Time Constraints, Durable Consumer Goods and the Prevalence of Obesity in Western Europe

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What is the paper about?

Big people!

and what may lie behind their body mass…

What is obesity?

- **Definition:** excessive accumulation and storage of fat in the body
- **Measurement:**
  - overweight: BMI>25, obese: BMI>30 (WHO)
  - not uncontroversial, e.g. Cawley and Burkhauser (2006)
- **Cause:** Overconsumption of energy, i.e. people consume more energy than they expend

Why should we care?

- Big issue!
- Policy (Do I have a graph here)
  - Health and mortality impact (Type 2 Diabetes, Cardiovascular Diseases,….)
  - Cost (health and disability, treatment)
  - Social cost?
- Scientific Interest

What may lie behind obesity?

- Genetic and biological determinants
- Behavioral: Body mass as the combined outcome of diet and exercise
  - Calorie intake
    - (Relative) prices
  - Sedentary life-style
    - Technology

What does the author do?

- Devise a illustrative Beckerian model
- Show associations of mean log BMI with various socioeconomic and demographic characteristics and the possession of durable consumer goods across European countries
- Focus on features of the conditional BMI distribution other than the mean, i.e. tails
- Try to address some endogeneity issues using an instrumental variables strategy

What have we learnt?

- Obesity is related to socioeconomic and demographic characteristics of the respondents (especially gender, age, education, work status)
- Smoking matters!!!
- Obesity also seems to be related to the possession of certain durable goods that may correlate with eating habits and time use
- Not only conditional means, but the entire conditional distribution varies with different respondents' characteristics

But……

- The considered covariates are rather mediate proxies – pathways regarding their impact on calorie intake and time use remain somewhat opaque

- Choice of durable consumer goods – where is the TV???

- (Endogeneity issues – urbanity as an instrument?)

