

# BEA Satellite Account on Small Business Activity

Comments by John Haltiwanger, University of Maryland

# Overview

- BEA Small Business satellite account has great potential.
- The current approach is to use source data primarily from the SUSB from Census to characterize the evolution of the size distribution of economic activity over time.
- A strength of the SUSB is that it uses the enterprise definition of a firm (not establishment size or EIN size which can be misleading).
- But a key limitation in the measurement approach is using information only on the evolution of the size distribution.
- Inferences about differences in growth by firm size cannot be derived from such information alone.

## Comment 1: “Size Distribution Fallacy”

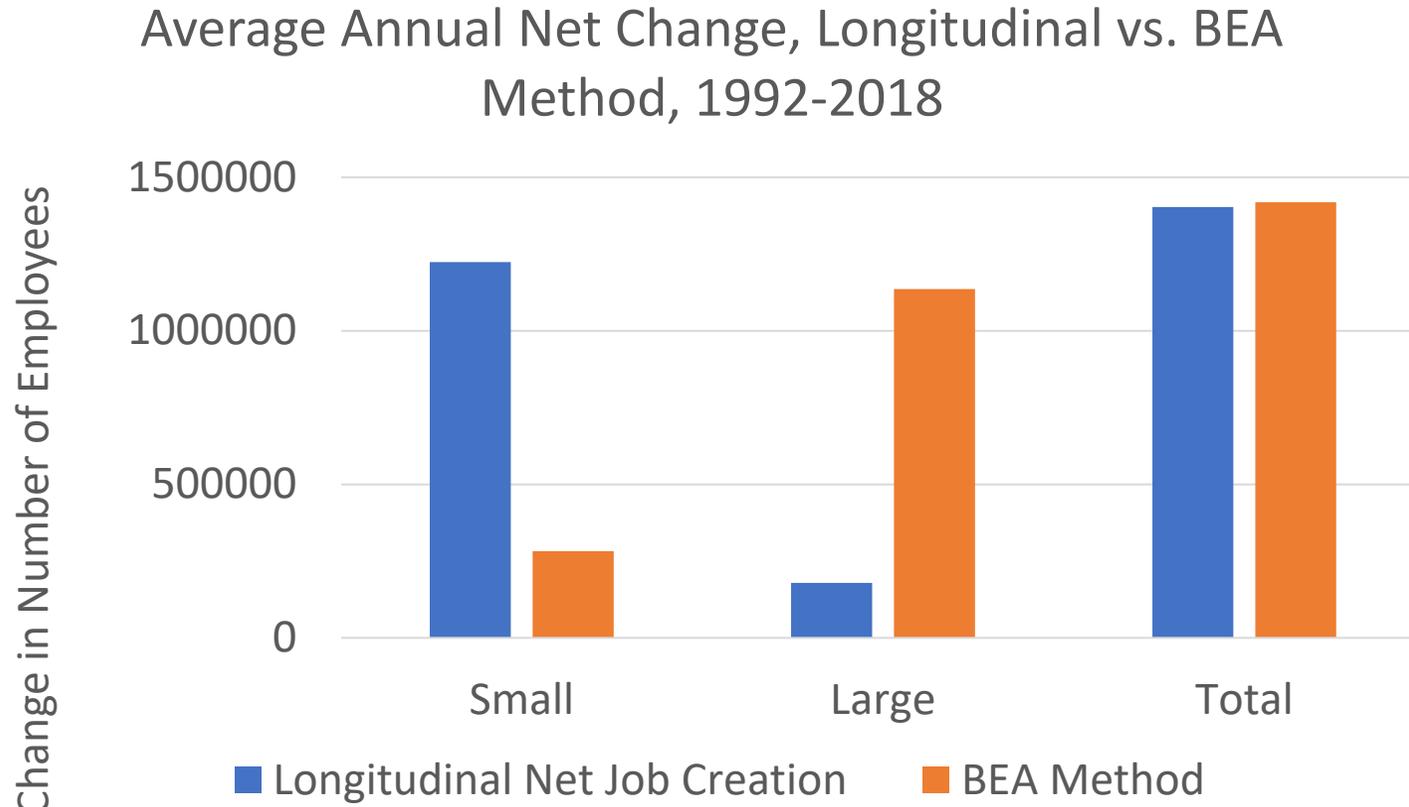
- **Firms cross size class boundaries over time.**
- The increase in the employment or output in the “large” size class from one period to the next may be from large firms becoming larger, large firm births (very rare) or **from small firms becoming large**. **This implies it is misleading to use growth of employment or output based on changes over time in the activity by size class.**
- **Instead, tabulations from longitudinal firm-level data must be used.**
- This “size distribution fallacy” is well-known in the measurement and research literature. See Davis, Haltiwanger and Schuh *Job Creation and Destruction*, MIT Press, 1996, Chapter 4, Box 4.1) (DHS). Also, see Birch and MacCracken (1983), and *Small Business Administration: State of Small Business* (1983, page 62).

