

Using Administrative Records Data to Produce Business Statistics: The Nonemployer Statistics by Demographics Series (NES-D)

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Disclaimer: Any opinions and conclusions expressed herein are those of the authors and do not reflect the views of the U.S. Census Bureau. The Census Bureau's Disclosure Review Board has approved all statistics and estimates presented today for public release under approval number CBDRB-FY20-053.

What is the Nonemployer Statistics by Demographic Series (NES-D)?

- New data series with first release in December 2020
- Leverages existing administrative records and Census data
- Assigns demographic characteristics to the nonemployer universe
 - Approximately 25 million nonemployer businesses

What is the nonemployer universe?

- **2016 Nonemployer Universe: ~25,000,000**
- Businesses with no paid employment, subject to federal income taxes, & w/ annual receipts of \$1,000 or more (\$1 or more for Construction sector)

- Sole Proprietorships
- (1 owner):
- 87%

- Partnerships
- (>1 owner):
- 7%

- S-corporations
- (>=1 owner):
- 4%

- C-corporations & other LFOs
- (>=1 owner)
- 2%

21st Century Challenges to Business Surveys

In response to declining response rates, increasing operational costs ...

- SBO employers
- ASE (employers)
- BRDIS-M (employers)



- Annual Business Survey (ABS)
- Only employers

- SBO nonemployers



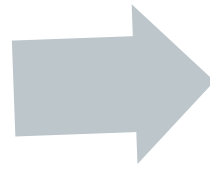
- Nonemployer Statistics by Demographics (NES-D)

Longer-term goal: Annual Total Business Ownership
Integration of Nonemployers + Employers

Nonemployer Demographics – Past & Present

Previously:
Collected as Part of SBO

- Survey (2012) – sample size approx. 800,000 nonemployer firms & 940,000 employer firms
- Every five years
- 3-year dissemination lag from reference year
- High respondent burden
- Low response rate => high imputation rate & costs



Currently:
Blended Data Approach (NES-D)

- **Not a survey** - Nonemployer universe (approx. 25 million as of 2016)
- Leverages administrative records (AR) & Census data to assign demographics to business owners
- Annual – **higher frequency**
- Aims to shorten dissemination lag to 2 years (from reference year) – **more timely**
- **No additional respondent burden**
- Reduces imputation & costs => **higher quality**
- First release in 2020 with 2017 reference year (when 2017 SBO would be released)

NES-D Content – First Release December 2020 with 2017 Data

Tabulations of:	• Number of businesses	
	• Business receipts	
	• Number of business owners	
Dimensions. By:	• Demographic characteristics of business owner:	<ul style="list-style-type: none"> • Sex, race, Hispanic origin, veteran status, age, place of birth, citizenship • Future releases: additional characteristics
	• Legal Form of Organization (LFO) – Sole Proprietorship, Partnership, S-Corp	
	• Receipt-size class	
	• Geography	
	• NAICS industry	
	• Cross-tabulations	

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What data sources are used for NES-D?

Variables	Data Sources
Receipts, industry, geographic location	Nonemployers database from Business Register
Race (core demographic in SBO/ABS) Hispanic origin (core demographic in SBO/ABS) Sex (core demographic in SBO/ABS) Age of owner Place of birth Citizenship status	Decennial Census Data, American Community Survey (ACS), & Numident (from SSA)
Veteran-status (core demographic in SBO/ABS)	Department of Veterans Affairs (VA) AR data (USVETS). Also exploring Department of Defense data.

