Can It Work for Employers?

Evaluating the Expansion of Administrative Records Use beyond Nonemployer Demographic Statistics (NES-D)

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FCSM, October 25, 2023

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Employer Demographics Project

Goal
- Assign demographics to employer firms in the U.S. by leveraging administrative records (AR) & Census data
  - ✓ Already accomplished for nonemployer firms (Nonemployer Statistics by Demographics, NES-D)
- Explore alternative ways to demographically classify (e.g., executive-based for public firms)
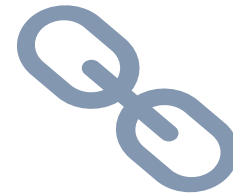
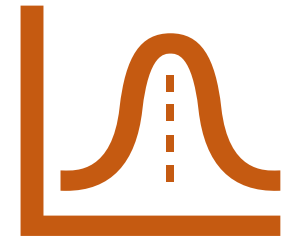**Benefits & Uses**
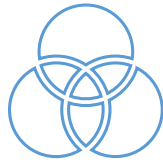
New data products & improvements, such as:
- Unburdening surveys
- Enhancing business programs w/ demographics
- More granularity and flexibility

Reduce costs

Facilitate linkages of external & internal business data to business owners' demographics

Improve sampling frame for business surveys

Context -The Annualization of Census' Business Demographics Statistics

BEFORE

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

(Nonemployers & Employers Demographics)

CURRENTLY

Annual Business Survey (ABS)
(Employers)

Survey-based

+

Nonemployer Statistics by Demographics (NES-D)

Administrative Records (AR) - based

Annual Business Demographics Program
Synchronization of employers & nonemployers

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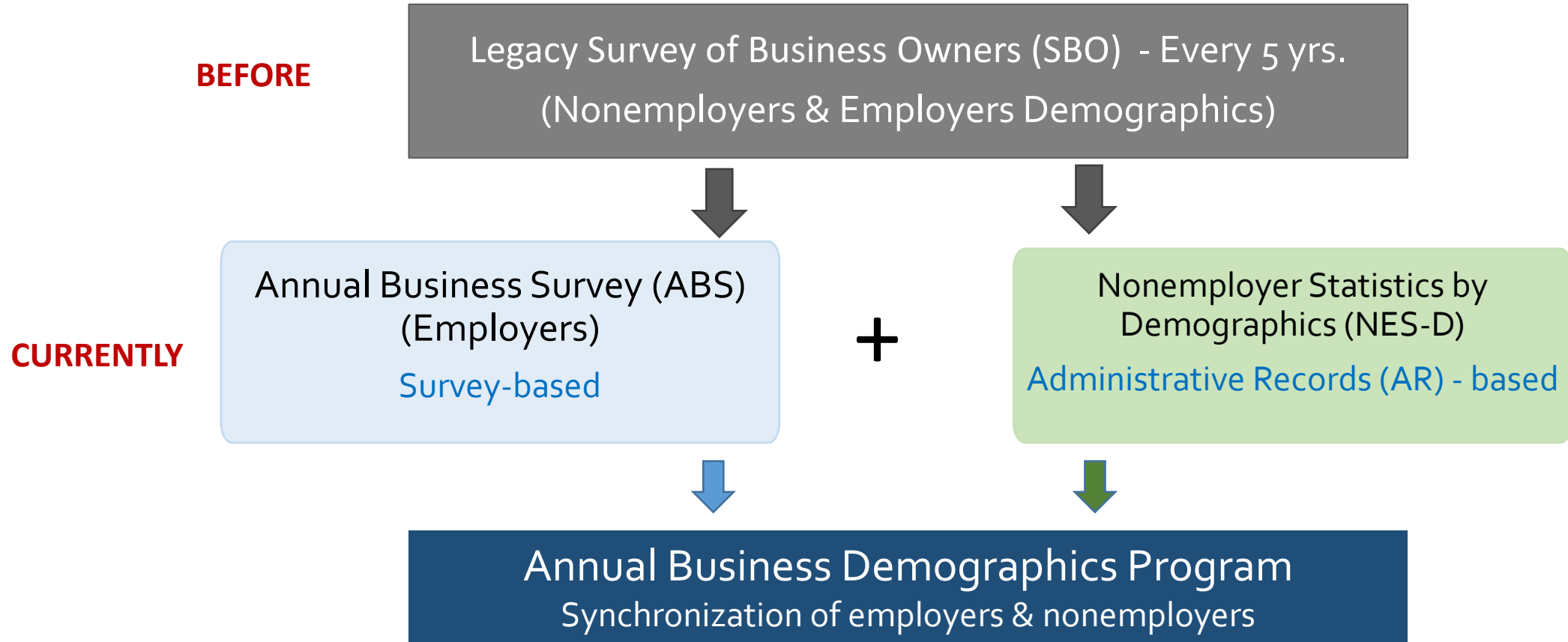
Employer Demographics Project as part of Annual Business Demographics Program

