

ABSTRACT

Classical music, one of music genre, has its own special audience with unique characteristics of the consumer behavior. For example, for Taipei as a metropolitan in Taiwan, the ticket sales of classical music concerns with lower price in fact is better than the sales of tickets with higher price. Therefore knowing the characteristics and purchasing pattern of classical music concerts is very crucial for the success of their concert ticket promotion. In this research, multivariate regression analysis and Artificial Neural Network (ANN) were used to study and predict the classical music ticket sales of low, medium, and high price category by using data features which might affect the ticketing sales such as type of classical music, whether the concert has sponsorship, and so on. The ticket sales data of classical music concert from 2010 to 2011 in Taiwan provided by an online ticketing company in Taiwan was used for investigation. Prediction using multivariate regression method is better using only correlated attributes. In contrary, prediction using ANN method is better using all of the attributes. The experimental result shows that the ANN model can generate better prediction result comparing with the multivariate regression method. In average, ANN model can obtain 0.174 of RMSE which can be considered as 17% prediction error in terms of the percentage of ticket sold across three price category and the total ticket sold for all categories.

Key words: ticketing sales forecasting, multivariate regression, neural network