

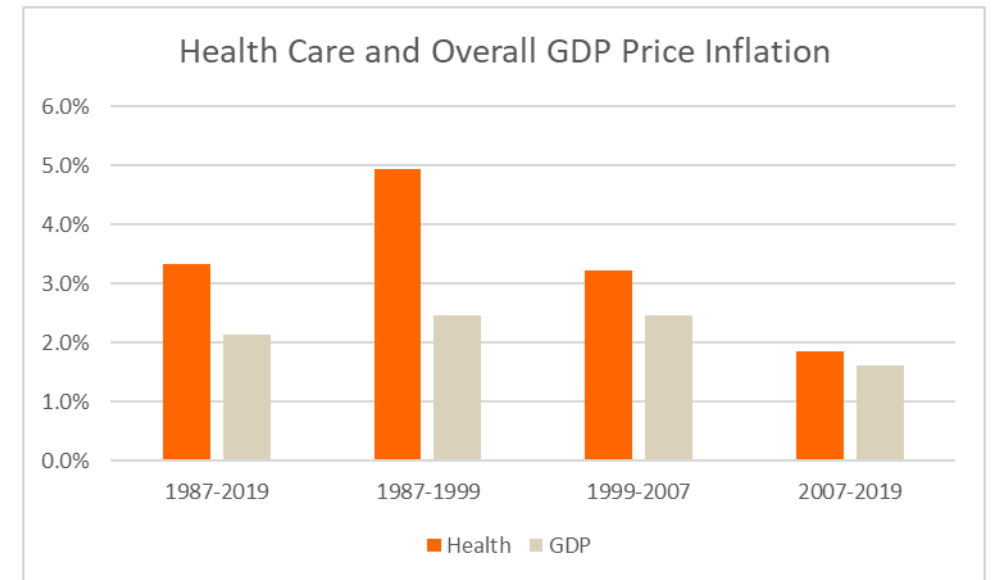
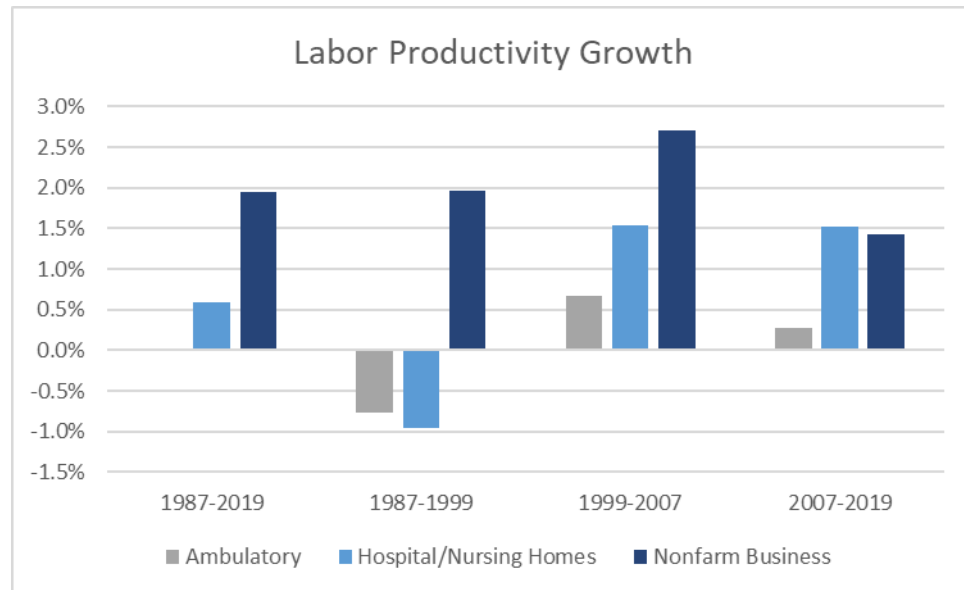
# Measuring Productivity in the Health Care Sector