Calorie Intake

Figure 1: Long-Run Changes in Calorie Consumption, 1909-1998.
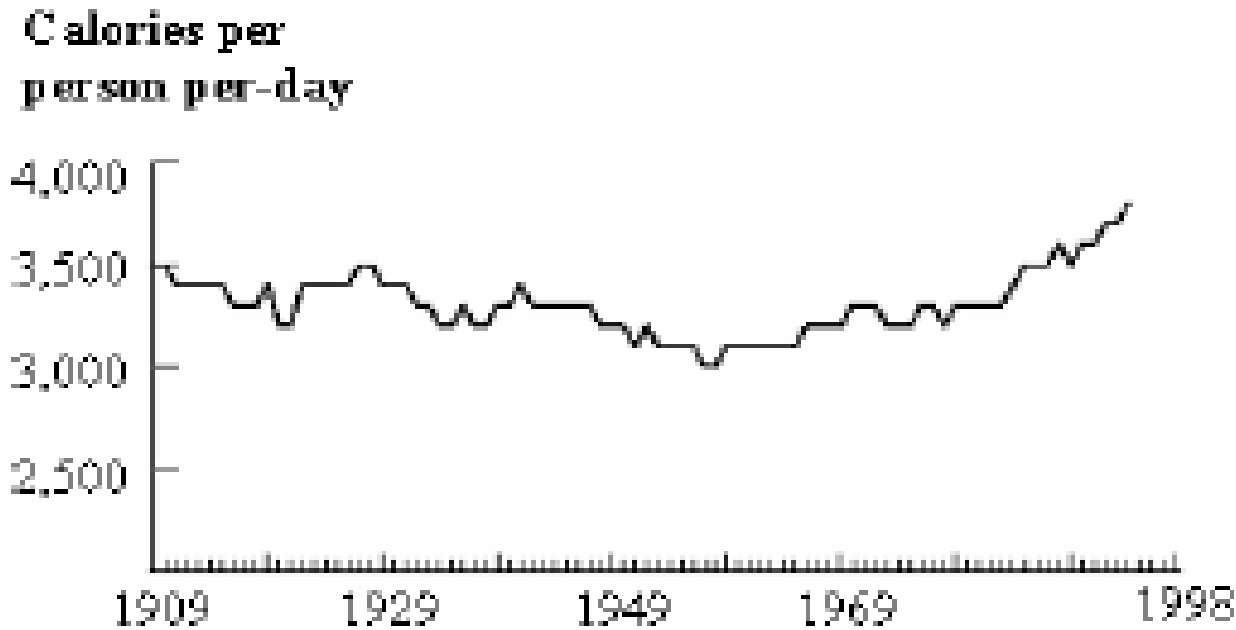
Source: USDA's Economic Research Service
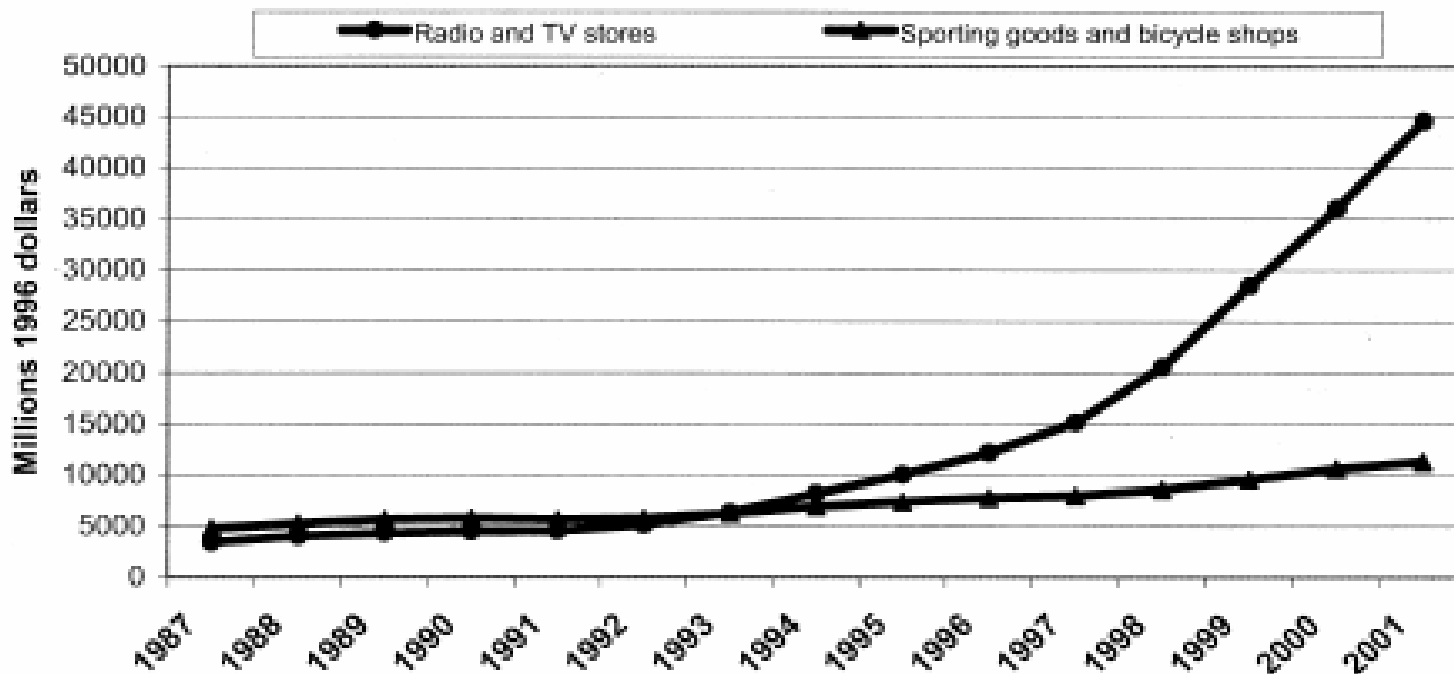
Source: Lakdawalla et al. (2005)

