

Longitudinal Data for Entrepreneurship Research from the U.S. Census Bureau

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Any opinions and conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau. All results have been reviewed to ensure that no confidential information is disclosed.

U S C E N S U S B U R E A U

Census Bureau Data Products Related to Entrepreneurship: Public Use

- Survey of Business Owners (SBO)
 - Owner characteristics – not explicitly longitudinal
- Statistics on U.S. Business (SUSB)
 - By firm size, some tabulations longitudinal
- Business Dynamics Statistics (BDS)
 - by firm size and age, explicitly longitudinal
 - Developed with support from Kauffman
- Quarterly Workforce Indicators (QWI)
 - Linked firm-worker data – explicitly longitudinal

Census Bureau Data Products Related to Entrepreneurship: Restricted Use

- Longitudinal Business Database
 - Microdata (Source data for the BDS)
- Integrated Longitudinal Business Database (iLBD)
 - Microdata: LBD + nonemployers
 - Transitions from self-employment to employing businesses
- Longitudinal Employer-Household Dynamics (LEHD)
 - links UI data with Census demo and econ data
 - Source data for QWI

Why are longitudinal data important?

Example: Do small or large firms create the most net new jobs?

“This week, we are honoring our nation’s job creators—the entrepreneurs who generate roughly 70% of all new positions.” - Rep. Nydia M. Velázquez (D-NY), the Chairwoman of the House Small Business Committee, 5/20/09

“One of the most enduring lies in American politics is the myth of small-business job creation.” - Steven Pearlstein, WA Post 7/8/09

Inadequate data helped feed this debate

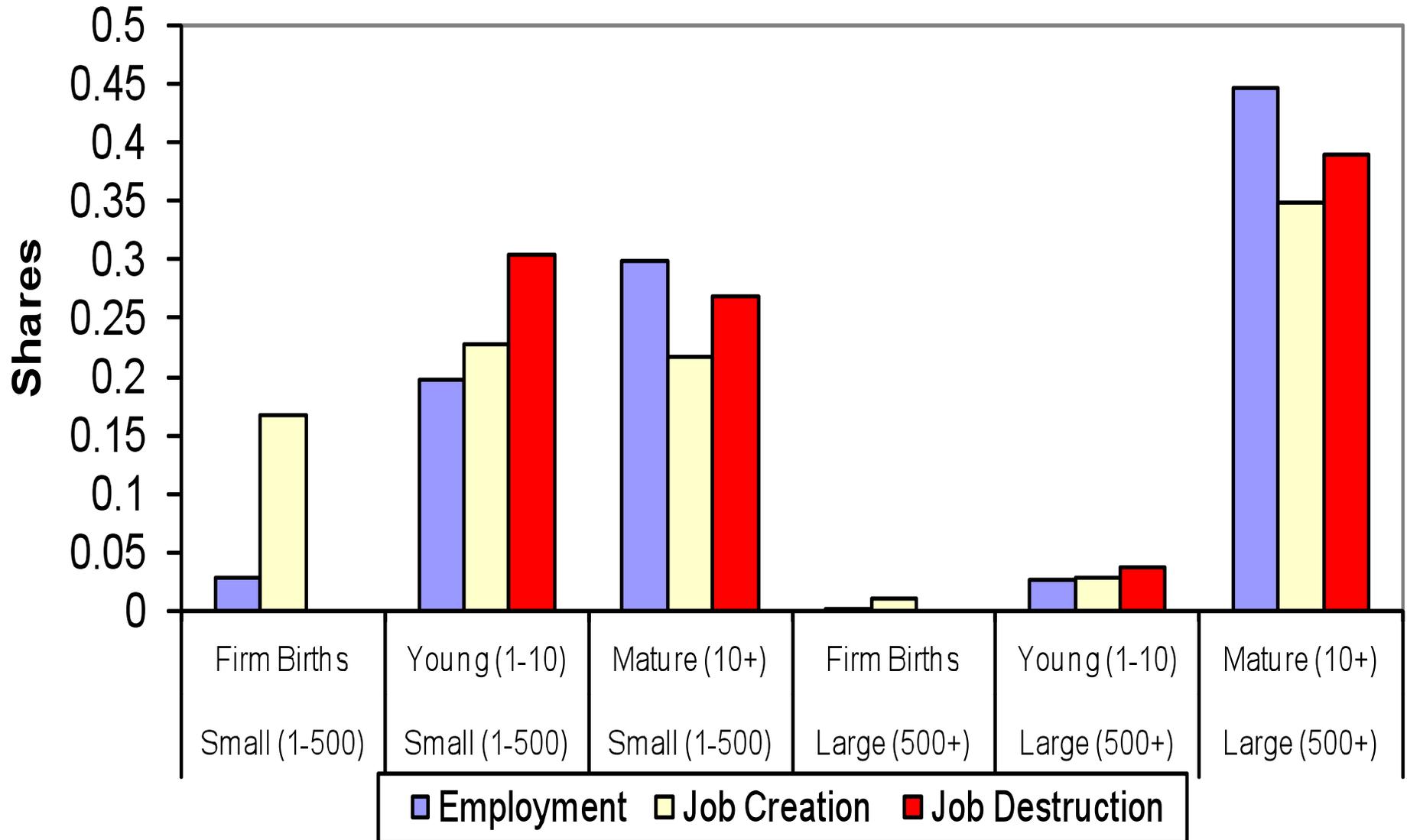
- Recent work (Haltiwanger, Jarmin, and Miranda, 2010) highlights the issues:
 - Crucial role of (small) startups
 - Rich “Up or Out” dynamic
 - Until recently, no public use data allowed researchers and policy analysts to disentangle the role of age (dynamics) and size

