Order (ABMCO) is an integrated and comprehensive approach that keeps the attention of management centered on the activities undertaken with the aim of increasing the value of the customer and the profits earned by giving that value, that the Activity Based Management Change Order (ABMCO) model has two dimensions, namely the cost dimension and process dimension.

Economic Value Added (EVA), Stewart & Stern, seorang analis keuangan perusahaan Stern Stewart & Co. pada tahun 1993, mengembangkan konsep baru EVA (Economic Value Added) adalah pendekatan baru dalam menilai kinerja perusahaan dengan memperhatikan harapan para pemberi dana. Tidak seperti ukuran kinerja konvensional, konsep EVA dapat berdiri sendiri tanpa perlu analisis komparatif dengan perusahaan sejenis atau membuat analisis tren. Akuntansi yang digunakan tidak lagi menjadi penyedia informasi keuangan yang memadai. Perusahaan sekarang harus mengidentifikasi konsep Manajemen Berbasis Nilai (VBM) yang terbaik akan memulai tingkat yang lebih tinggi dari kesadaran Nilai Pemegang Saham di perusahaan. In corporate finance, as part of fundamental analysis, economic

value added (EVA) is an estimate of a firm's economic profit, or the value created in excess of the required return of the company's shareholders. EVA is the net profit less the capital charge for raising the firm's capital. The idea is that value is created when the return on the firm's economic capital employed exceeds the cost of that capital. EVA is a service mark of Stern Value Management

Change Order, A contract price that changes with a percentage change of between five percent to ten percent will cause the impact of change orders on project costs. Some research aimed at measuring change uses a statistical model to measure the impact of change orders on project costs based on contract change data which includes; due to errors and omissions, the scope of work changes, or changes due to unexpected conditions. A statistical model is needed to measure increases in contract prices due to changes in orders in construction projects. The most significant variables that affect the value of the change order, namely (1) the time of the change order and (2) when the reason for issuing the change order is an unexpected condition. Two regression models were developed and validated as follows: (1) a model to measure the percentage increase in contract prices due to changes in orders that increase contract prices from 0.01 to 5% and (2) models to measure percentage increases in contract prices due to changes in orders that increase contract price from 5 to 15%. The models will provide the owner with a retrospective or forward price of the change order, and hence, allow the owner to estimate and use the contingency amount.

Project Performance, The construction industry is generally considered to have underperformed compared to other sectors. Not only that, the UK construction industry has been criticized for not performing at the same level as that of other developed countries. To this, the UK working groups on Key Performance Indicators (KPIs) have identified ten parameters for benchmarking projects, to achieve excellent performance, in response to Egan's report. These consist of seven project performance indicators, namely: construction cost, construction time, cost predictability, time predictability, defects, client satisfaction with the product and client satisfaction with the service; and three company performance indicators, namely: safety, profitability, and productivity. Most of these indicators can be regarded as having results orientation, except for predictability of design cost and time, and predictability of construction cost and time, which can be considered as procurement orientated, and safety, which can be regarded as process orientated. It is the contention* of this paper that successful construction project performance can be divided along three orientations: procurement, process and result orientations. Besides, although these indicators provide a generic framework criterion for successful construction project performance, this current paper will give a review of measurements developed to assess project performance and propose a model that will help to identify the performance of the stakeholders involved in a construction project.

3. Data Analysis And Discussion

3.1. Research Method

Research Approach

Qualitative methods are used in this research with general, flexible, and dynamic nature. Qualitative research is more focused on something that cannot be measured by black and white truth, so that in qualitative research researchers dig deep into the data for certain things. Thus, the quality of qualitative research is not very much determined by the number of sources involved, but rather how deep the researchers dig up specific information from the selected sources. Population and Sample, The population in this study were 121 registered contractors in the Indonesian Construction Services Development Agency (LPJK) Surabaya. The sample selection method in this study uses a non-probability sampling method with a purposive sampling technique that is the sampling technique with specific considerations.

- 1) Has K1-K3 Classification
- 2) Total project work for 2016 max 2.5 Billion.
- 3) Minimum 1 time working on a project in 2016.

To calculate the number of samples to be used :

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{121}{1 + (121 (0,05^2))}$$

$$n = 92.9 \approx 93 \text{ contractors}$$

Model of Conceptualization:

