

Estimation methodology of short term natural rubber price forecasting models

ABSTRACT

This study developed a short-term econometric model of world natural rubber price Standard Malaysia Rubber Grade 20(SMR20). Both single and simultaneous equations were utilized using monthly data from January 1990-December 2008 as estimation period and data from January 2009-June 2009 was used as an ex-ante forecast. The data were tested for unit root and Vector Error Correction and co-integration method was used to estimate the parameters of the model. The models specifications were developed in order to discover the inter-relationships between NR production, consumption and prices of SMR20 and to determine forecast price of SMR20. Comparative analysis between the single-equation specification and simultaneous supply-demand and price equation were made in terms of their estimation accuracy based on RMSE, MAE and (U-Thile) criteria. Ex-ante forecasts was carried out for the period of January 2009-June 2009. The results revealed that the values of the RMSE, MAE and U of simultaneous supply-demand and price equations model were comparatively smaller than the values generated by the single-equation model. These statistics suggest that the simultaneous equation of supply-demand and price model is more accurate and efficient measure in terms of its statistical criteria than the single-equation model in predicting the price of SMR20 in the next 6 months.

Keyword: Supply-demand and price model; Econometric; Forecasting; Single equation; Natural Rubber Price