Business owners and the self-employed: thirty-three million (and counting!)*

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September 8, 2025

Abstract

Entrepreneurs are known to be key drivers of economic growth, and the rise of online platforms and the broader "gig economy" has led self-employment to surge in recent decades. Yet the young and small businesses associated with this activity are often absent from economic data. In this paper, we explore a novel longitudinal dataset that covers the owners of tens of millions of the smallest businesses: those without employees. We produce three new sets of statistics on the rapidly growing set of nonemployer businesses. First, we measure transitions between self-employment and wage and salary jobs. Second, we describe nonemployer business entry and exit, as well as transitions between legal form (e.g., sole proprietorship to S corporation). Finally, we link owners to their nonemployer businesses and examine the dynamics of business ownership.

JEL Codes: L26, J63, J21

Keywords: entrepreneurship, nonemployer business, dynamics, reallocation, business income

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*Any opinions and conclusions expressed herein are those of the authors and do not represent the views of the U.S. Census Bureau. This paper was started while Kroff was an economist at the U.S. Census Bureau. Kroff is an advanced analytics specialist at Analysis Group. The views presented in this article are those of the authors and do not represent any opinions or positions of Analysis Group or its clients. The Census Bureau has ensured appropriate access and use of confidential data and has reviewed these results for disclosure avoidance protection (Project 7515812: CBDRB-FY25-CES022-003). We thank Andrew Foote, Cheryl Grim, Susan Houseman, Vitaliy Novik, Jay Stewart, and participants at the NBER CRIW Conference on the Changing Nature of Work for helpful comments and suggestions.

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1 Introduction

The number of U.S. nonemployer business entities has surged in recent decades. Such businesses include independent contractors, gig workers, and business owners without employees: work that is not considered employment in a wage and salary job (Abraham et al., 2019, 2021). These entities have a dual nature that is largely absent from other forms of economic activity. A nonemployer is both a job and a business, albeit sometimes a loosely defined one. While tens of millions of people in the U.S. engage in this type of work, they are often absent from statistics on labor market and business dynamism.

This gap represents a growing blind spot in our capacity to monitor the health and vitality of the labor market and the entrepreneurial economy. With current published statistics, it is not possible to know, for example, what share of the self-employed persistently operate outside of conventional wage and salary work, nor how this share might be changing over time. Similarly, there is no ready data source on worker movements between wage and salary jobs and self-employment, nor is there a comprehensive description of employees who moonlight as gig workers. Recent research has shown the value of administrative tax data to address these questions. For example, Hyatt et al. (2021) document that self-employment is highly dynamic and fluid, and that only about half of such jobs survive into the next year. Fairlie et al. (2023) use tax data to document the key role of the self-employed and business owners in job creation. Abraham et al. (2021) show the critical importance of tax records for providing a comprehensive characterization of self-employment that household surveys fail to capture.

This paper documents efforts at the U.S. Census Bureau to develop a comprehensive, longitudinal database of self-employment jobs and associated business entities, which were first outlined in Goetz et al. (2017). We use a unique, comprehensive dataset of business tax records that includes independent contractors, gig workers, and other nonemployer businesses.[1] We produce three new

[1]In this paper, we rely primarily on data from the U.S. Internal Revenue Service (IRS), which offers definitions for many such work arrangements, which we also follow. The U.S. Internal Revenue Service (2025c) states that "an individual is an independent contractor if the person for whom the services are performed has the right to control or direct only the result of the work and not what will be done and how it will be done. If you are an independent contractor, then you are self-employed." "The gig economy—also called sharing economy or access economy—is activity where people earn income providing on-demand work, services or goods. Often, it's through a digital platform like an app or website" (U.S. Internal Revenue Service, 2025b). It continues "Gig work is certain activity you do to earn income, often through an app or website (digital platform)" and goes on to provide examples such as driving or renting property. The U.S. Internal Revenue Service (2025e) definition of a business owner is quite broad - "a sole proprietor is someone who owns an unincorporated business by themselves" - and therefore every self-employed individual is a business owner.

sets of statistics that relate entrepreneurial and self-employment decisions to business and workforce composition. First, we measure how many people transition between self-employment and wage and salary jobs, along with those who do both kinds of work persistently. Second, we describe what types of nonemployer entities enter and exit each year, as well as how many nonemployer businesses transition from one type of legal form of organization to another. Finally, we link owners to nonemployer businesses and measure how many "ownership jobs" start and end each year.

We obtain our results from rich administrative data originating from nonemployer business tax filings by sole proprietors, partnerships, S corporations, and C corporations. Nonemployer business entities use the tax identifier of either the owner (Social Security Number, or SSN) or the business (Employer Identification Number, or EIN, which millions of nonemployer businesses use despite the name). Nonemployer businesses can switch between these two tax identifiers, and so we develop longitudinal linkages that allow for changes in legal form over time. The resulting longitudinal identifier allows us to contribute the Longitudinal Business Database for Nonemployers (LBD-NE) to the Census Bureau's data infrastructure. Additionally, we create a database of self-employment jobs which matches people to the nonemployer entities that they own. These owner-entity links come from IRS filings: 1040 Schedule C filings for sole proprietors, and Schedule K-1 filings for the owners of partnerships and S corporations. The resulting database is the Self-Employment Job Frame (SEJ). The business owners in this database are then matched to both Unemployment Insurance (UI) wage and W-2 records, allowing us to see their full labor market history.[2]

This paper describes how we create the LBD-NE and the SEJ, and provides the first statistics from these new data products. We find that about thirty-three million people (17.3% of workers) engaged in some form of self-employment in 2019.[3] Workers who combine a wage and salary job with self-employment have become more common (9.5% of workers in 2019). Such workers are more numerous than those who obtain all of their earnings from self-employment (7.8% in 2019). We also find that here are substantial differences by age. Workers under age 35 are less likely to

[2]UI wage records are collected for nearly all private sector wage and salary workers as well as UI-covered employees of state and local governments in order to assess payroll taxes for state UI programs. W-2 records are annual records of wage and salary payments, which employers report to the IRS.

[3]We report a much higher number of workers who were self-employed than other data sources such as the Current Population Survey. For example the Bureau of Labor Statistics reports that, in March of 2019, there were 6.0 million incorporated self-employed workers (series LNU02048984) and 9.3 million unincorporated self-employed workers (series LNU02027714). Our results are consistent with Abraham et al. (2021), who report that in recent years administrative records data show many more self-employed than household surveys – and that this is even true when comparing survey respondents to their own administrative records.

be self-employed compared to older workers. Younger self-employed workers tend to supplement their income with wage and salary work. Workers age 55 and older have the highest shares of self-employment, and are more likely to be self-employed without concurrent wage and salary work.

We also provide comprehensive statistics on transitions between wage and salary jobs and self-employment. Among those who found employment in 2019 after not working in 2018, nearly one-fifth (18.0%) had self-employment income. We also show that self-employment does not provide the stability of wage and salary employment. Of those who had only self-employment income in 2018, only about three-quarters (73.5%) of these continued to rely only on such income during 2019. Most of the remaining one-quarter (16.5%) had no paid work at all during 2019. In contrast, of workers with wage and salary income in 2018, nine-tenths (90.0%) of them continued to do so in 2019.

