

The Business Dynamics Statistics: Describing the Evolution of the U.S. Economy from 1978-2021

Martha Stinson

Center For Economic Studies, U.S. Census Bureau

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Any opinions and conclusions expressed herein are those of the author and do not represent the views of the U.S. Census Bureau.

The Census Bureau has ensured appropriate access and use of confidential data and has reviewed these results for disclosure avoidance protection (Project 7508369: CBDRB-FY23-0422). All data used in this presentation have been publicly released and can

be downloaded at [Business Dynamics Statistics Datasets \(census.gov\)](https://www.census.gov/business-dynamics-statistics-datasets) or [BDS Explorer - Census Bureau](https://www.census.gov/bds-explorer).

Background

- Longitudinal Business Database (LBD) created in late 1990s
 - Early work on job creation by Davis, Haltiwanger, and Schuh (1996)
 - Jarmin and Miranda (2002)
- Business Dynamics Statistics (BDS) first published in 2009
 - Funding from the Kauffman Foundation
- Formal LBD production system completed in fall 2020
 - Chow et al. (2021)
 - BDS is now an official Census Bureau product

Definitions: Businesses

Basic building blocks of the BDS:

1. Establishment: physical location where specific business activity happens
2. Firm: group of one or more establishments under common ownership and control

Measures of dynamics: opening and closing of establishments

1. Establishment entry:
 - a. NO paid employees in March 12th pay period of year t-1
transition to
YES paid employees in same pay period of year t
2. Establishment exit
 - a. YES paid employees in March 12th pay period of year t-1
transition to
NO paid employees in same pay period of year t
3. Firm death – all establishments of the firm exit and do not return to activity

Definitions: Jobs

Measures of dynamics: adding or losing jobs

1. Job creation (JC): $\text{employment}\{\text{year } t\} - \text{employment}\{\text{year } t-1\}$ when $\text{emp year } t > \text{emp year } t-1$
 1. Jobs created by existing establishments growing (continuers)
 2. Jobs created by establishments opening (entrants)
2. Job destruction (JD): $\text{employment}\{\text{year } t-1\} - \text{employment}\{\text{year } t\}$ when $\text{emp year } t-1 > \text{emp year } t$
 1. Jobs destroyed by existing establishments shrinking (continuers)
 2. Jobs destroyed by establishments closing (exits)
3. Net job creation (NJC): Job creation – Job destruction

Definitions: Characteristics

Classify firms and establishments by their characteristics and look at dynamics for sub-groups

1. Firms

a. Age

- a. current year – birth year of oldest establishment
- b. calculate in initial year of firm's life and then naturally age up

b. Size

- a. sum of employment across all active establishments at the firm
- b. initial: firm employment in year t-1
- c. Main: average across year t and t-1