Employer Demographics Project

AR-based (Not a survey)

Annual Business Survey (ABS) (**Employers**)

Survey-based

Nonemployer Statistics by Demographics (NES-D)

AR – based

(Not a survey)

Annual Total Business Demographics Program
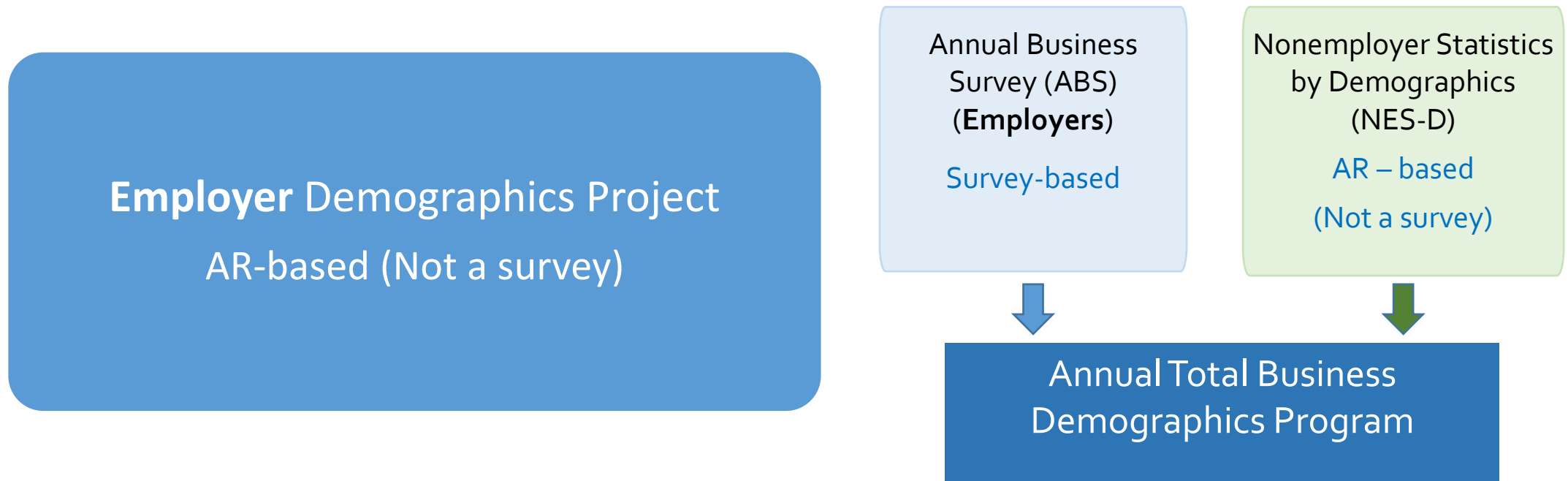
Data Sources

Variables	Data Sources
Employer firm identifiers, Legal Form of Organization (LFO), employment, payroll, industry, geography	**Business Register:** Comprehensive database of all U.S. employer & nonemployer business establishments containing business name, identifier, address, industry classification, legal form of organization, receipts, and employment and payroll.
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.
Owner Identifiers (Protected Identification Keys or PIKs)	Tax data: 1040 filings, Schedule K-1, EIN applications (SS-4 form)

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Methodology (1/2) – How are demographics assigned?

