RIETI Special BBL Seminar
Handout

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http://www.rieti.go.jp/jp/index.html
Comments on Japan’s new growth strategy and the world economy

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What should be the growth objectives?

① Enhance productivity growth
   - Services sectors

② Restore the sustainability of Japan’s government debt
   - Tax increase and cuts on social security spending

③ Income Inequality
   - What is the implication on growth?
Stylized Facts on economic growth

- Jorgenson and Timmer (2011)
  - Services accounts for 3/4 of GDP and hours worked.
  - Distribution services: rapid TFP growth.
  - Finance, business services, personal services: low TFP growth.
  - Labor share in value added is declining.
  - Share of Skilled labor and ICT increased.
  - Distribution, finance, business services: Most skill- and ICT-intensive.
What area of innovation are promising?

- Induced innovation (Yujiro Hayami)
- Directed Technological Change (Daron Acemoglu)

Direction of technological change is determined by market environment.

- Endowment of resources in the market: Increase in supply of skilled labor enhanced the skill augmenting technology (Acemoglu)
- Demographic change = Population aging
What area is promising? - Gerontotechnology

- Population aging continues in Japan and all over the world
  - Increasing demand and decreasing supply for nursing care service
  - Social security reform is not sufficient to keep the current living standard
- Technological innovation in nursing care services is necessary, e.g., Elderly care robots.
- Gerontotechnology (= Gerontology + Technology)
Necessary Tax increase to restore the fiscal sustainability of Japan: 25–30 %

- Doi (2009): Accounting method
  - Consumption tax rate 5% $\rightarrow$ 17%

- Shirakawa Hiromichi (2010): Accounting method
  - Consumption tax rate 5 $\rightarrow$ 32%

  - Consumption tax rate 5 $\rightarrow$ 35%

- Braun and Joines (2012): OLG Model
  - Consumption tax rate 5 $\rightarrow$ 33%
Hansen and Imrohoroglu (2011)
Tax schedule for fiscal sustainability
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Effect of tax hike on Japanese economy

- Hours Worked
- Capital Stock
- GNP
A comprehensive fiscal consolidation plan (Braun and Joines 2012)

- Consumption tax rate: Gradually raise to 33 % in 2050-2080 then decrease to 17% in 2100.

- Raise Copayment of medical services for elderly from 10% to 20%

- Substantial decrease in pension benefits

- 2% inflation

- General spending cut
Income inequality – Implication to Growth

- Simple calculation of neoclassical growth model
- Two type of agents – Worker and Capitalist
- They have identical preferences and technology
- Capitalist own a large amount of capital stock, while worker owns a very small amount.

- What happens in Steady State Equilibria?
- There are infinitely many equilibria corresponding to the share of capital stock owned by Worker.
Income inequality – Implication to Growth

- If share of Worker’s capital stock decreases,
  ① Labor supply by worker increases.
  ② Income of Worker decreases.
  ③ Income of Capitalist increases.
  ④ Total output increases.

- Redistribution policy of capital stock
  ① decreases the total output
  ② decreases Worker’s labor supply and increase consumption and income of Worker