Table 1 Net Job Creation by Firm Size and Firm Age, U.S. Private Sector, 2005 (Panel A – BASE YEAR SIZE)

Firm Age	Firm Size (Base Year)												All
	a) 1 to 4	b) 5 to 9	c) 10 to 19	d) 20 to 49	e) 50 to 99	f) 100 to 249	g) 250 to 499	h) 500 to 999	i) 1000 to 2499	j) 2500 to 4999	k) 5000 to 9999	l) 10000+	
a) 0	731,515	503,644	498,317	553,181	313,511	292,348	157,120	151,518	186,087	131,178	D	D	3,518,419
b) 1	79,759	-12,547	-20,836	-47,837	-41,006	-57,188	-48,830	-5,476	-14,532	-20,131	211	-408	-188,821
c) 2	26,506	-24,840	-31,883	-44,488	-26,738	-18,026	-9,049	-13,579	-23,615	-12,782	D	D	-178,494
d) 3	7,535	-22,650	-26,855	-37,824	-15,918	-14,813	-8,981	-7,548	-11,581	-12,114	D	D	-150,749
e) 4	20,456	-18,442	-23,212	-29,616	641	-9,816	-4,301	-5,436	-298	-4,011	D	D	-74,035
f) 5	4,808	-19,792	-24,392	-29,425	-14,870	-6,222	-2,449	-6,849	-293	-3,418	D	D	-102,902
g) 6 to 10	14,577	-71,332	-99,235	-110,111	-40,652	-1,324	-9,452	5,437	-20,693	-13,945	-9,903	17,928	-338,705
h) 11 to 15	15,663	-47,730	-67,923	-81,876	-40,432	-27,666	-9,530	2,179	-2,028	22,441	6,140	69,409	-161,353
i) 16 to 20	5,673	-36,856	-58,236	-71,299	-35,979	9,780	-5,725	10,200	3,204	12,615	10,491	2,158	-153,974
j) 21 to 25	2,923	-28,173	-42,609	-51,490	-22,246	-13,346	3,901	10,269	36,484	10,075	9,889	-56,563	-140,886
k) 26+	1,016	-38,599	-71,235	-107,390	-48,873	10,309	19,924	85,473	56,436	143,701	58,245	307,517	416,524
m) ALL	910,431	182,683	31,901	-58,175	27,438	164,036	82,628	226,188	209,171	253,609	90,973	360,214	2,481,097

Source: U.S. Census Bureau, Business Dynamics Statistics at http://www.ces.census.gov/index.php/bds/bds_home

