Comment on “World growth and international capital flows in the 21st century”
by Michel Aglietta

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My questions/comments

1. A question about the projected path of future population (particularly, for Japan)

2. What would this exercise imply in terms of economic welfare?
We now look at the share of the 45-69 years old population in total population of each region, because high savers are concentrated on this age group. One can see on Figure 5 that the proportion of high savers in total population follows a wave pattern that propagates from one region of the world to the next through the decades. The ratio culminates first in Japan as soon as 1995 and remains at a high level until 2030. Then North America experiences its maximum in 2025 and Western Europe in 2030, Eastern Europe, Russia and China after this date. All are regions with declining labour force and thus hamper growth in the future. On the contrary, the regions found on Figure 3 as the potentially fast-growing regions see a progressive ageing leading to an increase of the high savers ratio which does not culminate before 2050. It follows that saving will flow from early high savers to late high savers in the coming decades. This demographic feature will influence a lot the saving rates in the next decades in our model because life cycle hypothesis is in the heart of the saving behaviour of households in the INGENUE model.

In the long run, the population converges toward a stationary level in each region. As a result, the share of the 45-69 years old population in total population of each region converges to a similar level for all regions. This pattern can be seen in Figure 5: in 2100, the high saver ratio is close to the long run level (27.7%) in most regions.
Projected path of Japanese population

- Given that current (and near-future) level of the birth rate is well below 2.0, the Japanese population will continue to decline, and approaches zero in the remote future.

- But, according to the paper’s projection, the population converges to a steady state level (not zero) in 2100. Probably, the birth rate is projected to start to rise sometime in the future. What is the driving force? Why will it work in the remote future, but not now?

- How the outcome would change if the birth rate stays at a low level (well below 2.0) even in the remote future?
Comments related to welfare implications of this exercise

• Equilibrium obtained in this exercise should be very close to the first-best outcome.
  – Given the evolution of technology and population, households and firms make an intertemporal decision. => No reason for suboptimality

• In a more realistic world, the equilibrium obtained in this paper might not be achievable.

• How and to what extent would the economy deviate from the equilibrium obtained here?

Government
  – It might be difficult for the government in shrinking economy to become smaller for some reasons: political process; bureaucracy; large fixed costs to produce public goods and services.

Substantial decline in real interest rate
The world real interest rate is declining over the fifty-year period. This is due to global aging. As a result the world saving investment equilibrium is tilted more and more toward a lower equilibrium rate. This downward trend provides the general profile of regional real interest rates (figure 8). The hierarchy of regional real interest rates is linked to the rate of change of the real exchange rates. The real interest rates regulate investment and saving flows. The gap between investment and saving is the current account balance of each region. It is financed by capital flows whose amounts are such that yield differentials between different regions cancel out in every period.

The world financial equilibrium allocates capital flows that finance current account imbalances modulated by real exchange rate changes. Net foreign assets affect exchange rates. They move with the net financial positions of the regions to create future surpluses or...
Responses of the real interest rate to a decline in the birth rate

Why is substantial decline in the real interest rate problematic?

- Decline in labor supply $\Rightarrow$ Labor is scarce, but capital is not $\Rightarrow$ Higher $K/L \Rightarrow$ Decline in the real interest rate
- Real interest rate in each period might be below zero even if the baseline values (or the steady state values) are above zero.

$$r^n_t = r^n_{BL} + \sigma E_t [(\hat{Y}^n_{t+1} - \hat{Y}^n_t) - (\hat{G}_{t+1} - \hat{G}_t)]$$

(Wicksellian) natural rate of interest is defined as what the equilibrium real rate of return would be if prices were perfectly flexible

- However, nominal interest rate cannot go below zero under the current monetary regime $\Rightarrow$ Liquidity trap!
Natural rate of interest in Japan

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