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Comments on Lu and Cai (2014) "China's Shift from the Demographic Dividend to the Reform Dividend"

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Summary of this paper

- Background:
  - Transition in the structure of Chinese population:
    - working-age population peaked in 2010 (or 2013)
    - The population dependency ratio increased in 2011.
  - Demographic dividend in economic growth in China is disappearing.

- Purpose:
  - To identify the sources of economic slowdown and provide policy suggestions on the relevant reforms

Summary of this paper

- Approach:
  - Add the variable of human capital to a standard Cobb-Douglas production function: $Y = AK^{\alpha}(hL)^{1-\alpha}$
  - Get a potential growth rate function:

$$\Delta Y_t^* / Y_{t-1}^* = (\Delta y_t^* / y_{t-1}^* + 1) \times (h_t L_t^* / h_{t-1} L_{t-1}^*) - 1 \quad \text{(Equation 2.4)}$$

$$\Delta y_t^* / y_{t-1}^* = \Delta \hat{A}_t / A_{t-1} + \hat{\alpha} \Delta k_t^* / k_{t-1}^* \quad \text{(Equation 2.3)}$$

  - The potential growth rate of employment (L_t^* / L_{t-1}^*):

$$L_t^* = population_{15+,t} \times Tr_{15+,t} \times (1 - NAIRU_{15+,t})$$

  - Population: the total fertility rate (TFP)

Summary of this paper

- Simulation analysis:
  - Relaxing the population fertility policy (TFR)→+ in long term
  - Increasing the labour force participation rate →+, but the effect is diminishing
  - Increasing TFP →+, and the effect is ascending
  - Human capital:
    - Increasing the enrolment rate →+, but the effect is limited.
    - In creasing training →+, the effect is more significant

Summary of this paper

- 5 Policy suggestions.
  - Skipped.

- Overall evaluation:
  - It is very interesting paper!
  - It made a good contribution to policy application!

Comment 1

- Measurement of labour productivity?
  - Equation 1: $Y = AK^{\alpha}(hL)^{1-\alpha}$
  - Equation 2: $Y/hL = A(K/hL)^{\alpha}$ (Labour productivity)
  - Human capital, h, has negative effect on labour productivity, but normally has positive effect

Comment 2

- Alternative model:
  - $Y/L = A(K/L)^{\alpha} h^{1-\alpha} \rightarrow y = Ak^{\alpha} h^{1-\alpha}$ (1)
  - First difference of log term of equation (1):
  - $\Delta y_t / y_{t-1} = \Delta A_t / A_{t-1} + \alpha\, \Delta k_t / k_{t-1} + (1-\alpha)\, \Delta h_t / h_{t-1}$ (2)

- Equation 2.4:

$$\Delta Y_t^* / Y_{t-1}^* = (\Delta y_t^* / y_{t-1}^* + 1) \times (h_t L_t^* / h_{t-1} L_{t-1}^*) - 1$$

- $\Delta Y_t^* / Y_{t-1}^* = (\nabla y_t^* / y_{t-1}^* + 1)(L_t^* / L_{t-1}^*) - 1$

- $\Delta Y_t^* / Y_{t-1}^* =$
  $\left(\Delta A_t / A_{t-1} + \hat{\alpha}\, \Delta k_t^* / k_{t-1}^* + \hat{\beta}\, \Delta h_t / h_{t-1}\right)(L_t^* / L_{t-1}^*) - 1$

Comment 3

- "The total factor productivity (TFP) growth rate will decline when rural-to-urban migration ends."

- How and why?
- How do you estimate the TFP?
- $\Delta y_t / y_{t-1} = c + \alpha \, \Delta k_t / k_{t-1} + \mu_t$