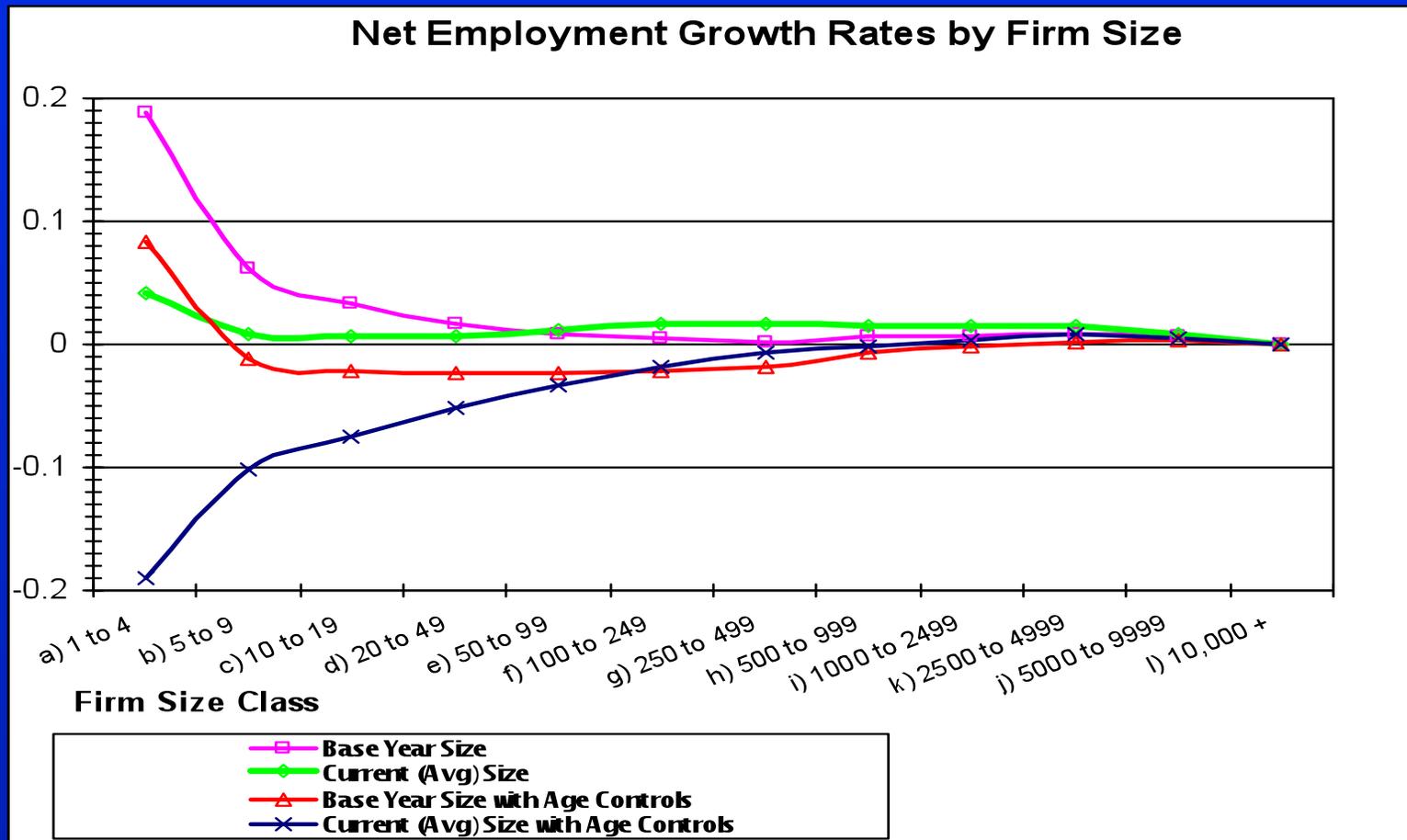
Shares of Employment, Job Creation and Destruction by Firm Size and Age Broad Classes



But the (*Restricted use*) Microdata reveal an even more interesting story...

