

# The New Nonemployer Statistics by Demographics (NES-D):

Responding to 20th-century survey-based statistics challenges while addressing 21st-century needs

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# What is NES-D?

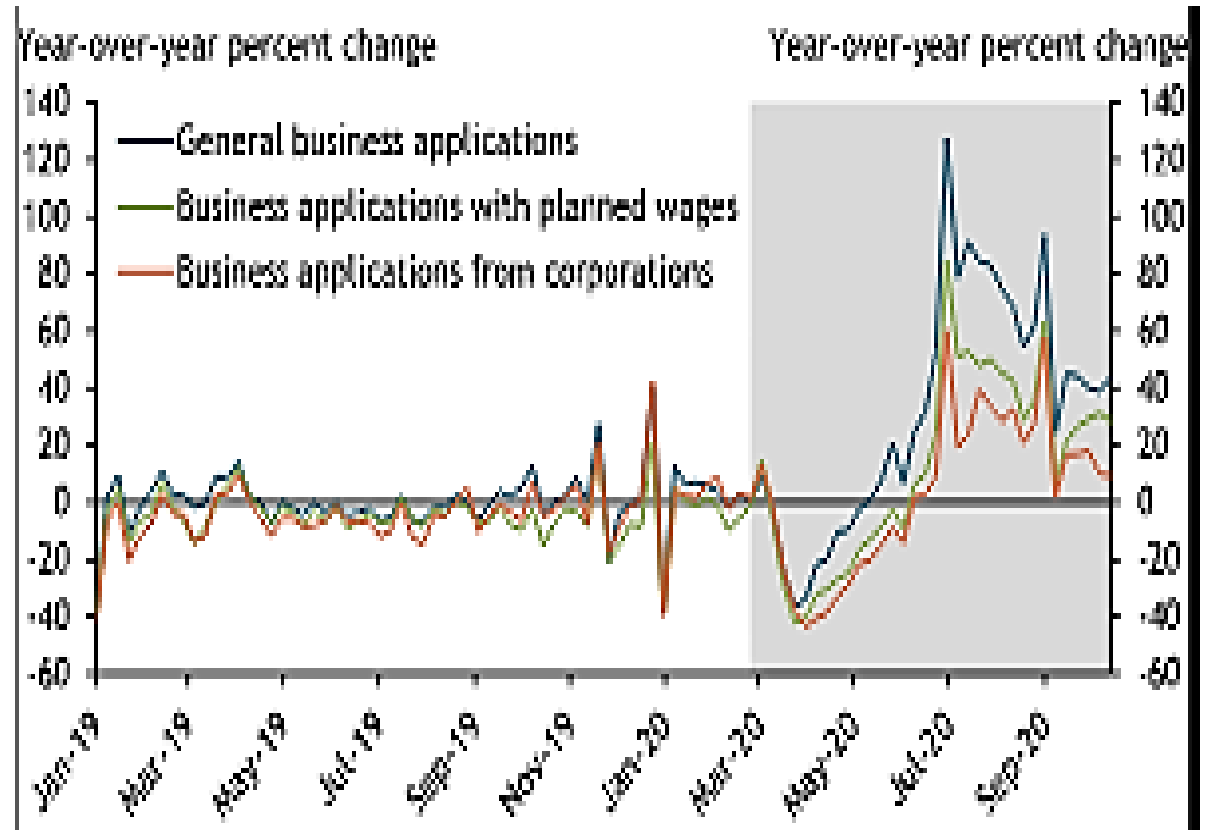
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- **Not a survey** -- New annual data series that provides **demographic characteristics** (e.g., race, sex) for universe of businesses with no paid employees (**nonemployers**)
- Leverages & links **existing** administrative records (AR) & census data to nonemployer business owners
- **Content:**
  - Tables of counts & receipts of nonemployer **businesses** by race, Hispanic origin, sex and veteran status of business owners
  - Tables of counts of nonemployer **business owners** by race, ethnicity, sex, veteran status, place of birth, & age
- **Detail:** Geography & industry detail, receipt-size class, and legal form of organization
  - Current Geo Detail: U.S., state, MSA
  - Current Industry Detail: All sectors, 2 and 3-digit NAICS (North American Industry Classification System)
- **Coverage:** Universe\* of nonemployer businesses
- **Frequency:** Annual
- **First official release** 12/2020 with 2017 reference year

# Who are Nonemployers?

- Nonemployers: businesses w/ no paid employment, subject to federal income taxes, & w/ annual receipts of \$1,000 or more
- As of 2018, there were approximately 26 million nonemployers accounting for about 83 percent of all businesses but only about 3 percent of receipts
  - Approximately 87 percent of nonemployers are sole proprietors (i.e., businesses with only 1 owner, usually thought-of as self-employed persons)
- Nonemployer growth outpacing that of employers
  - From 2014 to 2018, number of nonemployers grew by approximately 11 percent and employer firms by approximately 3.5 percent
- Unprecedented increase in business applications during pandemic (see graph) – will they become nonemployer businesses?