Durables

Figure 3. Retail sales, sports and television. (Source: U.S. Department of Commerce, Bureau of Economic Analysis, various years, constant dollar output for double-deflated industries.)
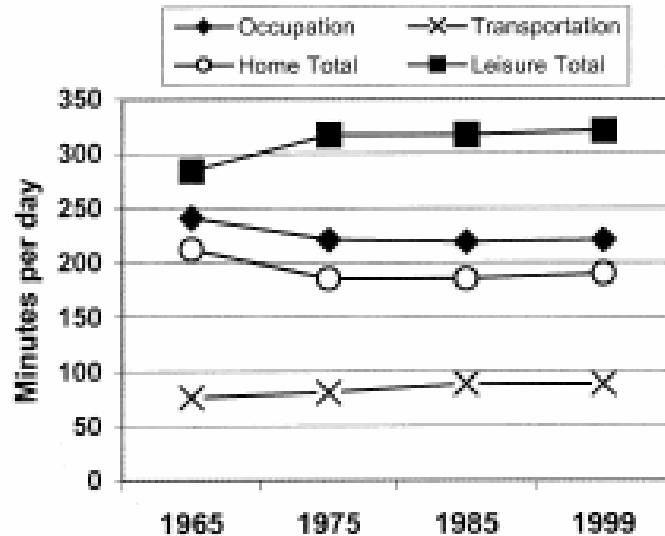
Source: Sturm (2004)

Time Use

Figure 2. Changes in time allocation, 1965 to 1999. (Sources: Robinson and Godbey,[4] and author's calculations based on Family Interaction, Social Capital, and Trends in Time Use Survey, 1998–1999.)
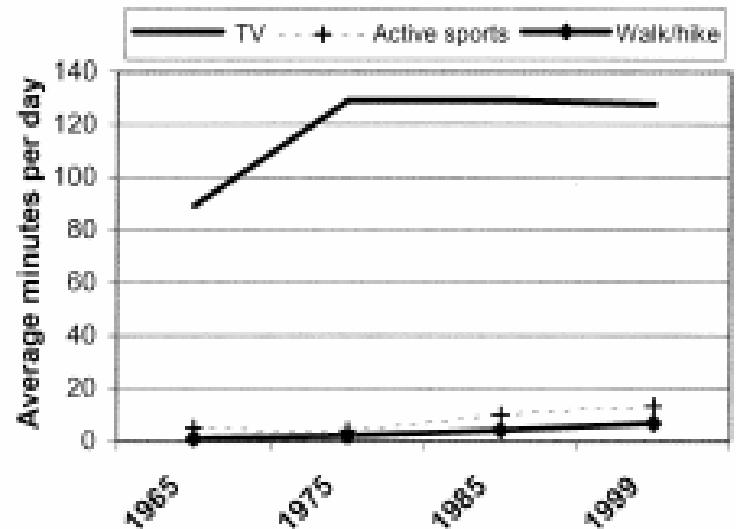

