A Second Chance at Success: A Political Economy Perspective

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Background

- Why are there large cross-country differences in the size of government among countries sharing similar backgrounds?
  - Hassler, Rodriguez Mora, Storesletten and Zilibotti (2003, AER) ⇒ HMSZ
  - Hassler, Storesletten and Zilibotti (2007, JET) ⇒ HSZ

- A key to the answer is the feedback mechanism.

- The feedback mechanism means that expectations about the future policy affect the current individuals’ decision-making and current individuals’ decision-making in turn affects future actual policy.
Contribution of HMSZ and HSZ

- They present a theoretical exposition as to why the countries with similar cultural and political backgrounds have different sizes of government.
  - Pro-welfare states equilibrium: some European countries
  - Anti-welfare states equilibrium: Anglo-Saxon countries

A shortcoming of HMSZ and HSZ ⇒ No second chance

- No prediction consistent with the POUM hypothesis (Benabou and Ok, 2001, QJE) supported by the US data.

- **POUM (Prospect of upper mobility) hypothesis**: When there is a second chance of upward mobility in the future, the poor agents do not support a high level of redistribution.
Objectives

1. We present a unified framework that yields multiple equilibria (shown by HMSZ and HSZ) and satisfies POUM hypothesis (claimed by Benabou and Ok).

2. Based on this framework, we theoretically explain the correlation between inequality and intragenerational upward mobility.

3. We examine the welfare implications of upward mobility.
Structure of our model

Our model approximates HSZ model by taking $\eta_o \rightarrow +\infty$.

- $e_t^y$: success
- $1 - e_t^y$: failure
- $e_{t+1}^o$: success
- $1 - e_{t+1}^o$: failure

Costs:
- $\text{Cost} = (e_t^y)^2$
- $\text{Cost} = \eta_o \cdot (e_{t+1}^o)^2$

The old vote on $\tau_t^y$ and $\tau_t^o$.

The rich young pay $\tau_t^y$ and rich old pay $\tau_t^o$.

The rich young pay $\tau_{t+1}^y$ and rich old pay $\tau_{t+1}^o$.

Wage:
- $(1, 1)$
- $(0, 1)$
- $(0, 0)$

Time:
- $t$
- $t+1$
Expected Utility before educational investment

⇒ no strange technology, linear utility function.

The old who were successful in youth

\[ V_{tos} = (1 - \tau_t^o) + s_t. \]  

The old who were unsuccessful in youth

\[ V_{tou} = e_t^o \cdot (1 - \tau_t^o) - \eta_o \cdot (e_t^o)^2 + s_t. \]  

young

\[ V_t^y = e_t^y \cdot (1 - \tau_t^y) - (e_t^y)^2 + s_t \]

\[ + \beta \left[ e_t^y \cdot (1 - \tau_t^{o+1}) + (1 - e_t^y) \left( e_t^o \cdot (1 - \tau_t^{o+1}) - \eta_o \cdot (e_t^{o+1})^2 \right) + s_{t+1} \right]. \]
Equilibrium

State variable

\[ e_t^y = \text{the probability (or the size) of being successful in youth.} \]

\[ u_{t+1} = 1 - e_t^y \]

⇒ The size of the old who were unsuccessful in youth.

⇒ state variable in period \( t + 1 \).

Voting rule

⇒ only the old vote on current taxes \( \{\tau_t^y, \tau_t^o\} \) at the beginning of each period.

⇒ policy conflict between the old who were successful in youth and the old who were unsuccessful in youth.

Equilibrium

⇒ Stationary Markov Perfect Equilibrium ⇒ characterize the \( \{\tau_t^y, \tau_t^o, u_t\}_{t=0}^{\infty} \).
POUM equilibrium

- The old who were successful in youth always prefer $\tau_t^0 = 0$.
- The old who were unsuccessful in youth prefer $\begin{cases} 
\tau_t^0 = 1 & \text{if } u_t \leq 1 - 1/2\eta_o \\
\tau_t^0 = 0 & \text{if } u_t > 1 - 1/2\eta_o 
\end{cases}$.

Why unsuccessful old prefer zero tax rate?

- small $\eta_o$ $\Rightarrow$ low costs for educational investment in second chance.
  $\Rightarrow$ high probability of being successful via second chances.
  $\Rightarrow$ high probability of being taxed in old age.
  $\Rightarrow$ an incentive to avoid taxation.
  $\Rightarrow$ Prospects of POUM hypothesis can be supported when $\eta_o$ is small.
**Equilibrium Pattern**

- High upward mobility, low tax burden majority of the successful

**Multiple equilibria: European countries case**
- High upward mobility, low tax burden majority of the successful
- Low upward mobility, high tax burden majority of the unsuccessful

**POUM hypothesis: US case**
- High upward mobility, low tax burden majority of the unsuccessful
- Low upward mobility, high tax burden majority of the unsuccessful
Upward Mobility and Income Inequality

⇒ Numerical analysis under the economic environment of $\beta = (0.96)^{20}$.

⇒ Lower costs of a second chance do not necessarily result in lower inequality.
 ⇒ Lower costs of a second chance do not necessarily improve welfare.
Implication

tax rate on the young

education in youth

utility of the young

POUM hypothesis
Multiple equilibria

POUM hypothesis
Multiple equilibria

POUM hypothesis
Multiple equilibria
Conclusion

1. We present a unified framework that yields multiple equilibria (HMSZ and HSZ) and satisfies POUM hypothesis (Benabou and Ok).
   - A second chance plays a key role in determining redistribution policy.
     - Low-cost economy: POUM equilibrium (US economy)
     - High-cost economy: Multiple equilibria (EU economy)

2. Based on this framework, we theoretically explain the correlation between inequality and intragenerational upward mobility.
   - Lower costs of a second chance do not necessarily result in lower inequality.

3. We examine the welfare implications of upward mobility.
   - Lower costs of a second chance do not necessarily improve welfare.