Prioritizing Steps for the Statistical Agencies: Discussion by W.E. Diewert

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Some Highlights

Bradford Jensen Paper

- **Makes a convincing case that services data is seriously underrepresented in the US production accounts**
- **Points out some serious problems in the US statistical system with BEA, BLS and Census being unable to share micro data; the need for a common sampling frame**
- **The need to link to administrative data; in particular to tax data**
- **Statistics USA is the answer to these problems but …**

Some Highlights (cont)

Timothy Sturgeon and Gary Gereffi Paper

- **They advocated collecting establishment level data according to *business function***
- **See page 23 of their paper for their list of 12 generic business functions**
- **I liked their classification very much. Roughly speaking, their functions are associated with what we might think are firm *overhead activities* such as:**

  (1) Purchasing inputs;

  (2) Selling outputs including distribution, logistics and marketing activities;

  (3) R&D and product development; i.e., developing new technologies and products;

Some Highlights: Timothy Sturgeon and Gary Gereffi Paper (cont)

(4) Other overhead activities such as accounting, maintaining buildings, security services, payroll management, accounting, and overall strategic management.

What is the significance of this business function breakdown?

- **Most of these activities can be outsourced; i.e., firms face a make or buy decision with respect to these service functions.**
- **The problem for statistical agencies is to define the outputs in a precise form.**
- **Presumably this is being done in the North American Product Code.**

Some Highlights (cont)

Katharine Abraham and James Spletzer paper

- **Described the Occupational Employment Statistics (OES) survey in some detail.**
- **A very rich data source on employment (and earnings) by pretty detailed occupations by industry and geographical region.**
- **Very useful for young people making occupational choices but also potentially useful for looking at the effects on employment of outsourcing.**
- **It seems to me that this survey should be expanded so that "smoother" annual time series could be extracted that would also be used in order to obtain better labor input deflators for the BEA industry estimates of the value of labour input.**

Some Highlights (cont)

The Michael Mandel Question:

"What burning policy question would having additional information on offshoring answer?"

- **I interpret this question as: "Why do we want to measure service inputs and outputs better?"**
- **The Houseman, Kurz, Lengermann and B. Mandel paper shows that we need better measurement of intermediate input use in order to better measure real imports and more importantly, the *real output* and *Total Factor Productivity* of the US economy.**
- **The paper by Alterman also makes the connection between better measurement of intermediate input usage by industry to better estimates of real value added and TFP growth by industry.**

Some Measurement Problems

The basic problem is that the *matched model paradigm* breaks down in various ways:

- **An existing supplier is replaced by an new supplier who supplies the same product at a lower price but the shift to a lower price is missed by standard statistical agency procedures (because the products are not exactly matched). Michael Mandel and Susan Houseman brought this to the attention of the profession. Emi Nakamura and Hon Steinsson call this *product substitution bias* and it is analogous to outlet substitution bias in the CPI.**
- **Entirely new products appear and old products disappear again leading to a lack of matching.**
- **Old firms disappear and new ones enter (Haltiwanger).**

More Measurement Problems

- ***Transfer pricing*** **is becoming more prevalent with increasing offshoring (transfer prices do not necessarily represent real opportunity costs; are driven by tax considerations).**
- ***Problems with the Input-Output Tables*****: In order to properly deflate cells in I-O tables, we actually need to decompose transactions into a series of bilateral intersectoral transactions, with a separate index for each set of these bilateral transactions. Not only do we not do this, we compound the problems associated with the real I-O tables by using output price indexes as intermediate input price indexes (across all industries as well!). This is why we need a new intermediate input price index.**

More Measurement Problems (cont)

- **It is difficult for firms to break up many intermediate input expenditures into price and quantity components; i.e., a firm will have its quarterly or annual expenditures on say janitorial services for its various structures but it will not bother breaking this into price and quantity components (how many square feet of building space was cleaned and to what level of quality?).**
- **What is the price of many of the business functions mentioned earlier such as "strategic management" or "R&D activities" or an advertising campaign?**
- **The number of products in the I-O tables will have to be increased to reflect these hard to measure services. But there are problems with the I-O tables for some "traditional" products; e.g., leased capital services and contract labor.**

More Measurement Problems (cont)

- **There are no universal product codes for all intermediate inputs and so firms are not routinely breaking up intermediate input expenditures into price and quantity components.**
- **Contrast this with the household final demand sector where Universal Product Codes exist and various scanner data sets are available (and will gradually be used in the construction of a CPI).**
- **It is also easier to construct a CPI (as opposed to the construction of an intermediate input price index for an industrial sector) because consumers are generally not into making "make or buy" decisions, which lead to a lack of matching on the business side. (But there are some make or buy household decisions as well).**

My Recommendations for Statistical Agencies

- **Set up an *intermediate input price survey*. Ideally, this survey would ask respondents whether a particular input purchase was from a domestic or offshore supplier. This would eliminate the need for proportionally spreading imports across all sectors as is done now and would give us a chance to address import substitution bias.**
- **Expand the OES survey so that good annual numbers on employment and earnings by occupation (or educational background) would be available and this information would feed into the System of National Accounts to give better deflators for labor income generated by industrial sector and this in turn would lead to better productivity numbers.**

My Recommendations for Statistical Agencies (cont)

- **Given the US fiscal situation in coming years, it is likely that a value added tax will come into being. This is an opportunity to get a much better grip on the value of exports and the value of imports for small firms (because exports are exempt from a value added tax and imports are not deductible and so these value flows should be a part of a firm's submission to the tax authorities so that they can better monitor these VAT filings). This will not help break down exports and imports into price and quantity components but it should lead to better estimates of value flows.**
- **Set up Statistics USA!**