Understanding & Enhancing "Retirement Security"

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Outline

- What is Retirement Security?
- Key aspects of our model of retirement
  - Medicaid aversion and bequest motives
- How do these factors affect demand for life annuities and new products?
  - Longevity insurance
  - LTCI/Life annuity combination products
- Possible policy and product design implications

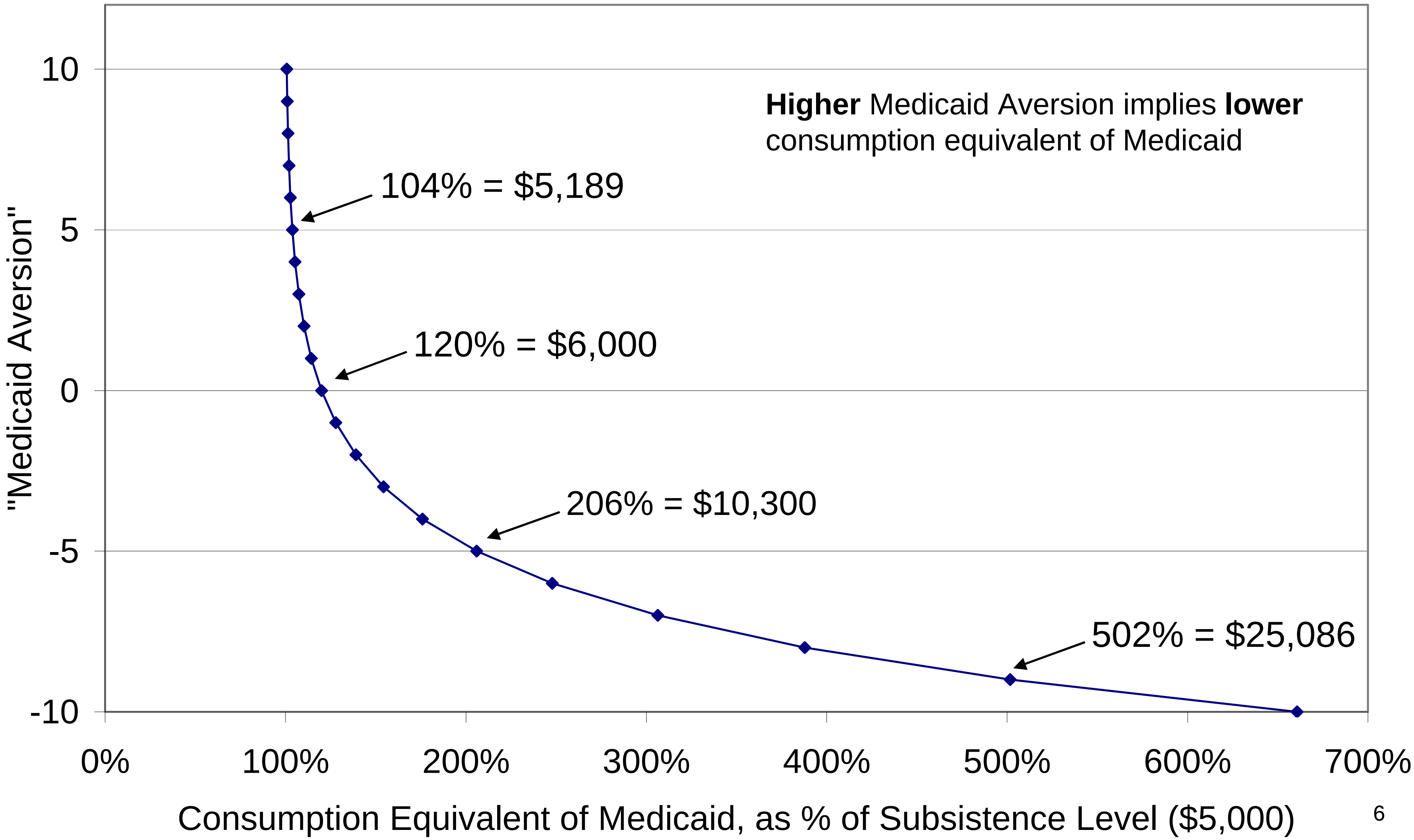
Lifecycle model w/health, longevity risk