2. Establishments

a. Industry

- a. 2017 vintage NAICS code
- b. sector, 3-digit, and 4-digit

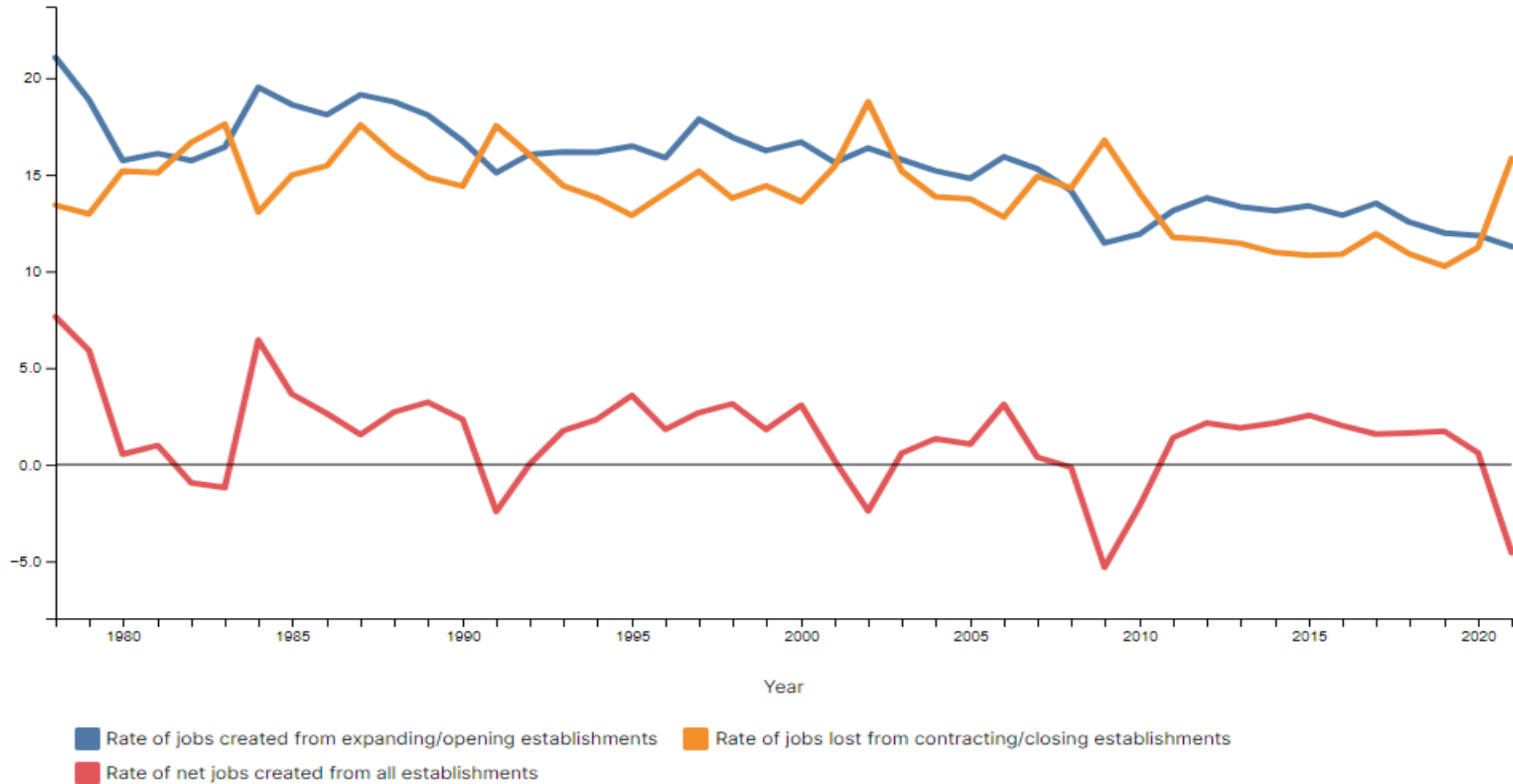
b. Geography

- a. State
- b. metro/non-metro
- c. MSA
- d. county

Definitions: Rates

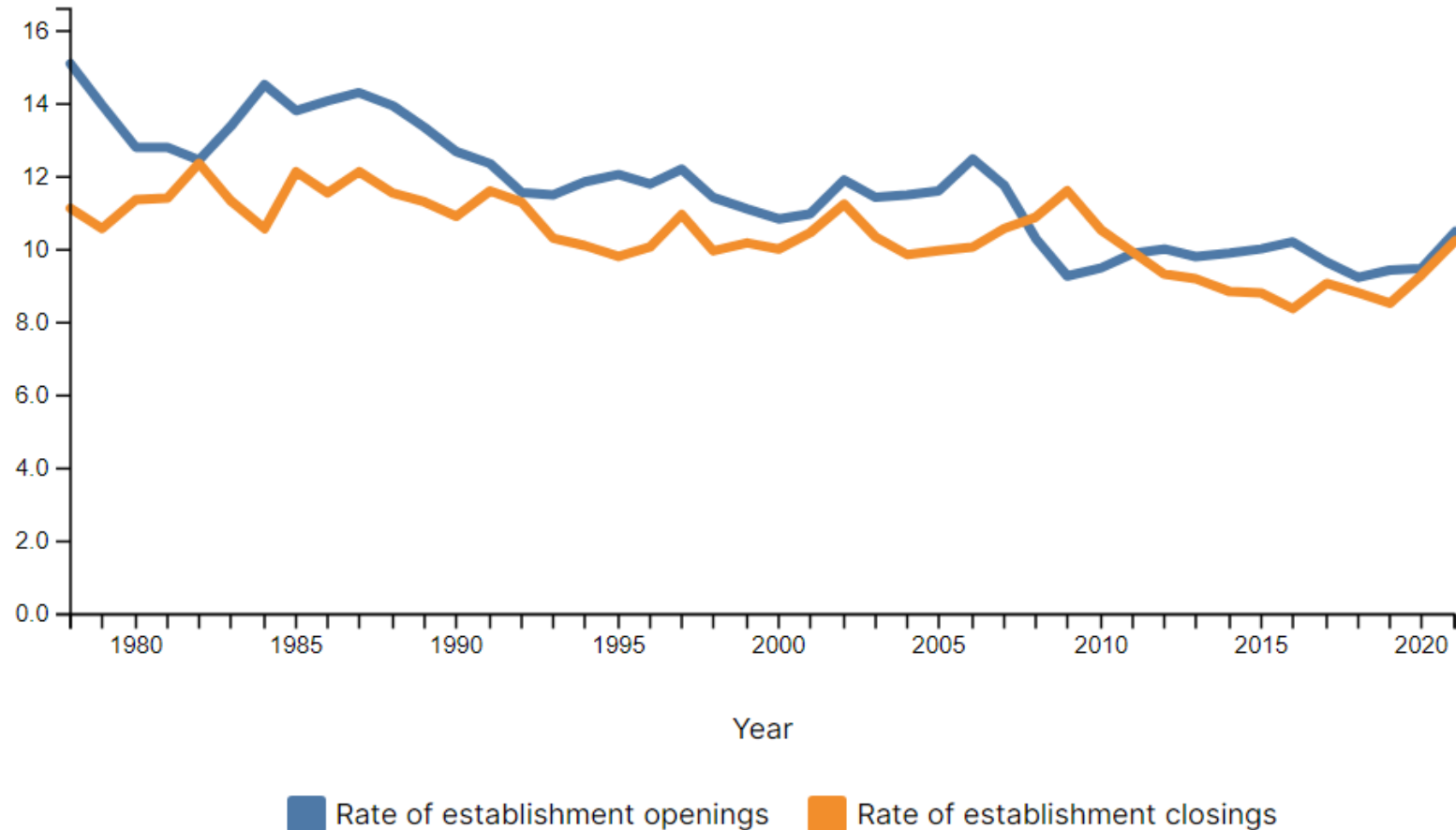
- Often difficult to compare JC and JD over time or space
 - Areas of different population sizes don't compare easily
 - Most numbers increasing over time just due to population and economic growth
- Calculate rates to make better comparison
 1. Denom = average employment in years t and t-1
 2. Job Creation Rate (JCR) = Total Job Creation/Denom
 3. Job Destruction Rate (JDR) = Total Job Destruction/Denom
 4. Net Job Creation Rate = (JC – JD) / Denom

2021 BDS: Job Creation and Destruction Rates 1978-2021



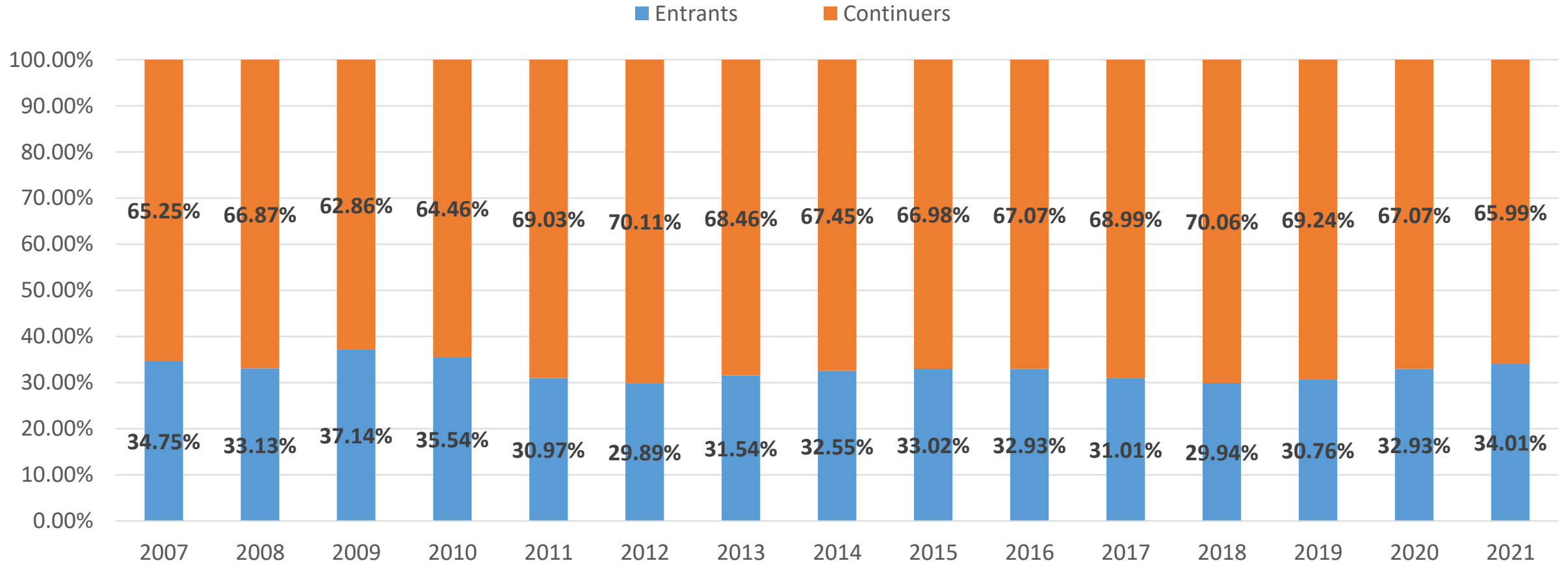
Source: U.S. Census Bureau - Center for Economic Studies - Business Dynamics Statistics (2021)

