Strategic Survey Methods and Life Cycle Models

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LTCU and LTCI

- Standard behavioral data too limited
- SSQs add unobserved contingent strategies to the data set
- Papers LTCU and LTCI with Ameriks, Briggs, Shapiro, and Tonetti (on Vanguard Research Initiative Website)
- Implementation in VRI
Two late in life saving motives:

- High LTC costs
  - Brown and Finkelstein (2008)
  - De Nardi, French, and Jones (2010)
- Strong bequest motive
  - Kotlikoff and Summers (1981)
  - Luxury (De Nardi (2004))
- Modeled as symmetric utility functions (De Nardi (2004))
  - Marginal utility multiplier $\theta$
  - Luxury shifter $\kappa$
LTCU and LTCI

Data Source: Genworth Cost of Care Study 2013
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• Need to engineer questions to separate motives
• Need for appropriate sample
• Vanguard Research Initiative (VRI)
• Vanguard data: deidentified for NYU, Michigan
• Website: http://ebp-projects.isr.umich.edu/VRI/
• Big Science
• Survey 1 on demographics and wealth (verifications)

• Innovative measurement (paper Wealth of Wealthholders on website under VRI)

• Linked to account data
  
  • Used to validate the survey responses.
  
  • Mean wealth $840,000 employer sample, $1.1M individual sample

• Portfolio details in paper
LTCU and LTCI

- SSQs in LTCU model:
  - Describe hypothetical environment
  - Describe hypothetical state
  - Describe hypothetical future
  - Describes hypothetical choice set
  - Verify understanding
  - Record a choice
Seek to specify the following optimization problem:

\[
\max_{\{x_1, x_2 \mid x_1 + x_2 \leq W\}} \frac{\theta_{LTC} (x_1 + \kappa_{LTC})^{1-\sigma}}{1 - \sigma} + \frac{\theta_{beq} (x_2 + \kappa_{beq})^{1-\sigma}}{1 - \sigma}
\]

\[x_1, x_2 \geq 0\]

Use \(W = \$100,000/\$150,000/\$200,000\)
• Verbal translation of technical maximization aided by pre-pilot cognitive interviews
• Free form pop-up interviews with subset of pilot sample
• Direct and (relatively) simple wording (grade level check)
• Preamble before SSQ
We are now going to ask about a different situation where you are older and definitely need long-term care. In this situation, you are asked to make tradeoffs between spending on your long-term care and leaving a bequest. This scenario is hypothetical and does not reflect a choice you are likely ever to face.
LTCU and LTCI

- Scenarios rationalized/broken up to ease comprehension/ lower anxiety
- First state scenario concisely
- Then flesh out
- Check comprehension
Suppose you are 85 years old, live alone, rent your home, and pay all your own bills. You know with certainty that you will live for only 12 more months and that you will need help with ADLs for the entire 12 months.

You have $100,000 that you need to split into Plan E and Plan F.

- Plan E is reserved for your spending. From Plan E, you will need to pay all of your expenses, including long-term care and any other wants, needs, and discretionary purchases.

- Plan F is an irrevocable bequest.
• Bulleted recap adds features
  • no public care option
  • pay out decided by impartial third party, etc.

• Comprehension tests

• Slider for division
Here are the rules for this scenario.

- You have no money other than the $100,000.
- Other than Plan E, you have no other resources available to help with your long-term care. You have to pay for any long-term care you may need from Plan E.
- Any money in Plan E that you do not spend cannot be given away or left as a bequest.
- You have full insurance that covers all of your hospital, doctor, and medications, but you have no long-term care insurance.
- There is no public-care option or Medicaid if you do not have enough money to pay for a nursing home or other long-term care.
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- Responses recorded through custom-designed interactive slider.
- Include a link in the top right corner to the full scenario.
- The slider allows experimentation
- Dynamically displays the trade-offs
Please make your decision on splitting money into Plan E and Plan F by clicking on the scale below. To put more money in Plan E, move the slider to the right. To put more money in Plan F, move the slider to the left. The numbers in the box will change as you move the slider to let you know how much you will have to spend and how much you will leave as a bequest.