The transition dynamics of business owners and the self-employed are fundamentally related to the more than thirty (31.5 in 2019) million nonemployer businesses that they operate. More than two-thirds (68.4% in 2019) of these businesses are sole proprietors without EINs. Other nonemployers are sole proprietors with EINs (16.8%), partnerships (8.2%), S corporations (4.8%), and C corporations (1.8%). The transition dynamics of these businesses are quite different across these legal forms. More than a third (36.4%) of sole proprietors operating in 2018 were either inactive or exited by 2019, and these rates are lower for sole proprietors with EINs (26.1%), C corporations (23.4%), S corporations (20.3%), and especially among partnerships (12.5%).

We also present some of the first statistics on transitions across these legal forms, which we show are infrequent. A small share (2.1%) of sole proprietors obtain an EIN and remain a sole proprietor. Among sole proprietors, more than fifty thousand (in 2019, about 0.2%) transitioned into partnerships or S corporations. A few thousand (0.1% of) partnerships transition to S corporations, but, for legal reasons, no businesses make the reverse transition. More C corporations transition to S corporations than the reverse (6 thousand vs. 1 thousand from 2018 to 2019).

We are among the first to document the joint dynamics of businesses and those who operate them: more than forty million (averaging 40.8 million 2014–2018) owner–business combinations. More than half (52.8%) of these ownership jobs are held by an owner with concurrent wage and salary income, a phenomenon which is particularly common among sole proprietors without EINs. We further document that owners frequently work multiple ownership jobs: about one-third (33.7%) of jobs are held by an owner with concurrent ownership of more than one active business. These "parallel entrepreneurs" are especially prevalent among owners of partnerships and S corporations. We also

find that nonemployer businesses operated by wage and salary workers are more likely to exit, and sole proprietors are more likely to both enter and leave wage and salary work. Owners with stakes in multiple businesses—especially of partnerships and S corporations—have especially high transition rates, which include investments into and divestments out of continuing businesses. These statistics show that a relatively small pool of the most active entrepreneurs account for a disproportionate share of U.S. business ownership dynamics.

Our efforts build on a number of recent studies that utilize administrative records on business income. Several of these papers provide descriptive evidence using administrative records on business income, including Goldschlag et al. (2017), Collins et al. (2019), Lim et al. (2019), Garin et al. (2020, 2022, 2023, 2024), Hyatt et al. (2021), and Bhandari et al. (2025). Abraham et al. (2021, 2019, 2021, 2024) and Eggleston et al. (2022) utilize linked survey and administrative records data to measure self-employment, and compare survey responses to administrative records from those same respondents. Our work also builds upon decades-long efforts at the Census Bureau to use administrative records to produce detailed statistics characterizing workforce and business dynamics including the Quarterly Workforce Indicators (QWI) and the Business Dynamics Statistics (BDS).

Our findings demonstrate the critical importance of nonemployer businesses for business dynamics more broadly. The central role of reallocation in productivity-enhancing economic growth has been established by among many others—Foster et al. (2001); Haltiwanger et al. (2013), and Decker et al. (2014)—but these authors were only able to consider employer businesses. Our paper, building on the earlier efforts of Davis et al. (2009); Goetz et al. (2017), and Hyatt et al. (2021), provides the most comprehensive evidence to date on the reallocation dynamics of nonemployer businesses.

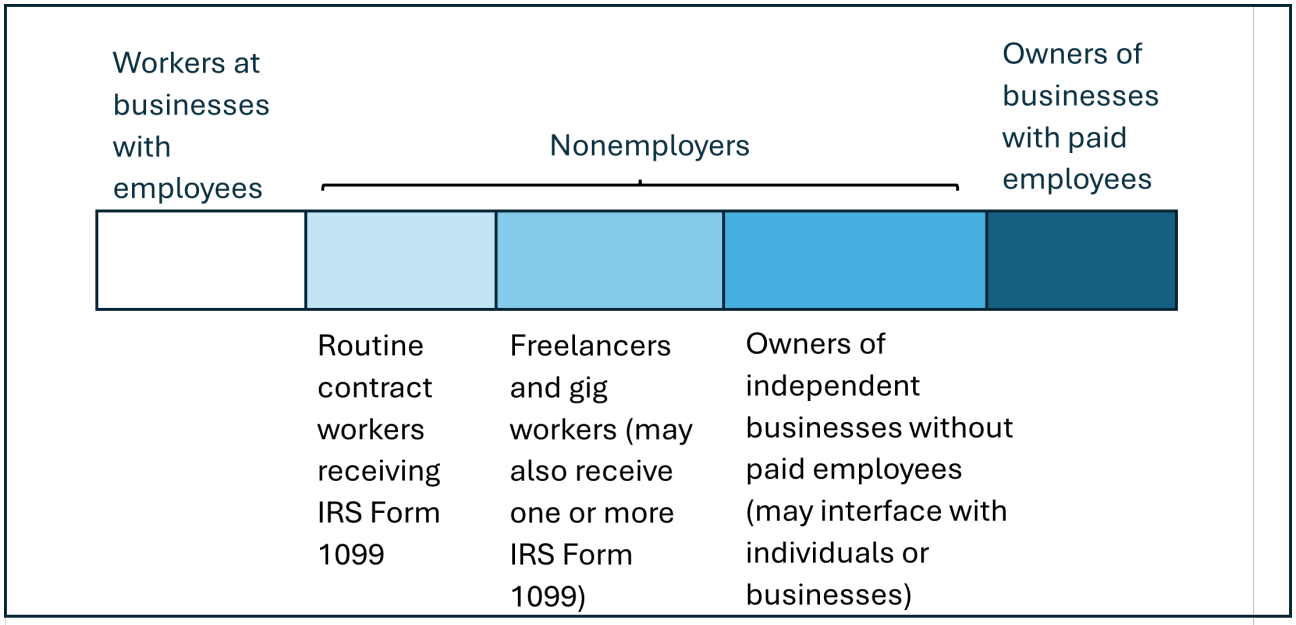
This paper proceeds as follows. Section 2 discusses conceptual issues and explains how we assemble the LBD-NE and SEJ data. Section 3 provides statistics on self-employment dynamics. Section 4 concludes with further development plans for this data infrastructure.

