

Healthy Living in Hard Times 2005 JHE

Christopher J. Ruhm

Empirical study

Temporary economic downturns associated with:

- Decline in Smoking and

- Decline in height-adjusted weight

- Rise in leisure-time physical activity.

Declines are largest among

- heavy smokers,

- severely obese, and

- those who were completely inactive.

WHY?

- Declining work hours?

- increasing the non-market time?

little evidence that income reductions play an important role.

Changes in behaviors supply one mechanism for the procyclical variation in mortality and morbidity observed in previous research.

Introduction

Ruhm (2000) Mortality decreases with unemployment in relatively high income countries.

One percentage point rise in unemployment decreases death rate by 0.5 percent.

Results use fixed-effect (FE) models that exploit within-state variation in unemployment.

Replicated in

50 Spanish provinces over the 1980-1997 period (Tapia Granados, 2002),
16 German states from 1980-2000 (Neumayer, forthcoming),
23 OECD countries between 1960 and 1997 (Gerdtham and Ruhm, 2002)

Question is WHY does mortality decrease? This paper provides an answer.

a one point rise in unemployment lowers fatalities

from cardiovascular disease	0.4%
influenza	0.7%
liver ailments	0.4%
all causes	0.5%

Why?

Changes in lifestyle is explanation offered here

Mechanisms:

- increases in non-market time make it less costly to undertake health producing activities such as exercise or the consumption of a healthy diet.
- decrease the frequency of “self-medication” by smoking and drinking.

Paper suggests importance of the former.

Three more points

- Although physical health improves, mental health may deteriorate.
- Healthier lifestyles need not be restricted to or concentrated among those becoming newly unemployed.
- Worse health during temporary expansions does not imply negative effects of permanent economic progress.

Data

- non-institutionalized adults
- 14 years, 1987- 2000
- Behavioral Risk Factor Surveillance System
- Telephone survey
- 50,000 people in each year
- 14-year sample contains almost 1.5 million observations.

Variables surveyed:

smoking, height, and weight are in the core survey in every year,

leisure-time physical activity for all years except 1993, 1995, 1997, and 1999

Demographic data on age, sex, education, marital status, and race/ethnicity for all years.

Outcomes modeled: Smoking, obesity, regular exercise.

1.4 Methods

The basic econometric specification is:

$$(1) Y_{ijmt} = \alpha_j + X_{ijmt} \beta + E_{mjt} \gamma + \delta_m + \lambda_t + \varepsilon_{ijmt},$$

where

Y is the outcome for individual i living in state j interviewed in month m of year t ,

X is a vector of individual characteristics,

E measures economic conditions,

ε is a regression disturbance, and

α , δ , and λ represent unobserved determinants of lifestyle behaviors associated with the state, calendar month, and survey year.

Since the dependent variables are dichotomous, binary probit models are estimated.