

Comments on: Murphy & Topel, *The Value of
Health and Longevity*, JPE, 2006

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January 6th, 2007

How do you give comments on a paper already published in JPE?

Keep up the good work!

This Paper's Question

How to measure the benefits of improvements in health in a utility-theoretic framework?

This Paper's Answer

Consumers max expected lifetime utility

Health affects quality of life, $H(t)$, and length of life, $G(t)$

Calibrated model says that value of past health improvements is. . .

ENORMOUS

And that future improvements will be even more valuable

Things I Like about this Paper's Answer

Non-market wealth (time) is a key determinant of WTP

Complementarity of health improvements

Questions from a Skeptical GE Modeler

Benefits are big. . . so is partial equilibrium the natural framework?

Specifically, will these improvements affect relative prices?

1: Intertemporal Substitution

M-T Instantaneous Utility = $H(t)u(c(t), l(t))$

Suppose $H(t)$ increases

⇒ period t consumption becomes more valuable

⇒ $u(c(t), l(t))$ increases

⇒ changes in relative prices

2: Within-Period Substitution

Suppose $H(t)$ is not separable. . .

$$u(H(t), c(t), l(t))$$

⇒ increase in $H(t)$ changes MRS_{cl}

⇒ changes in relative prices

3: Feedback Effects

M-T — health improvements are complementary

⇒ initial policy intervention will lead to future improvements

And if improvements are a byproduct of market activity (air quality),
could imply other improvements (or losses)

**Welfare Effects of a 5% Energy Tax:
by Leisure-Air Quality Relationship and PE vs. GE Benefits Measures**

	Costs	PE Benefits	GE Benefits	Net Benefits
Complements	-3.822	5.609	5.878	2.671
Separable	-2.558	5.223	5.507	2.954
Substitutes	-1.102	4.807	5.103	3.997

All figures in billions of 1995 US dollars.

Model calibrated to benchmark VSL = 5.597 million 1995 US dollars

Bottom Line

The value of health and longevity is measured using the full vector of price and quality changes implied by a policy intervention.

Broader Context

My Claim — substitution patterns matter. . . GE responses matter. . .

Collectively, the papers in the session confirm this. . .

Murphy & Topel / Cameron & DeShazo:

Time profile of health effects matters (nonseparability)

Currie, Greenstone, Moretti:

Mothers sort in response to cleanup (GE)

The Message

So keep up the good work!

Strategies linking equilibrium models and WTP estimation in a consistent framework are needed

The impulse that should guide this work is the same one compelled the authors today to link VSL to utility-theoretic framework in a more satisfying way