2 Data and concepts

2.1 What is a nonemployer?

Nonemployers cover a wide range of economic activities, some of which are commonly recognized as self-employment and some of which more closely resemble running a business. We think of these

Figure 1: Employees, nonemployers, and employers



Notes: This figure shows where nonemployers fall on the spectrum of self-employment. Traditional employees are the furthest removed from self-employment and owners running a business with paid employees are the most intensely self-employed. Nonemployers are business entities that file tax returns and report income but do not have any employees and thus fall in the middle of this spectrum. Information in the tax return identifies a person who is liable to pay taxes on the income and who can be viewed as self-employed. These workers can be contractors who primarily provide services to a single business but in a less formal way with no payroll taxes withheld from their earnings; gig workers or freelancers who do jobs for multiple customers who may be businesses or people or both, often facilitated by an app; and independent business owners who are customer-facing and provide services in a similar manner to employer businesses but have no workers beyond the owner.

activities as falling along a spectrum as shown in Figure 1. At the far left end are workers who are the furthest from self-employment: employees who are paid directly by businesses and have taxes withheld from their earnings and reported to the IRS on their behalf. At the far right end are individuals who are most clearly self-employed business owners: those who hire other people and pay formal wages. In this paper we will focus on the middle groups: those who don't employee other people but who don't have a traditional work arrangement with an employer.

The nonemployer type that most closely resembles traditional employment is that of contract workers who are employed primarily by a single business but who have different taxes withheld and different tax forms filed to report their earnings than a regular employee. This type of work is technically self-employment, from the perspective of the U.S. tax authority, but daily activities of the worker may not resemble running a business as the worker may have both limited autonomy and responsibility with regards to the scope of their work.

Another type of nonemployer is the gig worker or freelancer. This type of self-employed individ-

ual does jobs for multiple customers who may be businesses or people or both. This group includes workers who get jobs through an app such as ride-sharing or food delivery or child care. It can also include activities such as playing in a band on the weekends or giving speeches where an honorarium is paid. The frequency of such gigs may vary but the defining feature is that the relationship between the customer and the self-employed individual is less structured and is commonly of shorter duration than a contractor hired by a single company.

Finally, the last type of nonemployer is someone who clearly runs a business but does not report any paid employees to the tax authority. These businesses serve as a job for each of the potentially multiple business owners, who are each self-employed. Compared to contractors, this type of worker has more autonomy. Compared to gig workers, they have a more formal business model and more responsibility for running the overall business, including marketing their product. They may have similar business operations and a similar customer base to someone who employs other people but on a smaller scale. If the business thrives, this type of work arrangement can transition to ownership of a business that hires additional workers.

Nonemployer businesses can be legally organized in one of four different ways: first as a sole proprietorship; second as a partnership; third as an S corporation; fourth as a C corporation. Each of these legal forms files particular tax forms and has certain rules for reporting income. The most important difference across these legal forms is the degree of separation between the owner and the business. A sole proprietor can use their SSN to file tax forms and report income to the IRS, as for most sole proprietorships there is not a distinction between the owner and the business entity. The other three are required to use an EIN to file tax forms. Sole proprietors as a group are dominated by contractors and gig workers but other nonemployer businesses also fall into this category because they choose to use their SSN as their business tax identifier. Thus when using tax data, it is not always straightforward to distinguish between a contractor or gig worker from someone who might be more widely recognized as a business owner. Nonemployers who use EINs, on the other hand, appear more similar to employer businesses in the tax data. In the next section we discuss the IRS forms in more detail and explain how we use these tax filings to classify both self-employed individuals and nonemployer businesses.

Table 1: Selected tax forms that record income from employment and business ownership

		Information return for recipient income (or loss)		Issuing entity also files		Recipient adds to their IRS Form 1040	
Recipient	Issuing entity	IRS Form	Name	IRS Form	Name	Schedule	Name
Employee	Employer	W-2	Wage and Tax Statement	941	Employer's Quarterly Federal Tax Return		
Sole proprietor (independent contractor, gig worker, independent business, etc.)	Business purchasing goods or services	1099-NEC	Nonemployee Compensation	1096	Annual Summary and Transmittal of U.S. Information Returns	C	Profit or loss from Business (Sole Proprietorship)
		1099-MISC	Miscellaneous Information				
	Bank, online platform, etc.	1099-K	Third Party Network Transactions			SE	Self-Employment Tax
	Household payments via cash or check do not generate information returns. IRS Form 1099 is only required above a certain dollar value.						
Partner	Partnership	Schedule K-1 (Form 1065)	Partner's Share of Income, Deductions, Credits, etc.	1065	U.S. Return of Partnership Income	SE	Self-Employment Tax
						E	Supplemental Income and Loss
Shareholder	S corporation	Schedule K-1 (Form 1120-S)	Shareholder's Share of Income, Deductions Credits, etc.	1120-S	U.S. Income Tax Return for an S Corporation	E	Supplemental Income and Loss
	C corporation	1099-DIV	Dividends and Distributions	1120	U.S. Corporation Income Tax Return	B	Interest and Ordinary Dividends

Notes: IRS Form 1040 is the U.S. Individual Income Tax Return. Shareholders of S and C corporations who perform substantial services for their businesses are required to receive wage and salary payments and can therefore receive a W-2 in addition to their Schedule K-1 or 1099-DIV. Sole proprietorships are the business entities owned by sole proprietors, and for these entities the tax identifier may be either the Social Security Number (SSN) an Employer Identification Number (EIN). Partnerships and corporations must use an EIN as their tax identifier, including nonemployers. Independent contractors received IRS Form 1099-MISC until 2019, and starting in 2020 received form IRS Form 1099-NEC. While most private sector employers file IRS Form 941 when they issue W-2 records, farms file IRS Form 943, and private households (e.g., for a nanny or home health aide) file IRS Form 1040, Schedule H.

2.2 Administrative records on wage and salary and business income

We are able to provide statistics on the self-employed and business owners from the variety of records that are generated by businesses as they determine their tax liability. Table 1 provides a list of the main forms submitted to the IRS as records on the income of employees, the self-employed, and business owners. These tax forms are one of two types. Tax returns determine the final tax liability of a household or business, i.e., what taxes are owed to the IRS in a particular calendar year. Information returns, in contrast, are records of transactions that do not determine tax liability by themselves but rather report payments from a business to another business or an individual. Tax returns provide evidence of the existence of a business of some type. Information returns connect businesses to each other and to people. In this section we will discuss which forms the Census Bureau receives. In the next section we will describe how we use this information to construct our database of nonemployer businesses linked to self-employed individuals.

IRS Form 1099 is a category of information returns used by businesses to, among other things, report payments to non-employees for services rendered. These forms can serve a similar purpose to an IRS Form W-2 for an employee - to report taxable income to the IRS. However, while the W-2 will also report taxes withheld, the 1099 will only report income because businesses do not withhold taxes from the earnings of contractors or gig workers. The type of IRS Form 1099 filed depends on the type of relationship between the business and the person. Businesses reporting payments to independent contractors filed IRS Form 1099-MISC until 2019, and then starting in 2020, IRS Form 1099-NEC. Those individuals whose work is mediated through an online platform, such as a rideshare app, receive Form 1099-K. Credit card issuers and payment apps (e.g., rideshare services) also use 1099-K to report the total dollar value of transactions they facilitated for a business, including purchases by households.