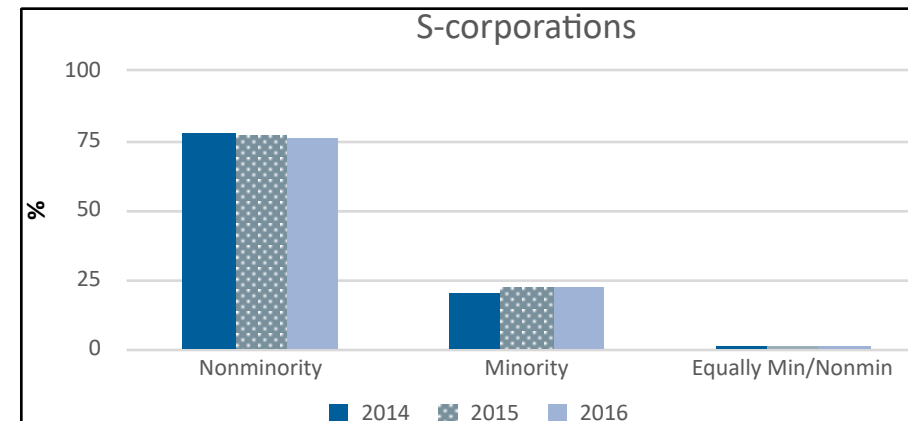
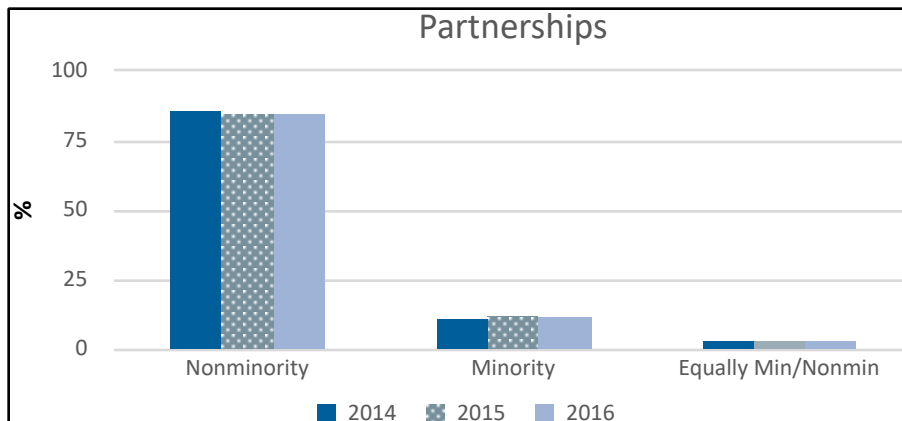
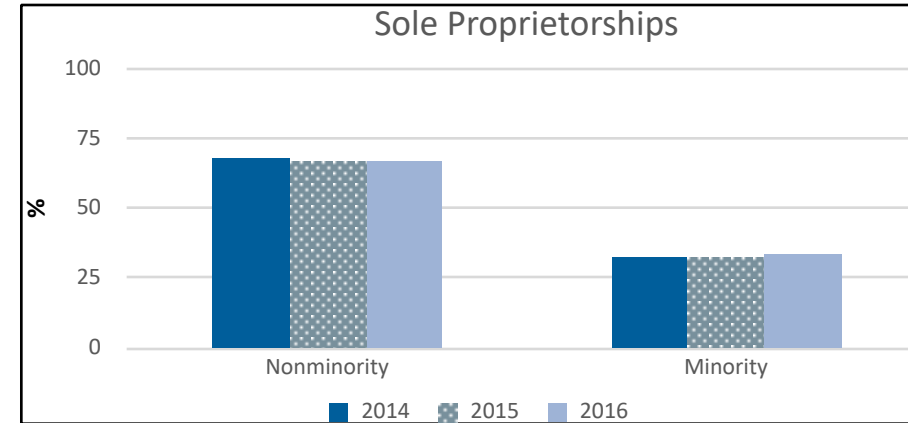
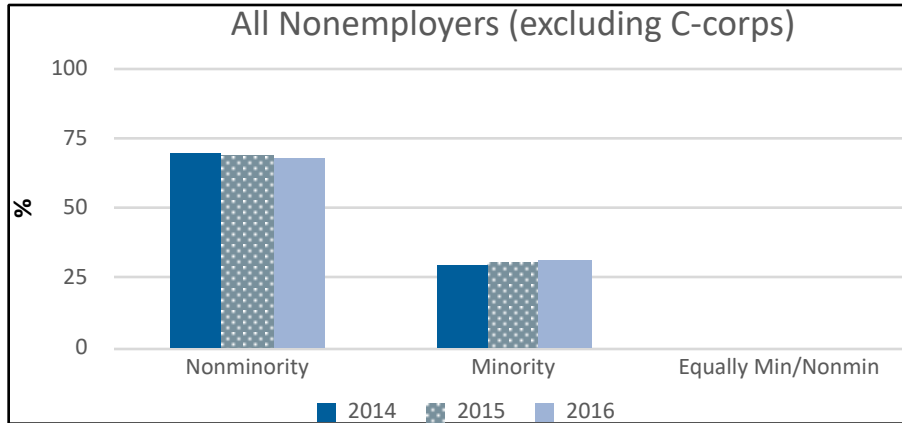
How are demographics linked to business owners?