## Employer Identification Number (EIN) Applications



Sources: Business Formation Statistics, U.S. Census Bureau.

# Census' Annual Business Demographics Program: a Hybrid-Data Approach

Low response rates, high respondent burden,  
increasing imputation rates & costs

Need for more frequent & timely high-quality data

**PRIOR STATE**

Legacy Survey of Business Owners (SBO) - Every 5 yrs.  
(Employers & Nonemployers)

**CURRENT STATE**

Annual Business Survey (ABS)  
(Employers)  
Survey-based

+

Nonemployer Statistics by  
Demographics (NES-D)  
Administrative Records (AR) - based

**FUTURE STATE**

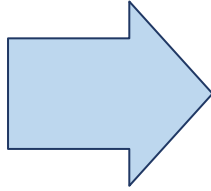
Annual Total Business Demographics Program  
Synchronization of employers & nonemployers

# Nonemployer Demographics – Past & Present

## Previously:

Collected as Part of Survey of Business Owners (SBO)

- Survey (2012) – sample size approx. 800,000 nonemployer & 940,000 employer firms
- High respondent burden
- Low response rate (50% for nonemployers) => high imputation rate & costs
- **Every five years**
- 3-year dissemination lag from reference year



## Currently:

NES-D -- AR & Census Data

- **Not a survey** - Nonemployer **universe** (approx. 26 mill. as of 2018)
- **No additional respondent burden**
- Low imputation rates & costs => **higher quality**  
=> In 2018, imputation rates between < 10% for race and 1% for sex and age
- **Annual – higher frequency**
- Will shorten dissemination lag to 2 years (from reference year) – **more timely**
- Ability to add characteristics from AR to augment data product w/ relative ease & low costs, but some loss of content

# How is NES-D created?

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- [Nonemployer universe](#) identified & extracted from Business Register\*
- Unique anonymized person identifiers called Protected Identification Keys (PIKs) facilitate linkage of records across data sources
- [Source of PIKs/Owner identification](#)
  - Sole proprietors – Tax form 1040
  - Partnerships & S-corporations – Schedule K-1 (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

# Data Sources

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Variables	Data Sources
Receipts, industry, geographic location, legal form of organization	Nonemployers database from Business Register
Race Hispanic origin Sex Age of owner Place of birth U.S. Citizenship status	Decennial Census Data, American Community Survey (ACS), & Numident (from Social Security Administration)
Veteran-status	Department of Veterans Affairs (VA) AR data (USVETS). Also exploring Department of Defense data.

# How well does NES-D cover nonemployer universe?

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- 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)
- Availability of race and ethnicity data for approximately 90-95 percent of owners (w/ PIKs)
- Approximately 90-95 percent of owners (w/ PIKs) are not missing any demographics
  - Only about 1 percent are missing 3 or more demographics
- Missing demographics are imputed



# Some challenges & limitations

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- Owners of U.S. nonemployer C-corporations cannot be identified with tax or AR data (only 2% of nonemployers)
  - Evaluating feasibility of imputation
- Veteran status
  - Conceptual differences between what the ABS view as a veteran and VA's definition: VA concept is narrower
  - Potential for supplementary AR source of military service data
- Equally-owned category for sole proprietorships (1 owner) possible in survey but not in AR sources
- Shocks (e.g., pandemic) that may delay/impact AR (e.g., tax filings)

