

Surasan Vivekmetakorn 2009: A Study of Classification Methods to Determining Factors that Affect the Purchasing Decision of Goods and Service in Modern Trade of Consumer: A Case Study of Chatuchak District, Bangkok. Master of Science (Statistics), Major Field: Statistics, Department of Statistics. Thesis Advisor: Associate Professor Prasit Payakkapong, M.S. 135 pages.

This research has a purpose to study factors which influence consumers in purchasing of goods and using of services in modern trades by comparing three classification methods e.g. the Multinomial Logistic Regression Analysis method (MLRA), the Decision Tree method (DT) and the Back propagation Neural Networks Model (BPNN). The factors used in classifying of which are 49 variables and apply a method of quota sampling within the Chatuchak District, Bangkok from the three modern trades located therein e.g. CENTRAL Department Store, TESCO Lotus and Carrefour totally 1,500 samples.

The research is found that the method of BPNN gives 90.33% of classification and regarded as the most percentage accuracy, while the methods of MLRA and DT give the percentage accuracy for classification of 70.47% and 61.67%, respectively. The BPNN, as the best method, is found that the most effective factors in classifying consumers for each modern trade can be summarized as follows. For components market of the products, the factors influencing the CENTRAL group are a classification of goods which is comfortable for finding, TESCO Lotus are variety and modern of goods and services and Carrefour is size of package. For components market of price, the factors influencing the CENTRAL group and TESCO Lotus are the appropriate price and Carrefour are price signs clear. For components market of places, the factors influencing the CENTRAL group are near location, TESCO Lotus and Carrefour are a clean place. For components market of promotion the factors influencing the three modern trades are advertisement by presses. And for components of persons/ staffs, the factors influencing the CENTRAL group are staff having knowledge in the products, TESCO Lotus are clothes and cleanliness of staffs and Carrefour are the number of employees with adequate facilities.

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