Figure 5. Time in leisure activities. (Sources: Robinson and Godbey,[4] and author's calculations based on Family Interaction, Social Capital, and Trends in Time Use Survey, 1998–1999.)
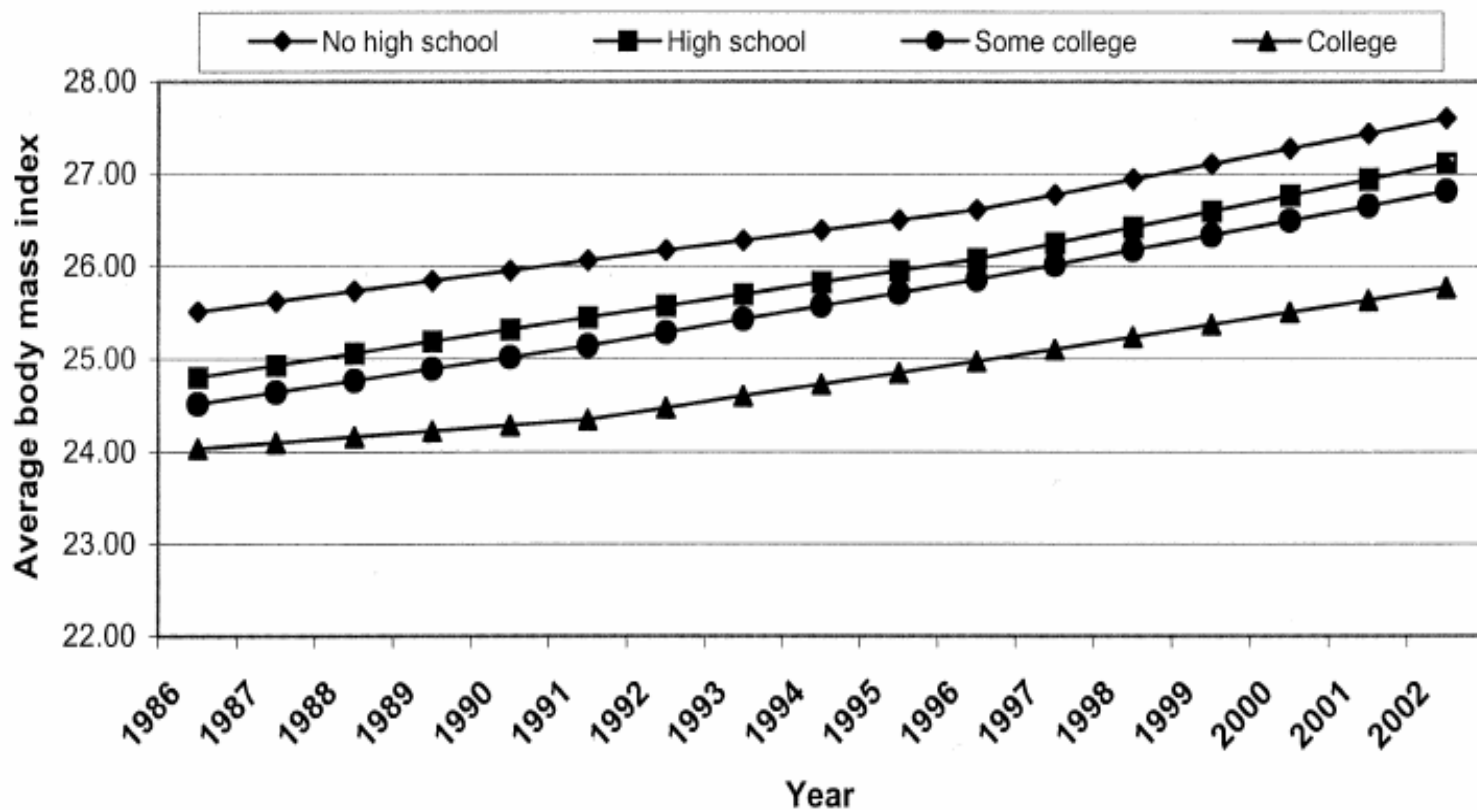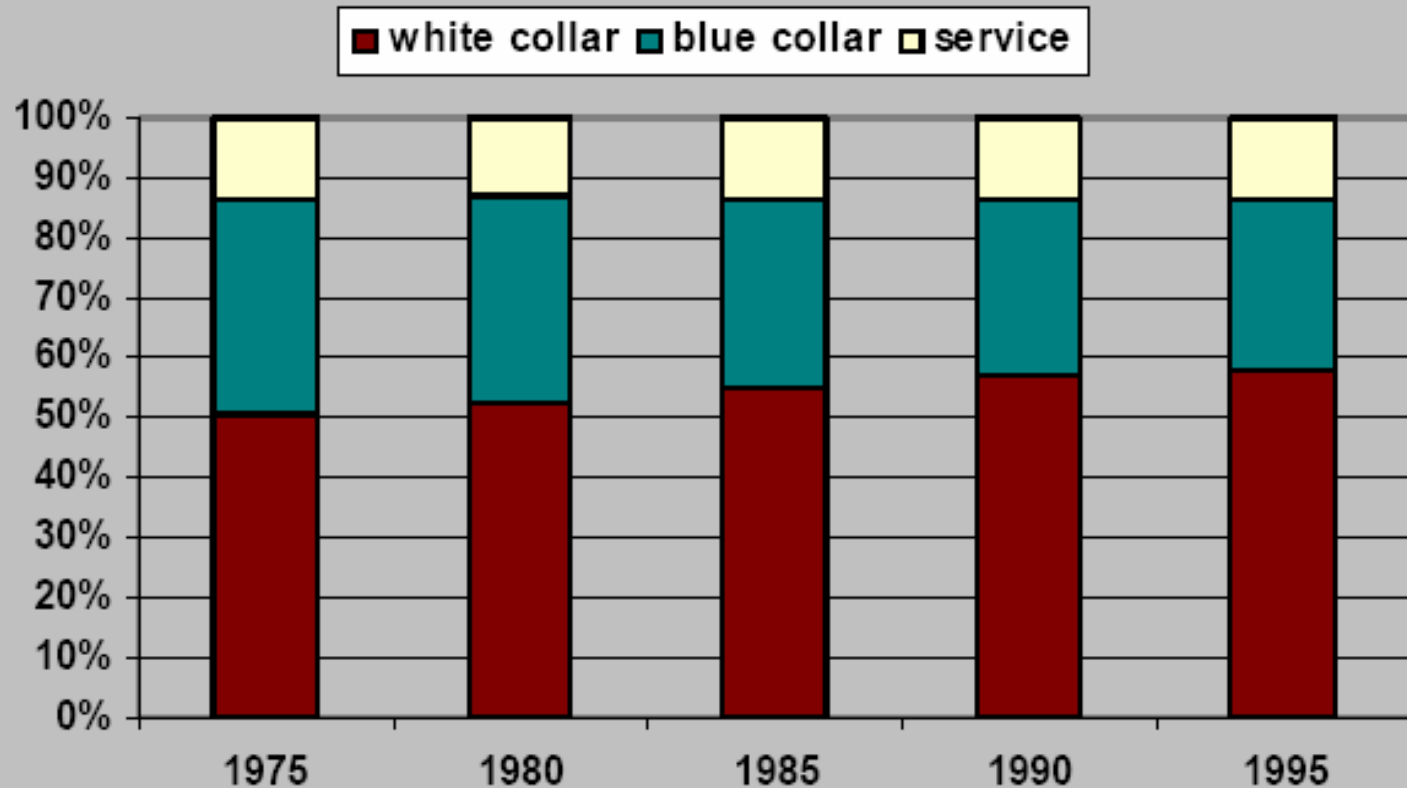
Source: Sturm (2004)

