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Comment

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We observe trend appreciations of CPI real exchange rates in rapidly growing economies. This is usually explained by more rapid productivity growth in the tradables sector, which pushes up the relative price of non-tradables, sometimes called "dual inflation." We also observe high frequency correlations between nominal exchange rates, CPI real exchange rates, and relative price of tradables. This is usually explained by imperfect substitutability among traded goods combined with sticky prices.

In a textbook Balassa-Samuelson model, the terms of trade are exogenous and thus not a function of tradables productivity. This can explain trend real appreciation. In a textbook Dornbusch model, prices are sticky and terms of trade endogenous but all goods are traded. This can explain high correlation between nominal, CPI real, and relative traded goods prices. However, if we add endogenous terms of trade to the Balassa-Samuelson framework, the same trend productivity that can explain "dual inflation" will also cause the terms of trade to worsen and thus offset or even reverse the appreciation of the CPI real exchange that we sought to explain in the first place. And of course, even if the CPI real exchange appreciates, it will move in the opposite direction of the relative price of tradables, the "external real exchange rate."

The objective of this paper is to see if a two sector small open economy optimizing model with sticky prices can simultaneously generate (1) trend real CPI appreciation in response to "real" shocks; and (2) high, positive correlation among nominal, CPI real, external real exchange rates in response to "nominal shocks." To do this, one needs at least two sectors, sticky prices, and at least two shocks, a supply shock and a nominal shock. There is a reason why the literature has tended to specialize in either sticky price models with only traded goods or flexible price models with non-traded goods but exogenous terms of trade—it

is very hard to do both and solve in closed form. Thus, the paper must resort to simulation which is appropriate. That being said, I am not convinced that the basic story requires capital accumulation or pricing to market. I found the capital accumulation part of the model hard to understand. I also think the pricing to market version of the model is overly complex.

The model is a bit of hybrid—there is optimization at home for agents, but the monetary authority follows a crawling peg exchange rate target. Could one consider other monetary policy rules with inflation targeting? The author chooses the NOEM set up with imports as an intermediate input. In this framework a terms of trade deterioration is an adverse supply shock, which is realistic. But imported goods are also consumed directly, and thus a terms of trade decline lowers real income and thus demand. This effect would go the other way and is worth modeling since the model is being solved numerically anyway.

The model can generate a lot of persistent real exchange rates and a high correlation between real and nominal exchange rates. The model is better at matching these moments for low price elasticities of foreign demand η^* than for high elasticities. In response to faster productivity growth in tradables, the model can always generate dual inflation. However, for low values of η^* , it cannot generate appreciation of the real CPI exchange rate. The terms of trade effect swamps the dual inflation effect. For $\eta^* = 5$, it can generate real CPI appreciations, but not trend as real exchange rate ultimately depreciates. For very high $\eta^* = 15$, it can generate trend real CPI appreciations. However, even in this case, the model is not able to reproduce the trend appreciation of the external real exchange rate in response to a shift in the supply of tradables.

This is an important area for research, especially for central banks in small open economies with flexible exchange rates. It has implications for inflation targeting in open economies, and the results in this paper add to our knowledge in this area.