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Research Report

Asymmetries in Commodity Price Behaviour

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Asymmetries in Commodity Price Behaviour

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Many developing countries are dependent on commodity prices as their main source of income. Additional income from commodity price booms can benefit the economies of low income countries that are reliant on a few commodities, while a slump in commodity prices can be harmful. Policy prescriptions can be potentially catastrophic if the income from a commodity boom is diagnosed as permanent when in actual fact turns out to be temporary. It is no surprise therefore, why the dynamic properties of commodity prices in relation to manufactures has been of great interest to economists and policy makers. Deaton and Laroque (1992) in an influential paper have described commodity prices to have long periods of doldrums punctuated by sharp upward spikes. This would imply that in relation to a threshold, commodity prices would be persistently below the threshold and when prices move above it then the movement would be sharp, in the sense that it would revert quickly back to the attractor or long run intertemporal equilibrium.



.... / To address this behaviour we adopt the Threshold Autoregressive (TAR) model due to Enders and Granger (1998) assuming that commodity prices will be stationary. Further, as propounded by Prebisch (1950) in his influential study, primary commodity prices relative to the prices of manufactured goods would fall during cyclical downturns by more than they would rise during cyclical upturns. To test this type of asymmetry related to speed of adjustment, we make use of the Momentum Threshold Autoregressive (M-TAR) model due to Enders and Granger (1998), whereby asymmetry is addressed by suggesting that there is more momentum in price adjustment depending on whether prices are increasing or decreasing. Applying the Enders and Granger method (1998) and the more recently developed and powerful method of Lee et. al. (2011), we find commodity prices to broadly exhibit stationary behaviour with considerable evidence of asymmetries. However, while asymmetries exist, the type of asymmetric behaviour seems to be contrary to what Deaton and Laroque (1992) and Prebisch (1950) propound. In case of the momentum type asymmetry there seems to be some support to the findings of Cashin et. al. (2002). Overall however, asymmetries do exist, and their effect on developing countries can have non-trivial effects which merit further attention.

► References

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