Risk Management of Automobile Insurance Market in Taiwan

Wo-Chiang Lee

Department of Banking and Finance Tamkang University, 151, Yin-Chuan Road Tamsui Taipei County, Taiwan 25137, R.O.C.

Email:wclee@mail.tku.edu.tw

Abstract: In this article, we investigate four types of classifier for automobile material damage insurance underwriting. From many studies exiting in the literatures, it can be seen that artificial neural network (ANN), and Genetic Adaptive Neural Network (GANN) are generally more superior to logic model. However, ANN and GANN have been criticized to identify the relative importance of potential independent variables, and certain interpretative difficulties. We also show that the Genetic Programming Decision Tree (GP-DT) classifier yields the best classification accuracy, and efficiency through the approximate rules inferred are less intuitive and humanly understandable. Furthermore, the result is feasible to construct the automobile material damage insurance underwriting system. It can decrease the default risk of underwriting more efficient.

Keywords: Automobile Material Damage Insurance, GP-DT Classifier, Underwriting Insurance

JEL Classification Number: C01, C13, and C14