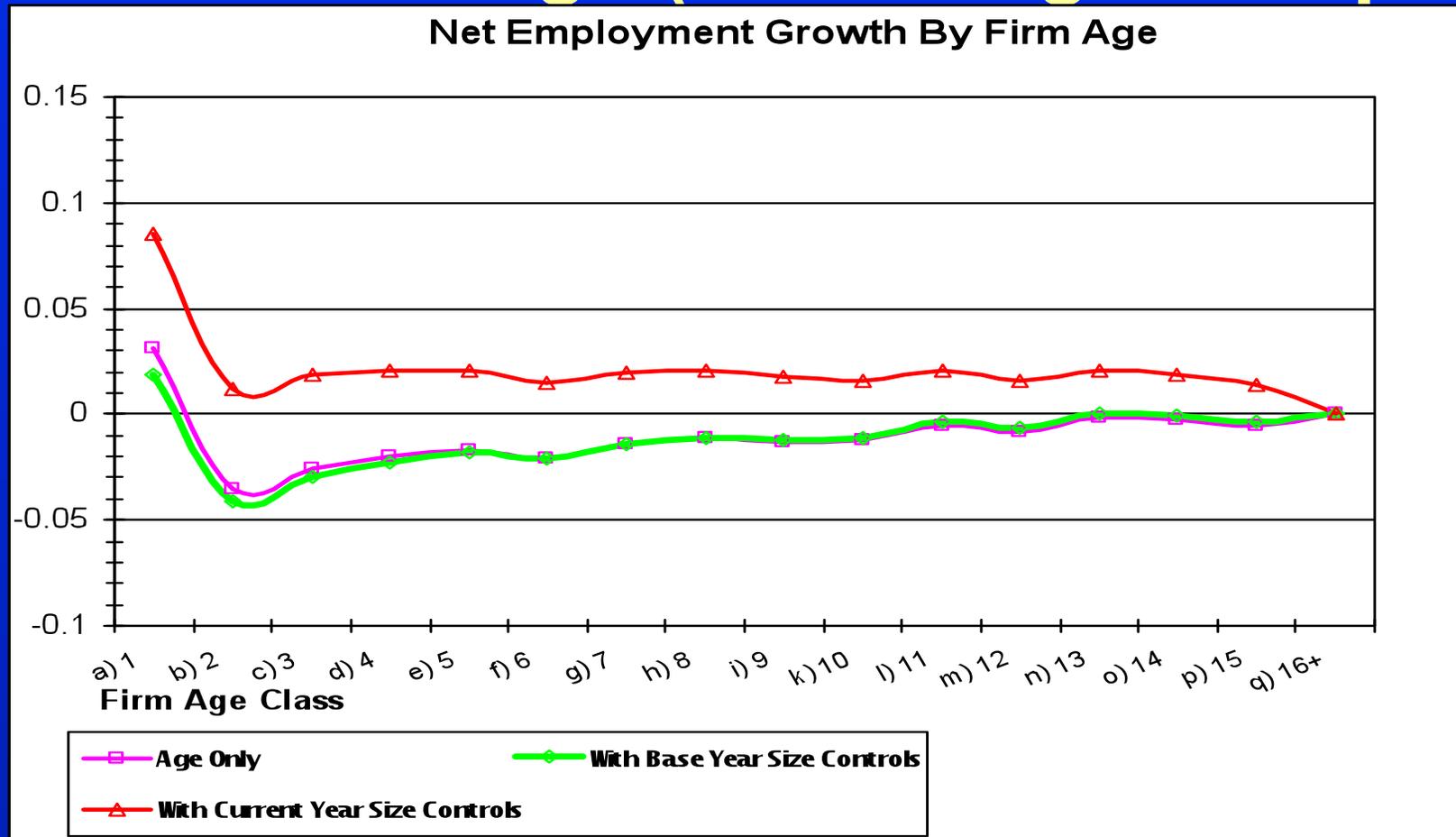
- HJM (2010) use LBD microdata (the source data for the BDS) to perform a detailed, rigorous analysis of firm level employment growth with a rich set of controls

Firm Size: Sensitivity to controlling for age and size methodology



Note: Each reported point reflects the estimate for the size class in question relative to the omitted firm size class (10,000+)

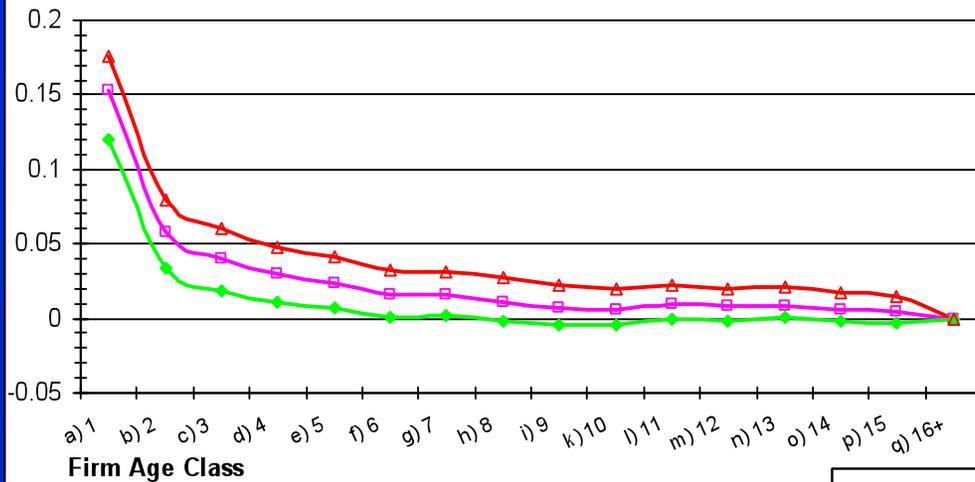
Modest overall relationship between net and firm age (excluding startups!)