- Unique person identifiers called Protected Identification Keys (PIKs) facilitate linkage of records across data sources
- Source of PIKs
 - Sole proprietors – Tax form 1040
 - Partnerships & S-corporations – Schedule K1 (Forms 1065 & 1022S)
- Owners of U.S. nonemployer C-corporations cannot be identified with tax or AR data (only 2% of nonemployers & 4% of receipts)
 - Evaluating feasibility of imputation
- Missing demographics are imputed

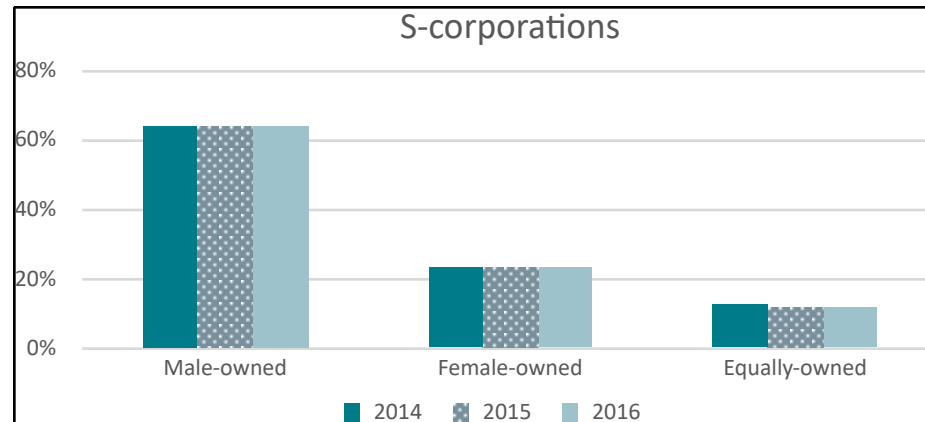
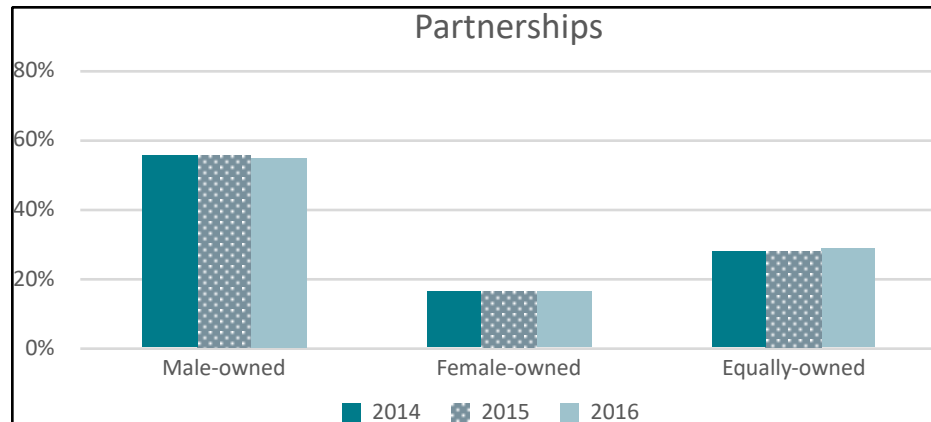
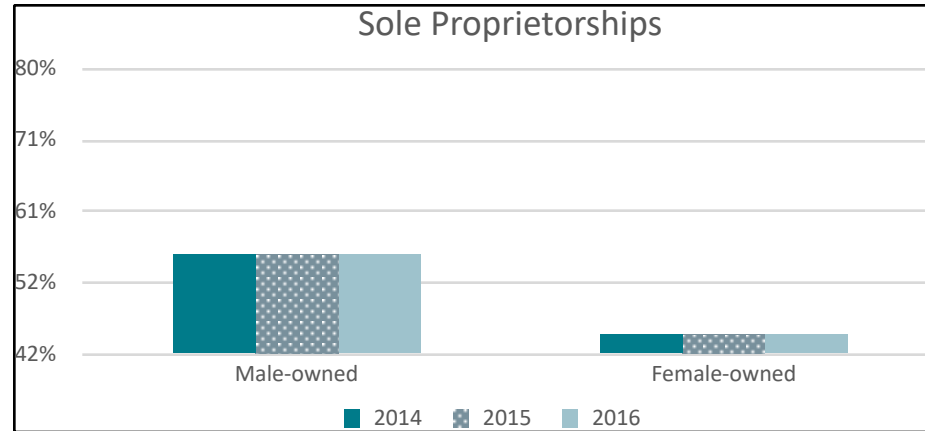
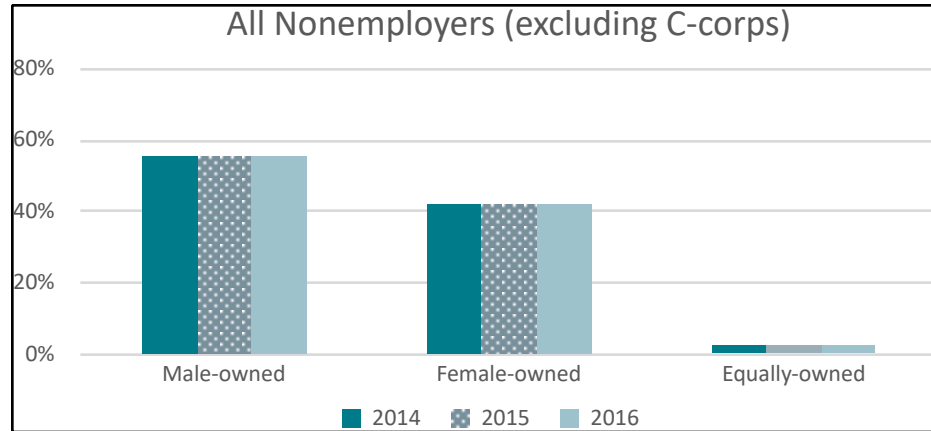
How well does NES-D cover nonemployers?

- Consistent coverage over time (2014-2016 nonemployers)
- PIK information available for approximately 99 percent of nonemployer firms in each year – not including C-corps
- Availability of sex, age, place of birth & citizenship for approximately 98-99 percent of owners (w/ PIKs) in each year
- Availability of race and ethnicity data for approximately 90-95 percent of owners (w/ PIKs) in each year
- Approximately 90-95 percent of owners (w/ PIKs) are not missing any demographics
 - Only about 1 percent are missing 3 or more demographics