- Employer 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 and EIN applications (SS-4 form)
  - Partnerships & S-corporations – Schedule K-1 (Forms 1065 & 1022S)
  - Owners of U.S. nonemployer C-corporations cannot be identified with tax or AR data
    => Evaluating feasibility of demographics imputation for small C-corps
    => Longer term: Evaluate feasibility of classifying public corporations based on executives' demographics

*The BR is a comprehensive database of all U.S. employer and nonemployer business establishments containing business name, identifier, address, industry classification, legal form of organization, receipts, and employment and payroll (these last two apply only to employer firms).

Methodology (2/2) – How are demographics assigned?

- Link demographics from various sources to business owners via PIK
- "Roll-up" owner-level demographics to firm-level
  - Majority rule: Business is assigned the demographic of the group that jointly owns > 50% of the business
    - For instance, a business is black-owned if owners of black race own more than 50% of the business
  - Eligible for demographic classification if top owner in firm owns at least 10%
  - Top 4 (person) owners are considered

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Owner PIK Coverage Results – 2018 Employers (1/2)

- Owner PIKs available for approximately:

  o Soleprops (86% – 97%)
  - Currently assessing reliability of PIK sources
  - Demographics will be imputed for those without a PIK

  o Partnership (76% - 77%)
  - Assessing feasibility of demographics imputation for the rest

  o Scorps (95%)
  - Assessing feasibility of demographics imputation for the rest

=> Approximately 90 – 95 percent of non C-corps, accounting for 86 – 88 percent of employment

graph   9

Demographics Coverage Results – 2018 Employers (2/2)

- Availability of sex, age, place of birth for approximately 97% of owners (w/ PIKs)

- Availability of race for approximately 92% of owners (w/ PIKs)

- Availability of Hispanic origin for approximately 95% of owners (w/ PIKs)

- Approximately 92% of owners (w/ PIKs) are not missing any demographics
  - Only about 3% percent are missing 3 or more demographics

- Missing demographics will be imputed

Some Challenges

- Complex ownership structures makes it hard to identify owners

- Owner identification is closely tied to LFO (e.g., sole proprietorship, partnership, S-corp), but sometimes LFO changes are intractable or there are errors in LFO assignment

- Ownership information for partnerships & S-corps are tied to EINs that firms use for "income" tax purpose, but EINs in Business Register are "payroll" EINs

  - Sometimes firm "income" EIN not equal to "payroll" EIN => inability to identify owners in those cases

graphic

Can we leverage AR for employer demographics?

- We think so!

- Sole proprietorships, partnerships and S-corporations

- Modeling for small C-corps?

- Alternative non owner-based demographics for public corporations?

- Rely on survey for large private C-corporations?

