The Boskin Commission
One Decade Later

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I’m Here as the Boskin Surrogate

**Nostalgia**

- A great group of people (Boskin, Dulberger, Griliches, and Jorgenson) who met at least a dozen times
- Wonderful cooperation from BLS: Kathy Abraham, John Greenlees, and many others at many meetings
- Challenging Topic that we addressed with vigor
- Moynihan, the corridors of power & the bean soup
- The press conference, almost as many TV cameras as Alan Greenspan
- Live on the Lehrer Newshour
- Better yet, in the control room of the Lehrer Newshour
Why So Much Publicity

- BC tried to do two things at once
  - #1 assess the CPI bias
  - #2 urge a “bias correction” for Social Security indexation, the “CPI minus X” approach
- Set off a storm of controversy over both #1 and #2
  - #1, BLS and others defended their methods and criticized some aspects of the BC report
  - #2 launched a kill-campaign by the AARP
  - Moynihan: “Oh, we came so very close!”
Let me Take You Behind the Scenes

- Nine years later, I can confess, I’m here as the surrogate for a good reason
  - Most of what is criticized about BC was my fault
- Fingers slipping on the keyboard
- The two-hour phone call from Zvi
- The fate of Social Security (in principle, not in practice) was decided at the dining room table in Jacksonville FL at my wife’s cousin’s house
Differences with the 1961 Stigler Report

- Stigler had a budget for new studies, we had no budget at all
  - This partly explains the “off the cuff” nature of the quality change estimates
  - A survey, not new research

- Novelty: Divide CPI into 27 categories and try to come up with a quality bias estimate for each, including zero for many categories

- Overriding issue – extrapolating across categories rather than assuming bias was zero when there was no research on that category
### About #1, The BC Conclusions about the Bias (in Percentage Points)

<table>
<thead>
<tr>
<th>Source of Bias</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Level Substitution</td>
<td>0.15</td>
</tr>
<tr>
<td>- Apples vs. bananas</td>
<td></td>
</tr>
<tr>
<td>Lower Level Substitution</td>
<td>0.25</td>
</tr>
<tr>
<td>- Golden apples vs. red delicious apples</td>
<td></td>
</tr>
<tr>
<td>Outlet Substitution</td>
<td>0.10</td>
</tr>
<tr>
<td>New Products / Quality Change</td>
<td>0.60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1.10</strong></td>
</tr>
</tbody>
</table>

Plausible Range: (0.80 — 1.60)
About Substitution Bias:
CPI Immediate Fix in 1999, Previously Planned

- Switch to geometric weights for most lower-level categories
- Retain fixed weights for upper-level categories
- In principle this should have eliminated 0.25 of the total 1.1 bias
Outlet Substitution: the “Walmart Effect”

- New forms of retailing have been invented going way back to the Sears catalog vs. the rural general store
- In our period (1995-96) there was a rapid shift toward discount merchants
  - Side Comment: this is the same phenomenon of “big box” retailing that has caused U. S. productivity growth to sprint ahead of Europe’s
  - Martin Baily is the expert on the productivity and price effects of big box retailing.
- Linked out by CPI
Quality Change and New Products, the Controversial Part

- 27 categories
  - 8 we assumed no bias
  - Other 19, we imputed bias estimates ranging as high as 3% for medical care and 5% for electronics
  - This came out to 0.6% on average with 1982 weights
  - New product bias and late intro bias implicitly included
Our recommendations

- **Short-term**
  - Introduce a research-based index to redo history. Done almost immediately (Stewart-Reed).
  - Upper-level substitution bias – move to a “trailing Tornqvist” index with instant reweighting instead of 1982-84 weights in 1996
  - Use scanner data to get fast revisions on weights
No Comment or Response on an Important Recommendation: Misallocation of Data Resources

- Data collection: too much emphasis on city indexes
  - There are “National Goods” vs. “Local Goods”
  - Why collect thousands of observations on bananas when a few would do?
  - Free up resources to collect prices on local goods, i.e., non-imported produce, fuel costs, and household services
- For national goods like DVD players, this would free up resources to do more hedonics
Criticism of The Boskin Recommendations and Approach

- Particular praise of Moulton-Moses (1997) who called BC “the most influential critique of the CPI in decades”
  - No adequate attention to quality deterioration
  - BLS already makes lots of quality adjustments
  - Back of envelope, extrapolation from one category to the next
  - Can’t be implemented month-to-month

- (But others claimed the Opposite) Should have been more aggressive in estimates of value of new products
Today’s 2005 Commission Response

- Shapiro-Wilcox (1996). Our substitution estimates were too low, should be 0.5 not 0.4
- About substitution bias, we will have this persistent difference between CPI vs. PCE, where does this come from?

<table>
<thead>
<tr>
<th>Year</th>
<th>CPI</th>
<th>PCE</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995:1-1998:1</td>
<td>2.35</td>
<td>1.68</td>
<td>0.67</td>
</tr>
<tr>
<td>1998:1-2001:1</td>
<td>2.73</td>
<td>2.00</td>
<td>0.73</td>
</tr>
<tr>
<td>2001:1-2003:1</td>
<td>2.04</td>
<td>1.70</td>
<td>0.34</td>
</tr>
<tr>
<td>2003:1-2005:3</td>
<td>2.92</td>
<td>2.51</td>
<td>0.41</td>
</tr>
</tbody>
</table>
But we know a lot even if we don’t have evidence, e.g., that the value of the invention of the jet airplane is positive rather than zero (Me: value of invention of air transport = 3% of GDP per year)

Would you want to assign a zero value just because there is no formal research?

Moulton-Moses: “the overall approach seems to us to be a sensible and useful way to approach the problem of coming up with an overall assessment of bias.”
The BLS in 1995-96 actually did very little adjustment for quality change, it was mostly linking.

No explicit adjustments for new and improved goods, greater speed, durability, variety, convenience, safety, and energy efficiency.

Some of our estimates were too high, others too low.

- Especially value of new products (Hausman)
Speed of the BLS Response

- Geometric weighting at lower level, expected to reduce CPI by 0.2
- Faster change in upper-level weights (2 years vs. 11 years)
- New sampling procedures to rotate items faster
- Adoption of previous PPI approach to hospital care
- Personal computers, TVs

“Does the BLS Know that Wal-Mart Exists?”
NBER WP 10712 Aug 2004

- Typical food item at Wal-Mart is 15-25% cheaper than at standard supermarkets (based on scanner data)
- BLS links out lower Wal-Mart Prices
- Food at home inflation overstated by 0.32-0.42 points

Helps with puzzle: negligible growth in median real income since 1973 but everyone seems to be getting better off
New Research on Medical Care

- Cutler *et al.* heart attack treatments bias of 3.1-3.5%
- Ellison and Hellerstein, cephalexin class of antibiotics 3.78% per year
- Shapiro *et al.* on cataract surgery
- There was already a 2.0 difference between PPI and CPI, so the Boskin 3.0 estimate of bias only allowed 1.0 for pure measurement bias.
New Research on Durable Goods

- Ohashi 12 percent per year on VCRs 1978-87
- Cell phones alone (Hausman) account for 0.8-1.9 percent per year
- Indirect approach by Bils (NBER WP 10606) 2004
  - Increased expenditures on goods with higher prices, implicit quality change of 5.8% per year, more than double that in CPI