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COMMENT: THE DECLINE OF JAPAN'S SAVING RATE AND DEMOGRAPHIC EFFECTS

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This paper is a serious attempt to identify the causes of the recent sharp decline in the Japanese household savings rate (Koga, 2006). It pays particular attention to Japan's changing demographic structure. The paper's major strengths are the following:

1 The author pays attention not only to the monotonic increase in the population share of the aged but also to the complicated effects of the ageing of the baby-boomers, which seems to have often been overlooked in previous discussions on this matter.

2 The empirical approach allows the author to summarize the complicated roles played by demographic factors into just two variables.

Using state of the art time series techniques, the author shows that those two demographic variables indeed explain a substantial portion of the recent decline in the Japanese saving rate.

After a few exchanges of opinions and revised versions and probably in response to the referee's comments, the author has made a number of significant improvements to the original manuscript. As a consequence, I do not have much to complain about concerning the final version of the paper. Here, I will just point out some challenges for future research.

1 *Theoretical foundation*. In the paper, the author simply assumes Equation (1), which states the relationship between the saving rate and a macro factor (the ratio between permanent income and current disposable income) and demographic factors. It would be nice to see a theoretical model that generates this relationship.[1] Such a model would facilitate our understanding of what kinds of forces underlie the impact of demographic structure on the saving rate. Such information seems to be important in deriving the policy implications of the paper's estimation results.

2 *Unit root test on the saving rate*. The paper follows the usual practice in time series analysis these days and runs unit root tests on all of the variables involved, including the saving rate. However, the saving rate is naturally bounded from above by 1, and, although it is not necessarily bounded below by zero, it does not seem likely that this variable would take a value much lower than zero. Such characteristics do not conform to the usual features of variables that follow unit root processes. This is obviously a difficult question that has not been discussed sufficiently in the literature, but it will probably have to be addressed at some point in the future. In our communication, the author kindly let me know of the work of Nicolau (2002), which might be a good starting point.

3 *Short sample*: The published version of the paper does not show time series plots of the demographic variables, $Z_{1,t}$ and $Z_{2,t}$, but the discussion paper version does. According to the plots in that version, both variables have apparent upward time trends. In Figure 1 of the current paper, the saving rate shows a relatively clear downward trend since the latter half of the 1970s. As the sample period of the paper's analysis starts in 1980, these trends

[1] The discussion paper version of the paper that the author refers to does not necessarily succeed in this aspect.

might be one of the reasons why the estimated equation fits so well to the data. I can think of two ways to check robustness of the results presented in the paper. The first is to add other possible determinants of the saving rate, some of which might be trended, to the right hand side of the estimated equation, and to see how the results change, if at all. The second is to extend the sample period to the pre-oil crisis period utilizing data from the 1968 System of National Accounts (SNA) to see how the same model fits the longer time period. If we find that the results of the paper are largely unaffected by such changes, we will be able to place even more confidence in the value of this paper.

REFERENCES

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