2021 BDS: Establishment Entry and Exit Rates 1978-2021

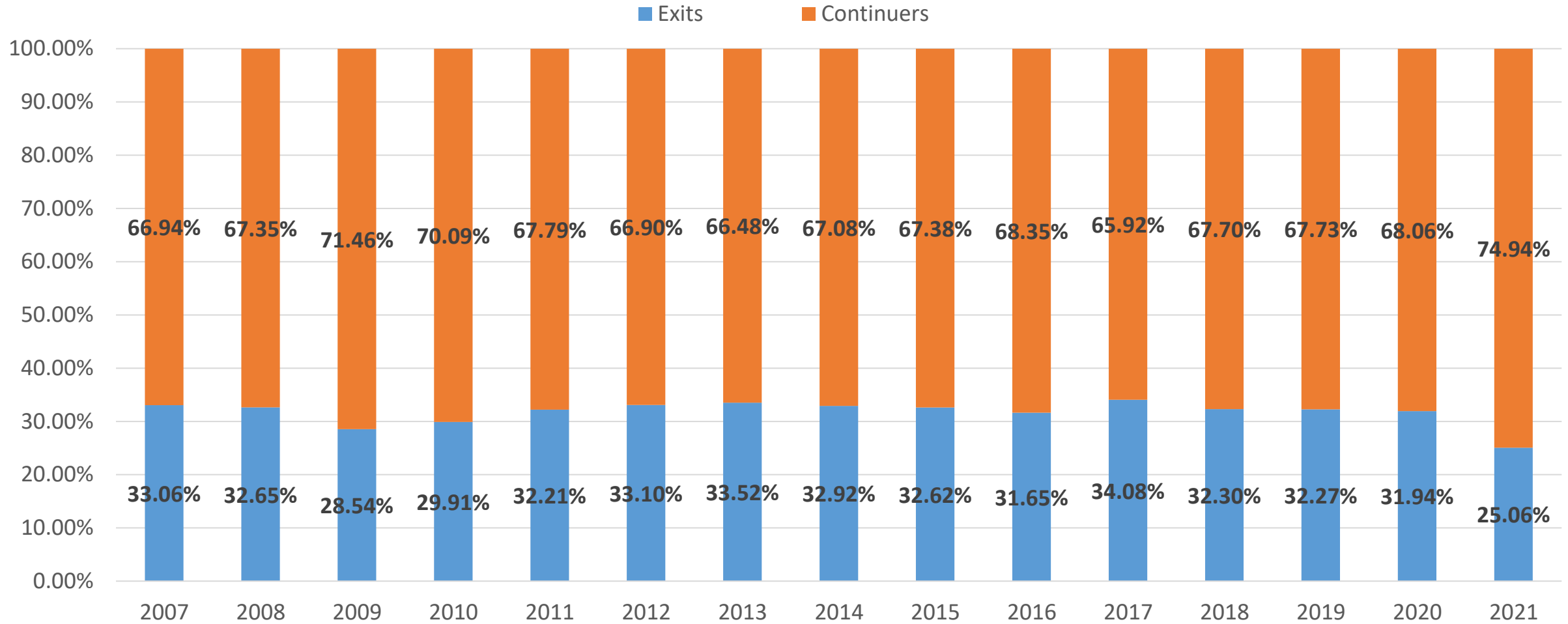


Source: U.S. Census Bureau - Center for Economic Studies - Business Dynamics Statistics (2021)

2021 BDS: Share Job Creation from Entrants v. Continuers



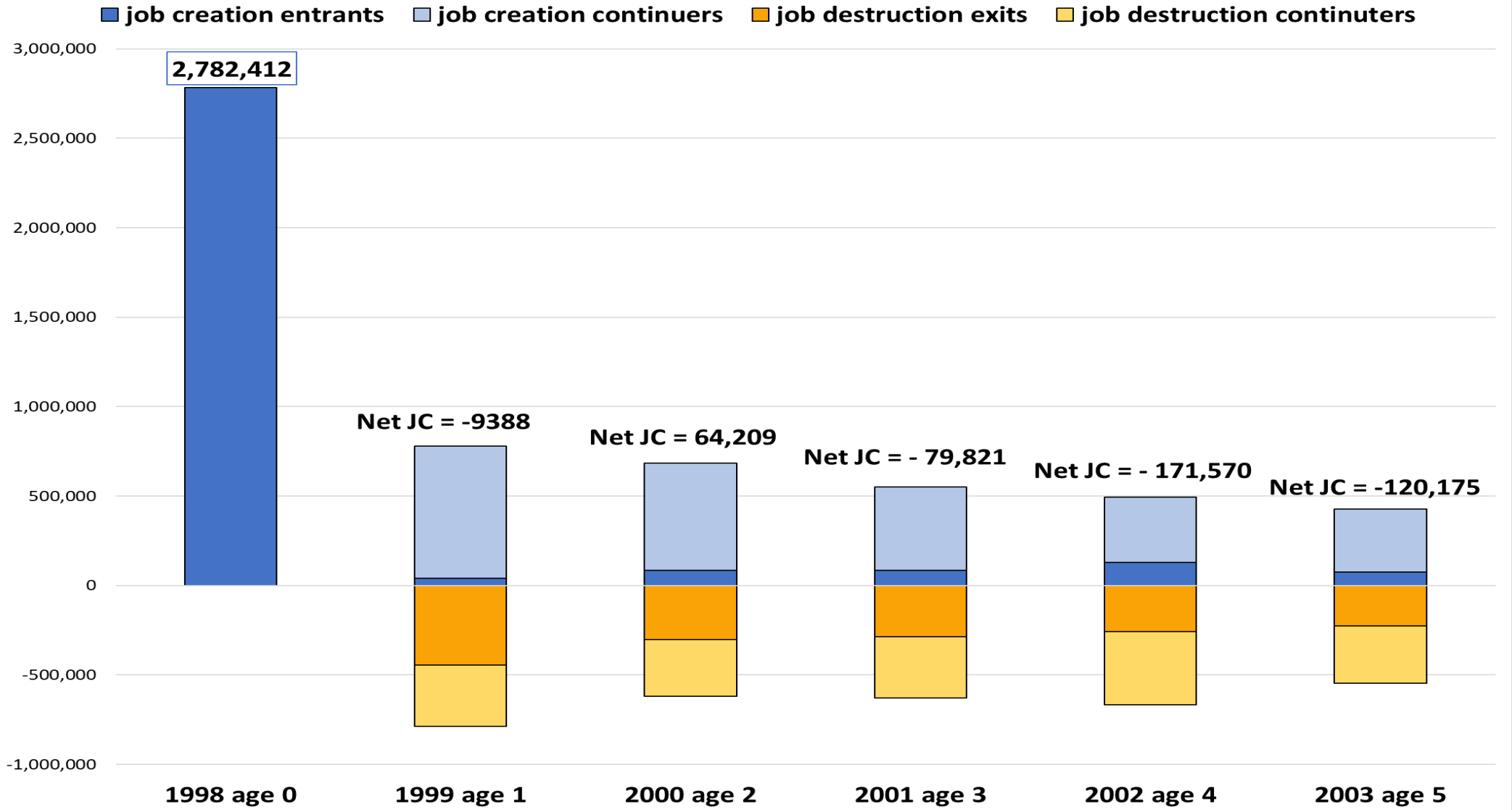
2021 BDS: Share Job Destruction from Exits v. Continuers



