Essays on Business Cycles in Small Open Economies

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Abstract

This dissertation investigates the features of the business cycles in emerging economies in comparison with developed economies, using small open economy models. Chapter 1 summarizes the background and provides an overview of the thesis.

Chapter 2 aims to explain the difference in trade balance volatility between emerging and developed small open economies using a simple endowment economy model. I show that in order to replicate the observed magnitude of trade balance volatility, the model must include collateral constraints on borrowings. Further, the nonlinear simulations with an occasionally binding collateral constraint show that in a model in which an asset is collateralized, the difference is explained by the share of tradables in consumption. The resulting positive relationship between the tradable goods consumption ratio and trade balance volatility is consistent with the cross-country data.

Chapter 3 examines whether learning-by-doing plays an important role in emerging economies. I present a business cycle model with learning-by-doing and estimate the model using the data on emerging and developed economies. I evaluate the model in terms of predictive performance and the business cycle moments of concern in recent studies, namely, the high volatility of consumption relative to that of output, and highly countercyclical net exports. The results indicate that the model with learning-by-doing outperforms the model with trend productivity shocks proposed by former studies. Further, the model is consistent with the observed relationships between the business cycle moments and growth rates. These results suggest the essential role of learning-by-doing in emerging economies and imply another possible reason for the difference in business cycles of emerging and developed economies.

In Chapter 4, I provide a policy analysis by studying the effects of currency swap agreements on the probability of financial crises. The analysis is based on a small open economy model with a financial constraint. A currency swap is described as an exchange of collateral goods between two countries. The quantitative analyses show that in some cases, currency swap agreements can lower the probability of financial crises. Whether it benefits both member countries depends on the difference in the size and probability of recessions, as well as the amount of collateral goods exchanged. The results suggest that these factors should be considered in the design of currency swap contracts.