SOE and Chinese Real Business Cycle

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Summary

With enhanced importance of China in the global economy, the macroeconomic aspect of the Chinese economy has been extensively investigated recently. However, most studies have mainly focused on economic growth. What factors characterize Chinese real business cycle (RBC)? What drives economic fluctuations in China? The literature has long been mute on these issues. In this paper, we document Chinese business cycle from 1978 to 2010 and find that Chinese RBC exhibits a unique pattern characterized by moderate consumption volatility, substantially low investment volatility, and acyclical trade balance, which implies that Chinese RBC differs from business cycles in other emerging markets.

To explain these features, we construct a full-fledged general equilibrium model with SOE (state-owned Enterprise) sector and investigate Chinese RBC using Bayesian estimation method. We

incorporate a vertical structure in the model, that is, some SOEs monopolize key industries and markets in upstream industries and provide intermediate goods to downstream manufacturing sectors, in which SOEs compete with Private firms. Moreover, we consider asymmetric financial access and productivity difference between SOE and PE. The model dynamics are driven by eight shocks, three of which are shocks to SOE sector, including shocks to the markup charged by upstream SOEs (markup shock), share of SOE's sales in downstream sector (share shock), and share of SOE's profit distributed to household (dividend shock).

We show that the estimated model can reproduce main features of business cycle in China to a large extent. For example, the proposed model predicts that the relative volatility of consumption to output is 1.06, in contrast to 0.98 in the data. The model also predicts that the relative volatility of investment to output is 2.33, which is the same as in the data. In summary, shocks to SOE sector are the most important source in explaining China's economic fluctuation. These shocks generally account for 85 percent, 79 percent, 72 percent and 57 percent of variance of output, consumption, investment and trade balance-to-output ratio, respectively. Among the three SOE shocks, share shocks and markup shocks are the two main drivers.