

Abstract

Many analysts coincide that transportation is closely linked to economic activity. However, data containing information about transportation have not been part of their research for a long time. Introduction of electronic toll collection systems in recent years led to a new source of data containing information about truck transport. This thesis aims to examine the ability of seasonally adjusted toll data to predict Czech economic activity. Economic activity is represented by four variables - real GDP, nominal GDP, industrial production index and the volume of foreign trade. Seven models - five dynamic models, ARIMA model, and regression with ARIMA error - are constructed for each dependent variable. These models are then compared using both Akaike and Bayesian information criterion and the most appropriate model for each dependent variable is selected. It was concluded that both real GDP and industrial production index can be predicted using toll data. Both the number of kilometers travelled, and the amount of toll collected seems to be good predictors of economic activity. Particularly, data containing information about toll collected might be more beneficial because the amount of toll collected in given quarter can even predict economic activity in the next quarter.