Please move the slider to see how it works. When you are ready, place the slider at the split you want and click NEXT to enter your choice.

Plan F
$50,000

You will leave the above amount as an irrevocable bequest.

Plan E
$50,000

You will have the above amount during the next year when you need help with ADLs.
• Explore credibility of SSQ responses

• As in Manski 2004 on probabilities, look for internal coherence.

• SSQ 3 response coherence: bequest vs. LTC lock box.
• Three interesting “post-survey” questions

<table>
<thead>
<tr>
<th>Overall, how clear were the tradeoffs that the hypothetical scenarios asked you to consider?</th>
<th>Overall, how well were you able to place yourself in the hypothetical scenarios and answer these questions?</th>
<th>How much thought had you given to the issues that the hypothetical scenarios highlighted before taking the survey?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>Percent</td>
<td>Response</td>
</tr>
<tr>
<td>Very Clear</td>
<td>51.8</td>
<td>Very Well</td>
</tr>
<tr>
<td>Somewhat Clear</td>
<td>39.7</td>
<td>Moderately Well</td>
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<tr>
<td>Somewhat Unclear</td>
<td>7.4</td>
<td>Not very well</td>
</tr>
<tr>
<td>Very Unclear</td>
<td>1.1</td>
<td>Not very well at all</td>
</tr>
</tbody>
</table>
• Estimation Methodology

• First Stage: Estimate parameters outside model

• Second Stage: Match simulated model moments to data
  
  • Central case: match both wealth (25th, 50th, 75th percentiles by age) and SSQ moments (mean of survey responses normalized by dollars to allocate)
  
  • Paper shows estimates based on SSQ alone and on wealth alone
  
  • Believe decision maker or econometrician?
• LTC motives as drivers of late in life savings behavior if \( Y \leq $50,000 \) and \( W \leq $400,000 \) (majority of the US population).

• Bequest motives contribute only modestly to late in life savings.

• This is true whether targeting SSQ, wealth, or both sets of moments.
• Relates to “Annuity Puzzle”

• Explain low demand for wealth below $Y \leq 50,000$ and $W \leq 400,000$

• Demand high above (our sample!)
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- Also analyze demand for ADLI that pays out when \( s = 2 \).
- High interest regardless of motive
  - Direct if care about LTC
  - Indirect as bequest protection if care about bequests.
• Dig deeper in ABCST: “Long Term Care Insurance, Annuities, and the Under-Insurance Puzzle.”
  • Estimate individual preference parameters using our SSQs (simple parameteric response error process assumed)
  • Calculate model-implied demand for actuarially fair insurance
  • VRI 2 includes analogous stated preference questions
  • Meaningful individual differences, but below model-implied demand
• Unfamiliarity?

• Repeat for actuarially fair ideal annuities (e.g. no risk of default)

• More extreme difference:
  - 90%+ estimated to be interested with big dollars
  - Less than 25% stated interest, small dollars

• Illustrates the annuity puzzle in dramatic form

• Most VRI respondents can self insure against LTC out of the income from their annuity.

• With low bequest motive optimal to annuitize the bulk of their wealth

• Gap appears robust
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- In paper, use difference in demand estimates to check for mis-specification
  - Look for systematic patterns

- A priori family of interest given reduced form and small bequest motive (altruism?)

- VRI Survey 3 measures transfers.

- For both ADLI and annuities, transfers predict gap:
  - higher family transfers assoc. with lower stated relative to estimated demand

- No effect of children per se
• Specification test.
• No version responsive to preferences consistent with stated demand for insurance.
• Family transfers may explain a portion of this gap
• Ongoing work with Mi Luo
• Further development of SSQs ongoing (e.g., labor)