# Illustration of Size Distribution Fallacy

	Firm 1	Firm 2	Firm 3	Small (<100)	Large (100+)	All Firms
Year 1	50	500	150	50	650	700
Year 2	150	600	75	75	750	825

- In this example, net employment increases by 125 from Year 1 to Year 2.
  - Using the changes in the aggregate size distribution, the large firm size class accounts for 80% of change.
  - However this is misleading since most of the growth arises from Firm 1 (a small firm in Year 1) growing substantially and becoming a large firm in Year 2. Using the longitudinal data, 80% of net growth in employment is accounted for by small firms.
- Key to overcoming this limitation is to use tabulations from longitudinal firm-level data.
- Relevant source data in the public domain: Business Information Tracking Series (BITS), Business Dynamic Statistics (BDS) and Business Economic Dynamics (BED). BITS and BDS are from Census while BED is from BLS. **This satellite account should draw on these resources and collaborate with Census and BLS. BITS is closely connected to SUSB and recently BITS and BDS have become an integrated product.**

# Size Distribution Fallacy Critically Important in Practice



. Small < 100, Large 100+. Using initial size (t-1) for longitudinal

These inferences robust to using different size cutoffs.

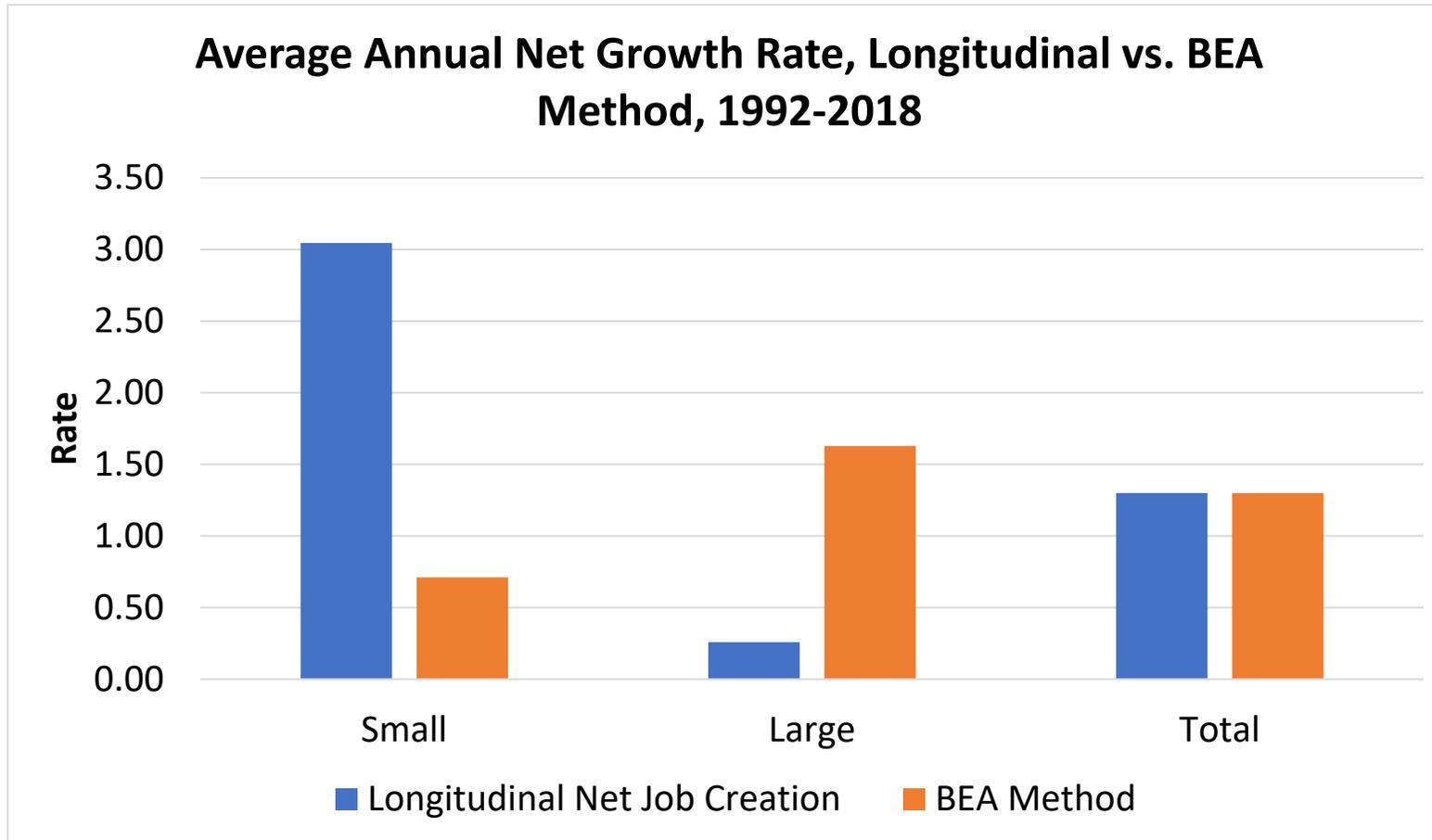
Using tabulations from longitudinal firm-level data (BDS): Small businesses account for 87% of average annual net employment growth from 1992-2018.

