Paternalism in Pension Systems
András Simonovits
(EI RCERS HAS + IM-BUT + ED CEU)
Personal memories on János

- 1970: My advisor on Theory of Teams (MA of mathematics)
- 1976: 2 weeks in the USSR together
- 1982: My advisor on Non-Price Control (Ph.D. of Economics), incl. joint papers
- 1984: With Zsuzsa, host of my family at Princeton
Research group

- Entries
- 1970: myself
- 1971: Katalin Farkas (died)
- 1972: Judit Szabó
- 1973: Mária Lackó
- 1974: Zsuzsa Kapitány
- Joint lunch at cafeteria 11:30-12:30
Related researchers

- 1958: Tamás Lipták (died)
- 1968: Judit Rimler
- 1968: Béla Martos (died)
- 1973: Tamás Bauer, János Gács and Mihály Laki
- 2008: Aladár Madarász
- Private celebrations of János’ birthdays from 1998
Motivation

• Kornai against paternalism in socialism
  – Economics of Shortage (1980)
  – Communist System (1992)
• Kornai against paternalism in capitalism
  – Soft Budget Constraint (+Maskin + Roland, 2003, JEL)
  – Health Care (+ Eggleston, 2001)
• But also Solidarity and Welfare: PENSION?
My „serious talk”

- Pension: compromise between autonomy and paternalism
- Autonomy is preferable in general, old-age saving in particular
- Pension paternalism is due to myopia and lack of markets (indexed life annuities)
Plan

• 1. Historical phases of pension systems
• 2. Myopia vs. inefficiency
• 3. Voluntary pensions with tax expenditures
• 4. Cap on pension contributions
• 5. Conclusions
1. History of pension systems
Funded pension

- 1889: No mandatory pensions
- 1889-: Bismarck introduced mandatory pensions for blue-collar workers
- 1918-1924: WWI + hyperinflation destroyed pension funds
- 1929-1937: Great Depression ..
- 1939-1945: WWII..
Also unfunded pensions

- 1935: F.D.R. introduces unfunded public pensions
- 1947: Hungary adopts PAYG
- 1957: Germany also
- 1983: Chile – funded private pensions
- 1998: Hungary – partial privatization
- 2010: Hungary renationalizes the private funds
2. Myopia vs. inefficient pension
Myopia vs. inefficiency

• Simplest OLG model for comparing pensions (á la Feldstein, 1987)
• Myopes are able to accumulate private savings but not enough
• Government is able to force workers to contribute to pensions but inefficiently
Myopia vs. inefficiency, continued

- **Critical** efficiency: voluntary saving and mandatory pension provide the same SWF
- Subcritical efficiency: pension > saving
- Supercritical efficiency: pension < saving
- How does the critical value of efficiency depends on myopia?
2. Private saving vs. public pension

<table>
<thead>
<tr>
<th>Discount factor</th>
<th>Critical interest factor</th>
<th>Young-age consumption</th>
<th>Old-age consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.95</td>
<td>1.018</td>
<td>0.82</td>
<td>0.30</td>
</tr>
<tr>
<td>0.96</td>
<td>1.012</td>
<td>0.77</td>
<td>0.32</td>
</tr>
<tr>
<td>0.97</td>
<td>1.007</td>
<td>0.71</td>
<td>0.35</td>
</tr>
<tr>
<td>0.98</td>
<td>1.003</td>
<td>0.65</td>
<td>0.39</td>
</tr>
<tr>
<td>0.99</td>
<td>1.001</td>
<td>0.57</td>
<td>0.43</td>
</tr>
<tr>
<td>1.00</td>
<td>1.000</td>
<td>0.50</td>
<td>0.50</td>
</tr>
</tbody>
</table>
3. Voluntary pensions ...
Voluntary pensions with tax expenditures

- **Voluntary** pensions (VP) appear to be very attractive because they replace paternalism.
- In fact, most VPs rely on tax rebates or matching, therefore need additional **taxes**.
- **Asymmetric** VP: only the well paid participate.
- **Symmetric** VP: the low paid also participate.
3a. Pure public pension ($\alpha=0$)

<table>
<thead>
<tr>
<th>Wage</th>
<th>Voluntary contrib</th>
<th>Saving</th>
<th>Worker cons.</th>
<th>Pension. cons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0</td>
<td>0.00</td>
<td>0.41</td>
<td>0.18</td>
</tr>
<tr>
<td>2.0</td>
<td>0</td>
<td>0.16</td>
<td>1.49</td>
<td>1.05</td>
</tr>
</tbody>
</table>
### 3b. Asymmetric voluntary (α=1/3)

<table>
<thead>
<tr>
<th>Wage</th>
<th>Voluntary contrib.</th>
<th>Saving</th>
<th>Worker cons.</th>
<th>Pension cons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.000</td>
<td>0</td>
<td>0.40</td>
<td>0.18</td>
</tr>
<tr>
<td>2.0</td>
<td>0.165</td>
<td>0</td>
<td>1.43</td>
<td>1.17</td>
</tr>
</tbody>
</table>
3c. Symmetric voluntary ($\alpha=1$)

<table>
<thead>
<tr>
<th>Wage</th>
<th>Voluntary Contrib</th>
<th>Saving</th>
<th>Worker cons.</th>
<th>Pension. cons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.008</td>
<td>0.00</td>
<td>0.39</td>
<td>0.22</td>
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<tr>
<td>2.0</td>
<td>0.032</td>
<td>0.09</td>
<td>1.41</td>
<td>1.04</td>
</tr>
</tbody>
</table>
4. Cap on pension contributions
Cap on pension contribution base

• Different countries in different times apply different **caps** in terms of average gr. wage
  • Sweden: 1.3; Germany: 1.8
  • Hungary, 1993: 3.3; 1996: 1.6; 2005: 3.3; 2013: no

• Reasons
  – Hidden personal income tax
  – Minimally necessary paternalism
4. Impact of pension cap on consumption

<table>
<thead>
<tr>
<th>Cap</th>
<th>Low young</th>
<th>Low old</th>
<th>High young</th>
<th>High old</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0.48</td>
<td>0.09</td>
<td>1.54</td>
<td>1.85</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>0.4</td>
<td>0.37</td>
<td>0.27</td>
<td>1.49</td>
<td>1.78</td>
</tr>
<tr>
<td>0.5</td>
<td>0.33</td>
<td>0.33</td>
<td>1.47</td>
<td>1.77</td>
</tr>
<tr>
<td>0.6</td>
<td>0.33</td>
<td>0.33</td>
<td>1.46</td>
<td>1.75</td>
</tr>
</tbody>
</table>
5. Conclusions

• Paternalism should be minimized in general
• The extent of optimal paternalism in pension systems depends on the discount factors and the critical interest factors
• Voluntary pension is good but tax expenditures should be taken into account
• Cap on pension contribution should be carefully chosen