

Discussion of David Cook and Nikhil Patel's paper

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Summary

This paper proposes a theoretical model that incorporates three important features in international trade. First, most international trade is priced in a few key vehicle currencies. Second, intermediate goods account for much of the growth in international trade. Third, countries within a region trade more extensively than countries in different regions.

There are two regional small open economies (SOEs) and one large global economy in the model. Based on this model, the authors study the effect of global and regional interest rates shocks on regional SOEs. Following an increase in the global interest rate, the response of the interest rate in the regional SOEs depends on their monetary policy regimes. Under the fixed exchange rate regime, the interest rates in the regional SOEs have to increase by the same amount as the global interest rate to maintain the fixed exchange rate regime. If the regional SOEs follow CPI targeting, the interest rates in these countries also increase, but less than one to one relative to the global interest rate. In contrast, if the regional SOEs' central banks target PPI inflation, the interest rates in these countries will fall following a positive shock to the global interest rate. The dynamics and equilibrium effects on international trade and total output also vary substantially in each of the above cases.

We now consider the effect of regional interest rate shocks. Following a decrease in the interest rate in one of the two regional SOEs, the central bank of the other regional SOE has two options: CPI targeting or competitive devaluation. The exports plunge sharply due to the substitution effect if the central bank follows the CPI targeting regime.

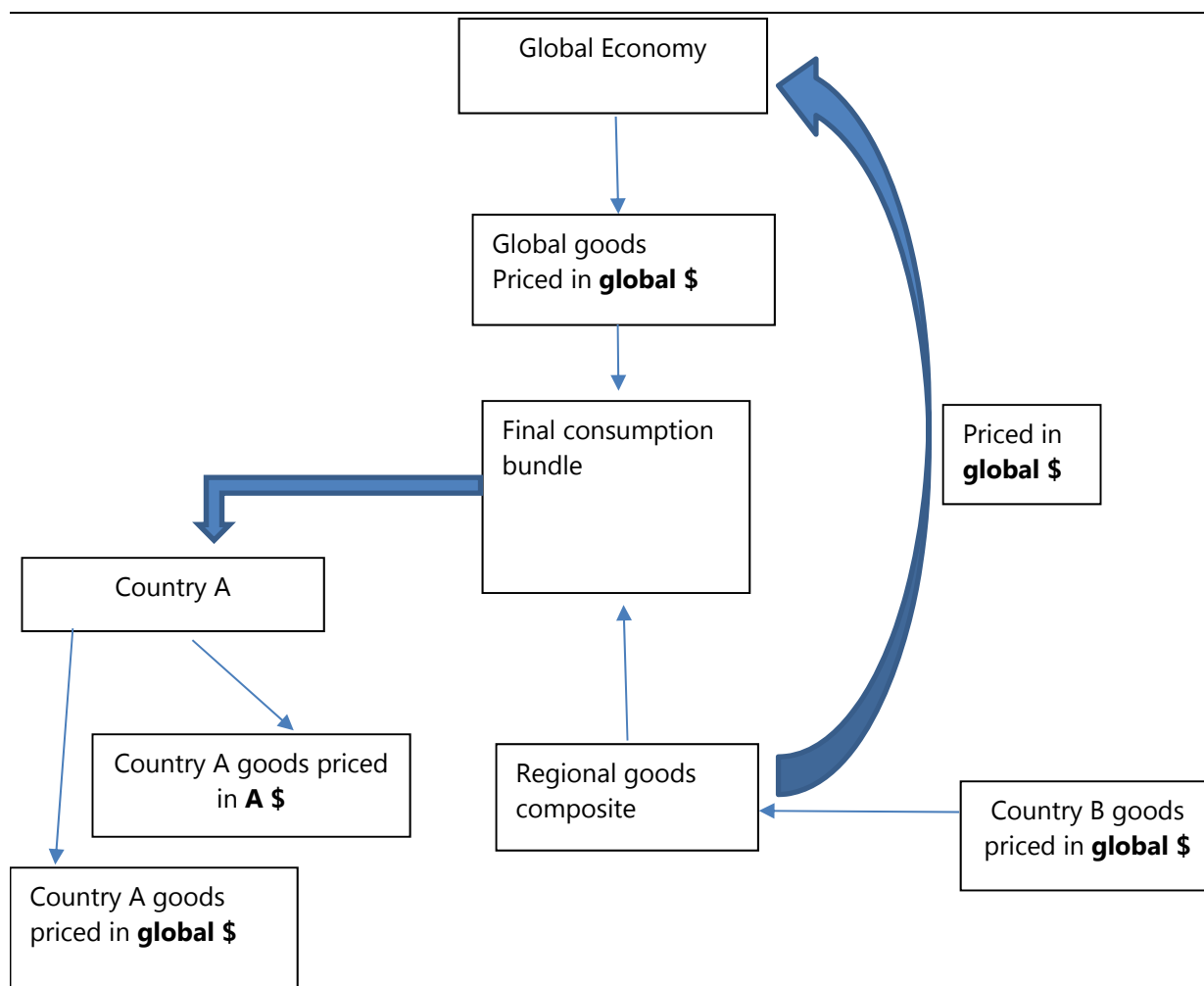
This paper also empirically tests the model's theoretical predictions by using disaggregated sectoral data on bilateral international trade flows that are decomposed into different global value chain components.