Under BEA method using changing size distribution, small businesses account for 19% of growth in employment.

Share of employment at small businesses declined from 40% to 33% from 1992 to 2018.

This reflects many forces but not large businesses growing faster than small businesses.

# Analogous inferences in computing net growth rates



For small firms in t-1, average annual (employment weighted) longitudinally consistent net employment growth rate is about 3 percent.

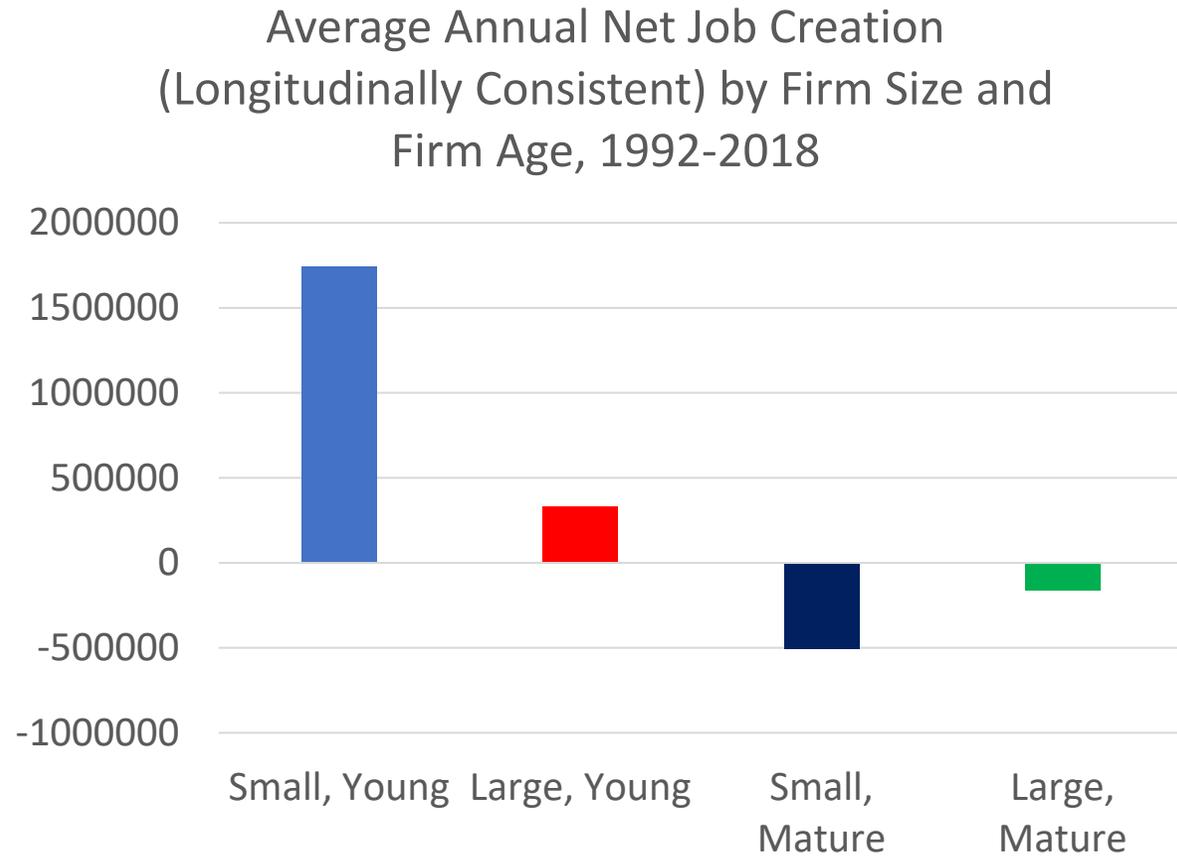
For large firms in t-1, average annual (employment weighted ) longitudinally consistent net employment growth rate is 0.26 percent.