  - Some of them likely not to be eligible for demographic classification

Next Steps
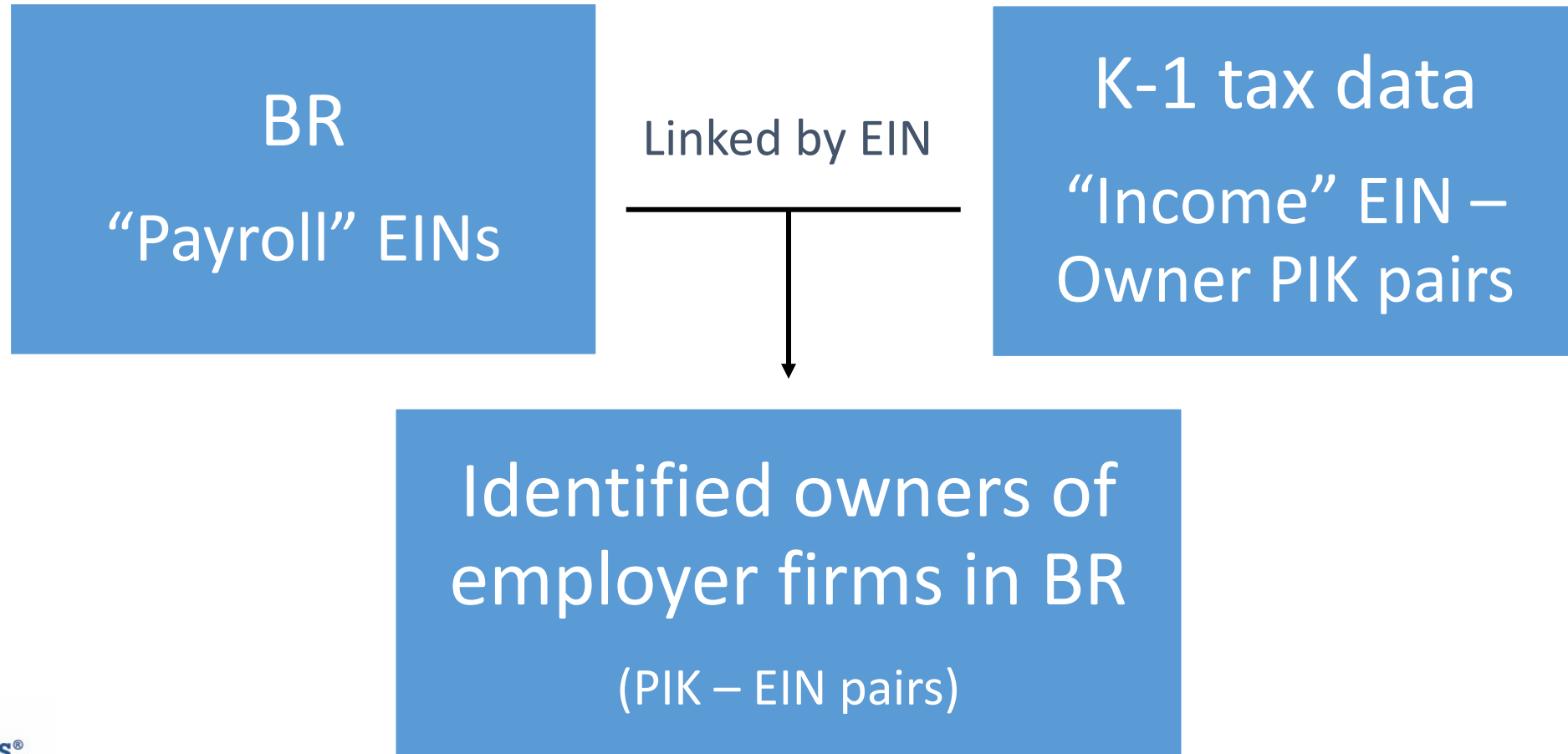
- QA, QA, QA!

- Extension to multiple years
  - More QA - Evaluate longitudinal consistency & patterns

- Demographics imputation for partnerships & S-corps for which we have not been able to identify owners

- Evaluate feasibility of demographic imputation for small C-corporations

- Longer term - Explore alternative, not owner-based firm demographic classification (e.g., executive-based)

Thank you!

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Owner Identification for Partnerships & S-corps

BR

"Payroll" EINs

Linked by EIN

K-1 tax data

"Income" EIN – Owner PIK pairs

Identified owners of employer firms in BR

(PIK – EIN pairs)

