The Future of Economic Statistics (December 11, 2015, FESAC Meeting)

Introduction

The purpose of this short document is to provide background for the session "The Future of Economic Statistics" at the December 11, 2015, Federal Economic Statistics Advisory Committee (FESAC) meeting. This document has been written jointly by staff from the Bureau of Economic Analysis (BEA), the Bureau of Labor Statistics (BLS), and the Bureau of the Census.[1]

Statistical agencies face four broad challenges

(1) Declining Response Rates: Response rates for sample surveys have been falling with negative implications for data quality and survey costs.

(2) Changing Data User Demands: The demands of data users are increasing in scope and complexity. Users want more timely and detailed data for characteristics of the economy that are not easily captured in surveys (e.g., finer levels of geographic or industrial detail).

(3) Emerging Providers of Economic Statistics: Statistical agencies are facing increased competition from emerging sources of economic statistics. These products sometimes dominate "official" sources along some dimensions (e.g., timeliness, cost), but are inferior along other dimensions, such as accuracy, coverage, consistency, transparency, and accessibility. It is important to note that these alternative estimates of official statistics are almost always benchmarked back to the official estimates that come from scientific sample surveys.

(4) Flat or Declining Statistical Agency Budgets: Budgets for statistical activities are likely to remain constrained for the foreseeable future. Statistical agencies will need to find ways to do more with less. Innovation is imperative.

Opportunities

(1) Administrative Records: Since many administrative records sources have near universal coverage of economic units covered by particular programs (e.g., tax or unemployment insurance administration), statistical agencies have been using administrative records for several decades to construct sampling frames. Recently, the statistical agencies have used administrative records for primary statistical measurement and economic research activities – BLS has the Business Employment Dynamics (BED), and Census has the Business Dynamics Statistics (BDS) and the Longitudinal Employer-Household Dynamics (LEHD).

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[1] This short document borrows liberally from the longer document "Ten-Year Vision for Modernizing Economic Measurement at the U.S. Bureau of Economic Analysis and U.S. Census Bureau" by William Bostic, Ron Jarmin, and Brian Moyer.

(2) <u>Commercial Data:</u> BEA and BLS use commercial data to supplement survey data. For example, BEA currently uses over 100 different sources of commercial data when creating the national accounts.

(3) <u>Improved Computing Capabilities and Analytical Methods:</u> Statistical agencies often find themselves lagging private sector organizations in data processing and computational capabilities. Statistical agencies are working to build staffs that are skilled in "big data" tools, and the Joint Program on Statistical Methodology is now offering a class on "big data."

Addressing the Challenges

(1) <u>Methodological:</u> Research is needed into how to produce economic and social statistics from data collected from a wide variety of sources, most of which were not designed as inputs to the production of official statistics.

(2) <u>Computational:</u> Research on the computational implications of using big data is needed. Agencies need to learn how to architect, develop, and provide the hardware, software, and human capital infrastructure needed to create and disseminate statistics constructed from different sources (surveys, administrative sources, transaction data, social media, etc.).

(3) <u>Policy and Legal Aspects:</u> Work needs to be done to secure legal permissions and stakeholder buy-in to use non-traditional sources of data for the production of official statistics. This includes legal agreements with data providers but also includes transparently engaging the complete set of stakeholders in the legal, privacy, and ethics space to ensure all understand the cost, benefits, and risks of expanding the capabilities of the federal statistical system in such a manner.

(4) <u>Data User and Stakeholder Engagement:</u>
   a. The agencies need to collaborate with a variety of organizations, especially government administrative agencies and private sector businesses, to modernize economic statistics.
   b. Users will need to be satisfied that new statistics derived from administrative records or data obtained from private businesses accurately measure the phenomena we intend them to.
   c. The agencies should make use of external collaboration to ensure project success and maximize knowledge transfer from the private and academic sectors. Advisory committees are crucial in this regard. This would also include making fuller use of collaborative efforts such as the NSF Census Research Network (NCRN) and the Federal Statistical Research Data Centers (FSRDC).
   d. Given the complex issues surrounding access to, and use of, the types of data needed to improve economic measurement, the agencies will need to engage a broad spectrum of stakeholders beyond academic experts. Individuals and organizations are rightly concerned about how information on them is collected, stored, used, and disposed of. Thus, the agencies need to work with the legal and privacy community to consider what, if any, changes to the relevant regulatory and policy frameworks are needed.