If net growth rate computed from Changes in size distribution at Aggregate level (BEA method)  
Small = 0.71 percent  
Large = 1.6 percent

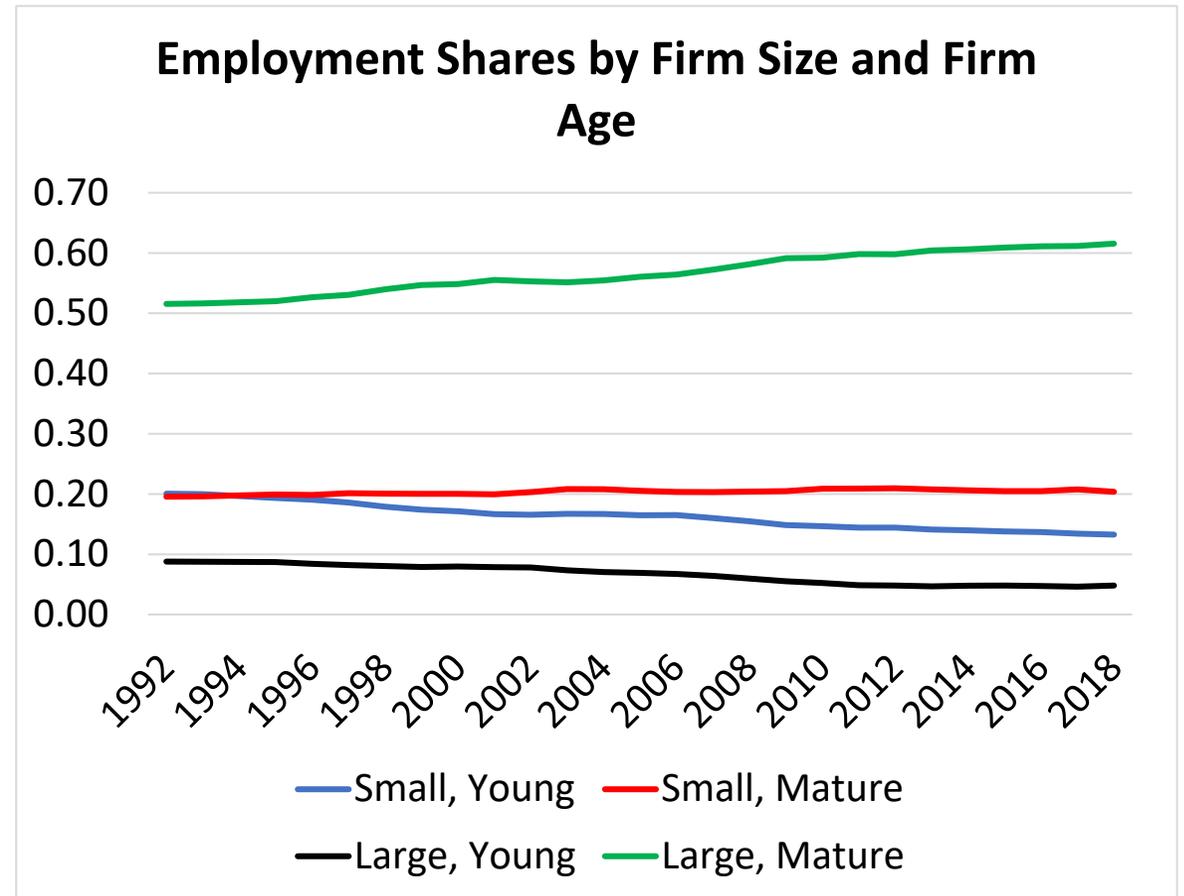
. Small < 100, Large 100+. Using initial size (t-1) for longitudinal

