



The Analysis of the Factors Which Affect the Building Costs in Indonesia

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Abstract

Buildings are the kind of facility needed by everyone. The accuracy in determining the amount of costs required to build a building has become a challenge for all parties involved in the process. This study aims to determine the factors affecting the cost of a building. By using four independent variables, i.e. floor area, number of floors, foundation depth, and project implementation time, and one dependent variable in the form of a contract value of the building project, an analysis to determine the factors that influence the cost of a building has been made. Using 81 samples in several cities in Indonesia and multiple linear regression of stepwise method, the results show three factors that significantly affect the cost of building projects. They are floor area, number of floors, and project implementation time. This is indicated by t_{count} for floor area of 12.770, t_{count} for the number of floors of 46.05, and t_{count} for project implementation time of 2.321.

Keywords: Building Costs; Indonesia; Construction Project; Regression.

1. Introduction

Meeting the needs of government buildings, private buildings, as well as individual buildings is a necessity. Each party that will establish buildings definitely requires an initial estimate of the costs.

Dipohusodo [1] states that a key consideration in the world of construction is the cost because it takes such big amount and vulnerable to the risk of failure. In building construction projects, appropriate use of cost is both a demand and challenge that must be met. Not infrequently, a construction project cannot be completed due to lack of funds provided. Project cost overruns may happen due to various factors such as errors in planning or errors in cost calculations by the contractor. Budi [2] suggests that more than 50% of the causes of loss is due to errors in the estimating the project cost during the tender. Efforts should be made to meet the accuracy of the estimated costs by knowing the factors most responsible for influencing the cost of the construction project. Those factors vary, from both the internal and external of the construction project. These must be considered properly so the challenge of cost overrun that can lead to failure of the construction project can be avoided.

On that basis, this study will analyse factors that affect the cost of building projects in Indonesia. By knowing the factors, it is expected that the problems arising due to imprecision in estimating the cost of a building project can be solved.

2. Review of Related Literature

Many previous studies have discussed the factors that affect the cost of the building project. Henny [3] concludes four factors that have a positive and significant relationship with the incremental cost of building, i.e. fund, labor, cost estimation, and material factors. On the other hand, Ahmed, Dlask, and Hasan [4], find projects that have excess

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