The Effect of Technological Progress, Labor Migration, and Taste Shift on Renminbi’s Real Exchange Rate

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技術進步、勞動力遷徙及偏好轉移對人民幣實際匯率的影響

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Abstract

Contrary to the long-held notion of Balassa-Samuelson effect on real exchange rate movements, studies give systematic evidence that China is an outlier that does not always conform to the predictions of the Balassa-Samuelson theory. This paper develops a two-country model with terms of trade effect to obtain a set of predictions about the responses of real exchange rate to the interaction of alternative shocks, including productivity shocks, labor migration shocks and taste shocks under a fixed exchange rate regime. Our model indicates that the relationship between productivity shock and real exchange rate movements depends on the presence of other shocks impinging on the economy. We demonstrate that shocks originating from the labor market have crucial effect on the predictions of the Balassa-Samuelson theory. In the presence of both labor supply shock, the well-known prediction of the standard Balassa-Samuelson theory that fast productivity growth in the tradable sector yields a real exchange rate appreciation may not necessarily hold. The massive increase in labor supply in the urban area due to migration tends to keep wage growth down and restrains the real exchange rate from appreciating. The phenomenon of labor migration is particularly prominent in large developing countries like China and India in which there is substantial migration of unskilled labor from the rural to urban areas.

Our model has the potential to (i) provides an equilibrium explanation to the persistent depreciation of Renminbi (RMB) from 1997 to 2004 amid the rapid productivity growth in the tradable sector; (ii) demonstrate how the simultaneous presence of several types of
shocks (namely, productivity shocks, taste shocks and labor migration shocks) modifies the predictions of Balassa-Samuelson’s productivity-based model on the real exchange rate movements; and (iii) shed light on the ongoing debate over the extent of undervaluation of RMB relative to the “equilibrium” levels on the basis of the standard Balassa-Samuelson theory by sharpening the measures of the equilibrium exchange rate levels after embodying the labor migration feature of the Chinese economy into a general equilibrium model. The equilibrium real exchange rate with the labor migration effect indicates a more depreciated level and thus implies less undervaluation of the RMB than is the case using the standard Balassa-Samuelson model. Our model thus provides an alternative interpretation to the real exchange rate “undervaluation” finding in the literature.
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