The Challenge of Multiple EINs

Schedule K-1:
"income" EIN – owner PIK pairs, & ownership info

BR has "payroll" EINs
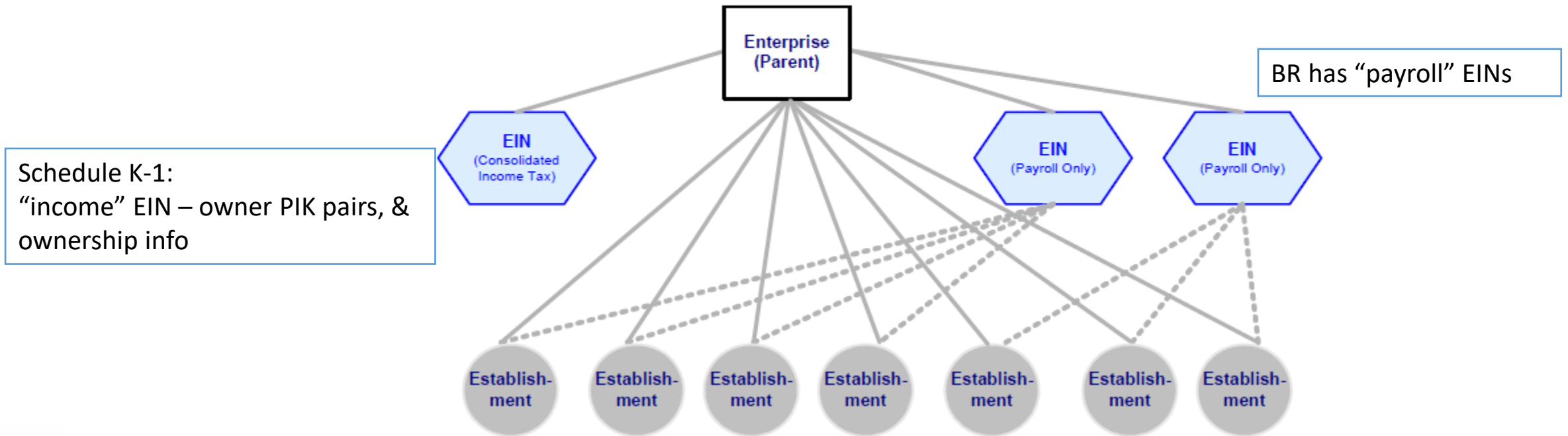
Source of PIKs for Employers Firms

Employer Firms
(excluding non-profits, government, other non-corporate)