The presence of an IRS Form 1099-MISC, 1099-NEC, or 1099-K for an individual can indicate self-employment. Census recently began receiving these data from IRS but not soon enough to be included in this initial work. For this paper, we will rely on tax return information filed by individuals using the 1040 Schedule C to report tax liability to the IRS to identify the self-employed who typically receive 1099s. Future work will incorporate the 1099 data to better differentiate between types of self-employed individuals based on who pays them.[4] The other major information return is the Schedule

[4]Because the LBD-NE and SEJ datasets that are the focus of our paper do not currently utilize IRS Form 1099 information, if an individual received IRS Form 1099 for their self-employment activity, but did not file a Schedule C, they

K-1 which is issued by a business to report profit or loss distributed to an owner of the business. The K-1 data are critical for assigning individual owners to businesses that operate using an EIN, essentially linking business and person identifiers. They also allow us to measure earnings of the business owners.

Self-employed individuals who receive one or more IRS Form 1099s are sole proprietors in the eyes of the tax authority and are usually required to file at least one Schedule C as a supplement to their IRS Form 1040 report of their total individual tax liability.[5] For married couples filing jointly, this Schedule C allows us to determine whether both members of the couple were involved in the business, or whether only one member of the couple was involved. For years prior to 2007, we either lack the PIK of the business owner on the Form Schedule C and are forced to rely on other data sources to determine the business owner.[6] Sole proprietors with net income of at least $400 are required to also file Schedule SE along with their IRS Form 1040. If a married couple co-owns the business, each member of the couple must file a separate Schedule SE to report their share of the earnings (and we count two self-employment jobs). For the purposes of this paper, we take the presence of a Schedule C as an indicator of both a nonemployer business and at least one self-employment job. In future work, we will use 1099 data to refine this definition by dividing sole proprietors into groups based on who pays them. This will allow us to differentiate between contractors, gig workers, and more formal business owners.

The final types of tax data listed in Table 1 are tax returns files by the three types of EIN businesses. A partnership is a business entity in which two or more individuals operate a business together, and share its revenue and losses. Partnerships report income and deductions with IRS Form 1065, and for each partner's share of these, issue them a Schedule K-1. An S corporation similarly allows up to 100

would be excluded from this analysis. Note that partnerships can receive IRS Form 1099, and that in these cases, the IRS Form 1099 recipient should be the partnership, not the individual partner. In some cases (e.g., payment for legal services) S corporations may also receive IRS Form 1099-MISC. Future versions of the LBD-NE and SEJ plan to incorporate IRS Forms 1099-NEC, 1099-MISC, and 1099-K.

[5]There are a number of reasons why many people who receive IRS Form 1099 do not file a Schedule C. One reason is that the IRS only requires a Schedule C if an individual engaged in self-employment or business activity. For example, an individual receiving an award or a prize unrelated to any self-employment activity can receive 1099-MISC but not file a 1040 Schedule C. Furthermore, there are issues with compliance. An analysis by Collins et al. (2019) found that 43% of those who received IRS Form 1099 as part of the online platform economy did not file a Schedule C or SE.

[6]From 2002-2006 we are able to identify which tax filers were self-employed when they file Schedule SE, an additional 1040 tax form that accounts for payroll taxes owed to SSA on self-employment income. However, not all tax returns that include a Schedule C also include a Schedule SE due to some differences in filing requirements and tax filing errors. In these cases, we do not have any information on which tax filers were business owners. For years prior to 2002, no data identifying business owners are available.

shareholders to jointly own a business together and share its profits or losses, which are reported with IRS Form 1120-S. These entities also use a Schedule K-1 to report each shareholder's claim of profits and losses. Partners and shareholders of S corporations have their business income taxed as part of their total household income and are not subject to corporate taxation. For the purposes of this paper, we use the presence of either a 1065 or 1120-S tax return as evidence of the existence of a business and rely on the Schedule K-1 to link to the owner(s) of the business.[7]

C corporations file their taxes with IRS Form 1120, which determines their corporate tax liability. These businesses issue each shareholder IRS Form 1099-DIV to report any dividends issued to each owner. However the Census Bureau does not receive 1099-DIV data and hence generally we cannot assign owners to C corporations. While nonemployer C corporations can be identified based on their tax return filings, we cannot link any owners to this type of business. Shareholders who provide substantial services for or are involved in the ordinary operations of their S or C corporations can also be required to receive wage and salary payments from the business that they own, which generates an IRS Form W-2. However in this analysis, we focus on businesses that did not report payroll and whose owners did not receive compensation reported on a Form W-2.

In summary, we identify the self-employment activity of sole proprietors based on their Schedule C and Schedule SE filings. We identify partnerships from IRS Form 1065 and payments to individual partners based on Schedule K-1 records. Analogously, we identify S corporations based on IRS Form 1120-S and payments to individual shareholders using Schedule K-1 records. We identify C corporations based on IRS Form 1120 but lack information on their shareholders.

2.3 Longitudinal data on nonemployer businesses

2.3.1 Earlier efforts and motivation

While many published statistics provide information on employer businesses, less attention is paid to the more than thirty million business entities that have no paid employment.[8] While they do not hire employees, these firms produce significant revenue and other economic activity. Additionally, each business usually represents a job for the owner (or owners), who provides labor for its day-to-day

[7] IRS Form 1041, U.S. Income Tax Return for Estates and Trusts issues a Schedule K-1 (Form 1041) to its beneficiaries. We do not use this Schedule K-1 payment data.

[8] According to the U.S. Census Bureau (2025c), 30.4 million nonemployer businesses operated in 2023, generating nearly $1.8 trillion in revenue.

operations. This link between ownership and work varies for the different legal forms mentioned in the previous section. While some owners of C corporations may be passive rather than active, i.e., they supply capital but no labor services, a nonemployer sole proprietor is almost always the only person who works for the business. Therefore, tracking these businesses is closely related to the measurement of self-employment jobs, which we explore later in this section.

In order to track these entities over time, we create a longitudinally linked universe of all nonemployer businesses in the U.S. economy. To do so, we create a firm identifier that is unique to that business and consistent in any year in which it operates. This effort results in a product that we call the Longitudinal Business Database for Nonemployers (LBD-NE). The main goal of this database is to support, at some point in the future, a regularly updated data product on the dynamics of nonemployer businesses. The LBD-NE also creates an infrastructure where additional information about business owners can be readily integrated.

These efforts build on the existing data infrastructure for nonemployer businesses. The Census Bureau currently publishes the Nonemployer Statistics (NES), which counts (annually) the total number of nonemployer businesses, as well as their revenue, by geography and industry. The statistics are cross-sectional in nature, however, and do not attempt to measure the dynamics of the nonemployer firms.[9] The Integrated Longitudinal Business Database (ILBD), originally developed in 2007, used NES microdata to track nonemployers longitudinally. The ILBD has been available for use by researchers at Federal Statistical Research Data Centers (FSRDCs), see Davis et al. (2009) and Goetz and Kroff (2021). The LBD-NE serves as a replacement for the ILBD, and will be the regularly updated companion to the Longitudinal Business Database (LBD) of employer businesses.

