

Thinking Through the BEA's Options for Integrating the Industry Accounts

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First, Plenty of Praise

- The BEA has done an amazing job over the past decade
 - in bringing the industry accounts out of the doldrums
 - in concept and timeliness
 - astute awareness of the difficulties and compromises
 - Key supplement to Brian Moyer: Yuskavage “Priorities for Industry Accounts” (November 2000)

And they Make the Discussant's Job Easy

- Initial reaction, what could I say about this technical topic?
- No problem thinking up things to say, since they asked so many questions, all I have to do is provide answers
- The questions start with Yuskavage (2000) on his p. 2
 - Brian Moyer ends with questions, so do Ann Lawson, Mark Planting

Why this Discussant loves all these Questions

- You ask a question, I've got an answer
 - The journalists from the WSJ and NYT have trained us with their endless phone calls to have an answer, the shorter the better.
 - “Often wrong but never in doubt”
 - And never say pause or say “hmmm”
- My hero Harry Truman once said
 - “Just give me a one-armed economist, one who doesn't always say `on the one hand, on the other hand.’”

Industry Accounts in the U. S. vs Some Other Nations

- Some national accounts sit on three legs, not two
- Not just expenditure and income, but the third leg is product
 - Product estimates actually used in current NIPA, GDP a compromise of expenditure, income, and product
- As Yuskavage and others point out:
 - Source data for current product estimates are scanty
 - Compromise between timeliness and accuracy
 - U. S. has better source data but it is not timely enough to be used in current NIPA estimation

The “Principle of Averaging” Conflicts with BEA Practice

- BEA chooses expenditure side as THE measure of GDP. Income side is a sideshow
 - Statistical discrepancy = Expenditure GDP minus income GDI
- Why not average them?
 - Martin Baily’s ERP on productivity debate brought attention to this issue

The BEA's explanation

- We've got deflators for expenditures (C+I+G+NX) but not for income
- Deflators are IRRELEVANT to determining the best total level of current-dollar GDP
- Alternative of averaging would apply to nominal GDP and real GDP could be calculated after.
 - Let's say GDP = 100 and GDI = 110
 - Compromise nominal GDP = 105
 - GDP can be deflated as before and then scaled up by 105/100 (or by a more sophisticated method)

A Unifying Theme in the NIPA and in these Presentations

- We've got conflicting data on value-added
 - GDP by industry, value-added comes from income-side data, gross output minus value-added yields intermediate materials as a residual
 - The opposite occurs in the I-O tables. Gross output minus estimated intermediate materials yields VA as a residual.

Real GPO More Problematic than Current-dollar GPO

- Separate deflators for gross output and intermediate materials
 - yields the GDP by industry deflator for value-added as a residual, and hence real value added as a hybrid (Yuskavage Fig. 2 p. 24)
- Large differences in nominal VA between I-O and GPO (Yuskavage Table 1 p. 19)
 - These are compounded by inevitable errors in deflators applied to GPO intermediate mtl

Start with a Consensus Opinion: Gross Output More Accurate

- Moyer slide 7:
 - “Quality of gross-output data is high”
- Same slide: further division into VA and intermediate materials is problematic
 - IO: intermediate materials data partial, differs across industries and time periods
 - GDP-by-I: income-side data used for VA depends on problematic coverage by industry of profits, net interest, and CCA
- Why should accounts assume one set of errors is more important or bigger than another?

Conflicting Data: Why Not Average Income and Expenditures?

- Averaging: Take average of two imperfect estimates as the measure of VA and intermediate materials for each industry
- But you can go beyond the income-expenditure precedent that supports averaging
- Research large discrepancies (Moyer: slide 11, “use both, undertake industry-specific evaluations”. You can’t avoid it, especially
 - When IO intermediate data are flimsy or
 - When GDP-by-I income-side data flimsy, e.g., underground economy in home repairs and personal care services distort property-type income measures

Specific Suggestions for Integration (Moyer slide 12)