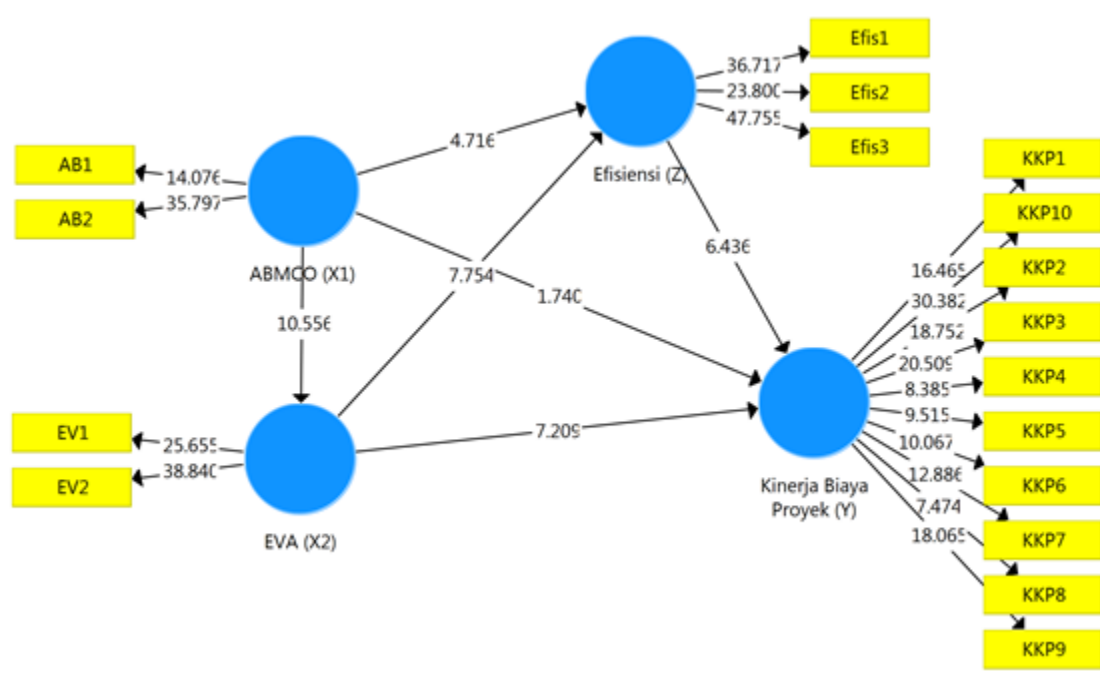


Figure 1: Conceptualization Model

4. Conclusions And Suggestions

4.1. Conclusion

Relationship Activity Based Management Change Order (ABMCO) with Efficiency

Based on the results of the study, it is noted that Activity Based Management Change Order (ABMCO) has a significant effect on efficiency. This can be seen from the t-statistic value of 2,802 which means greater than 1.96, which means that the more strategic use of Activity Based Management Change Order (ABMCO) will be able to improve project efficiency. In other words, Activity Based Management Change Order (ABMCO) operationally can improve operating efficiency and asset usage rate and lower cost. The focus is to do things right and do more activity. The significant effect of Activity Based Management Change Order (ABMCO) on efficiency shows that efficiency improvement can be made with good Activity Based Management Change Order (ABMCO) implementation. With Activity Based Management Change Order (ABMCO), a company can evaluate the cost and value of a processing activity so that there will be improved competitive position and increased process efficiency.

Relationship Economic Value Added (EVA) with Efficiency, Based on the results of the study, it is noted that Economic Value Added (EVA) has a significant effect on efficiency. The significant effect of Economic Value Added (EVA) on efficiency shows that efficiency improvement can be made with good EVA. The result of the analysis indicates that the variable of Economic Value Added (EVA) has a positive influence on project efficiency. This means that project efficiency can be established through good Economic Value Added (EVA). Based on the description above, it can be concluded that the first hypothesis reads "Economic Value Added (EVA) effect on the efficiency of building construction projects" otherwise accepted.

Relationship Activity Based Management Change Order (ABMCO) with Project Performance, Based on the results of the study, it is noted that ABMCO has no significant effect on project performance. Based on the above description, it can be concluded that the first hypothesis reads "Activity Based Management Change Order (ABMCO) affect the performance of building construction projects" otherwise not accepted.

Relationship Efficiency with Project Performance, The positive direction of efficiency to project performance indicates that there is a unidirectional relationship which means increasing productivity will be able to improve project performance.

Relationship Economic Value Added (EVA) Relationship with Project Performance, The significant effect of Economic Value Added (EVA) on performance shows that performance improvement can be made with good Economic Value Added (EVA). The result of the analysis indicates that the variable of Economic Value Added (EVA) has a positive influence on project performance. This means that project performance can be established through sound

Economic Value Added (EVA). Based on the description above, it can be concluded that the first hypothesis reads "Economic Value Added (EVA) effect on the performance of building construction projects" otherwise accepted. Relationship Activity Based Management Change Order (ABMCO) with Economic Value Added (EVA), The significant effect of Activity Based Management Change Order (ABMCO) on Economic Value Added (EVA) shows that the increase of Economic Value Added (EVA) can be done with proper implementation of Activity Based Management Change Order (ABMCO). The result of analysis shows that Activity Based Management Change Order (ABMCO) variable has positive influence on Economic Value Added (EVA). This means that EVA can be established through the implementation of a good Activity Based Management Change Order (ABMCO). Based on the description above, it can be concluded that the first hypothesis reads "Activity Based Management Change Order (ABMCO) effect on Economic Value Added (EVA) building construction project" otherwise accepted.

4.2. Suggestion

To improve project performance, it is necessary to enhance the effectiveness of project implementation through Activity Based Management (ABMCO) process; provide cost information and provide information about what activities are undertaken in the project

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