Note: Each reported point reflects the estimate for the age class in question relative to the omitted firm age class (16+)

But this masks “up or out” for Young Firms

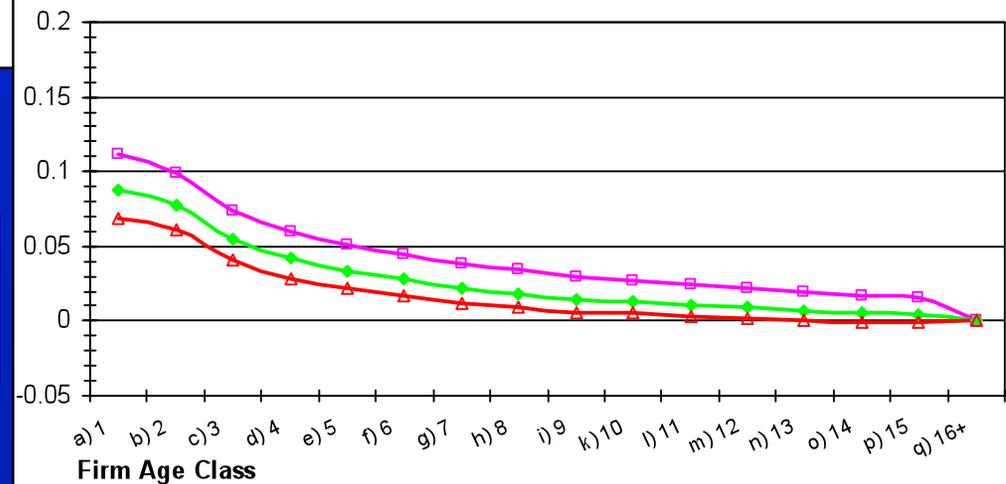
Net Employment Growth for Continuing Firms by Firm Age



These patterns robust to size controls

Using firm-level regressions

Job Destruction from Firm Exit by Firm Age



Interpretation

- More nuanced view of role of small businesses as “primary creators of jobs”?
 - More informative to focus on firm startups and firm age
 - Firm startups contribute substantially to gross and net job creation
 - Firm startups tend to be small
 - Young firms very volatile (up or out)
 - Firm age patterns don’t yield patterns that can be misinterpreted given regression to the mean effects
- Firm startup and firm age contributions to job growth consistent with models of industry evolution that stress importance of firm entry, learning, experimentation and selection
 - Dominant role of idiosyncratic factors
- Interpret current economic trends through this lens:
 - Did recent financial collapse adversely impact these young/small firm dynamics?

But need also to stress need to look beyond counting jobs...

- Productivity and earnings
 - Firm dynamics literature has shown that these life cycle dynamics of firms important for productivity and innovation
 - Lower productivity businesses exit
 - Conditional on survival, younger businesses more rapid productivity growth than mature businesses
 - Firm heterogeneity literature has shown productivity and earnings highly correlated
 - Insights from linked employer-employee data (e.g., LEHD)?
 - What types of workers work at young volatile businesses?
 - What are their longer-run labor market outcomes?