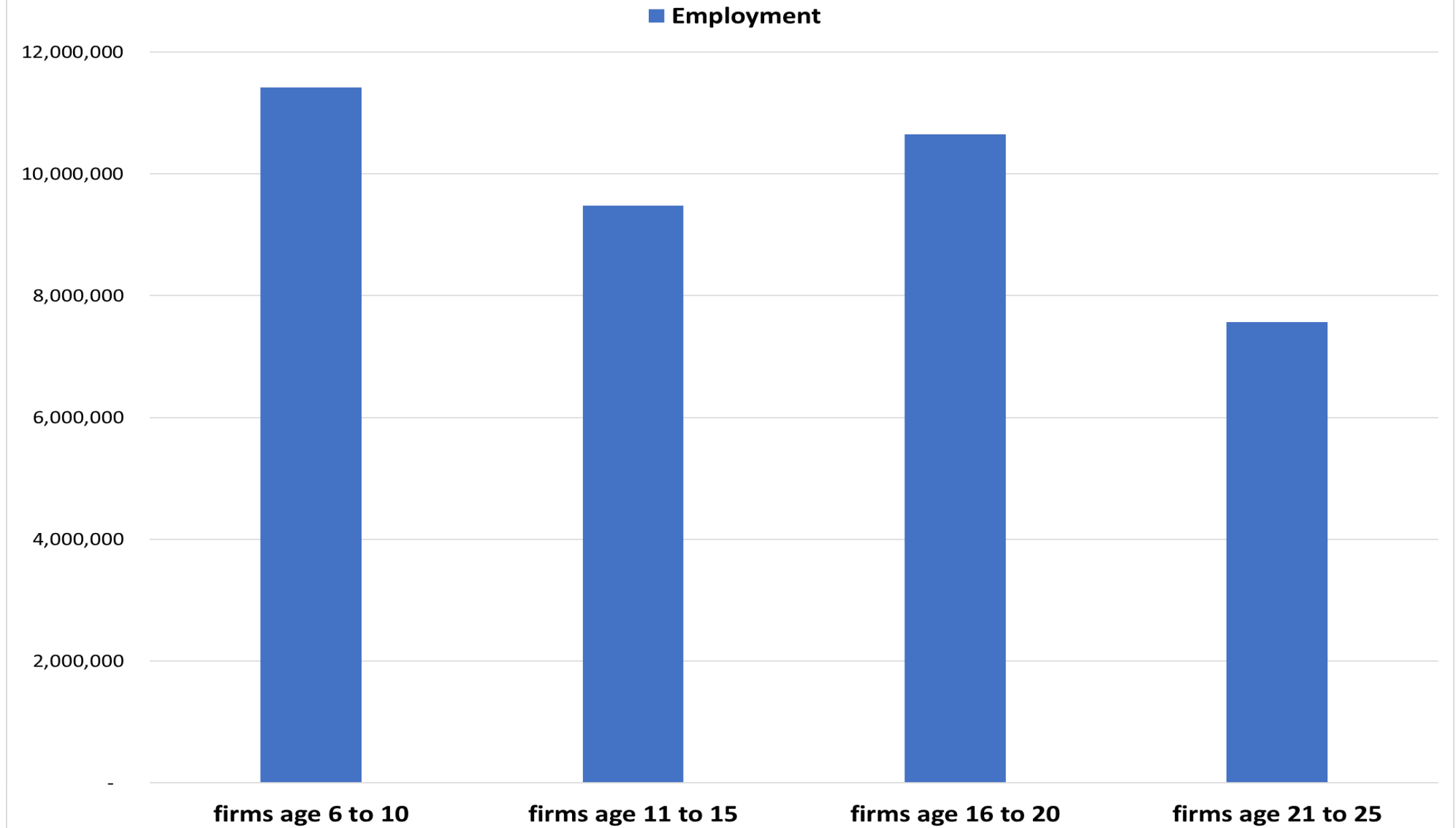
Important trends in the economy

- Employment at young firms has been declining
- Employment at older firms has been growing
- Employment at older firms is also at larger firms
- Heterogeneity across industries and geography

