

Dissecting the PPP Puzzle: The Unconventional Roles of Nominal Exchange Rate and Price Adjustments

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Summary

The vast literature on purchasing power parity and real exchange rate dynamics is relatively silent on issues regarding the adjustment mechanism of the real exchange rate convergence process. The conventional view, as expounded by sticky-price models, is that price adjustment governs the reversion process toward purchasing power parity. Researchers have been puzzled because the empirical reversion rate appears too slow to be explained by price adjustment. This study measures the individual contributions of price and exchange rate adjustments to the convergence process. It is shown that a) the reversion dynamics at both short and long horizons are driven mostly by exchange rate adjustment, not price adjustment, and b) nominal exchange rates converge much more slowly than prices. Thus, with the reversion being driven primarily by nominal exchange rates, real exchange rates revert at a slower rate than prices. The results reported in the paper raise a number of questions. For instance, why are the convergence rates of prices and nominal exchange rates different? Can heterogeneous convergence speeds be consistent in general equilibrium? Conventional models of PPP disequilibrium adjustment are based on saddle path analysis under rational expectations and predict both relative prices and nominal exchange rates converge to the equilibrium at the same rate. The empirical evidence suggests this is not the case, however. The differing speeds of convergence thus constitute a special puzzle that calls for new explanations.