Sole Proprietorships (1 owner)	**Partnerships** (>1 owner)	**S-corporations** (>=1 owner)	**C-corporations** (>= 1 owner)

Source of PIKs

1040 filings & EIN applications	Tax Schedule K1	Tax Schedule K1	n/a

Source: 2018 Business Register, U.S. Census Bureau.
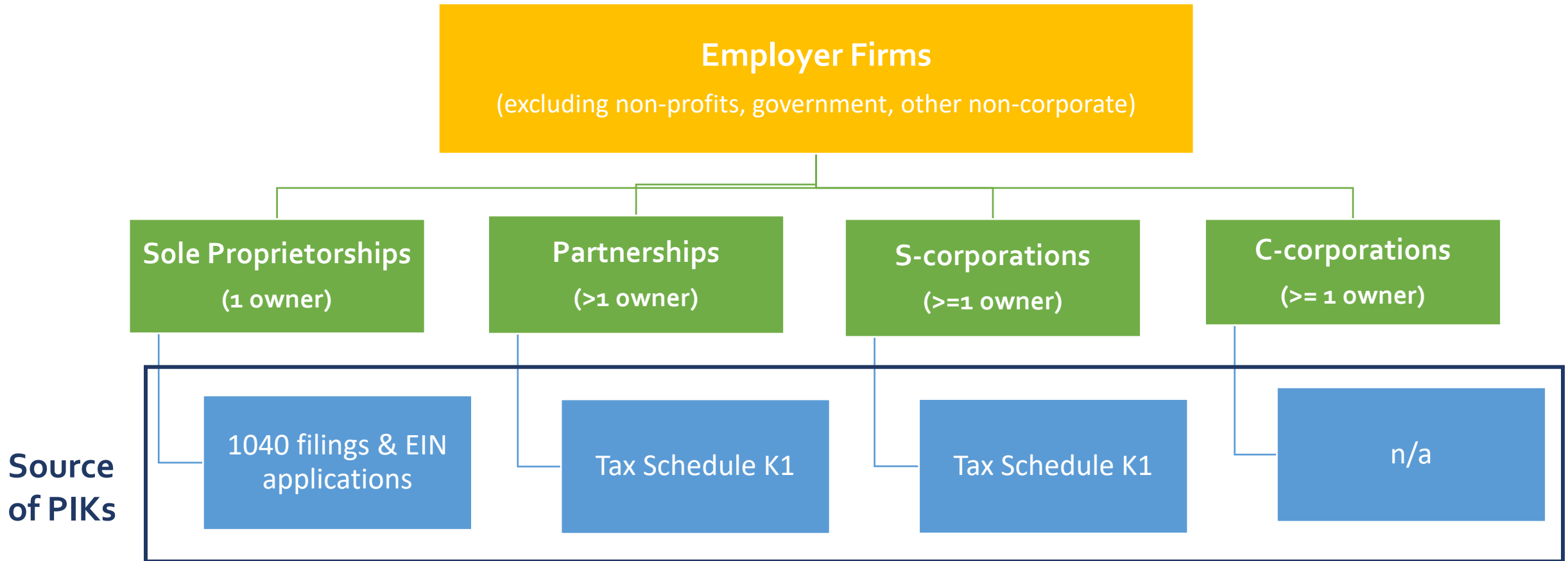
Preview of Owner Identification for non C-corps