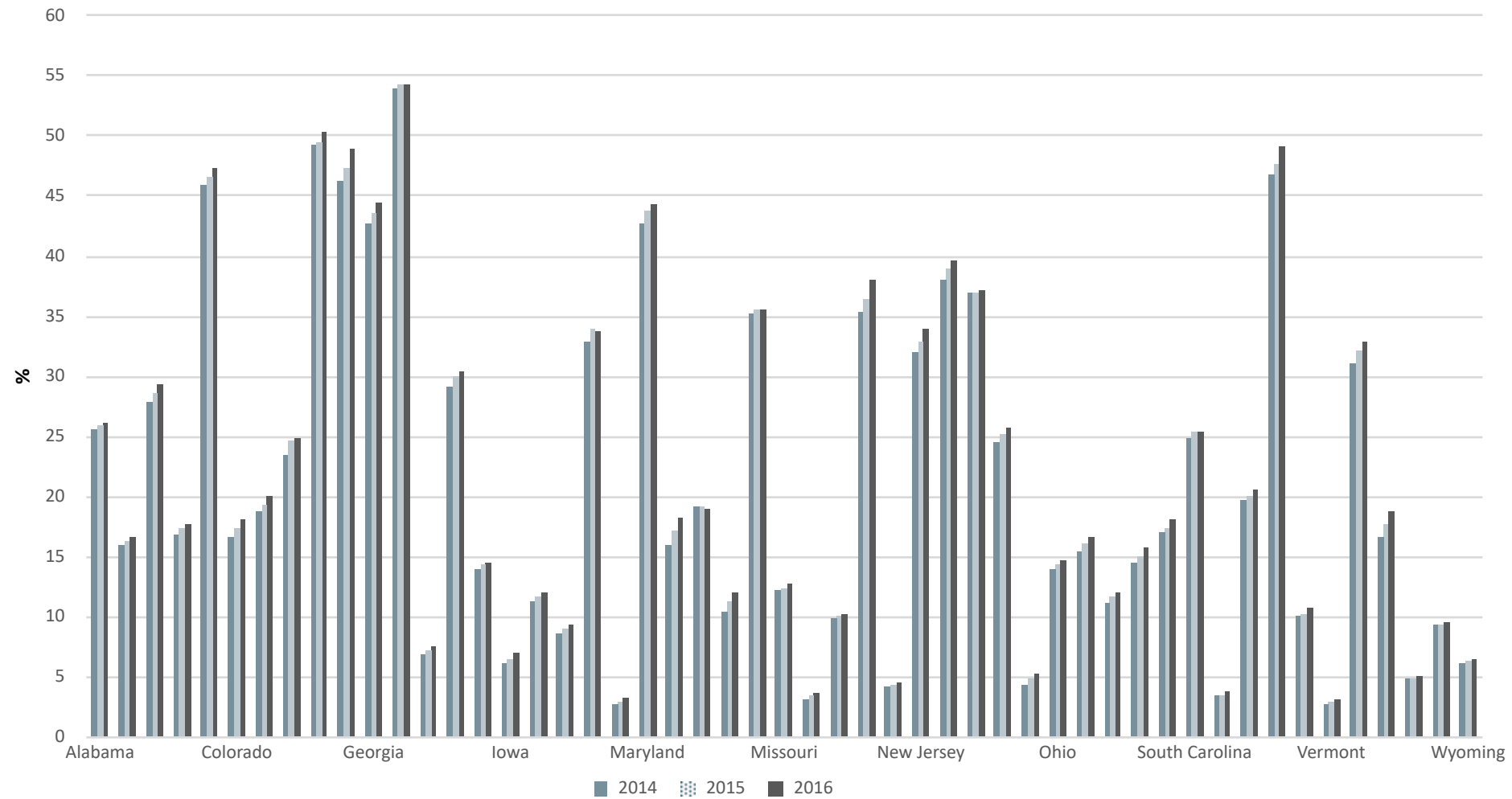
Firm Minority Ownership by LFO



Sex Firm Ownership by LFO



Minority-owned Nonemployer Businesses by State, 2014-16



What to expect from NES-D?

- Annual releases starting December 2020 with 2017 data
- Explore additional characteristics such as:
 - Household characteristics: marital status, number of dependents, home/property ownership
 - Gig economy related: contract work, does nonemployer also do salaried work?
 - Transitions to employer universe
 - Trade status: importer/exporter?
 - Innovation metric: patenting activity?
- Goal: combined employer and nonemployer data series covering all U.S. businesses

Thank you!

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NES-D Working Paper:

<https://www.census.gov/library/working-papers/2019/adrm/ces-wp-19-34.html>

Center for Economic Studies Working Paper Series:

<https://www.census.gov/library/working-papers/series/ces-wp.html>