

An Empirical Study of Simple Sum and Divisia Monetary Aggregation: A Comparison of Their Predictive Power Regarding Prices and Output in Turkey

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If there is one thing economists agree on, probably it is that inflation is a monetary phenomenon. Money also is thought to be related to the output level of the economy. The consensus among economists, however, does not go any further, and views differ on the characteristics of the relationships between money and the other sectors of the economy. It is not only these relationships, but also the definition of money at macroeconomic level is controversial. There are different proposals on how to define and measure money. Among them are the traditionally used simple sum money and Divisia money proposed by W. Barnett. This dissertation makes an attempt to test which definition of money works better when facing the real world situations. Without going far into theoretical details, yet trying to be as rigorous as possible in applying the employed techniques, we use several models and methods to compare the performances of simple sum and Divisia aggregates in predicting Turkish inflation and performances of simple sum and Divisia aggregates in predicting Turkish inflation and output growth in last two decades both in-and out-of-sample. We used all the time series approaches that allow us to incorporate money as explanatory variables. We also add an additional approach, neural networks, to these as an alternative forecasting tool.

Based on our results, we confidently conclude that money provides a good amount of information in predicting inflation and output in Turkey. Divisia aggregates have superior information content in predicting output, real or nominal. IN forecasting inflation, we make a distinction between high- and low-inflation environments. In high-inflation state, money appears to be more and directly related to the determination prices, while in low-inflation environment the link between money and prices get looser and more indirect. In high-inflation periods, Divisia aggregates clearly provide better information than simple sum aggregates. In low-inflation periods, on the other hand, simple sum aggregates are better predictor of inflation.