- Twist: Life starts in retirement! But:
  - Standard risk aversion, time preference
  - Subsistence consumption set at $5k/year (SSI)
  - Bankruptcy (non-LTC) set at $8k/year
  - Riskless Social Security annuity (from data)
- "Warm glow" bequest motive (luxury good)
- Four distinct health states with well-calibrated Markov transition matrix
  - $6k cost in poor health state
  - $50k cost in LTC state
- No asset risk (modeled in companion paper)

Modeling LTC risk

- Simulations imply 85% of health costs due to LTC (Brown and Finkelstein [2002])
- Real-world payment options include
  - Private payments, Medicaid, private insurance
- We capture Medicaid aversion with a parameter measuring consumption when bankrupt in LTC state (c^{MED})
  - Degree of Medicaid aversion indexed by $\ln(u'(c^{MED}))$
- Extent of Medicaid aversion empirically unknown
  - Must be low to explain no LTCI (Pauly [1990])
  - Must be high to explain low spending (DeNardi, French and Jones [2006])

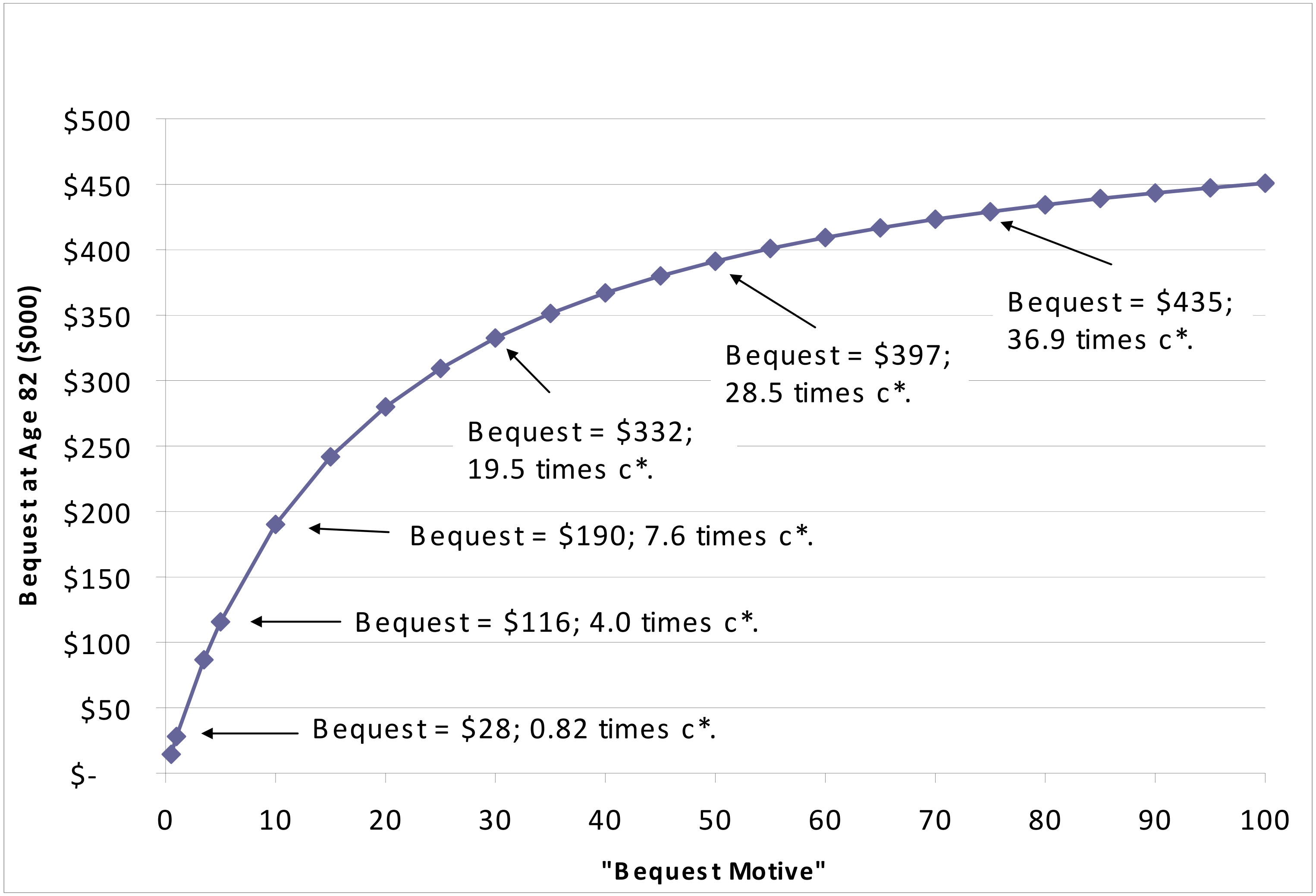
Medicaid Aversion in Our Model



Modeling Bequest Motives

- Bequest function incorporates risk aversion over bequests, and “luxury good” nature of bequests
- Use very simplified assumptions to illustrate our bequest motive (for next slide *only*)
  - 18 years to live, 100k end-of-life expenses
  - No uncertainty, no interest, no time discount
  - Assume 200k wealth, 30k annual income at age 65
- Bequest parameter is measured from 0 to 100. For a baseline individual:
  - “30” means agent optimally leaves a bequest of 332k, which is 19.5 times optimal retirement consumption (c*), at death.
  - Bequest roughly equal to consumption, in this case.

