EXPECTED BEQUESTS AND CURRENT WEALTH IN SHARE, ELSA AND HRS

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Age profile of wealth

• Important for both theoretical and economic policy reasons

• Life-cycle theory: people save when young and dissave when old →

    Wealth decreases in old age
    Bequests are purely accidental

• Empirically not always observed, i.e. consumption falls in old age and bequests occur even in very old age
Problems with detecting wealth age profile in cross-sections

• Cohort effects
  – Higher life-time income of younger cohorts
  – Effect of institutions different across cohorts (e.g. pension system more generous to older cohorts)

• Time effects
  – Availability of new credit instruments
  – Business cycles

Possible way out

• Expected bequests (Hurd and Smith 2002)

• Provide a final stock of wealth

• Difference between current wealth and expected bequests gives the expected asset decumulation of the household
SHARE

- Conducted in 2004 in 11 European countries
- 19,000 households and 32,000 individuals

SHARE, ELSA and HRS

- SHARE was modelled after the HRS (US) and ELSA (UK)
- We can use common sets of questions
- We use ELSA and HRS from 2002
SHARE Questions on Bequests

• Probability of you or your partner leaving an inheritance more than 50,000 euro
• If positive probability, same question is asked for an inheritance of more than 150,000 euro
• If zero probability, same question is asked for an inheritance of more than zero
• Different thresholds in HRS (lower: 10,000 and 100,000 Dollars) and ELSA (higher: 50,000 and 150,000 Pounds)

Couples

• Must take into account both partners when answering
• Who leaves the bequest
  – Choose the one with the highest expected lifetime
• Timing of the bequest
  – At expected death time
How do people answer?

Table A - Distribution of Replies

<table>
<thead>
<tr>
<th>Case</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>P(B &gt; 1st thr)=1 &amp; 0&lt;P(B &gt; 2nd thr)&lt;1</td>
<td>5,583</td>
<td>9.3</td>
</tr>
<tr>
<td>P(B &gt; 1st thr)=1 &amp; P(B &gt; 2nd thr)=0</td>
<td>4,317</td>
<td>7.1</td>
</tr>
<tr>
<td>0&lt;P(B &gt; 1st thr)&lt;1 &amp; P(B &gt; 2nd thr)=0</td>
<td>9,144</td>
<td>15.0</td>
</tr>
<tr>
<td>0&lt;P(B &gt; 1st thr)&lt;1 &amp; 0&lt;P(B &gt; 2nd thr)&lt;1</td>
<td>8,678</td>
<td>14.3</td>
</tr>
<tr>
<td>P(B &gt; 2nd thr)=1</td>
<td>12,227</td>
<td>20.1</td>
</tr>
<tr>
<td>P(B &gt; 2nd thr)=1 &amp; 0&lt;P(B &gt; 0)&lt;1</td>
<td>4,669</td>
<td>7.7</td>
</tr>
<tr>
<td>P(B &gt; 1st thr)=0 &amp; 0&lt;P(B &gt; 0)&lt;1</td>
<td>6,787</td>
<td>11.2</td>
</tr>
<tr>
<td>P(B &gt; 1st thr)=0 &amp; P(B &gt; 0)=1</td>
<td>2,637</td>
<td>4.4</td>
</tr>
<tr>
<td>P(B &gt; 0)=1</td>
<td>8,234</td>
<td>10.9</td>
</tr>
<tr>
<td>Total</td>
<td>60,826</td>
<td>100</td>
</tr>
</tbody>
</table>

Notes:
P(B > 1st thr) probability of leaving a bequest above the first threshold value
P(B > 2nd thr) probability of leaving a bequest above the second threshold value
P(B > 0) probability of leaving a positive bequest
All SHARE countries, UK and USA. Individual respondents.

Plotting expected bequests

Assume ihs of bequests are normally distributed
Evaluate mean and sd for observations with two non-unit, non-zero probabilities =>
Econometric Model

Desired bequests $y$: semi-latent
Assume $\phi(y) = x\beta + e$ with $e \sim N(0, s)$
where $\phi(y) = \ln(y + (y^2 + 1)^{1/2})$ is the ihs transformation
Expected bequest=0 when desired bequest<0

Econometric Model (cont.)

- We only know the probabilities of each interval
- Assume interval probability $E(p|X) = G(X\beta)$
- If interval is between $a_1$ and $a_2$ we can use
  $$G(X\beta) = F[(a_2 - X\beta)/s] - F[(a_1 - X\beta)/s]$$
- Pseudo log-likelihood is:
  $$\ln L(\beta) = \sum_{j=1}^{3} [p(j,i) \ln G_j(X_i\beta) + (1 - p(j,i)) \ln(1 - G_j(X_i\beta))]$$
Quasi ML

- We use quasi-ML:
  - requires only that the conditional expectation is correctly specified as: \( E(p|X) = G(X\beta) \)
  - no assumptions about the remaining features of the likelihood

- Valid for linear-exponential family of distributions (Gourieroux et al, 1984)

