

Log production prediction model: a comparison between Malaysia and Indonesia using multiple regression technique

Abstract

Timber production and its related products have played a vital role in the development and economic growth of Malaysia as well as Indonesia. Logging activities are hence common to both countries pertaining to the revenues generated from these activities. Thus, this paper aspires to determine the trends on log production of Malaysia and Indonesia, and do a comparison between them. Modelling procedures using the multiple regression technique are illustrated, where the best models were selected after the four model building phases, incorporating the multicollinearity and coefficient tests, the eight selection criteria (8SC) and the goodness-of-fit tests. Prediction capability is evaluated through the calculated mean absolute percentage error (MAPE) whereby values less than 25% indicate an excellent accuracy measurement in predicting the log production. The log production model from Indonesia is found to give a better prediction with an MAPE of 2.39% compared to Malaysia (19.48%).