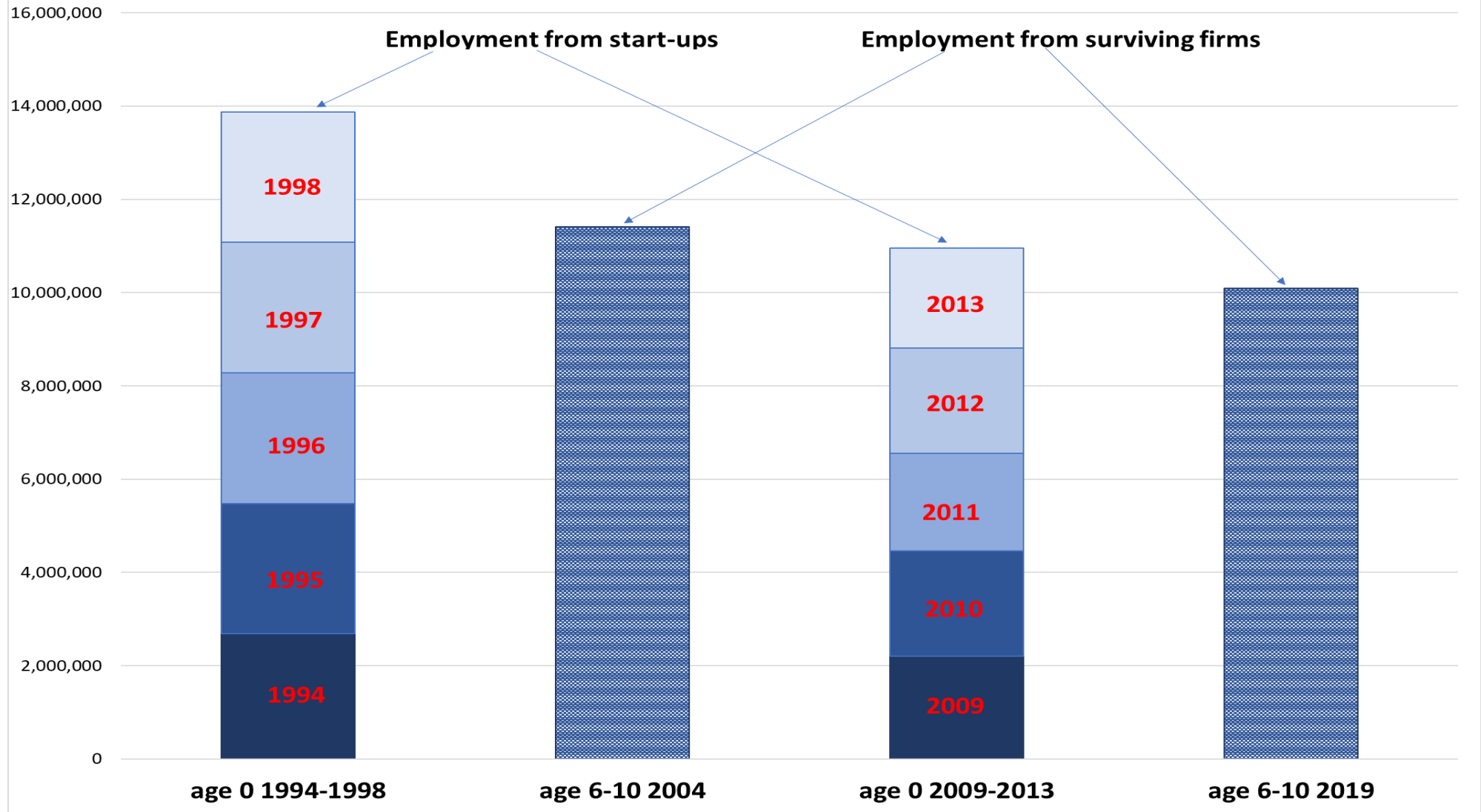
Lifecycle of 1998 firm birth cohort (age 0)



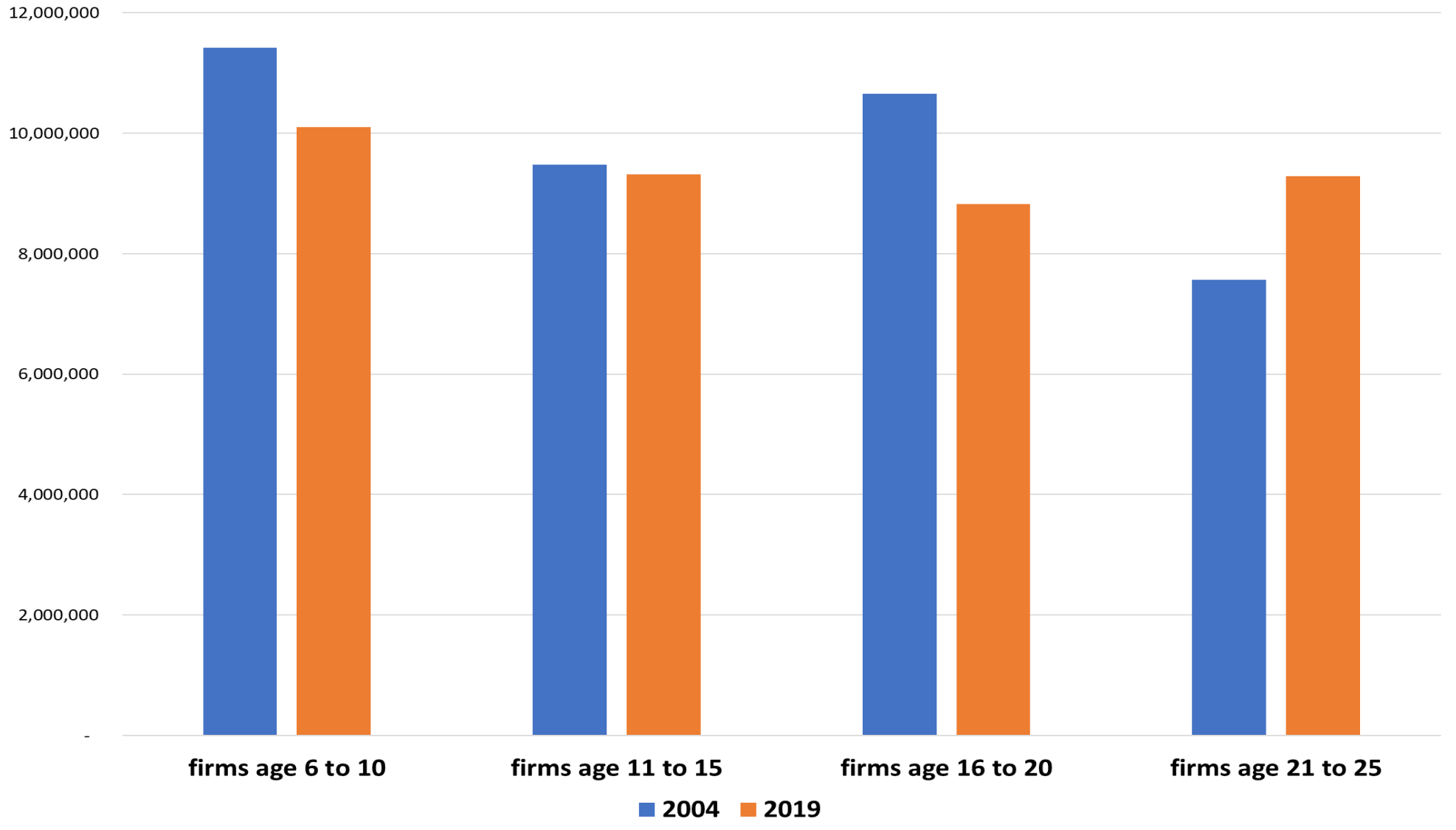
Distribution of employment across firm age categories in 2004