---

LOUISE SHEINER AND DAVID CUTLER



# Measured Productivity in Health Sector is Low and Measured Inflation is High



# Correct—or Mismeasurement?

- Some attribute to Baumol's Cost Disease: Labor intensive health care sector has low productivity growth, but rising wages because of rising productivity elsewhere leads to rapid price increases
- String quartet is classic example: productivity has not increased over time, but salaries (and prices of concerts) have.
- Health care is different from string quartet! Major improvements in outcomes over time, in cancer, heart disease, etc.
- Outcomes improvements not captured by official statistics.
  - Price deflators measure the price for a hip replacement at hospital x paid by insurer y
  - Big costly changes in procedures are supposed to be captured (by subtracting cost of improvement), but small incremental changes (better sutures, improvements in anesthesia, etc.) are surely not
  - And no attempt to account for outcomes
- With health care already 18% of GDP and rising, mismeasurement not only affects our view of the health sector, but also overall GDP and productivity growth

# How to Better Measure Health Prices?

- Recognize that people are trying to purchase improved health—not a procedure per se.
- Two main adjustments:
  - Account for substitutions between settings by measuring health spending by disease
  - Explicitly account for changes in outcomes

# Substitutions between Settings and Interventions

- Currently deflators will compare prices of in-patient surgery over time, and prices of out-patient surgery over time, but any savings from switching from in-patient to out-patient not captured
- Talk therapy and drugs treated as separate items, so if a new drug successfully treats some patients instead of costlier talk therapy, savings is not captured as lower prices
- One exception to this is switch from brand name to generic drugs – which BLS considers to be perfect substitutes (so switch to lower-priced generic drug does show up as lower drug prices)
- Solution to this dilemma: Measure health spending by disease, rather than by procedure
- BEA Health Satellite Accounts publish estimates of spending by disease

# Accounting for Outcomes

Three methods in literature – we argue last one is the best for cost-of-living deflator.

1. Subtract the cost of any improvements in treatment:

- Increased costs for better treatment won't show up as higher prices but doesn't capture surplus from improved treatments.

2. Measure the price per unit of health. e.g., measure changes in the price of an additional year of life after a heart attack.

- Although this sounds intuitively right, it won't fully capture the benefits of health spending.
- Why? Because people may desire to purchase more health at the current price than technology allows.
- If in year 1 I can buy an additional year of health for \$15,000, and in year 2 I can buy an additional 2 years of life for \$50,000—price per year has increased, but I may be much better off.

3. Subtract the value of treatment improvements from the price.

- If a year of life in good health is worth \$150,000, then an improvement that increases costs \$50,000 but provides an additional 6 months of life actually lowers the price of the treatment by \$25,000.

# Challenges discussed in the Chapter

- How to put a \$ value on outcomes—not just a year of life, but improvements in quality of life, and how to account for changes over time as we get richer
- How to link improvements in outcomes to changes in treatment? Want to distinguish between changes in outcomes linked to better nutrition, exercise, pollution control, pandemics, vs those caused by health treatments.
- Fitting into a NIPA framework: How much of health spending is consumption, how much is investment, and how much is an intermediate good (e.g., vaccines that allow people to work – we already capture the labor income in GDP)
- Data: Claims data bases have more limited information than you might want, other surveys much smaller.

# Findings Thus Far

- Chapter summarizes the literature using all 3 methods discussed.
- Using the cost-of-living approach, research finds that health care prices have either increased more slowly than the GDP deflator or perhaps at the same rate—depending on the study methods, population, and the assumed value of a year of life.
- If quality-adjusted prices rise 2 percent less per year than official estimates suggest, real health care productivity rises 2 percent more per year than official estimates.
- Implications for MFP are less obvious—because to the extent the quality improvements are from better capital (better MRIs, for example), this would eliminate any effect on MFP in health industry – but it should show up instead in medical equipment industry (unless machinery is imported).