The Bequest Motive in Our Model



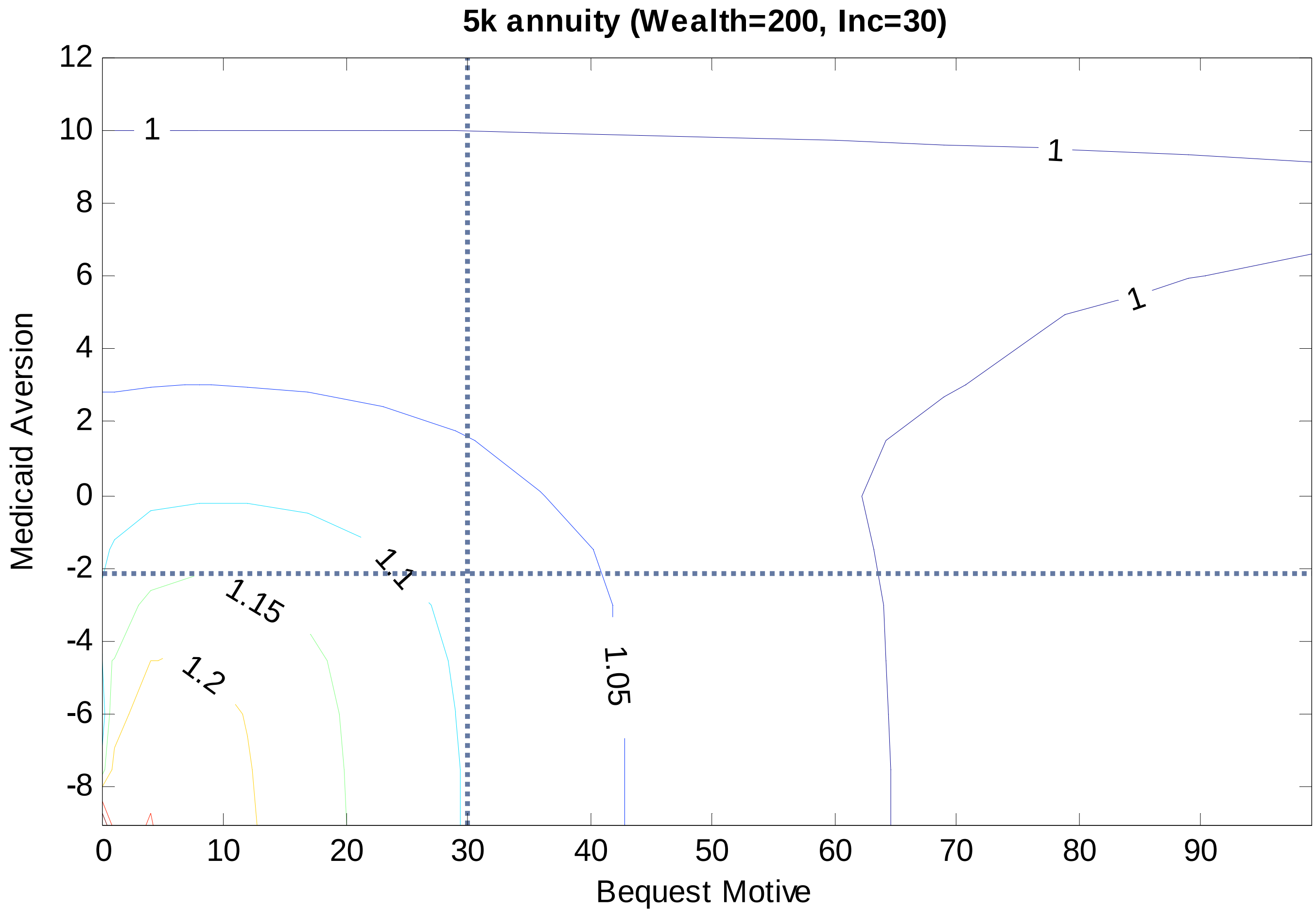
Empirical estimates

- Medicaid aversion and bequest motive not empirically identifiable from wealth and consumption data alone
  - Argument in Dynan, Skinner, Zeldes [2002]
- We use this data, *plus survey responses,* to get identification
  - Estimation possible for 268 of 498 single respondents
- Empirical estimates show massive heterogeneity
  - Bequest motives are common: no difference between wealth- & equal-weighted averages
  - Medicaid aversion is bi-modal, but higher if no kids (Hurd)
- Mean levels (conditional) are indicated by “crosshairs” on subsequent charts