Structure of the theoretical model

My main comments are on the paper's theoretical model. Therefore, it helps to give more details about the model structure in this subsection. There are two regional SOEs and one large global economy in the model. The two SOEs are symmetrical. Figure 1 shows the structure of the model and only one of the two symmetrical regional SOEs is displayed to save space.

Goods in two regional SOEs (country A and country B) are produced from labour inputs in each country. The two types of goods are combined into regional goods composites, which are either exported to the global economy for its consumption or combined with goods from the global economy and consumed in the regional SOEs.

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There are two important features in this production structure. First, the final consumption goods are produced along a global value chain. For instance, the exports of country A contain the imported intermediate goods from country B. Second, exports of SOEs are priced in a vehicle currency (global dollar). This deviation from the standard invoicing currency strategy (eg local currency pricing and producer currency pricing in Devereux and Engel (2002)), plus sticky prices, implies different exchange rate pass-throughs following an interest rate shock.

Comments

I have three comments on the theoretical model of the paper and one comment on its identification strategy in the empirical section. My comments on the theoretical model focus on its policy implications and the connection between model predictions and the scenario after the 2008 financial crisis.

Comments on the theoretical model

The paper proposes a very rich DSGE model that appropriately captures the import features of regional SOEs. The authors demonstrate that such a model produces

dynamics and general equilibrium outcomes that are substantially different from those in standard models. These results are very interesting by themselves, reminding us that some simplifications in standard models may create misleading results in matching data and making policy suggestions.

The authors may want to utilise such a rich model in monetary policy evaluation in the future. The monetary policy parameters in the model are calibrated to the standard values in the literature. However, it is not clear if such a policy is optimal or not. The authors may want to find out what is the welfare-based optimal policy in the model, which is an important advantage of such a rich general equilibrium model relative to reduced-form/partial equilibrium models.

The policies in the regional SOEs are assumed to be symmetrical in the model following a global interest rate shock. It would be interesting to relax this assumption. In reality, some regional SOEs impose more restrictions on exchange rate fluctuations than others. When the United States tightens or loosens its monetary policy, how will this affect these regional SOEs with different policy regimes? What are the optimal policy for these regional SOEs in this case? And is this policy also globally optimal? The model in this paper provides a great framework for answering these important questions. I would encourage the authors to explore them further.

It would also be interesting to connect the model predictions with what happened during the global financial crisis in 2008. When the Federal Reserve loosened the monetary policy through unconventional policy tools such as quantitative easing, many emerging markets adopted similar loose policies, although their domestic economies remained relatively resilient at the time. Policymakers in emerging markets were concerned that the accommodative monetary policy in the United States would weaken the dollar, which in turn would hurt the exports of emerging economies if they did not follow a loose monetary policy.

This concern seems to be legitimate in the model of this paper because the substitution effect is very strong under the model's setup. The authors find that if country A's currency depreciates against the US dollar due to an expansionary monetary shock in country A, country B may suffer a substantial export decrease if it does not devalue its currency against the dollar. Intuitively, country B's exports are priced in the US dollar and the prices are fixed in the short run. The depreciation of country A's currency against the US dollar has two effects on country B's exports. First, it reduces the consumption of country B's goods in country A. Second, country A will also replace some intermediate inputs that it imports from country B, which are used to produce goods exported to the global economy. Following a similar logic, when the United States loosens its monetary policy, the regional SOEs may engage in competitive policy, loosening to protect their exports. The authors might want to check if that is the case if policymakers prefer to stabilise their exports. In addition, it is useful to check whether such a policy is optimal or not, either locally or globally.

Comments on empirical results

To measure the US monetary policy, the authors employ the shadow rate calculated from the dynamic factor model in Lombardi and Zhu (2014). It would be useful to check the robustness of the main findings when the shadow rate is recovered from other methods, such as the one in Wu and Xia (2015).

The authors may also consider taking the endogeneity issue more seriously in their empirical work. For instance, the monetary policy shocks identified from event studies, such as in Neely (2010).

Conclusion

Overall, this is a very promising paper with a rich structure model. The model provides a framework for policy evaluation exercises that are crucial for policymakers in emerging markets.

References

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