

Название публикации:

IMPROVING THE ACCURACY OF MACROECONOMIC TIME SERIES FORECAST BY INCORPORATING FUNCTIONAL DEPENDENCIES BETWEEN THEM

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Аннотация:

A parametric approach to forecasting vectors of macroeconomic indicators, which incorporates functional dependencies between them, has been considered in this paper. As it is possible to functionally bind together most indicators, we believe that this information can help to substantially decrease their forecast error. In this paper, we have proposed to readjust the traditionally obtained forecasts given the known analytical form of the relationship between the considered indicators by the maximum likelihood method. We have also derived a standard form of the readjusted probability density function for each analyzed indicator by normalizing its marginal distribution. In order to prove the efficiency of the proposed method, an empirical out-of-sample investigation has been carried out regarding a simple example for such macroeconomic indicators as gross domestic product (GDP), GDP deflator, and GDP in constant prices.

Ключевые слова:

regression analysis; GDP; inflation; monetary base; maximum likelihood method; probability density function; functional dependencies of macroeconomic indicators