Strategic Survey Methods and Life Cycle Models

Andrew Caplin, NYU

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LTCU and LTCI

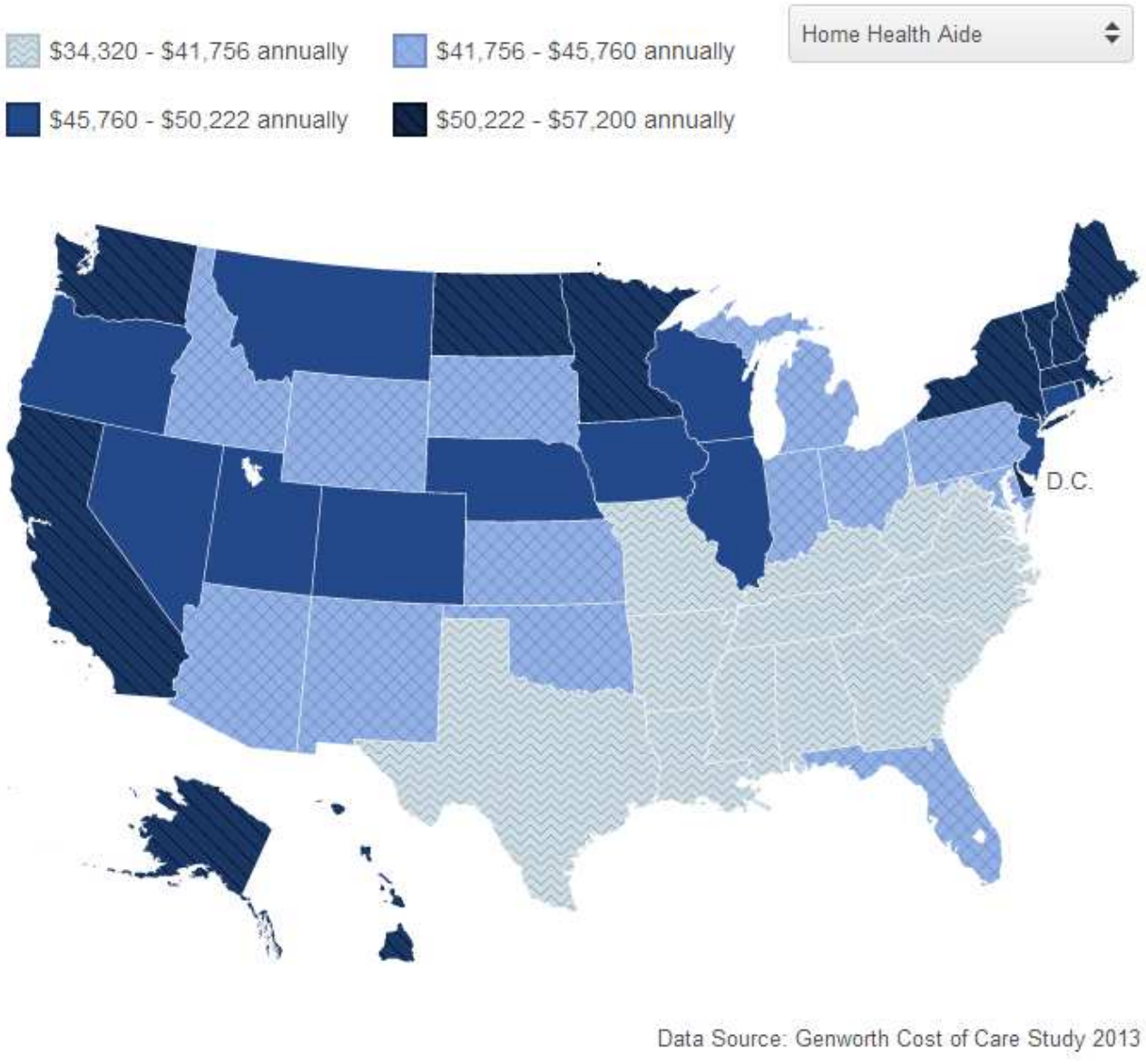
- Standard behavioral data too limited
- SSQs add unobserved contingent strategies to the data set
- Papers LTCU and LTCI with Ameriks, Briggs, Shapiro, and Tonetti (on Vanguard Research Initiative Website)
- Implementation in VRI