Education

Figure 6. Prevalence of obesity by education. (Source: Truong and Sturm.[31])

Source: Sturm (2004)

Employment

Source: Calculations based on data from Kutscher, R. "Historical trends, 1950-92, and current uncertainties" *Monthly Labor Review*, November 1993 and Handbook of US Labor Statistics, 5th Edition

Income (Inequality)

Figure 1 The relation between male obesity and income inequality in 21 rich countries.

Source: Pickett et al. (2005)

Some "easy-to-do" suggestions

- Focus on the distribution of BMI as well as directly on "key events", such as underweight, overweight and obesity to complement the analysis

  - Estimating the effects of covariates on conditional quantiles as such are not informative on the prevalence of overweight and obesity

  - Binary / Ordered response models may provide some additional insights

Some not "easy-to-do" suggestions

- Can we get a better grip on peoples' **eating habits** and **time use**? Better data? Food and health habits? Time use? (+ more consumer durables?)

- More direct use of **cross-country variation** (what do we know about cross-country variation in life-styles??)

- Other/further **instruments** for endogenous variables

Are we convinced?

- Yes:
  - Obesity is a problem, not only in the US but also in Europe
  - Demographics and socioeconomic characteristics matter
  - Smoking matters (growing literature, explanations??)
- "Maybes":
  - Patterns regarding durables not very uniform
  - Patterns regarding durables appear not very indicative of the story behind rising BMIs
  - More direct evidence desirable!

What now?

- Need more **direct evidence** on the determinants of eating habits and life-styles….

- Cross-country variation may be helpful to identify their effects on obesity….