The LBD-NE builds upon the ILBD and addresses some of the limitations in previous linking methods. Business linking in the ILBD relied on either a Protected Identification Key (PIK, which is a replacement for an SSN) for sole proprietors, and Employer Identification Numbers (EINs) for all other legal forms - but had limited infrastructure to track a business across identifer changes.[10] Business identifier changes occur for many reasons. Ownership of a sole proprietorship may change hands between individuals, including between spouses, changing the PIK of the owner. EINs may

[9]NES data can be found at https://www.census.gov/programs-surveys/nonemployer-statistics.html. A companion Nonemployer Statistics by Demographics (NES-D) product assigns owner characteristics to the firms and reports statistics based on demographic categories.

[10]These identifiers were also used to link the universe of nonemployers to the LBD, which researchers have used to track the life cycle of businesses from nonemployer startups to mature employer businesses (Fairlie et al., 2023).

change due to changes in legal form, changes of ownership, and administrative reasons related to federal or state laws. A business owner might acquire or change their EIN as they hire their first employee, which complicates efforts to track the transition of nonemployer businesses into employers. Such transitions are often accompanied by a change in the legal name of the business, which makes the construction of longitudinal links even more difficult. Finally, many sole proprietors own multiple businesses concurrently and file multiple Schedule Cs with their 1040 tax return. The ILBD chooses the highest revenue business for each year, leading to the possibility of mistaken links as businesses are matched at the person-level regardless of whether they engage in the same type of economic activities.

The LBD-NE integrates the nonemployer universe in a more comprehensive and systematic way than before, both by employing more sophisticated matching algorithms and by incorporating new data sources. First, we implement matching algorithms using fuzzy name and geographic information to detect businesses that remain in operation but change their numerical identifier (like PIK or EIN) between years. Secondly, we incorporate new data sources that were not available in prior versions of the ILBD. Crucially, we have acquired detailed information from the IRS Form K-1, which links the individual owners of a partnership or S corporation to their business. This allows us to track the transitions of sole proprietorships that were only identified by their PIKs in preceding years but then acquired EINs as they reorganized into partnerships or S corporations (or vice versa).

This new data infrastructure is part of a larger Census-wide effort to create a common, consistent, and comprehensive list of people, places, and entities that underlie all of its data products. As described by the U.S. Census Bureau (2025b), the Frames Program is creating benchmark infrastructure datasets that can form the basis for all surveys and programs. Each "enterprise frame" is organized around one of four foundational units of observation: addresses, businesses, jobs, and people. The LBD-NE fits into this context by allowing this large set of nonemployer businesses to be integrated with the complete employer universe. Additionally, the LBD-NE also provides a natural link to the jobs frame for self-employed business owners of nonemployer businesses. Having a product that enhances the internal consistency of the larger census infrastructure is a key benefit of this effort.

2.3.2 Building the LBD-NE

We now describe the creation of the LBD-NE using the process depicted in Figure 2. We begin with the NES data derived from the Census Business Register (BR). For nonemployers, all BR data are sourced from the IRS tax filings described in Section 2.2.

These administrative data records are processed by the NES program, thereby creating a tabulation dataset called the NES file. Edits made in this process include the imputation of missing geography and industry classification. Additionally, the NES file includes cases that were not tabulated for the NES, due to very low or very high revenue.[11] For the purposes of the LBD-NE, however, we generally retain all nonemployer business tax filings–including those not tabulated in the NES. Even though, by construction, most of these have little or no revenue, these business entities nevertheless engaged in sufficient economic activity (including purchases and other expenditures) to require a tax filing. Additionally, any revenue they generated is a source of income for a self-employed business owner.

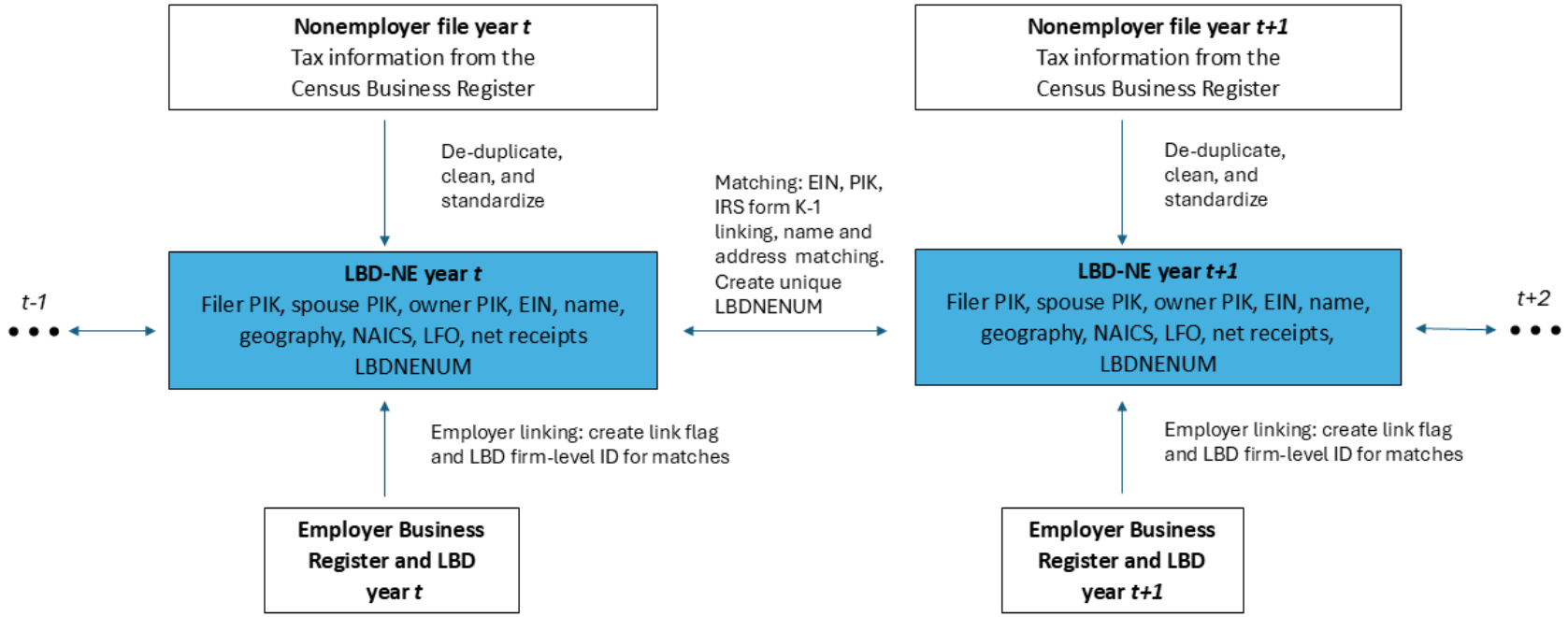
We further process the NES data in order to select the relevant universe, standardize variables, and merge in additional identifiers from external sources such as the K-1 data. This yearly file LBD-NE[t] represents the main infrastructure file, and retains the key information about all active nonemployer businesses in a given year t. As the NES file and its corresponding published statistics are all cross-sectional in nature, the main goal of the LBD-NE is to add a longitudinal component by linking records across time. We also seek to detect when a business changes its identifier within a given year (what we refer to as a "reorganization") and combine records when appropriate. To achieve these aims, we create a unique longitudinal identifier for each business by linking records within an annual file and across annual files for adjacent years (i.e. t and $t+1$).