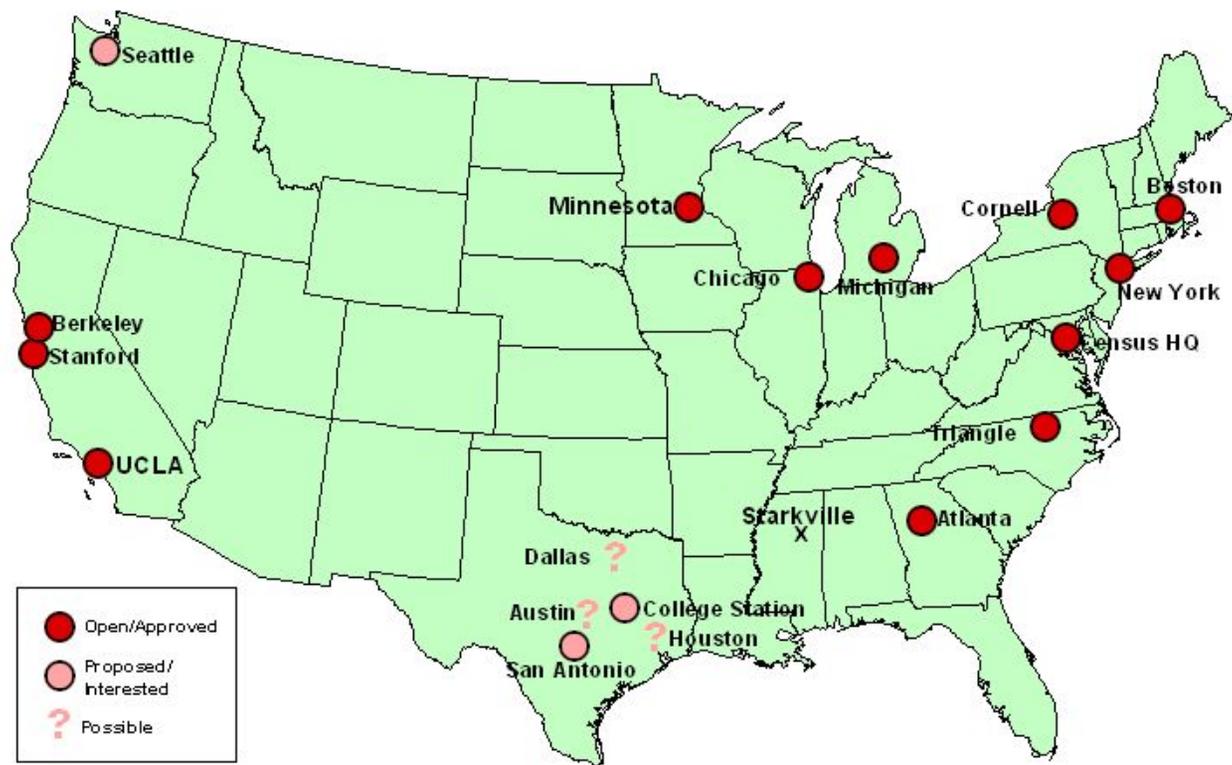
Access to Census Bureau Restricted Use data

- Researchers can access the restricted use data via Census Research Data Centers (RDCs)
- RDCs
 - provide secure access to confidential Census Bureau and other Federal statistical data to authorized researchers on approved projects.
 - are operated as Joint Partnerships between the Census Bureau and leading universities and research institutions.

Benefits of access to the restricted use data

- Access to non-disclosure protected data
 - No suppressions, masking, top-coding etc
- Ability to link at the micro (establishment, firm) level records from different census, survey and administrative programs, as well as researcher provided data.
 - This DRAMATICALLY increases the analytical power of the data.
- Network of RDCs increases collaboration across institutions

Census Research Data Centers



Entrepreneurship Research Using Restricted Use Census Bureau data

- Glaeser, E. and W. Kerr, (2010) "Local Industrial Conditions and Entrepreneurship: How Much of the Spatial Distribution Can We Explain?", Journal of Economics and Management Strategy, forthcoming.
- Haltiwanger, J., R. Jarmin and C.J. Krizan, "Mom and Pop Meet Big-Box: Complements or Substitutes?", 2010, Journal of Urban Economics, 67, pp. 116-134.
- Campbell, B., M. Ganco, A. Franco and A., Rajshree, "Who Leaves, Where to, and Why Worry? Employee Mobility, Employee Entrepreneurship, and Effects on Source Firm Performance" (September 1, 2009). US Census Bureau Center for Economic Studies Paper No. 09-32. Available at SSRN: <http://ssrn.com/abstract=1484926>
- Jarmin, R. and J. Miranda. 2009. "The Impact of Hurricanes Katrina, Rita and Wilma on Business Establishments." Journal of Business Valuation and Economic Loss Analysis, 4(2).
- Glaeser, E., W Kerr, and G. Ponzetto. 2009. "Clusters of Entrepreneurship." *CES Working Paper Series, CES-WP-09-36.*

More Information on access data through the RDCs

- Information and online proposal submission and tracking system
 - <http://www.ces.census.gov/>
- Email:
 - Lynn Riggs (Lead RDC Administrator)
Tammy.L.Riggs@census.gov