

# Fraudulent financial reporting detection and business failure prediction models: a comparison

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## Purpose

The purpose is to explore the differences and similarities between fraudulent financial reporting detection and business failure prediction (BFP) models, especially in terms of which explanatory variables and methodologies are most effective.

## Design/methodology/approach

In total, 52 financial variables were identified from previous studies as potentially significant. A number of Taiwanese firms experienced financial distress or were accused of fraudulent reporting in 2005. Data on these firms and their contemporaries were obtained from the *Taiwan Economic Journal* data bank and Taiwan Stock Exchange Corporation. Financial variables were calculated for the years 2003 and 2004. Three well-known data mining algorithms were applied to build detection/prediction models for this sample: logistic regression, neural networks, and classification trees.

## Findings

Many of the variables are effective at both detecting fraudulent financial reporting and predicting business failures. In terms of overall accuracy, logistic regression outperforms the other two algorithms for detecting fraudulent financial reporting. Whether logistic regression or a decision tree is best for BFP depends on the relative opportunity cost of misclassifying failing and healthy firms.

## Originality/value

The financial factors used to detect fraudulent reporting are helpful for predicting business failure.

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**Keywords:** [Financial reporting](#), [Business failures](#), [Taiwan](#), [Fraud](#), [Cluster analysis](#)

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