

# Sales Forecasting Considering Advertising Effect: Application of Trend-Cycle Decomposition in Cointegrated System

전 덕빈, 송 인선  
한국과학기술원 경영과학과

## Abstract

A long run and short run relationships between sales and advertising are analyzed within a new framework of trend-cycle decomposition of cointegrated time series. Sales and advertising have the long run relationship by sharing an unknown common trend, while the short run effect of advertising on sales and the feedback effect of sales on advertising are also incorporated into the relationships of cycle components of sales and advertising. The application result of the proposed model for the well-known Lydia Pinkham data is compared with those of other models, which shows the better forecasting capability than any other.