

Does the Growth of the Service Sector and the Digital Economy Create New Measurement Challenges? Comments

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Professor Bean's Presentation (1)

- A concise and thought-provoking presentation about the most pressing issue of measuring services “output” in a “digitalized economy” and at the same time a progress report of UK authorities’ attempts on this issue
- Five Measurement Issues Identified
 - Where should the production boundary be?: “boundary issue”
 - Handling quality change and new products: “deflator issue” – not considered
 - Inadequate measurement of services: “services output issue”
 - Digital economy and disintermediation: “digitalization issue”
 - Ease of geographical redenomination of production: “cross-border issue”

Professor Bean's Presentation (2)

- In fact, what Professor Bean's presentation explains is much deeper than these five issues. This is a question of what we should measure.
- Background: Two Puzzles
 - “Service Economy” (services become predominant)
and “Digital Economy” (huge expansion in digital data transfer)
seem to result in
 - **Nominal GDP Puzzle**
(no dramatic increase in IT & affected industries' nominal value-added)
 - **Productivity Puzzle**
(broadly-based productivity slowdown)

Professor Bean's Presentation (3)

- The presentation points out that the keys to understand these puzzles are
 - Value creation shifts from Market (Firm) Production to Household (Home) Production
 - Digitalization of Services and Services Disintermediation
 - Digitalization of Services and Free-of-Charge Digital Production
- A case in point: “sharing economy”. UK is a spearhead of the change called “sharing economy,” which is now to begin changing the landscape of the economy in not only developed but also emerging and developing economies

My interpretation: What is the “Value-Added”?

- The ultimate source of value-added of products and services is utility that consumers enjoy from consumption of them.
- Before digitalization,
 - Value-added of manufacturing was tied with physical products it produces
 - Thus, value-added is a synonym of employment creation (employment of human and non-human factors of production).
 - In the same way, value-added of services was tied with physical agents and physical places.
 - Again, value added is a synonym of (human and non-human) employment creation.
- Thus, the measurement of (real) value-added is not only the measurement of utility creation, but also the measurement of employment creation. This made the measurement of Value Added (GDP) of utmost importance in policy.

After Digitalization (though exaggerated...)

- After digitalization, **value-added is “freed” from the straightjacket of physical products.** (Music is freed from CDs and CD players etc.)
- This is the case even in services. **Value-added is “freed” from physical agencies and physical places.** (financial, insurance, travel advice, matching of all kinds, etc.)
- “Free-from-physical products, services and places” means (almost) negligible marginal cost of production and transportation.
- Naturally, place to create value (utility) is shifting from firms (markets) to households (home)
- Naturally, many value-creation activities do not entail (human and non-human) employment (except for initial stage of development) and thus become free of charge.
- Thus, Nominal GDP puzzle, and productivity puzzle

So, What Are You Measuring?

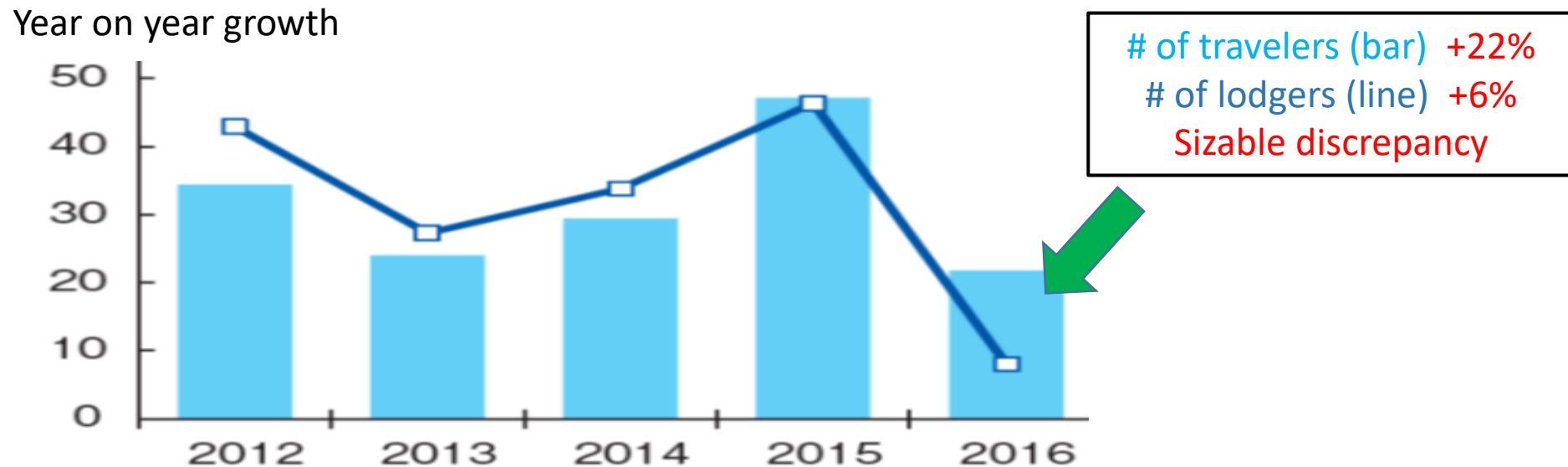
– An Ultimate and Fundamental Choice Problem

- Do you want to measure utility, the ultimate source of “value”? (**Utility or Welfare Approach**). However, utility (value) is no longer providing good information about employment creation, which policy makers concern most ... a similar problem in corresponding price indexes for Central Banks
- Or, do you want to measure (human and non-human) employment creation? (**Employment Approach**). Then, you have to admit that vastly improved value creation is not translated into employment creation. Nominal GDP puzzle and productivity puzzle are not puzzles but reality.
- These are fundamental questions, which all people engaging in measurement are obliged to take side at some point.
- However, we have not been discussing this issue adequately ... Academia seem to prefer Utility Approach, but policy consequence of this approach is not fully examined.

Other Practical Measurement Problems

- There are a lot of other measurement problems especially in Japan, some of which will be discussed in the next Panel.
- Among them, Inadequate coverage of new activities like the sharing economy ---

Case in point: not so reliable statistics -- discrepancy in statistics between the number of travelers and the number of lodgers in 2016



For other information, see newly-issued *Research Report on the Sharing Economy* sponsored by ESRI.

Final Questions

- Question 1
- Quality measurement of existing activities (related to both “output” measurement and appropriate construction of deflator)
- Especially, health care services and educational activities
- What are “progresses” so far in UK, and what is the assessment?
- Also, some health care services and educational services should be regarded as “investment” in health capital and knowledge capital respectively, not like consumption. What is a proper procedure to measure such investment?

Final Questions

- Question 2
- Cross-Border Issues
- This is especially important, since many transactions in the sharing economy are in the platform of foreign companies. (Airbnb, etc.)
- International cooperation between statistical agencies is necessary and desirable in theory, but it is not always achievable in practice.
Are there any practices that overcome this problem in a digital world?