Cross-National Evidence on the Burden of Age-Related Transfers

by Gary Burtless
The Brookings Institution

Retirement Research Consortium conference
Towards a Secure Retirement System

Washington, DC

August 2005
Dependency burden

- Age structure of the population
- Age pattern of factor income
  - Gross income from labor
  - From capital & land - interest, dividends, rent, flow of housing services from owner-occupied homes
- Age pattern of PAYGO transfers
Dependency burden

“Dependency tax” on factor income = \( \frac{\text{PAYGO Transfers}}{\text{Total Factor Income}} \)

\[
\begin{align*}
\text{t} &= \frac{S \ a_i \ P_i}{S \ a_i \ (W_i + R_i)} \\
\text{a}_i &= \text{Population in age group } i \\
\text{P}_i &= \text{Average PAYGO transfer in group } i \\
\text{W}_i &= \text{Average gross wage in group } i \\
\text{R}_i &= \text{Average capital income in group } i
\end{align*}
\]
What this paper does

- Tabulate comparable (LIS) data on the age distribution of transfers & factor income
  - Finland
  - Germany
  - United Kingdom
  - United States

- Adjust reported income amounts to NIPA totals
  - To include all employee compensation & capital income flows
  - To reflect under-reporting of wages, self-employment and capital income, and gov’t transfers

- Calculate implied dependency tax ($t$), 2000-2050
Age profile of factor incomes:
Unadjusted – Based on LIS income reports

Factor income received by average 45-49 year-old = 100

Age group: United States
Age profile of factor incomes:
Adjusted – Based on LIS and NIPA income

Gross factor income received as % of average factor income of 45-49 year-olds
Age profile of factor incomes

- **Labor income**
  - Rises steeply thru mid-40s in all countries
  - Falls off faster after age 55 in Europe compared w/ USA
  - Labor earnings of Adults 65-69 / Adults 45-49 :
    - 20% in USA
    - 5% in Europe.

- **Capital income**
  - Rises thru ages 70 or 75 in all countries
  - Higher at older ages in U.K. & USA than either Finland or Germany
    - Older Brits & Americans receive capital incomes that are twice those of older Finns & Germans
    - A surprise given low U.S. saving rate
Age profile of paygo transfers:
Adjusted – Based on LIS and NIPA income

Transfers received measured as % of average factor income of 45-49 year-olds

- Germany
- Finland
- USA
- UK

Age group


Age group
Age profile of paygo transfers

- Transfers are uniformly more generous for Finns & Germans than for Americans (at every age)
- At ages up thru 55, transfers received by Britons are as generous as those in Finland & Germany
- Past age 65 U.K. is the least generous of the four countries
- Past age 65, Germany is the most generous
- At ages 20-64, Finland is the most generous
- USA & Germany have steeply sloped age-profile of transfers: The aged fare relatively well in both countries
Simplified age profile of factor income & Paygo transfer benefits:
Four countries & 2000 population age profile

Factor income of 35-54 year-olds = 100
Impact of population aging on tax rate needed to finance paygo transfers:
Four-country average, 2000-2005

Tax in 2000 = 100
Impact of population aging on tax rate needed to finance paygo transfers:
Four countries, 2000-2005

Implied tax on factor income for Paygo transfers (% of factor income)

Germany
Finland
U.K.
U.S.A.
% decline in average old-age pension relative to real average wage, 2000 – 2050

<table>
<thead>
<tr>
<th>Country</th>
<th>% Benefit Cut</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.K.</td>
<td>-47</td>
</tr>
<tr>
<td>Japan</td>
<td>-38</td>
</tr>
<tr>
<td>Italy</td>
<td>-31</td>
</tr>
<tr>
<td>France</td>
<td>-21</td>
</tr>
<tr>
<td>Germany</td>
<td>-14</td>
</tr>
<tr>
<td>Canada</td>
<td>-6</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>-4</td>
</tr>
</tbody>
</table>

Source: OECD

/a/ Decline in wage replacement rate.