Chompoonut Monpaneevong 2010: A Comparative Statistical Methods of Profit-Loss Groups Classification for Savings Co-operatives in Thailand. Master of Science (Statistics), Major Field: Statistics, Department of Statistics. Thesis Advisor: Associate Professor Apinya Hirunwong, Ph.D. 123 pages.

This research aims to classify the performance of Saving Co-operatives in Thailand by comparison of three classification methods which are discriminant analysis (FLDF and QDF model), linear programming (LCM and LPMED model) and logistic regression analysis.

The data sets to analyze were 13 financial ratios of Savings Co-operatives from Cooperative Auditing Department in the period of 2006-2008 based on the CAMEL analysis. The sample in this study consists of 186 Thai savings co-operatives which are operating at the end of year 2008, of these, 169 earned profits for three continuous years and 17 suffered losses for three continuous years.

The study results reveal that the most suitable method for the classification of groups of savings co-operatives is the discriminant analysis with the FLDF and QDF model which is correctly classify 100%. It accurately classifies the groups by 3 financial ratios which are the debt to the savings co-operatives fund ratio, reserve fund to assets ratio and total asset turnover. For logistic regression analysis and linear programming with LPMED model and LCM model are correctly classify about 98.39%, 96.77% and 96.24% respectively.

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