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Discussion of

"Demographic Patterns and Household Saving in China"

Demographic Patterns and Household Saving in China

Discussion

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Summary of the Paper's Results

Key Findings

- A simple Overlapping Generations model is able to account for nearly the complete increase in the households saving rate:
  - $\Rightarrow$ the rapid labour income growth of the last years should have depressed savings, and hence...
  - $\Rightarrow$ the increase in saving rates is primarily due to the reduction in family size (population control).

$\Rightarrow$ Chinese external surpluses are possibly a temporary phenomenon?

Some Positive Comments

The Pros of the Paper

- A very simple and intuitive model.
- Empirical facts can be replicated pretty well.

Some Questions/Technical Remarks

Stocks and Flows

Capital accumulation is defined as $K_t = (1 - \delta) K_{t-1} + I_t$.
This is

"capital at the end of period t depends on capital at the end of period t-1 plus investments in period t".

$\Rightarrow$ But in the production function capital **at the beginning of period t** should be used:

$$Y_t = A_t K_{t-1}^{\alpha} N_t^{1-\alpha}.$$

$\Rightarrow$ And the same is true for the rental rate on capital and the accumulation of NFAs.

- Why is the **stock** of capital equal to the loans in period t (a **flow** variable)? Loans are used to finance investments, not already installed capital? (You take a loan to finance a computer in t. In (t+1) you pay back the loan, but your capital stock is still a computer...)

Some Questions/Technical Remarks

Investments

- Who's investing in the capital stock? Households consume and accumulate assets. Are these assets invested somehow?
- How do you simulate the model? Do young households follow Euler equations?
- Where are the first order conditions of the households? Is there an optimal labour-leisure decision? Such an equation would have an influence on savings as well.
- The only interest rate in the model seems to be the (real?) rental rate on capital. Obviously, this is the important rate, when we talk about investment dynamics, but is it also the relevant rate for determining optimal household consumption/savings?

Some Questions/Technical Remarks

Calibration

- What's the time period of the model? From $\beta = 0.99$ I guess the model is in quarters. But then a depreciation rate of 10% would be too high...

Expectations

- It is assumed that people have perfect foresight over round about 50 years. This means, people know in 1965 that the central bank decreases the interest rate in 2008 due to the financial crisis...?
- Why partial equilibrium under perfect foresight or static expectations? Why not a full model under (at least partly) rational expectations?

Some Questions/Technical Remarks

NFAs

- As usual, excess savings lead to the accumulation of NFAs.
- However, there is no trade with other countries in your model. So assets can be traded, but not consumption goods?
- More importantly, if excess savings leads to foreign assets, this should have an impact on the exchange rate. This in turn could lead to a reaction of the central bank. Since the interest rate changes, consumption/savings should change.

What I miss...

What I miss

- **Inflation.** Inflation influences the real interest rate, which should be crucial in determining saving rates of the households.
- **A Central Bank/Monetary Policy.** The policy rate also influences the real interest rate. If the PBoC reacts on exchange rate movements, there could be some *external* influence on household's saving behaviour.
- **The World Interest Rate.** Following simple textbook style models which are similar to yours (as in Obstfeld/Rogoff) NFAs depend crucially on *relative* interest rates: If world interest rates increase (relative) households will postpone consumption and accumulate NFAs.

Concluding Remarks

Where to go from here

- I find the paper very interesting to read, and the simulation results look very convincing. And surely, the demographic change in China should have a strong impact on saving rates.
- But I would find the results even more convincing, if the model would feature some additional aspects, which I believe to be important for the evolution of savings in China.