

A Theory of the Competitive Saving Motive

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Summary

Recent empirical work suggests that one explanation for the rapid rise in the household savings rate in China, India, Singapore, Vietnam and several other economies is an arms race in savings for competition for marriage partners triggered by a rise in the pre-marital sex ratio (Wei and Zhang, 2011). This competitive saving motive is distinct from the precautionary saving motive or savings for life-cycle reasons. It is quantitatively important, and is estimated by Wei and Zhang (2011) to account for half of the observed increase in the Chinese household savings rate in recent years. Without taking this into account, one would not have a complete picture of the underlying causes for the global current account imbalances, and might be prone to write incorrect prescriptions for the problem.

Because the existing empirical work is not accompanied by a formal theory, it leaves many important questions unanswered. We construct a simple overlapping generations (OLG) model with two sexes and a desire to marry. Under reasonable conditions, we show that men respond to a rise in the sex ratio by raising their savings rates. Moreover, the increment in their savings is always enough to offset any decrease in women's savings. As a result, the aggregate savings rises with the sex ratio. We also discuss a number of extensions that aim to allow for additional realism: (a) incorporate parental savings for children, (b) introduce intra-household bargaining, (c) consider an OLG structure in which each generation lives for 50 periods and makes savings decisions in multiple periods, and (d) allow for income inequality. In each case, under reasonably general conditions, both the aggregate savings rate and the current account rise in response to a rise in the sex ratio.

To check if the model can deliver an effect that is economically significant, we employ quantitative calibrations. In the benchmark case, as the sex ratio rises from 1 to 1.15, the economy-wide savings rate and the current account will both rise by more than 6% of GDP. We also consider a case of two large economies, whose relative sizes and income levels are calibrated to mimic China and the United States. The magnitudes of the current account imbalances in the simulations (about 4.4% of GDP for China and -1.5% of GDP for the United States when China's sex ratio rises from 1 to 1.15) are around one-half of the actual current account imbalances observed in the data.