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SYNTHESIS MODEL

DOUNGKAMOL SUKKAEWMANEE: DETECTING EARNINGS MANAGEMENT WITH  
MODIFIED SYNTHESIS MODEL AND SUPPORT VECTOR REGRESSION. ADVISOR COMMITTEE:  
SUCHADA KORNPETPANEE, Ph.D. 143 P. 2015.

The objectives of this research were: 1. to develop an earnings management detection model for nonlinear data by modifying the synthesis model of Ye; 2. to evaluate the efficiency of the developed model through comparisons with the linear regression models and the neuron networks model; 3. to assess the accuracy of the developed model using the information in firms subject to SEC enforcement actions for allegedly overstating earnings.

The samples consisted of firms listed on the Stock Exchange of Thailand and firms subject to SEC enforcement actions for allegedly overstating earnings. The study's methodology was divided into three stages: developing the model, evaluating model efficiency, and assessing the accuracy of the developed model from actual information.

Results indicated that:

1. The model developed, with support vector regression, showed a lower frequency of Type I and II error rates than those found in the linear regression model (approximately 70% and 31%) and the neuron networks model (approximately 73% and 38%).

2. The accuracy of the developed model for detecting earnings management was in compliance with SEC enforcement actions (MSE = 0.047, which was less than the criteria 0.100).

In conclusion, the model developed was found to be efficient, and more accurate in detecting earnings management for nonlinear data than current models.