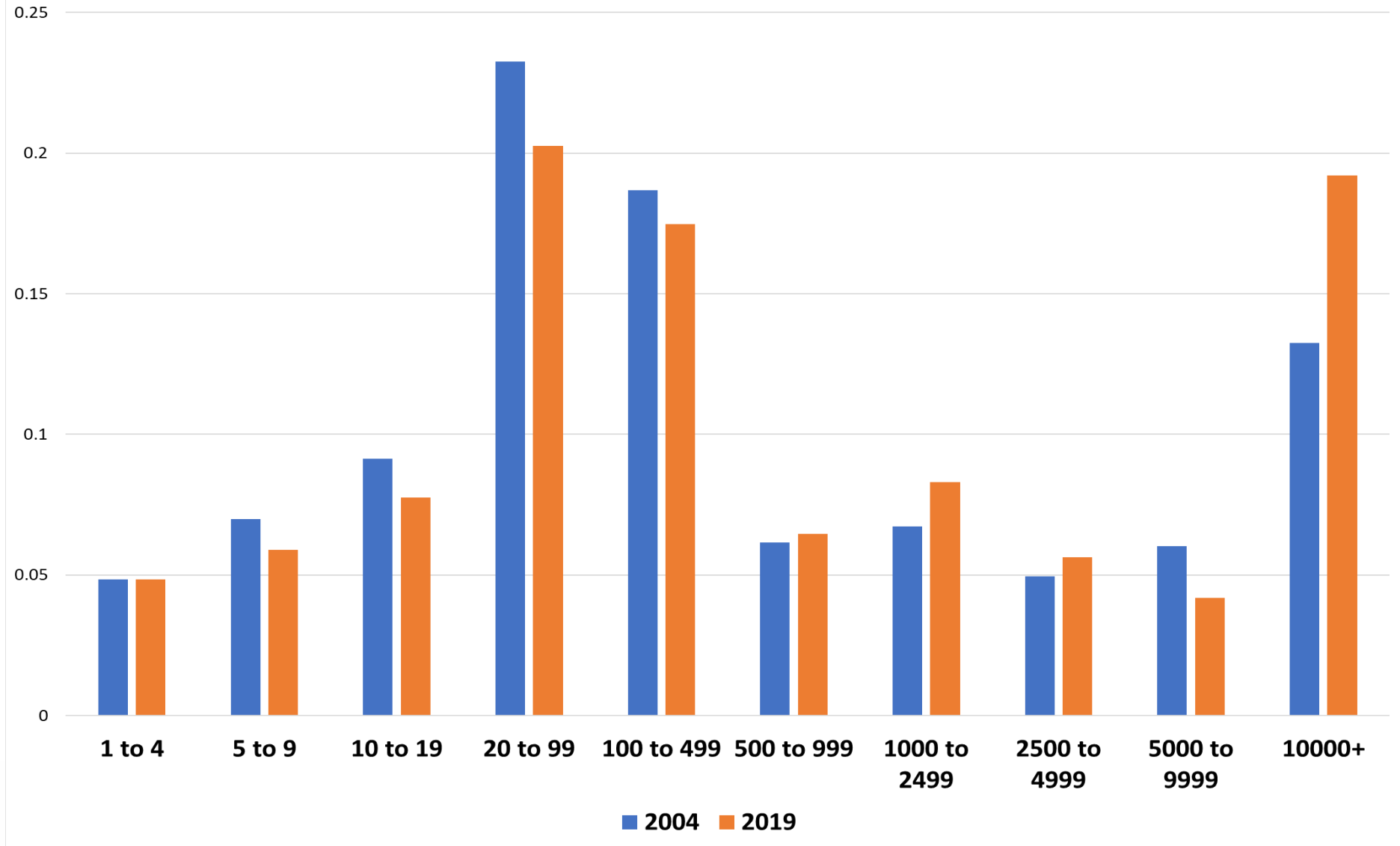
Employment across birth cohorts: initial employment at age 0 and employment at age 6-10



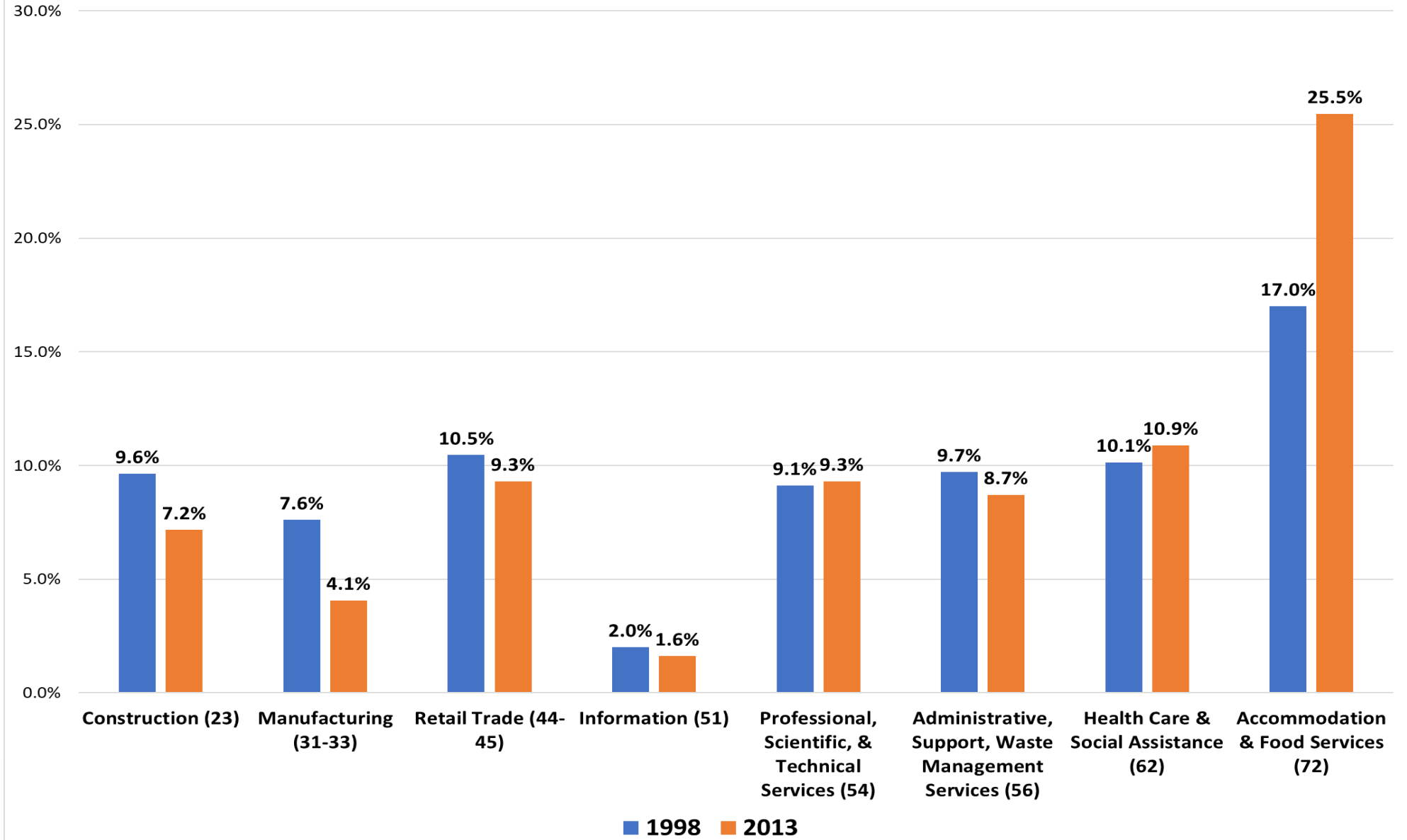
Distribution of employment across firm age categories 2004 v. 2019



