



ROMANIAN ACADEMY INSTITUTE FOR ECONOMIC FORECASTING

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2. Non-technical summary

A. “Unobserved components methods to estimate potential GDP (Case of Romania)” (author: Cristian Stănică)

1. **Objective:** to estimate the unobserved components of seasonal adjusted log quarterly GDP in the Romanian economy; to identify the properties of the long-run component (the trend), if it is a I(1) or a I(2) process.
2. **Methodology:** the uses of the Kalman filter to estimate the univariate models; the Harvey-Jaeger model without explanatory variables and the Harvey model with interventions.
3. **Results:** we detect an integrated series of second order I(2) for the trend and the presence of two cyclical components, one at the quarterly level, which measures the residual seasonal effects, another in the medium term with a period of 5 years and 3 months. The smooth I(2) trend can be explained by the presence of permanent shocks which are absorbed gradually by the economy.

B. “Determining the Output Gap and the Inflationary Shocks Dynamics. Case of Romania” (authors: Cornelia Scutaru, Cristian Stănică)

Objectiv: assessing the output-gap and the influence of the inflationary shocks within the Romanian economy.

Methodology:

- An extension of the Blanchard-Quah decomposition is used, for three variables: real output, unemployment rate and inflation;
- Using the impulse-response function, three types of shock are assessed: productivity shocks (supply), adverse shocks on the labor market and adverse shocks on the goods and services market (inflationary);

Results:

- The shocks' dynamics is confirmed by the real developments occurred in the Romanian economy over the interval 1994-2003;
- An *ex post* assessment for 2003 and 2004 is made, and the results allow for a forecast for 2005.

Conclusions:

- There are two types of shocks that act within the transition economy: permanent and transitory;
- The relevance of shocks on the labor market and of the productivity shocks upon unemployment is confirmed. The equilibrium is reached in around 4 years, the same as in the case of the output. The productivity shocks do not have relevance on the goods and services market.
- There is a lagged (2 lags) positive correlation between the output-gap and the inflation data series. Such a phenomenon is explainable through the high inertia of the economic reactions under the circumstances of transition; the analysis of the impulse-response function confirms such an interpretation.

C. "Estimating natural unemployment in transitional economies (Case of Romania)" (author: Lucian-Liviu ALBU)

Using four different filters to estimate natural rate of unemployment and an autonomous dynamic "pure" productivity model the following findings resulted (1992-2004):

- There are similar dynamics of the natural rate for all estimation procedures: minimal value registered during the first years of transition (1992-1994) and the maximal value in middle period (1999-2001). The average value is about 8.0%.
- On the base of simulations, the unfavorable impact of a positive difference between effective unemployment rate and natural rate on inflation dynamics is demonstrated as the general rule asserted in literature.
- Before 1998 the inflation is accentuated procyclical relating to output gap, but after 1998 it is countercyclical that could mean a favorable temporary situation when a growth in output may be accompanied by a negative change in inflation. More explanations could be extracted by considering the dynamic process of real reforming and restructuring: a prolonged and hesitant restructuring process of economy in first part of transition (before 1998); and an accelerated process of it during last years (after 1998).
- There is an evident inverse correlation between the estimated natural rate of unemployment and productivity growth (estimated on the base of an autonomous dynamic "pure" productivity model).