Regression Results

- Number of children and grandchildren: negative or non significant
- Education: typically not significant
- Food consumption: occasionally significant (4th quartile has positive effect)
- Net financial assets: 4th quartile significant in most countries, except Southern European and Switzerland
Regression Results

- Real assets quartiles and home-ownership dummy: extremely significant
- Bad health: negative, but insignificant
- Cognition (10 word recall): often significant
- Bequest received (expectation): very significant (Cox and Stark (2005))
- Typically not significant: employment, social interactions

Bequest and Real Wealth Ratios, 50th and 75th percentiles

<table>
<thead>
<tr>
<th>Bequest Ratio</th>
<th>Real Wealth Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50-54</td>
</tr>
<tr>
<td>U.S.A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.248</td>
</tr>
<tr>
<td></td>
<td>0.423</td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.285</td>
</tr>
<tr>
<td></td>
<td>0.528</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.266</td>
</tr>
<tr>
<td></td>
<td>0.584</td>
</tr>
</tbody>
</table>
Bequest and Real Wealth Ratios, 50th and 75th percentiles

<table>
<thead>
<tr>
<th>Bequest Ratio</th>
<th>Real Wealth Ratio</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50-54</td>
<td>55-59</td>
</tr>
<tr>
<td>France</td>
<td>0.198</td>
<td>0.209</td>
</tr>
<tr>
<td></td>
<td>0.390</td>
<td>0.355</td>
</tr>
<tr>
<td>Italy</td>
<td>0.255</td>
<td>0.263</td>
</tr>
<tr>
<td></td>
<td>0.533</td>
<td>0.410</td>
</tr>
<tr>
<td>UK</td>
<td>0.424</td>
<td>0.437</td>
</tr>
<tr>
<td></td>
<td>0.544</td>
<td>0.564</td>
</tr>
</tbody>
</table>

Deducing the age profile of wealth from the cross-section

• Wealth profiles are affected by differential mortality, productivity and by institutional effects
• But one can get an estimate of the age profile by assuming:
  • the saving rate is not influenced by cohort effects, only age effects
  • current age groups (i.e. cohorts) will have a saving rate in the future equal to the current saving rate of the older age groups (cohorts)
Wealth Age Profile by Cohort - USA

Wealth Age Profile by Cohort - UK
Reasons for differences in decumulation of assets

• Share of financial assets. Real assets can’t be easily liquidated, reverse mortgages are very rare

• Adequacy of welfare and health system

• Inheritance taxes and laws

Financial Transfers

• 3 questions for transfers given (last year)
• 3 questions for transfers received (last year)

• Questions on who gave/from whom they were received
• Questions on the motives for the transfer
Financial Transfers Given and Received

- They represent in/outflows of wealth and thus affect decumulation
- If transfers given higher than received then total dissaving is higher than implied by expenditure

Prevalence of Financial Transfers

<table>
<thead>
<tr>
<th>Country</th>
<th>Transfers Given</th>
<th>Transfers Received</th>
<th>Gives and Receives</th>
<th>Median Amount Given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>37.9</td>
<td>6.3</td>
<td>3.7</td>
<td>1,197</td>
</tr>
<tr>
<td>Denmark</td>
<td>31.5</td>
<td>9.2</td>
<td>4.7</td>
<td>1,689</td>
</tr>
<tr>
<td>Germany</td>
<td>40.1</td>
<td>7.5</td>
<td>5.0</td>
<td>1,434</td>
</tr>
<tr>
<td>Netherlands</td>
<td>26.8</td>
<td>5.3</td>
<td>2.7</td>
<td>2,033</td>
</tr>
<tr>
<td>Belgium</td>
<td>27.9</td>
<td>2.9</td>
<td>1.2</td>
<td>2,181</td>
</tr>
<tr>
<td>France</td>
<td>26.2</td>
<td>3.8</td>
<td>1.9</td>
<td>2,352</td>
</tr>
<tr>
<td>Switzerland</td>
<td>36.1</td>
<td>11.5</td>
<td>6.2</td>
<td>2,328</td>
</tr>
<tr>
<td>Austria</td>
<td>35.4</td>
<td>9.2</td>
<td>6.5</td>
<td>1,720</td>
</tr>
<tr>
<td>Italy</td>
<td>28.3</td>
<td>6.9</td>
<td>3.1</td>
<td>1,325</td>
</tr>
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<td>Spain</td>
<td>14.7</td>
<td>6.4</td>
<td>1.7</td>
<td>1,678</td>
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<tr>
<td>Greece</td>
<td>39.7</td>
<td>11.6</td>
<td>4.2</td>
<td>2,447</td>
</tr>
</tbody>
</table>
Conclusions

• Real wealth plays a major role in determining expected bequests.
• Financial wealth plays a role only for the rich (highest quartile) – and no role in Southern European countries
• The probability of receiving bequests plays an important role in predicting the value of expected bequests.

Conclusions

• Expected bequests are higher in Europe than in the US for people past retirement age
• In all countries most households plan to consume a non-negligible fraction of their wealth. However, past age 60, a fourth of European respondents expect to bequeath more than half to nearly all of their wealth.
• In many countries a sizeable minority of households make or receive gifts