LTCU and LTCI

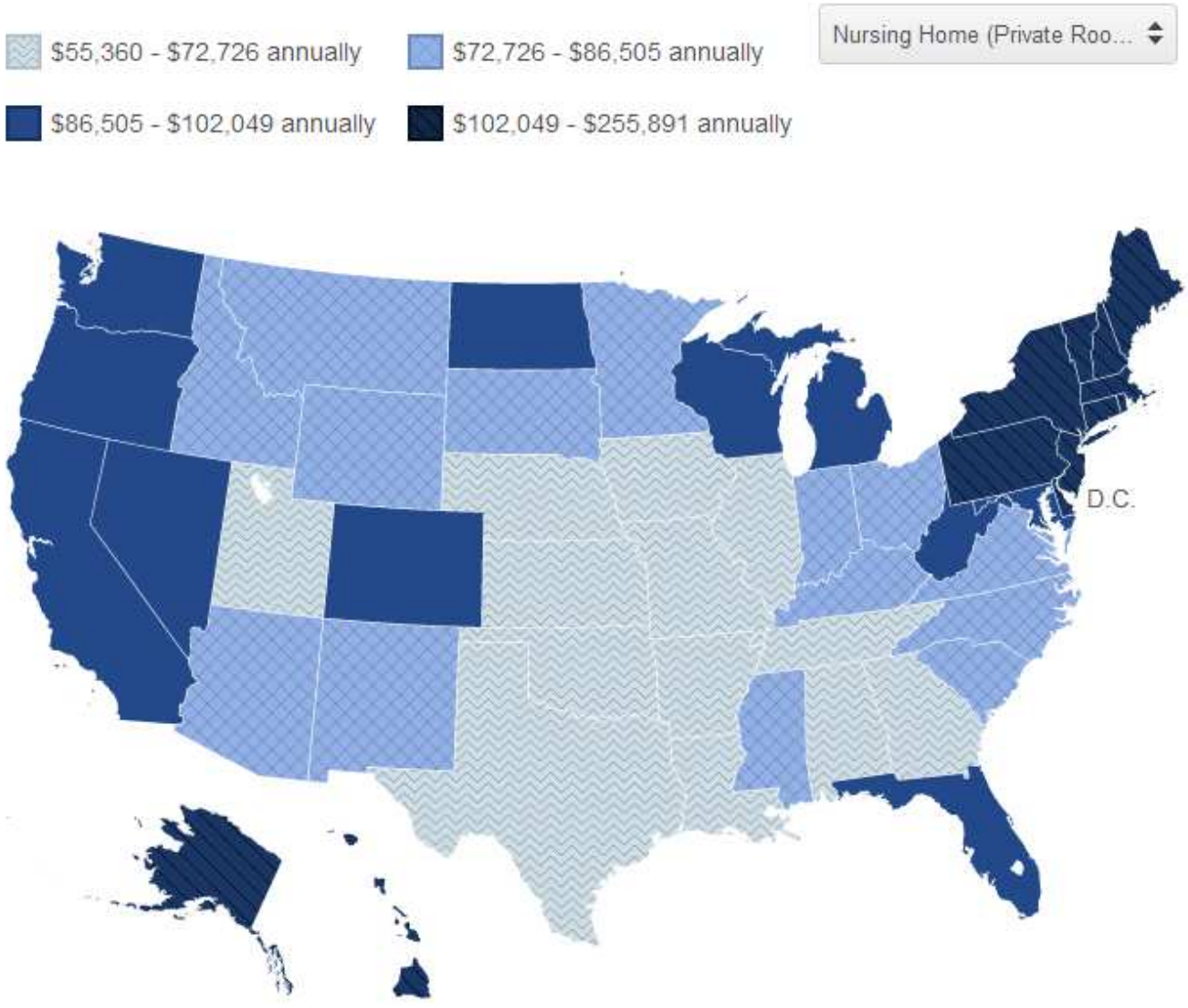
Two late in life saving motives:

- 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 θ
  - Luxury shifter κ

LTCU and LTCI



LTCU and LTCI



LTCU and LTCI

- 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

LTCU and LTCI

- 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

- 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:

$$\max_{\{x_1,x_2|x_1+x_2\leq W\}} \quad \frac{\theta_{LTC}(x_1+\kappa_{LTC})^{1-\sigma}}{1-\sigma}+\frac{\theta_{beq}(x_2+\kappa_{beq})^{1-\sigma}}{1-\sigma}$$

$$x_1, x_2 \geq 0$$

- Use $W = \$100,000/\$150,000/\$200,000$

LTCU and LTCI

- 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

LTCU and LTCI

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

LTCU and LTCI

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.

LTCU and LTCI

- Bulleted recap adds features
  - no public care option
  - pay out decided by impartial third party, etc.
- Comprehension tests
- Slider for division

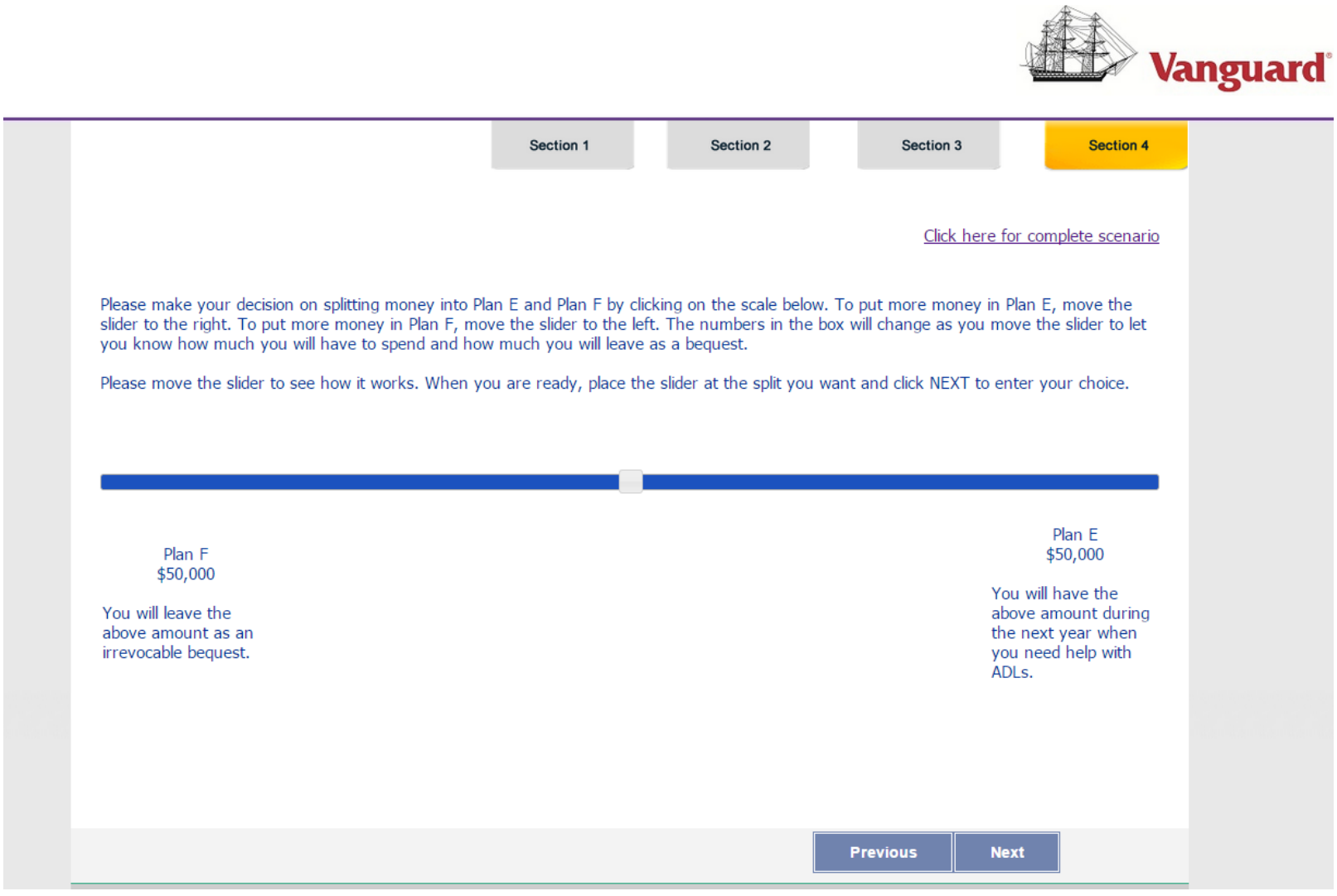
Here are the rules for this scenario.