Employer Businesses
(excluding non-profits, government, other non-corporate)

Soleprops	Partnerships	S-corps	C-corps
~15% of employers	~13% of employers	~55% of employers	~18% of employers

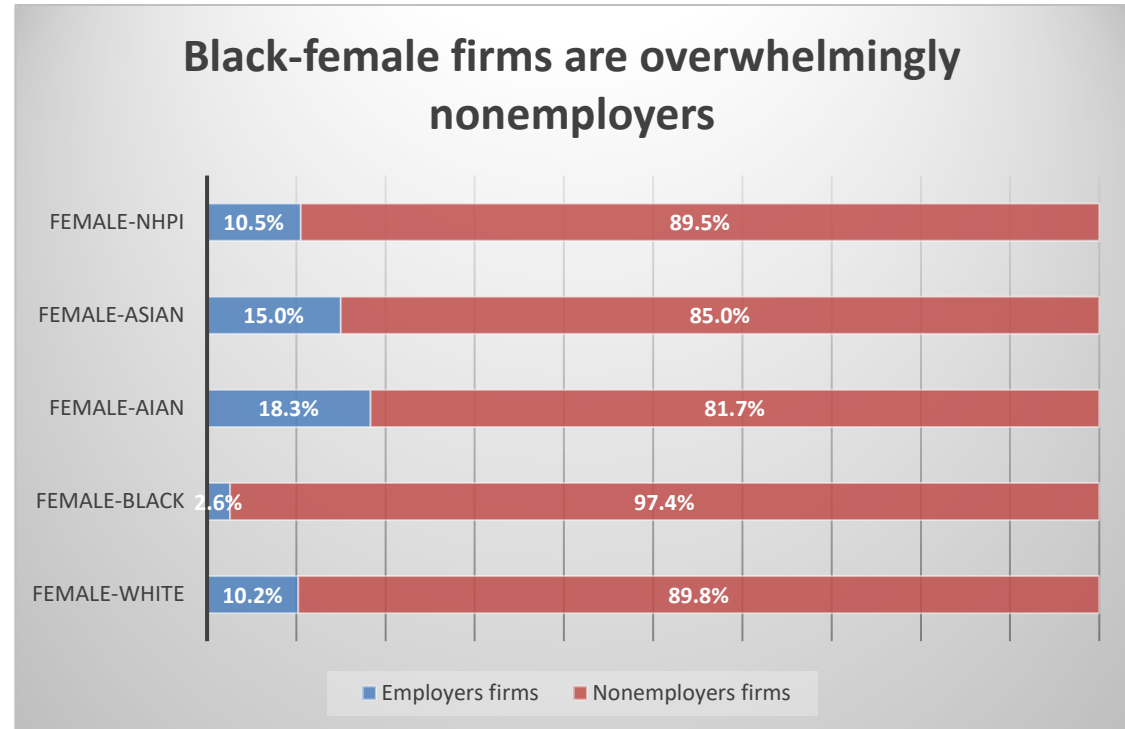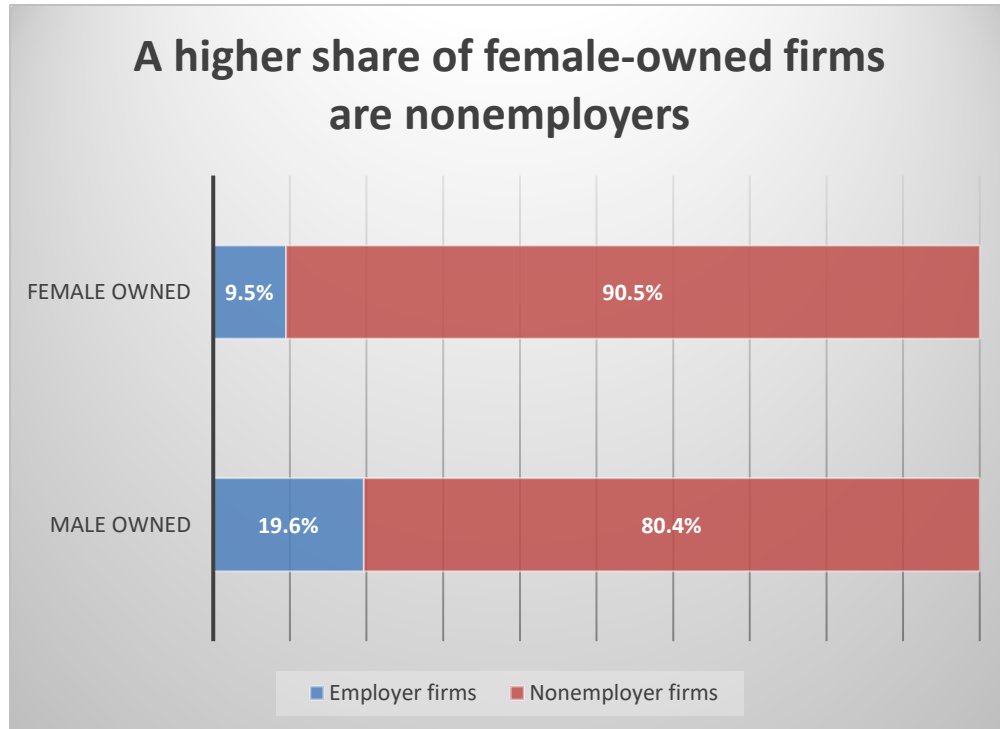| 86 to 97% of soleprops	76 to 77% of partnerships	Approximately 95% of S-corps
74 to 87% of SP emp	79 to 80% of P emp	Approx. 92% of S-corp emp