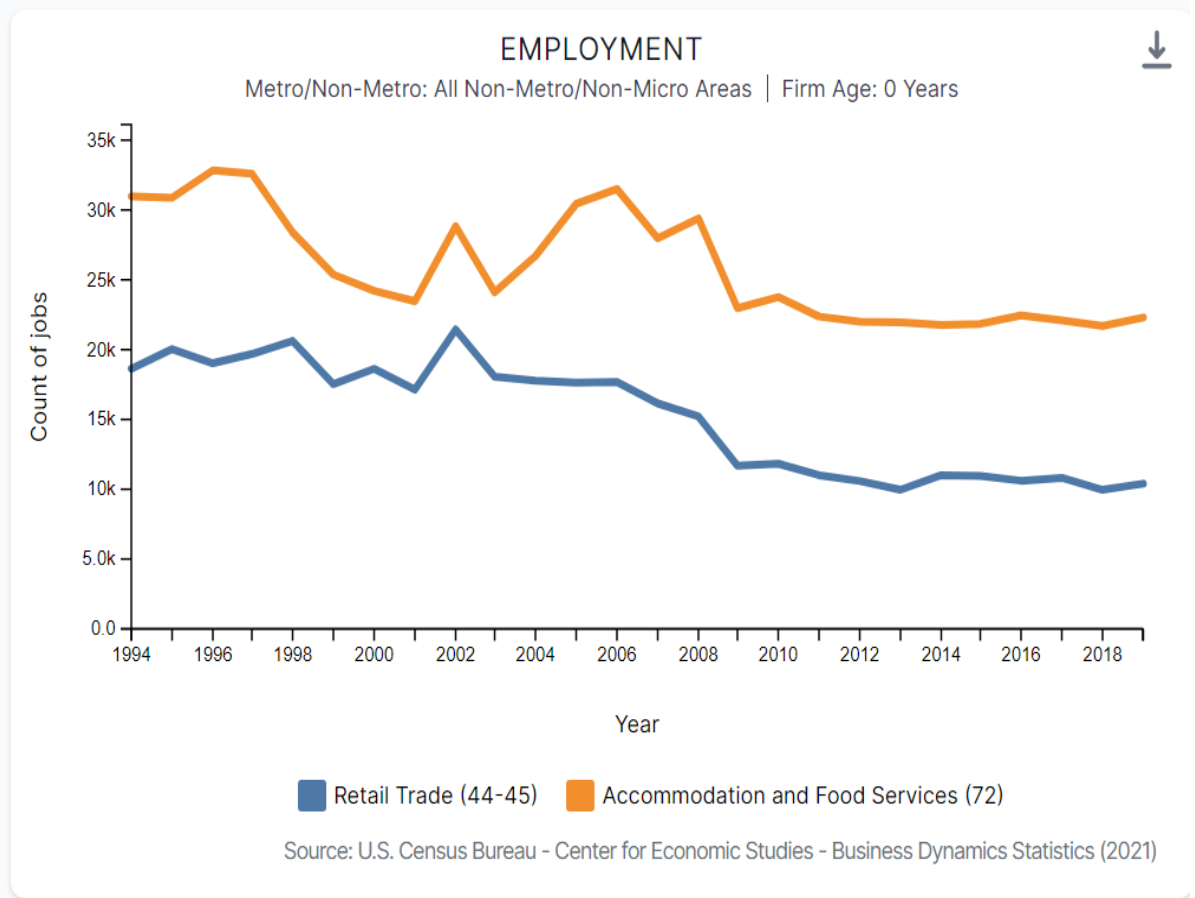
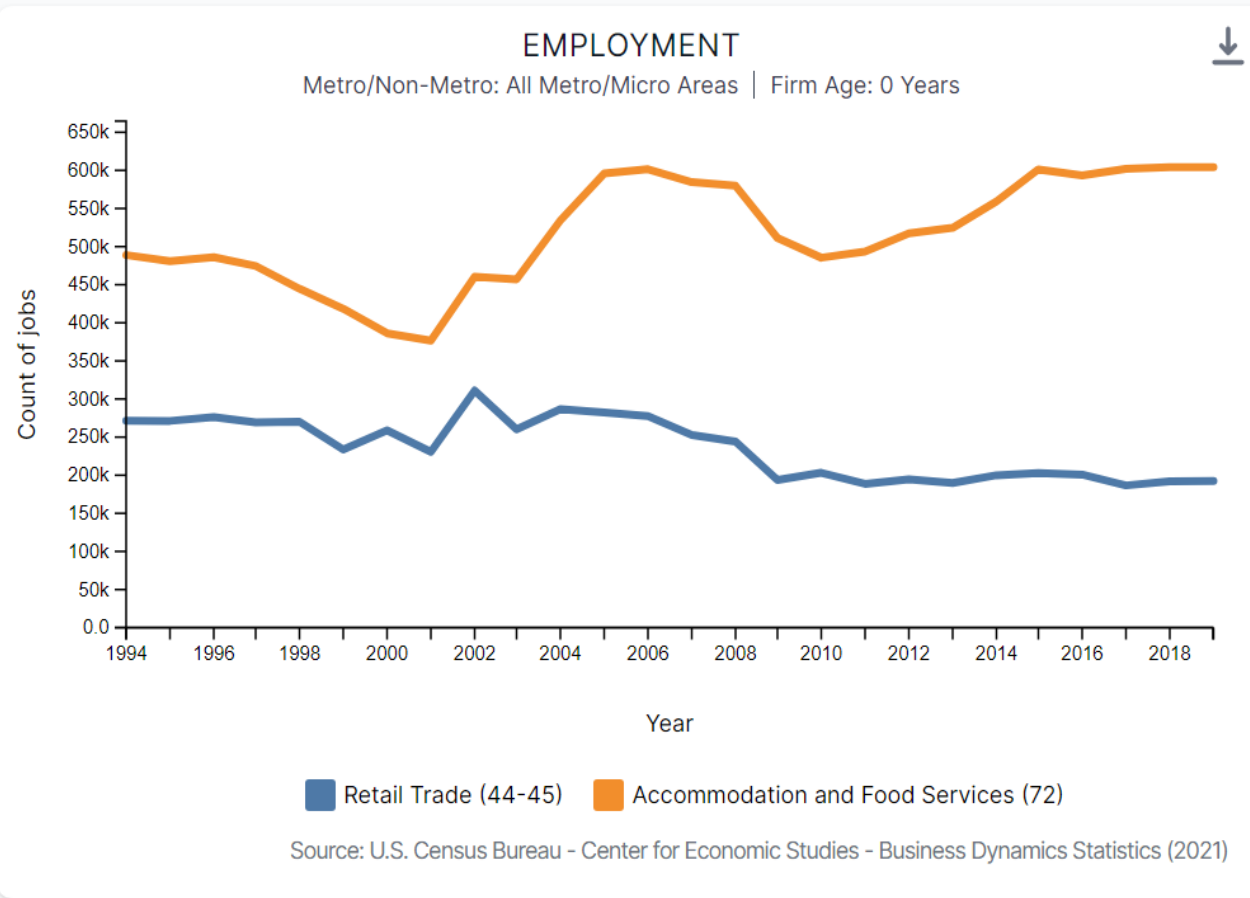
Share of employment across firm size categories Firms age 21-25