First, for sole proprietorships, we link from year to year based on the PIK of the primary business owner (or tax filer when owner information is unavailable). In the majority of cases, the PIK is unique in each year and the linking is straightforward. However PIK is not always unique due to several complicating factors. First, many owners file multiple Schedule Cs in the same year, each representing a distinct sole proprietorship.[12] In this case we select between the multiple potential matches by the level of agreement in reported industry, whether associated EINs (if any) match, and

[11] Specifically, NES does not tabulate cases where the net receipts of the business either total less than $1000, or exceed a certain dollar threshold which varies by industry.

[12] The U.S. Internal Revenue Service (2025a) requires that sole proprietors file multiple Schedule Cs with their IRS Form 1040 when they conduct separate activities in multiple industries: "If you owned more than one business, complete a separate Schedule C for each business. Give the general field or activity and the type of product or service."

Figure 2: Building the Longitudinal Business Database for Nonemployers (LBD-NE)



Notes: This figure depicts a flowchart of the data processing steps used in creating the Longitudinal Database for Nonemployers (LBD-NE). The white boxes represent the input datasets and the blue boxes represent the resulting annual output files, with arrows describing the direction of the data flow between them. Acronymns used in this figure include the following: PIK (Personal Identification Key, a unique longitudinal person identifier used to report sole-proprietorships), EIN (Employer Identification Number, required for partnerships and corporations regardless of employer status), LFO (Legal Form of Organization), NAICS (North American Industrial Classification System code, reported at the 6-digit level), LBD (Longitudinal Business Database, a Census database of employer firms), and LBDNENUM (unique identification number for nonemployer firms in the LBD-NE).

absolute difference in revenue (in that order of priority). We only retain matches in this step that agree at the NAICS sector level of industry detail. A second complication is due to the fact that when business owner information is unavailable (meaning we must rely on filer information), the filing individual may switch between the business owner and their spouse from one year to the next (when filing jointly). Therefore, if a link is not identified using the filer's PIK and reported industry, we match filer PIK to spouse PIK (and vice versa) across years.[13] We choose links based on the same order of priority as the previous step (i.e., industry, EIN, and revenue).

For businesses primarily identified by their EINs— partnerships, as well as S and C corporations— linking on main business identifier is relatively straightforward. Since EINs for these businesses are unique in a given year, links are made by simply matching by EIN across adjacent years.

Some sole proprietorships transition to a different legal form. For an owner who has been filing taxes under their SSN, this necessarily means a business identifier change, since partnerships and corporations must have an EIN. In order to track these more complex changes, we employ the use of EINs reported on Schedule C forms, as well as IRS Form K-1 information, which is filed to report the share of profits earned by each owner of a partnership or S corporation. Both the Schedule C and K-1 filings provide links between businesses and their owners.[14] In the case of an EIN reported for a sole proprietorship whose PIK does not appear in the following year, we match the sole proprietor's EIN to those of new partnerships and corporations (and vice versa for exiting partnerships/corporations and newly entering sole proprietorships). Similarly, we also match the sole proprietor's PIK to those found on K-1 forms of new partnerships and corporations (and vice versa for exiting partnerships/corporations and entering sole proprietorships). In both cases, we retain only the links that also match at the NAICS sector level. We perform these matches between consecutive years, as well as within a single year, as firms sometimes reorganize in the middle of a tax year and make two separate tax filings. For the links found within a single year, we collapse the two businesses into one unique record that can then be used for subsequent linking to adjacent years.

Finally, for records that are not linked in any of the previous steps, we employ a matching algorithm using fuzzy name and address information. This matching allows us to capture instances of typos or other errors in the PIK or EIN fields.[15] This is especially important for cases in which a typo

[13] Note that it is also possible for both a filer and their spouse to each own a business (or businesses).

[14] A sole proprietor might have an EIN because they had employees in the past or because they needed one due to various licensing or business registration requirements according to federal or state law (such as forming an LLC).

[15] Similar to previous steps, we only retain links that also match at the 2-digit NAICS level.

in a Schedule C filer's SSN prevented a link across years. While comparing actual SSN values (as reported) might allow for the identification of minor typos across years without additional information, the fact that each year would be assigned completely independent PIKs means that additional information is required to make these links.

With these sets of two-year business links in place, we next create a longitudinal history of each nonemployer business in order to assign it a unique business identifier. The resulting file shows the years that each firm is active, and the primary identifier used in each of these years. Firms that reorganized in the middle of a year can have a second identifier for that year. Because our linking process only attempts to match firms between consecutive years, a firm that appears in one year but not the previous one may be either a true firm birth or else a reactivation of a previously existing business. To see whether it existed before, we look back in time up to seven years to see if the firm's primary identifier existed previously. If it does, we deem it to be the same business and place it in the same longitudinal record.[16] Once all of a firm's history is recorded in one observation, we can assign a unique longitudinal identifier to each firm, which is consistent across all years of the database.

The final annual files list all nonemployer businesses that are active in the given year and their characteristics that can be used for tabulation and research.[17] The longitudinal identifier allows linkage between annual files. These are the final infrastructure files from which we tabulate the statistics reported later in this chapter. Further work is also being done to match this infrastructure with the employer universe, so that the LBD-NE can eventually be used in tandem with the LBD and Employer Business Register. Many of the methods described in this section can also be used for linking between the two universes, and efforts are already underway to implement this process, as described by Luque and Novik (2024).

2.4 Building the SEJ

The SEJ covers work that takes place outside of formal employer-employee relationships, such as contract work, gig jobs, or business ownership. A self-employment (ownership) job is a unique business-owner pair. The earnings attributed to each ownership job are represented by an owner's

[16]For a sole proprietorship, whose main identifier is a PIK, we make the additional requirement that it belong to the same NAICS 2-digit sector, in order to ensure it is a sufficiently similar business endeavor.

[17]While we do not report any particular business characteristics other than legal form in this chapter, numerous data fields are available from the tax data—including industry, geography, and revenue — and could be used in creating public statistics in the future.

share of the business's annual profit (or loss). For the owners of employer S corporations, these also include any wage and salary payments they receive from that business. These job records, composed primarily of a unique business-owner pairing and their associated earnings, populate the SEJ, one component of a larger job frame that also includes wage and salary jobs. In this section, we provide a brief overview of the construction and key features of the SEJ.