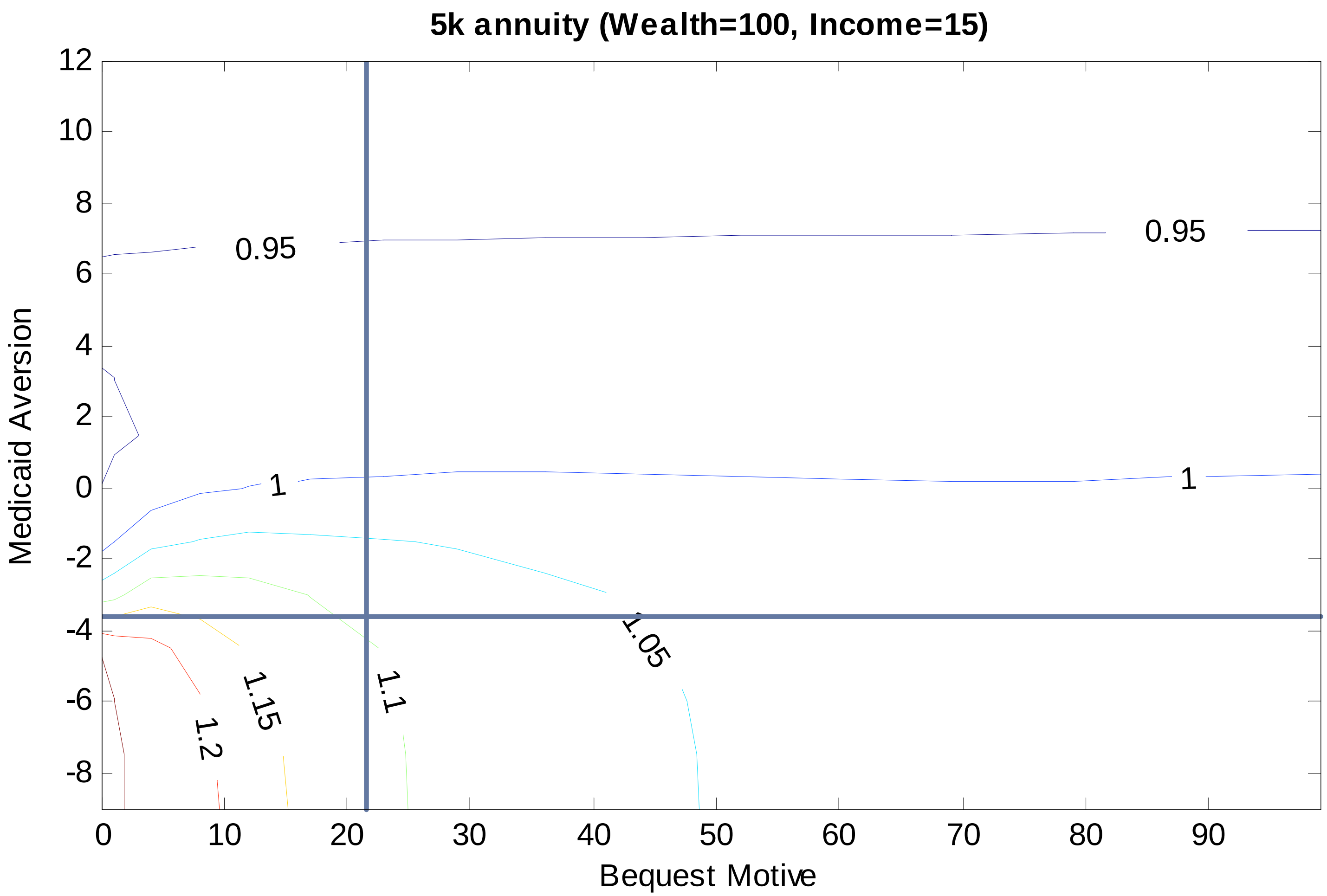
Annuity demand

- Choose baseline parameters
  - Wealth of $200k, income of $30k (real)
  - Age 65 female, good health
- Standard life annuity
  - Fixed real payments of $5,000
  - Present value @ 2% real rate of return is $86,300
- How does demand change as Medicaid aversion and Bequest motive changes?
- "Willingness to Pay" = WTP
  - What multiple of the zero-cost "Actuarially Fair" value would an agent pay for the policy?
  - Example: WTP of 1.1 means agent would pay 10% load…

