

Macroeconomics and the Nexus between Energy and Agricultural Commodities Prices

R.D. Weaver and Jiachuan Tian

ABSTRACT

The variation of energy prices has been a traditional source of shocks to the real economy. In many cases, this variation has manifested in jumps in energy prices that were characterized by some persistence. From another perspective, energy price volatility has historically been noted and its effects on real economy debated. Historically, the importance of the shocks to the real economy has led them to be labeled as energy crises, as they were argued to have resulted in substantial changes in real prices that induced changes in behavior on the demand and supply sides of the many markets. However, empirical studies of transmission of energy prices into the real economy have produced no consensus and have been challenged by a number of significant specification issues that have resulted in substantial variation in inference drawn from results. Among these issues is the question of completeness of model specification. This paper examines the question of whether such models need to incorporate macroeconomic indicators. Clearly, macroeconomic factors such as interest rates and exchange rates play a role in the determination of energy and commodity prices, however, considerable specification uncertainty characterizes the question of which macro metrics to incorporate. This paper examines this issue from the perspective of weak exogeneity and finds evidence that the parameter estimates associated with time series models that exclude consideration of macro indicators are not compromised by their exclusion. We examine this issue using Italian, U.S. grain, and Brent crude oil prices.