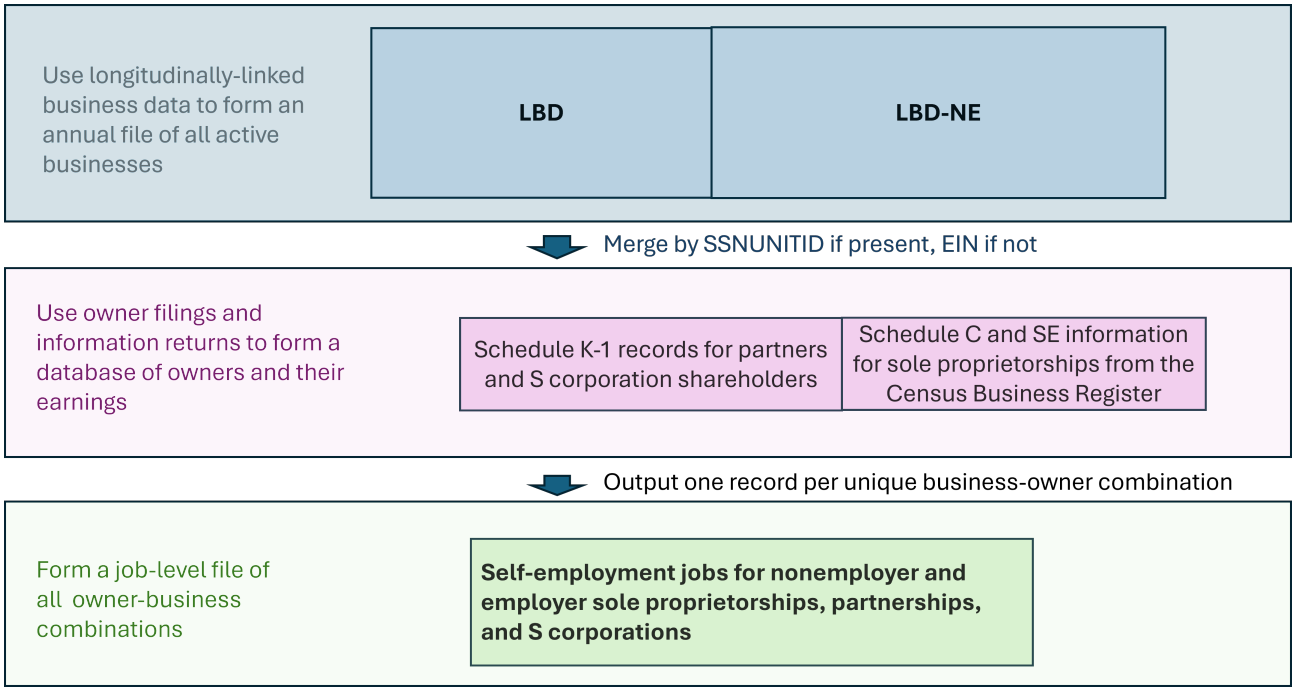
An individual may own multiple businesses. For example, a person driving for a rideshare service may report associated business receipts and expenses on a 1040 Schedule C. This filing represents one job. This same person may also operate an independent lawn care business jointly with their spouse, and, in theory, should report this activity on a second Schedule C. This reporting represents a second self-employment job for one owner and a separate self-employment job for their spouse. Thus, each self-employed worker can (and many do) have multiple self-employment jobs in the SEJ. Similarly, a business may have more than one owner. Sole proprietorships can be owned by couples, each of whom will be listed as an owner on the Schedule C and will have a self-employment job. For partnerships and S corporations, each separate Schedule K-1 filed on behalf of a stake-holding owner represents a unique self-employment job.

2.4.1 Forming an annual file of all active businesses

The SEJ includes all self-employment jobs that arise from ownership of sole proprietorships, partnerships, or S corporations, with or without paid employees. The first step in the construction of the SEJ is the formation of annual files of all active businesses from longitudinally linked administrative business data. The top (blue) panel from Figure 3 provides information on the scope of businesses that are at risk to contribute jobs to the SEJ – specifically, the SEJ spans the set of active sole proprietorships, partnerships, and S corporations in either the LBD (for employer businesses) or the LBD-NE (for nonemployer businesses). In a given year, employer businesses are included if they have positive payroll and nonemployer businesses are included they have positive revenue (although profits may be negative). These LBD and LBD-NE records define the set of active businesses and contribute key attributes such as industry, geography, and business receipts. For all nonemployer sole proprietorships and the majority of employer sole proprietorships, Business Register files, which contain information on Schedule C filings, supply the PIKs of business owners.

Because job earnings are derived from business profit rather than revenue, we supplement the

Figure 3: Integrating data on businesses and their owners



Notes: The Longitudinal Business Database (LBD) and Longitudinal Business Database for Nonemployers (LBD-NE) are both derived from the Census Business Register. The SSNUNITID is the Business Register identifier for sole proprietorships that file taxes using the owner's Social Security Number (SSN) rather than an Employer Identification Number (EIN). Schedule K-1 records are from Form 1065 for partnerships and Form 1120-S for shareholders of S corporations.

LBD and LBD-NE information with data on business operating expenses we collect from the broader annual Business Register files, linking on the EIN. Thus, at this stage, we have collected all the components needed to calculate profit or loss for the business. Later steps in the SEJ apportion these profits to individual owners.

2.4.2 Identifying owners and their earnings with information returns

For each active business present in the annual LBD or LBD-NE files, the next step in the formation of the SEJ is the identification of all owners/stakeholders associated with each business. Each annual SEJ contains one record for each unique business/owner combination. Businesses for which no owner may be found from among our administraive records sources are excluded from the final SEJ.

The information source we use to identify business owners varies with business legal form and (in some cases) the presence or absence of paid employees. Sole proprietors are identified from the Business Register from IRS Form 1040 Schedule C or, in the case of some employer sole proprietors, identified from IRS Form SS-4, Application for Employer Identification Number (EIN). For employer

sole proprietorships, this information is retained in the Business Register and is added to the SEJ along with other Business Register variables. For partnership and S corporations, however, we use Schedule K-1, currently not integrated with the BR, to identify business owners. Schedule K-1 records that cannot be linked to active businesses are excluded.

Conceptually, we would like to capture self-employment or ownership earnings at the job level. For the majority of partnership and S corporation jobs, the owner-specific profit available from Schedule K-1 approximates job-level earnings and we record this information directly on the SEJ. For sole proprietorship jobs, however, we include up to two different measures of self-employment earnings. First, we construct profit (or loss) at the business level from receipts less expenses. Because the vast majority of sole proprietorships have only one owner, this measure again closely apprximates ownership earnings and is recorded directly on the SEJ. For sole proprietorships jointly owner by two married and jointly filing spouses, profits are apportioned to each spouse separately. As an additional/alternative source of self-employment earnings for owners of sole proprietorships, we observe annual total self-employment earnings from 1040 Schedule SE reports of self-employment earnings. This measure is at the person/owner level and combines all annual self-employment earnings for the owner derived from all sole proprietorships and/or partnerships.[18] Because this measure captures annual owner-level information, for owners with more than one source of in-scope self-employment earnings, we allocate the share of total Schedule SE profits or losses to each of these businesses.