# Comment 2: Size is not sufficient...Young (small) businesses are primary net creators of jobs...but startups declining so young (small) share of activity declining

(See, "Who Creates Jobs: Small vs. Large vs. Young", Haltiwanger, Jarmin and Miranda, RESTAT, 2013) and "The Role of Entrepreneurship in US Job Creation and Economic Dynamism", Decker, Haltiwanger, Jarmin and Miranda, Journal of Economic Perspectives, 2014)



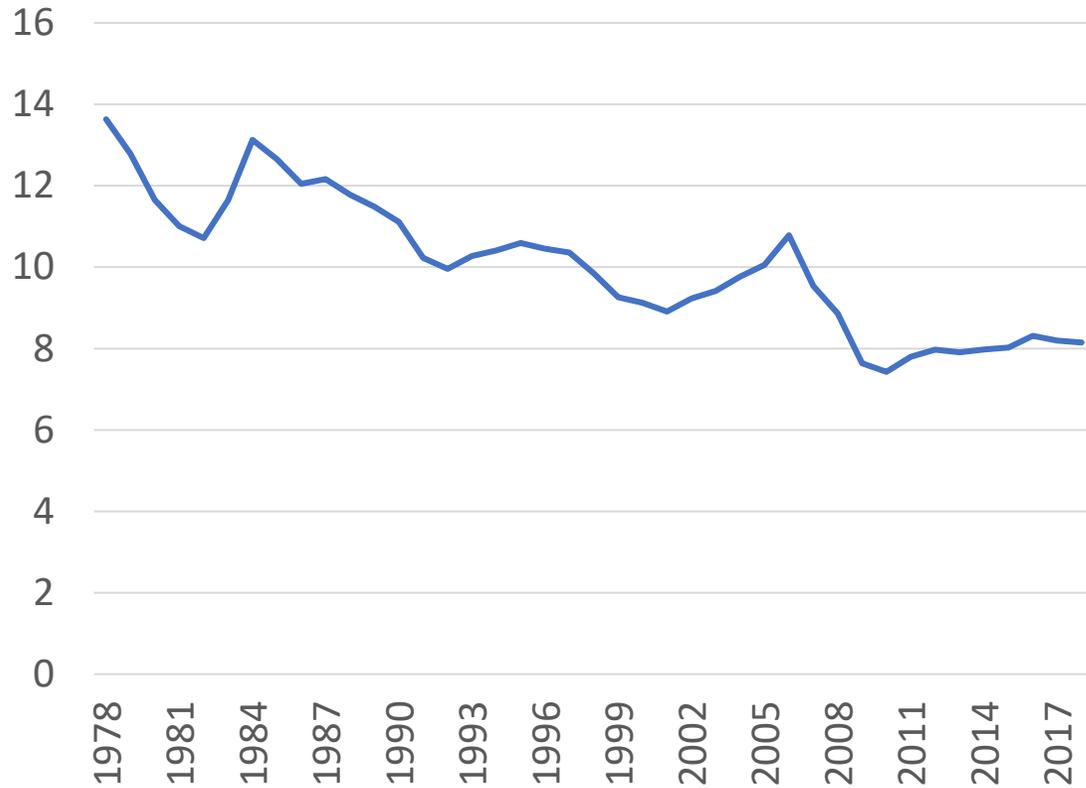
Source: U.S. Census Bureau, Business Dynamic Statistics