- His suggestions:
 - Start with GO, II, VA from “1997 prime” benchmark IO table
 - Extrapolate nominal GO with annual surveys
 - Options for VA
 - Assume constant intermediate materials ratios
 - Get income-side VA estimates from GDP-by-industry
- Why not do both and average them? Key principle – admit all data imperfect and don’t throw away any of them

Deflation Problems

■ Current Approach is Asymmetric

- In GDP-by-I, deflators based on product-specific data are applied to intermediate input data that are a residual
- The IO real intermediate materials data are more “honest” because the deflators are applied to actual nominal materials inputs, not to a residual
- The GDP-by-I real materials inputs data are a hybrid, neither beast nor fowl
- No wonder there are so many crazy discrepancies between GO and GPO growth rates by industry

Learning from Examples

- These examples simply report differences in real output per hour between the BEA GO and GPO data over 1995-2001
 - We should not be left in the dark about what causes these discrepancies
 - Integrating annualized I-O tables and then averaging the alternative measures of VA and intermediate materials would go a long way to solving these problems

Example #1: Non-durable Manufacturing, almost 10% of GDP

- Consistent tendency in BEA industry accounts for GPO (VA) for 1995-2001 to overstate the output growth of wholesale/retail trade and to understate the growth of nondurable mfg
- 1995-01 output per hour in nondur mfg
 - GO 2.35% PA, GPO 0.33%
- 1995-01 productivity revival in nondur mfg
 - GO +0.96, GPO -0.90

Several Other Major Differences in GO vs. GPO productivity growth

- 1995-2001 Output per Hour Growth rates, first number is GO, second is GPO (Value Added)
 - Metal Mining 7.95 16.35
 - Durable Goods 4.41 5.92
 - Nondurable Goods 2.35 0.33
 - Tobacco 3.42 -15.36
 - Communications 6.79 3.77
 - Wholesale 4.03 6.54
 - Retail 3.36 5.06

A Recurring Theme: Too Much Industry Detail?

- Pressure for more industry detail comes from only one direction, industry lobbyists
- Economists care more about historical continuity than about anything else.
 - So we'd rather aggregate above the industry breaks than care about fine points at the 4-digit level
 - Provide us with enough data to link across break points. How do we recombine sectors in durable manufacturing & services? Or will we be forced to go to the upper level (dur, svcs) with no feasible sub-industry disaggregation?

Argument for Asymmetric Disaggregation

- The last thing to do would be to disaggregate by sectors of equal 1997 nominal gross output or value added
- We know more about some industries than others
 - Tobacco – specific insurance, taxation, legislation issues
 - Airlines – totally corporate, no underground economy, extremely detailed data on EVERYTHING.
 - Could argue for aggregating services where proprietors income, tax evasion, tips, etc., are the dominant measurement issues: barber and beauty shops, restaurants, home repair, etc.
 - Law, medicine in the legal above-ground arena, the big issues are deflation
- Yuskavage pp. 38ff need for less disaggregation in order to improve timeliness

Summary: Yuskavage's Questions

- #1 “Should GPO and I-O Value-Added Estimates be the Same?”
 - He asks whether industry GPO should be a “control” for I-O value added, or vice versa
- Neither, the principle of averaging should be used

Yuskavage Question #2

- “Should the Annual I-O Accounts be Prepared as a consistent time series?”
- Answer: The principle of averaging suggests that the annual I-O accounts must be integrated with annual GDP-by-I.
 - The annual I-O accounts will always contain valuable independent information about intermediate materials that must inform the residual approach of the annual GDP-by-I

Yuskavage Question #3

- What level of industry detail is most useful?
- Answer:
 - Industry division should be substance and data driven.
 - Forget about demands of outside users
 - Current 88-industry is too much
 - Do we really need pipelines or transportation services?

Yuskavage Question #4

- “Are annual industry output measures with a release lag of 10 months for a year $t-1$ estimate acceptable?”
- Answer: Why 10 months or 4 months? Why not just publish them as part of the July revision as it was always done in the old days of Table 6.1 and 6.2??
- Let’s move toward a tripartite system in which expenditure, income, and product accounts coexist comfortably, averaged together to yield one number for total GDP
- Implications that annual revisions will be major
 - So what? They are major already