Health Insurance, Growth, and Endogenous Mortality in a Continuous-Time Overlapping Generations Economy

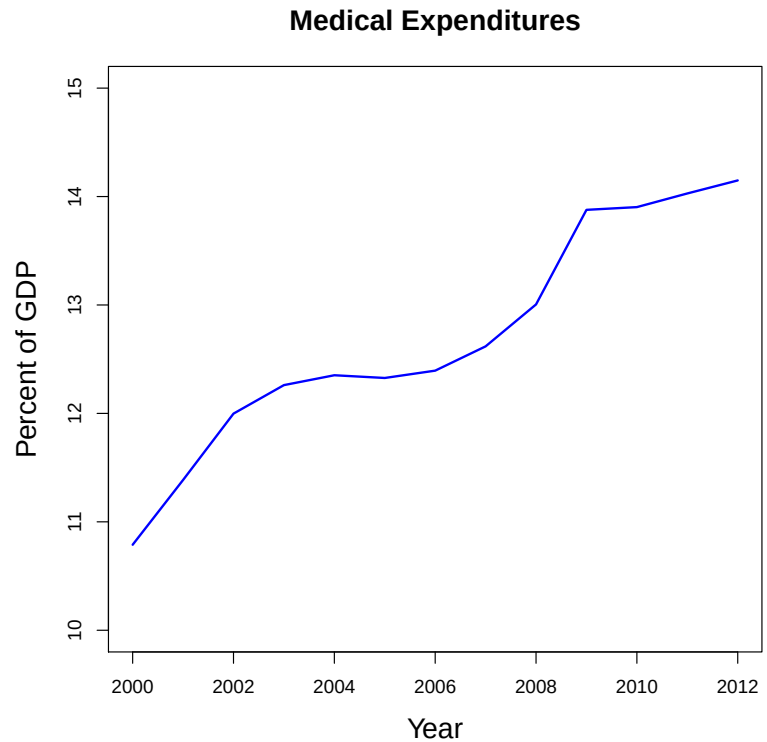
Mark Kelly
Baylor University

Go Bears! Dr. Pepper is awesome!

SEA discussion by
Stephen Terry
Boston University

A Fascinating Question

What does this huge runup in medical spending do? Does it affect aggregate income? Growth? Welfare?



Note: The figure plots the ratio of total US medical expenditures from the blended series in the NIPA Health Care Satellite Account to US nominal GDP. The data is at annual frequency and runs from 2000 to 2012.

What Does the Paper Do?

An OLG Model

- Medical spending
- Multiple sources of medical funding: distortionary taxes and premiums
- AK-style growth
- Infrastructure investment
- Endogenous mortality in an extension

Calibration

Spending shares, tax burdens, life expectancies, growth rates

Experiments

- Bad: reducing private medical costs
- Bad: increasing govt medical spending
- Bad: increasing govt consumption
- Bad: changing Medicare eligibility age
- Good: increasing govt infrastructure spending
- **No effect**: endogenous mortality

My Take

- Crucially important question, interesting paper!
- A lot of really hard and careful work is evident
- Model is really rich, matches a huge amount of data

My Comments

- Distortionary taxes distort

- Why is healthcare spending different?

Skyscrapers, Train Tracks, Limes, and X-Rays

$$Y = AK = L + X + S + T$$

$$K' = S + (1 - \delta)K$$

$$u(L, X)$$

Y: GDP
K: Skyscrapers
L: Limes
X: X-rays
S: New skyscrapers
T: Train Tracks

What do we know already from this toy model?

Growth: with AK, synonymous with new skyscrapers rate

Bad: messing with relative prices of limes & x-rays, especially if funding with distortionary taxes

Ambiguous: funding train tracks, if $A = A(T)$, $A'(T) > 0$

X-Rays are Special!

Lower Mortality: paper does endogenize, ✓
But strong restrictions (expenditure scaling, curvature) imply little movement

Lower Mortality & Human Capital: not endogenized
What about effect of longer lifespan on human capital accumulation?
Some work on AIDS in Africa.

Distributional Effects: assumed away with generational rep agents
Substantial uninsured population, which matters under Rawlsian criterion

Health & Productivity: feedback assumed away
Why infrastructure & not health? I code more without pneumonia

My Suggestions
- Don't just rehash distorting effects of distortionary taxes!
- Focus on uniqueness of x-rays, allow for big tradeoffs!

Minor Points

Closed-Form Solutions

- Why make strong assumptions to get these?
- Computer power is cheap, and these issues are complicated

Qualitative vs. Quantitative?

Paper has numbers, but really only the sign is discussed.
Are these numbers big? Small?

Why AK?

Stark dynamics, strong scale effects, perhaps overly parsimonious

Appendix Material

Much of the paper, p8-p25 is just FOCs without intuition. This can be rewritten to sell your message much more cleanly

My Take

- Crucially important question, interesting paper!
- A lot of really hard and careful work is evident
- Model is really rich, matches a huge amount of data

My Comments

- Distortionary taxes distort

- Why is healthcare spending different?