

**BUCHAREST UNIVERSITY OF ECONOMIC STUDIES**

**Council for University Doctoral Studies**

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**ADVANCED METHODS FOR ESTIMATING MACROECONOMIC INDICATORS**

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This paper presents a series of quantitative methods of analysis and forecasting of the main macroeconomic indicators specific to the Romanian economy. Also, it was studied the estimation of potential GDP and Output Gap layer, using 3 estimation methods, as Hodrick-Prescott și Band-Pass filters- known as univariate methods, production function and Kalman filter-multivariate method. The main results of this analysis highlight that the most accurate is multivariate method. Another aspect of this paper is the study of the fiscal-monetary interaction implications, by implementing the SVAR Bayesian methodology, with the aim of adopting the efficient public policies. In addition, this study provides a forecasting and investigating framework of the main shocks, that impacted Romanian economy, using a Dynamic Stochastic General Equilibrium(DSGE) model, highlighting the behavior of variables under conditions of high uncertainty. Last but not least, this paper evaluates the public debt and the budget deficit, from the perspective of their sustainability. To achieve this, the Panel Smooth Transition Regression(PSTR) model was used and the main results found that the determining factors of the budget deficit have a different behavior depending on the threshold variable, respectively the level of the underground economy.