石油價格預測-二次正弦曲線模型應用

徐子光, 蔡錦昌, 鄭國樑

國際企業學系

管理學院

hsutk@chu.edu.tw

摘要

Oil price uncertainty considerably impacts the business cycle, investment decision-making, and all kinds of general economic problems. Hence, how to accurately predict future oil prices has become an important issue toward governmental policies. This research collects data from January 1984 to October 2012 with a total of 346 historical observations monthly. Since fuel resources' scarcity and renewability increase the impact of oil prices, the long-term quadratic sine curve trend model was applied to establish new quadratic equations and predict the oil prices in future decades. The results show that the international crude oil prices of $200 per barrel in 2019 will exceed $300 in 2025. As such, the results can provide an accurate oil price forecast for the government，businesses and investor as a useful reference of management and investment decision making.

關鍵字：quadratic, sine curve model, crude oil prices, forecast