

## Abstract

The research is studying design guidelines for risk management of construction material cost in development of middle-income condominium project for socio-economic support of human capital. The research is using the quantitative method as its research approach. This research aims to explore and analyze effects from material cost fluctuation during 2004-2008. The middle-income condominium projects are selected for this research analyzing in areas that are next to BTS and MRT sky train. Project area are scoped about 1,200-3,200 sq.m. and constructed between 2006 to 2008. Project allowance costs 200-300 million Baht. The research is using three main methods of analysis. They are the analysis of variance in materials cost fluctuation, the materials proportion analysis, and lastly the lowest cost overruns risk (COR) evaluation for project development.

After analyzing, the research found that the design guidelines for risk management of construction materials cost can be determined on three main factors: the proportion of materials used, the variance of material cost, and the lowest cost overrun risk value in developing process. These three factors are based on materials that were evaluated in this research in six categories: miscellaneous architectural materials, electricity and water supply, concrete, steel, sanitary ware, and wood. The results show six material proportions of 2.8, 1.5, 1.0, 0.5, 0.1, and 0.1 respectively. The cost overrun risk indicated a value of 1.0545, so the developers are able to finish the middle-income condominium projects with the lowest contingency of 5.45% amid the situation of material cost fluctuation that is caused by the continuously oil price rise. Additionally found, the design guidelines for risk management of construction materials cost in development process of middle-income condominium projects for socio-economic can support the human capital indirectly. As the benefit of this research to public, the proposed methods for the project risk management of construction material cost, the residences will receive their places to live according to the purchasing contracts and will have no longer conflicts with developers.