- 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.

LTCU and LTCI

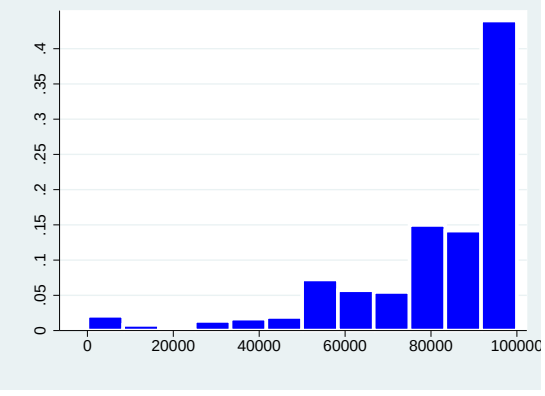
- Responses recorded through custom-designed interactive slider.
- Include a link in the top right corner to the full scenario.
- The slider allows experimentation
- Dynamically displays the trade-offs

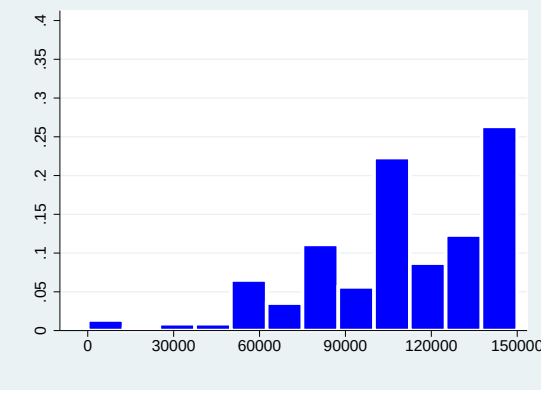
LTCU and LTCI

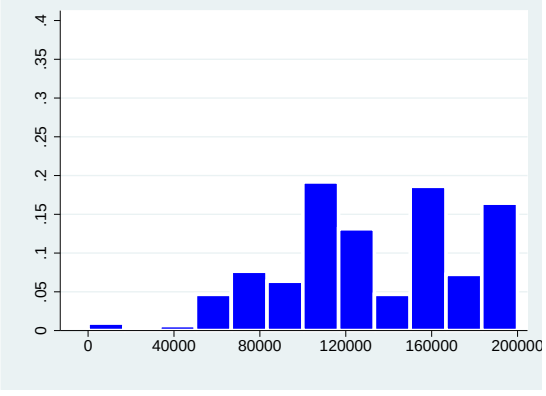


LTCU and LTCI

- 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

Overall, how clear were the tradeoffs that the hypothetical scenarios asked you to consider?		**Overall, how well were you able to place yourself in the hypothetical scenarios and answer these questions?**		**How much thought had you given to the issues that the hypothetical scenarios highlighted before taking the survey?**	
Response	Percent	Response	Percent	Response	Percent
Very Clear	51.8	Very Well	23.1	A lot of thought	29.5
Somewhat Clear	39.7	Moderately Well	60.5	A little thought	52.1
Somewhat Unclear	7.4	Not very well	14.2	No thought	18.4
Very Unclear	1.1	Not very well at all	2.2		

LTCU and LTCI

- 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?

LTCU and LTCI

- 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

LTCU and LTCI

- Relates to "Annuity Puzzle"
- Explain low demand for wealth below $Y \leq \$50,000$ and $W \leq \$400,000$
- Demand high above (our sample!)

- 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.

LTCU and LTCI

- 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

LTCU and LTCI

- 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

LTCU and LTCI

- 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

LTCU and LTCI

- 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)