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MODELS IN MONETARY ECONOMICS

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ABSTRACT

This study makes a significant contribution to understanding the dynamics of business cycles in Romania over the past two decades by applying a rigorous methodology that combines multivariate analysis with sectoral approaches, within a comparative framework that includes two Central and Eastern European economies: the Czech Republic and Hungary. This comparative perspective allows for the formulation of relevant conclusions regarding business cycle synchronization, sectoral vulnerability to external shocks, and the effectiveness of policy responses adopted by national authorities in times of crisis.

Using advanced statistical and econometric methods, the research highlights how different economic sectors respond to changes in the business cycle, identifying the most shock-sensitive areas and their potential as early warning indicators of recession. The sectoral analysis thus provides a detailed picture of the Romanian economy and supports the development of early warning tools useful for economic policy decisions.

A central component of the research is the assessment of the impact of external shocks on economic growth, conducted through Structural Vector Autoregressive (SVAR) models. These models distinguish between financial and health-related shocks, emphasizing the strong influence of external production and prices on GDP dynamics. Results show that Romania and Hungary reacted faster than the Czech Republic during crises like the 2008 financial crash and the COVID-19 pandemic, indicating higher sensitivity and adaptability. Granger causality tests confirm a unidirectional link from external shocks to domestic growth, highlighting the need to monitor global indicators in national policy decisions.

Another key aspect of the thesis is the analysis of monetary policy effectiveness under economic instability, using Time-Varying Parameter Factor-Augmented Vector Autoregression (TVP-FAVAR) models. These models capture the changing impact of both conventional and unconventional monetary policy measures depending on the phase of the business cycle. The results provide guidance for flexible and adaptive policy design in the face of current uncertainties caused by the health crisis, elevated inflation, and geopolitical tensions.

Overall, the research proposes a complex and integrated analytical framework that supports sound economic policymaking in contexts of volatility and uncertainty, while also offering theoretical and applied contributions to the specialized literature in the field of monetary economics.

KEY WORDS: business cycles, monetary economy, external shocks, health crisis, financial crisis, economic growth, inflation

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