

**A STUDY ON CLOSED ESTABLISHMENTS IN THE  
PHILIPPINES USING LOGISTIC REGRESSION AND  
CLASSIFICATION TREE ANALYSES**

**Thesis**

**Submitted to  
The School of Statistics  
University of the Philippines, Diliman, Quezon City**

**In Partial Fulfillment of the Requirements  
for the Degree of  
Master of Statistics**

**By  
Mary Jane C. Cabauatan**

**May 2004**

## ABSTRACT

This study analyzes closed establishments using logistic regression and classification tree analyses. Factors that contribute to closure of establishments were determined. The classification tree provides a better classification rate but its use on large data set such as in this study is not advisable and difficulty in interpreting the nodes were also encountered. On the other hand, results of the logistic regression were easier to interpret. This study thus recommends the use of logistic regression for large data sets and classification tree for smaller data sets.

Results in logistic analysis revealed that establishments are more likely to close if these underwent change in name, address, economic organization, legal organization, or geographic code. Of all establishments, retail sale of computers, computer peripheral equipment and software appear to be most vulnerable to closure and provinces that more likely to experience having closed establishments are those from Sarangani and Misamis Oriental.