Private Small C-corps*

Other C-corps
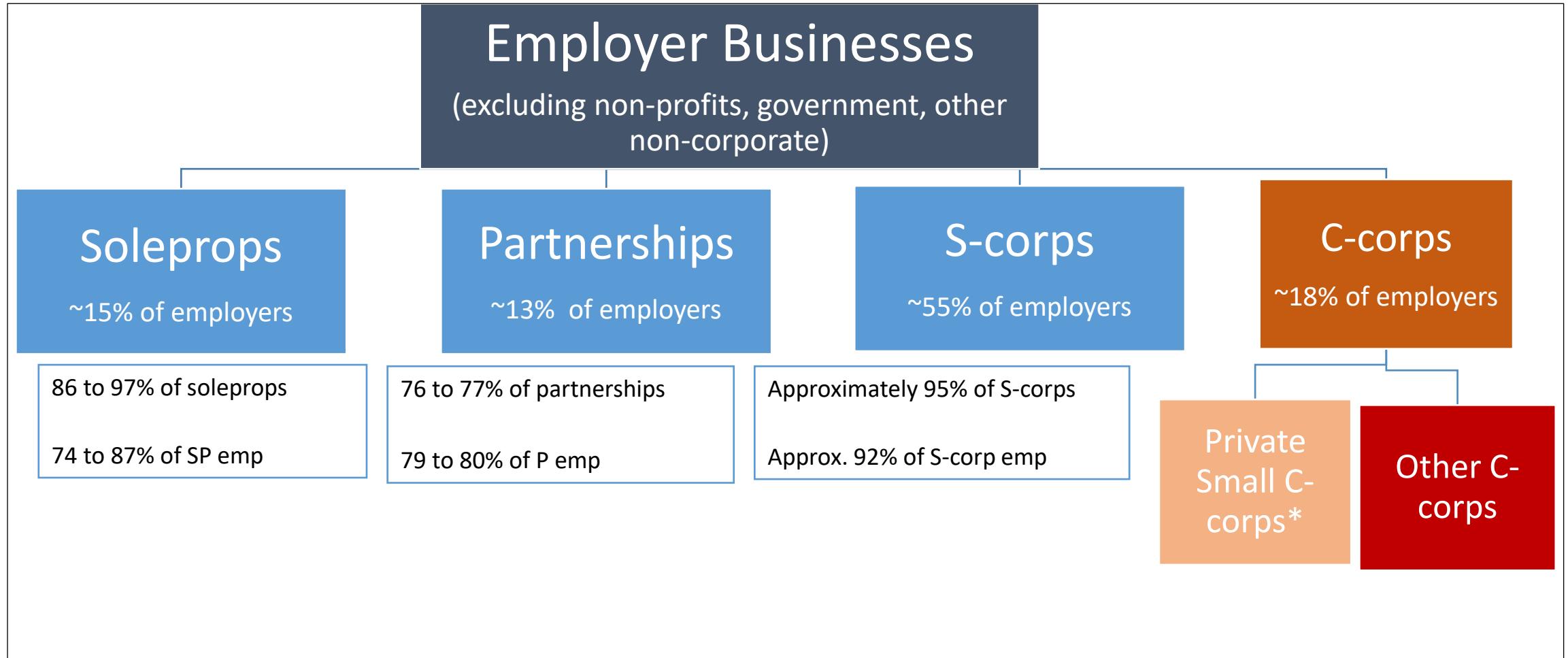
Source: 2018 Business Register.
*Small C-Corps = C-corps with <= 19 employees. They account for more than 50% of all C-corps and less than 15% of C-corp employment.

Employer Identification Number or EIN

- An Employer Identification Number or EIN is a unique nine-digit number that identifies your business for tax purposes
    - Required for all employer firms
    - Different uses such as payroll or income reporting to IRS
        - A given EIN may be used for both payroll and income tax purposes
    - Most employer businesses have 1 EIN

Illustration - 2018 Hybrid-data Total Business Demographics

A higher share of female-owned firms are nonemployers

	Employer firms	Nonemployer firms
FEMALE OWNED	9.5%	90.5%
MALE OWNED	19.6%	80.4%

■ Employer firms ■ Nonemployer firms

Black-female firms are overwhelmingly nonemployers

	Employers firms	Nonemployers firms
FEMALE-NHPI	10.5%	89.5%
FEMALE-ASIAN	15.0%	85.0%
FEMALE-AIAN	18.3%	81.7%
FEMALE-BLACK	2.6%	97.4%
FEMALE-WHITE	10.2%	89.8%

■ Employers firms ■ Nonemployers firms

Sources: 2018 NES-D and 2019 ABS (2018 reference year)

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