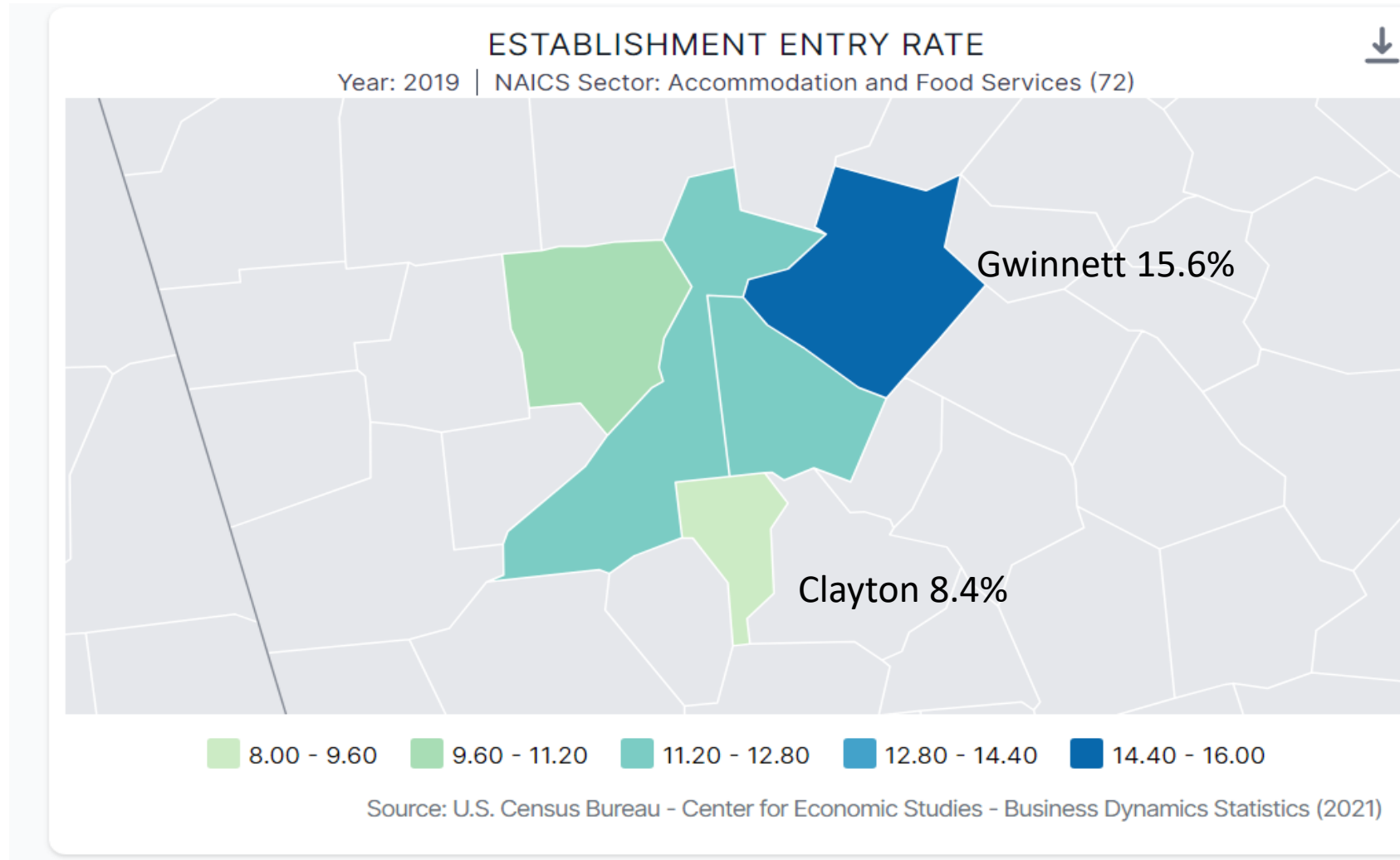
Share of start-up employment found in select industry sectors



Employment at start-ups by industry and geography: Retail v. Hotels & Restaurants and Metro v. Non-Metro



Entry rate for hotels and restaurants in Atlanta core metro counties: Clayton, Cobb, DeKalb, Fulton, Gwinnett



What happened after 2019?

- Timing of Covid-19 pandemic caused measurement issues
 - Many businesses closed in mid-March
 - Difficult to capture in BDS due to March 12th employment date
- Annual measurement misses some business dynamics
 - 2020 BDS measured changes between March 2019 and March 2020
 - 2021 BDS measured changes between March 2020 and March 2021
- To improve measurement of business dynamics, created BDS-Single Unit Firms
 - Use quarterly data to measure changes at four different points in a year
 - Track what happens to small businesses throughout 2020

Thank you!

Martha.Stinson@census.gov

ces.bds@census.gov

Employment of the 1994-1998 firm birth cohorts