"Baseline" Annuity WTP



Demand Given Lower Wealth



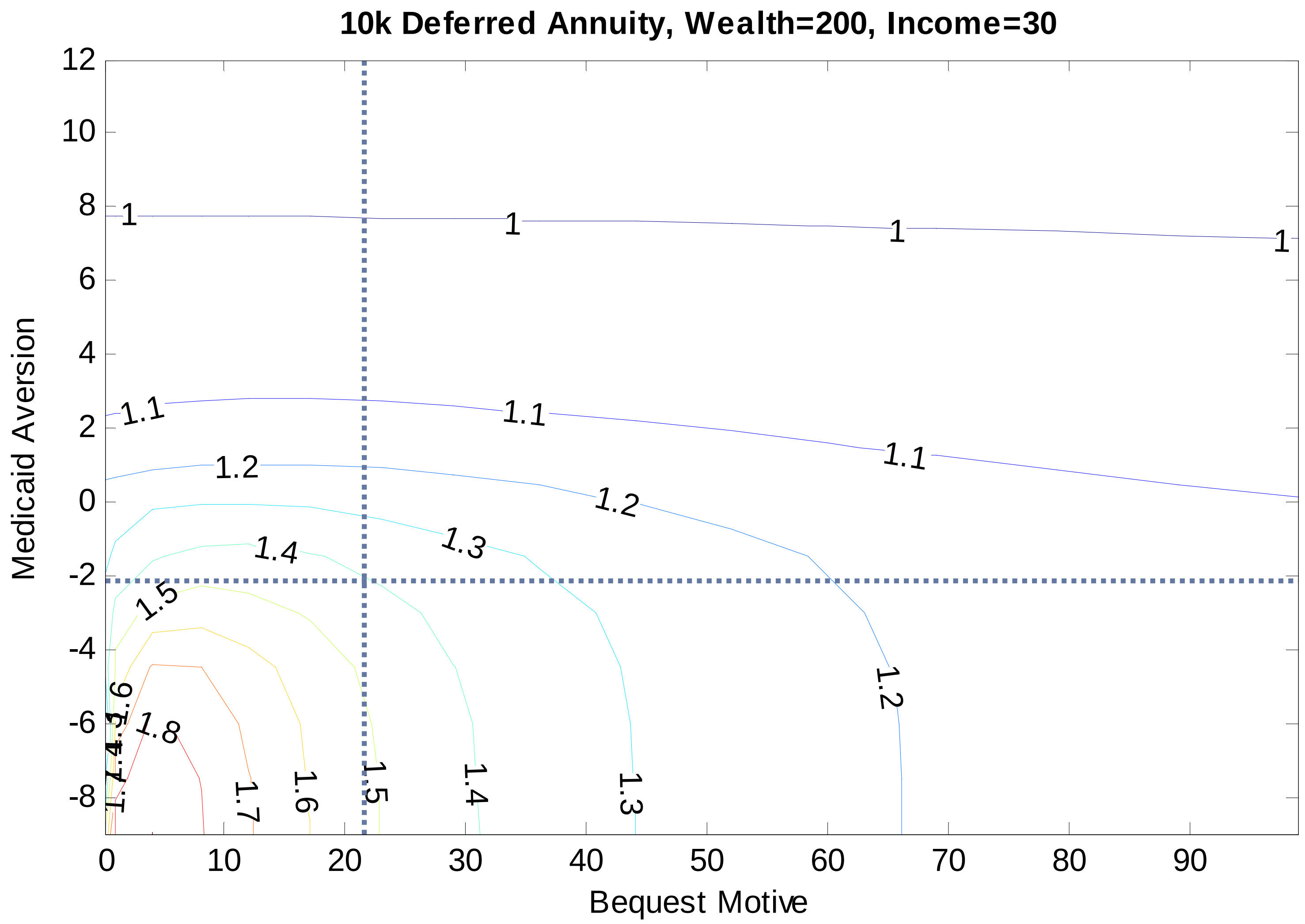
Low Tolerance for Load

- Medicaid aversion can drive demand down
  - Annuity is risky
    - High Medicaid aversion means bankruptcy very painful in LTC state
  - Not entirely a “liquidity” issue:
    - Even with complete liquidity, present value of annuity drops when LTC shock hits (Sinclair/Smetters, 2004)
- Bequest motives drive annuity demand down
  - But given high bequest motives, Medicaid aversion drives annuity demand up
  - An artifact of risk aversion in warm glow?
- With 20% load, interest only if minimal bequest motive and not Medicaid averse

“New” Ideas

- Two Enhanced Annuities of More Interest
- A: Longevity Insurance.
  - An annuity for which you pay premiums from age 65-85, receive 10k for life starting at age 85
  - Fair value premium is 1.56k / year.
- B: “Pop-up” LTC/Annuity product that triples annuity payments in LTC state
  - Combination of 5k annuity, plus
  - Additional 10k in LTC State

WTP for Longevity Insurance



WTP for Combination Policy

Implications

- Bequest motives and Medicaid aversion are core motivations for many
  - Theory-based surveys are crucial for measurement
- Annuity puzzle not so puzzling
  - Longevity insurance may be a bit better than straight immediate annuity
  - Combination with LTCI raises interest
- Is Social "Security" structured optimally?

Future Research

- Explore “Bequest Motive” more fully
  - Habitually low spending
  - Utility of wealth
  - Reluctance to give up control
- Explore “Medicaid Aversion” more fully
  - We’ve really measured aversion to poverty in LTC state – but is this a result of:
    - Low quality of care
    - Social stigma
    - Dependence on others

Innovations

- Can/should "pop-up benefits" be used to edge toward disability structure for LTCI?
  - Can incentives to family cut LTCI burden?
- Can deeper LTCI problems be resolved?
  - Contractual standard setting
  - Interaction with cognition
- Interaction with other financial choices
  - The housing asset and reverse mortgages
- Development of retiree investment strategies
  - Products, education, and advice
  - Automating finances in retirement