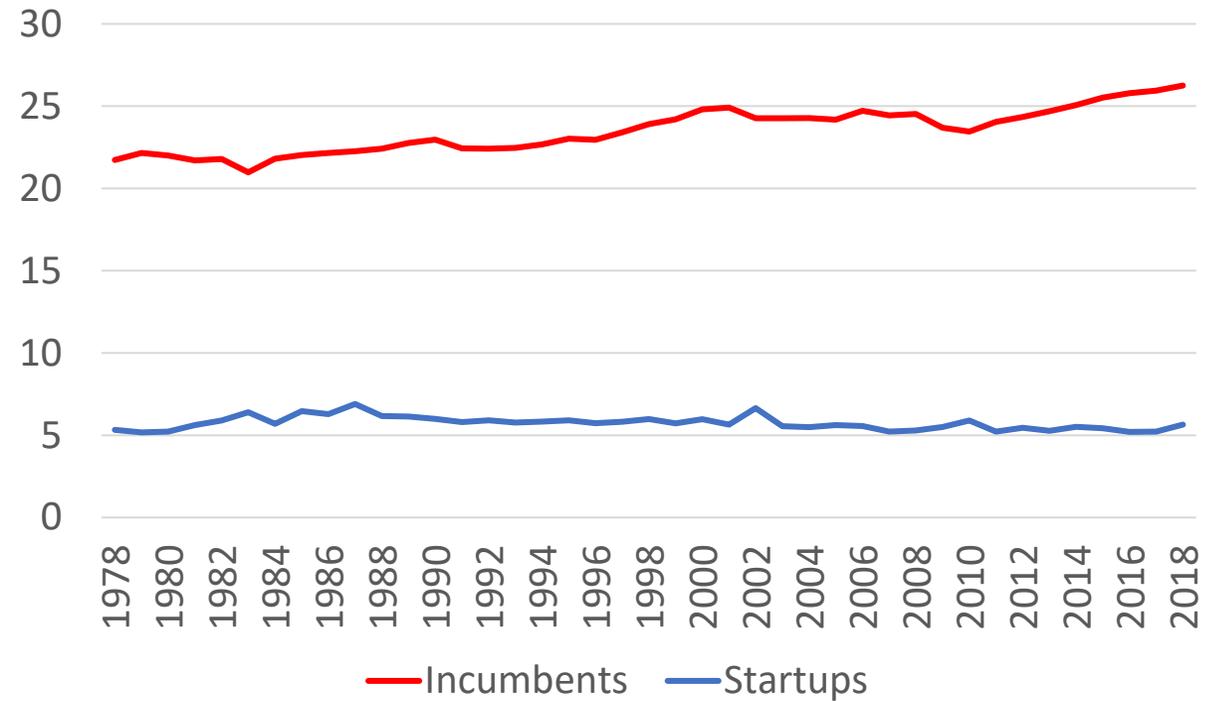
Young = Firm Age <=10, Small <100 (t-1 size)

Startups are declining. Less replenishment of small businesses. Share of activity accounted for by small and/or young businesses declining.

Firm Startup Rate, U.S. Private Sector



Average Employment Size of Incumbents and Startups, U.S. Private Sector



Source: U.S. Census Bureau, Business Dynamics Statistics

# Comment 3: Other measurement issues

- Tabulations presented from BDS use initial (t-1) size.
  - Transitory shocks imply regression to the mean issues. BDS and BED have alternative but in practice similar ways to overcome this issue. Taking this into account should be part of the measurement effort.
- Revenue from SUSB very useful. Larger firms account for greater share of revenue than employment. Again need to take dynamics into account.
  - Available every five years.
  - Five year net growth tabulations from longitudinally consistent data could be generated from integration of SUSB revenue and Longitudinal Business Data (LBD) at Census. The LBD underlies the BDS/BITS.
  - Annual firm-level revenue data available from business tax returns – this has been integrated into LBD starting in mid 1990s.
- Critical to use enterprise based firm size and age and not establishment or EIN based firm size and age measures.

# Recommendations

- Tracking the evolution of activity (output and employment) accounted for by firm size is useful but inferences about differences in growth rates by firm size cannot be made from such data.
- The U.S. Census Bureau and the Bureau of Labor Statistics have active public domain statistical programs tracking business dynamics that can be used to assess contributions of firm size and firm age to growth.
  - With some additional collaborative effort this can include both output and employment.
  - Census has enterprise size and age measures which are strongly preferred.
- Firm size and firm age are intrinsically linked:
  - Startups are small.
  - High net growth contribution of small businesses derives from young, small businesses; not mature, small businesses.
  - Declining share of activity from small businesses driven largely by decline in young firms.
- Satellite account should quantify activity by firm size and firm age.