台灣地區消費者物價指數的分析與預測

羅琪,魏聰偉
應用統計學系
管理學院
chilo@chu.edu.tw

摘要

Since “the consumer price index (CPI)” and “the inflation” have close relationship and the CPI is an index to measure the change of price level. Therefore, if one can construct a forecast model for the CPI, it may provide the government to propose early policy to hold down the price and the inflation. CPI is a characteristic of the time series, so the purpose of this research is to use both the ARIMA models and the classical models in the time series analysis and to seek out the better forecasting model the CPI in Taiwan.

CPI data were taken from National Statistics, R.O.C.(Taiwan) from January in 1981 to September in 2009. Then, this research used the statistical software SPSS 11.0 to fit the ARIMA model. The time series ARIMA model which includes model identification, model estimation, model diagnostic checking and forecasting was offered by Box and Jenkins in 1970. In the classical time series analysis, regression models and exponential smoothing models are used. After comparing the ARIMA model and linear exponential smoothing model, the conclusion is that the better forecasting model of CPI is linear exponential smoothing model.

關鍵字：consumer price index, exponential smoothing model, ARIMA model