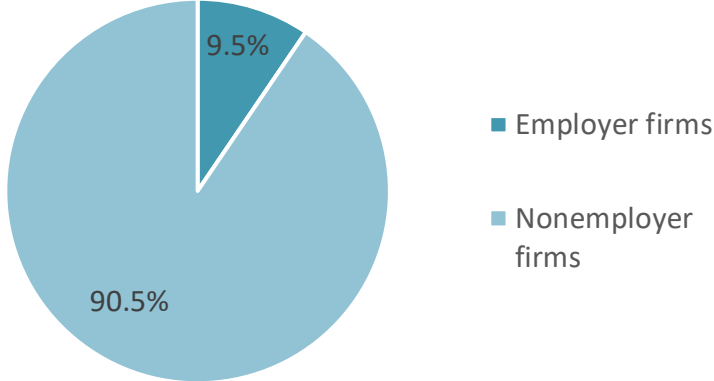
# NES-D Next Steps

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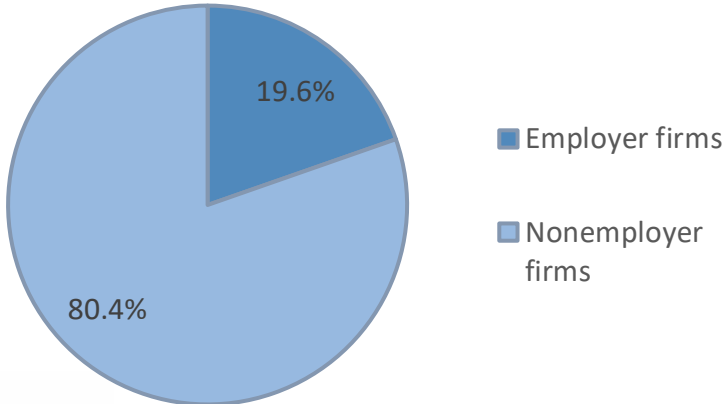
- Increase level of detail for nonemployers:
  - Geo detail: Potentially down to county level in future releases as disclosure-avoidance rules allow
  - Industry detail: Potentially down to 6-digit NAICS in future releases as disclosure-avoidance rules allow
- Shorten dissemination lag from 3 to 2 years –but pandemic getting in the way
- Additional characteristics for nonemployers, including:
  - Household (e.g., marital status)
  - Related to gig-economy (e.g., does nonemployer also work for a wage? Does nonemployer use contractors?)
  - Transitions to employer status
  - Firm age, patenting activity, exporter/importer status

# 2018 Hybrid-Data: Total Business Demographics Illustration

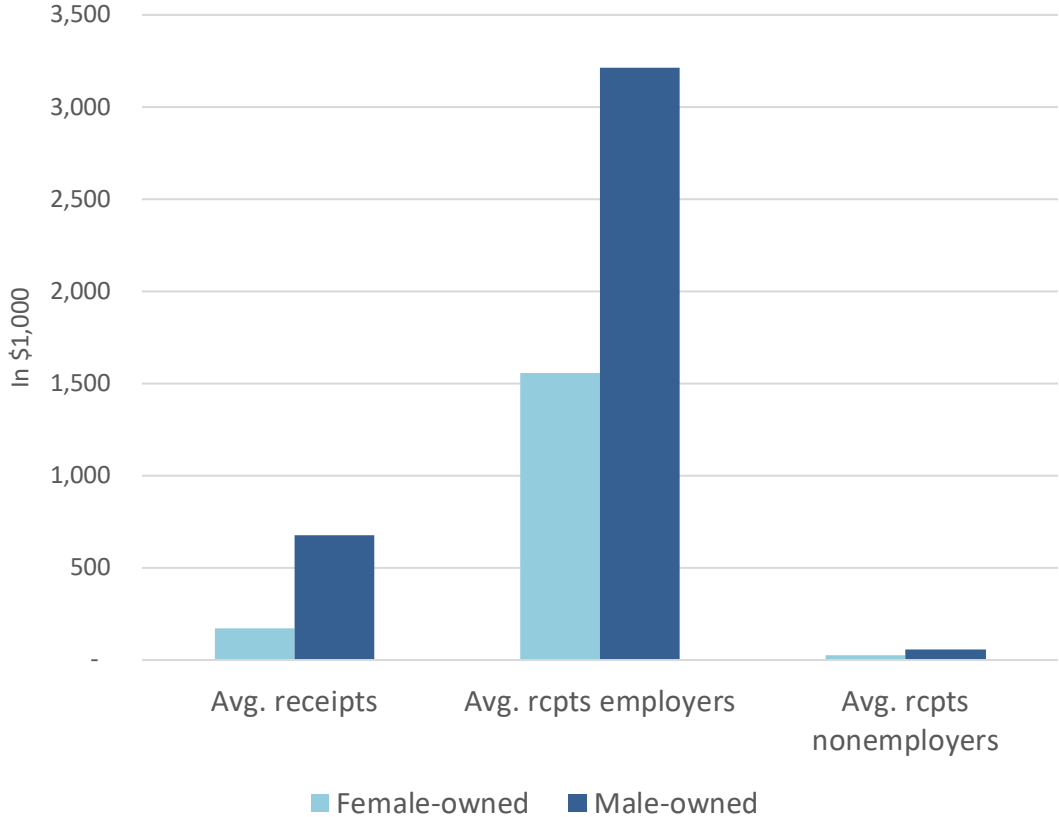
**Female-owned Firms**



**Male-owned Firms**



**Average Receipts of Nonemployers, Employers & All Business By Owner Sex**



ABS and NES-D tables are available at:

<https://www.census.gov/programs-surveys/abs/data.html>

Thank you!

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