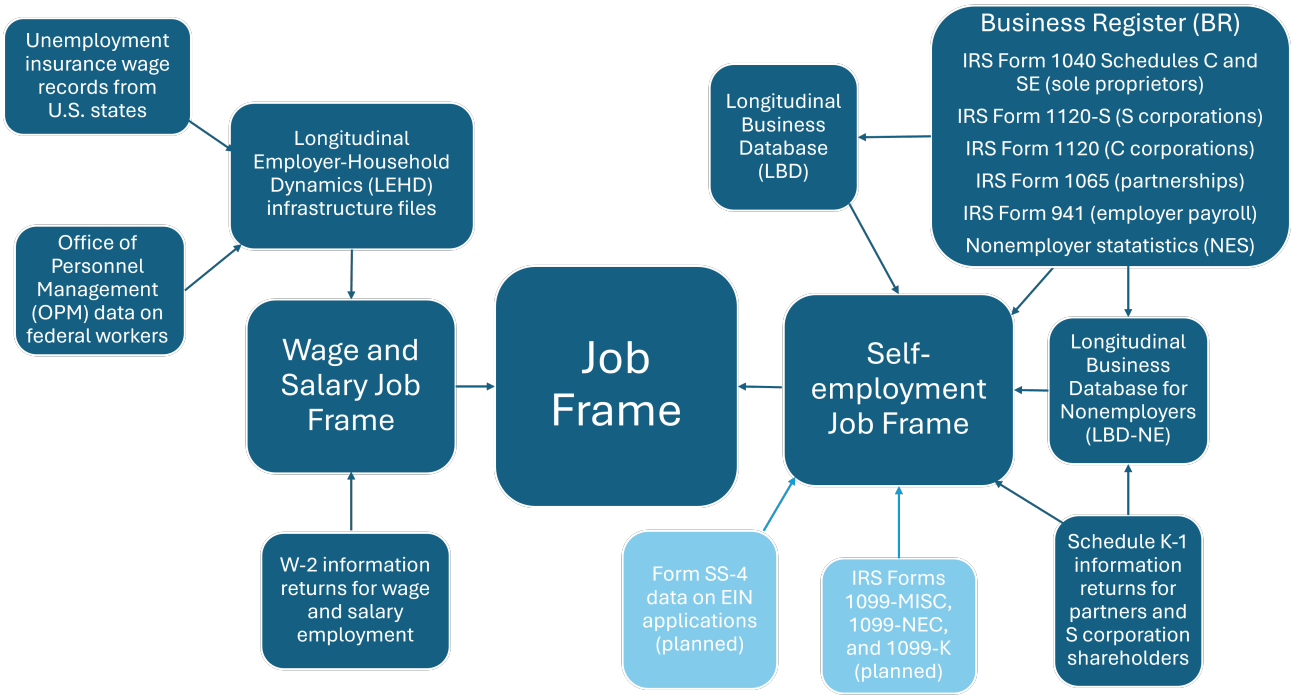
2.4.3 SEJ content and linking to other data sources

Each record (unique job) contains an owner PIK and longitudinally consistent business identifier (from the LBD or LBD-NE) for linking owners and jobs across time. The final file also contains ownership earnings and some basic business detail (though this information is not utilized in the analysis in this paper). The owner PIK makes it possible not only to link workers and jobs across time but also to add additional worker traits. For example, we can tabulate by broad worker age groups because we link worker date of birth from the Numident (originating from applications for SSNs) and household surveys and censuses conducted by the Census Bureau.

To maintain consistency across business, worker, and job tabulations, the analysis presented in this paper includes only those self-employment jobs that are associated with ownership of businesses

[18] Currently, we do not include this information for all owners of partnerships.

Figure 4: Constructing the Job Frame



Notes: IRS Forms 1040 Schedule C, 1065, 1120, and 1120-S provide business revenue and expenditure data to the Business Register (BR). The Longitudinal Business Database (LBD) and Longitudinal Business Database for Nonemployers (LBD-NE) assign longitudinal identifiers to businesses to allow comprehensive linkage from one year to another. The Longitudinal Employer-Household Dynamics (LEHD) infrastructure files are the microdata from which LEHD data products such as the Quarterly Workforce Indicators (QWI), Job-to-Job Flows (J2J), the LEHD Origin-Destination Employment Statistics (LODES, which populates the OnTheMap tool), Post-Secondary Employment Outcomes (PSEO), and Veteran Employment Outcomes (VEO) are derived.

without paid employees. Thus, the LBD-NE and the portion of the SEJ used in our analysis are derived largely from the same administrative sources, though the two data products differ in their unit of observation (businesses vs. jobs) and their content (business traits and receipts vs owner traits and earnings).

To put self-employed workers and the jobs they hold in the context of the workforce more broadly, we utilize the complete Job Frame composed of all workers who have administrative earnings from either nonemployer self-employment or from wage and salary work. An overview of the Job Frame is presented in Figure 4. Workers who hold wage and salary jobs are identified each year from at least one of three sources: W-2s, state UI system records, or Office of Personnel Management (OPM) personnel records. State UI systems cover the private sector and state and local governments. OPM data cover federal government jobs. W-2s cover the universe of workers who are at risk to have any type of federal tax (income or SSA payroll tax) withheld. [19] Since most workers are found in multiple

[19]Note that owners of employer businesses of certain legal forms may have a portion of their total compensation

sources, all these records are merged and reconciled in the Census Bureau's annual wage and salary Job Frame. This process is detailed in Tucker et al. (2024).

Using information from the combined wage and salary and self-employment Job Frame, we classify workers according to the types of work they do (wage and salary work, self-employment, or both) each year and present tabulations that show job-level transitions. We use worker classifications to paint a richer picture of the workforce choices and dynamics of owners that underlie and are influenced by business entry and exit and transitions from one legal form of organization to another.

3 Results

3.1 The SEJ and the Wage and Salary Job Frame

These administrative records on wage and salary and self-employment earnings offer insight into the composition of the workforce in each year. In our first set of tabulations, we consider workers in either wage and salary jobs or self-employment as obtained from the SEJ linked with the Wage and Salary Job Frame. We measure the share of the workforce engaged in self-employment each year, both overall and for different age groups. We also explore transitions between types of work across two consecutive years. These statistics enable users to track across-time flows of workers into and out of the workforce and across different types of work. These dynamic groupings provide answers to many interesting questions. For example, what fraction of young workforce entrants use self-employment as a pathway into the labor market? What fraction of workers persistently combine self-employment with wage and salary work? How frequently do older workers move from formal wage and salary work into less structured self-employment? In this section, we provide answers to these questions.

3.1.1 Workforce composition

Table 2 shows the composition of the U.S. workforce in 2014 and 2019, the beginning and end years of our time series. A worker is one of four types in any given year: (1) receiving wage and salary earnings, (2) receiving self-employment earnings derived from working as a sole proprietor, a partner, or the owner of an S corporation without other paid employees, (3) with both types of earnings, (4)

included in these administrative wage records. Though these ownership jobs are not included in the population of self-employment jobs covered in this paper, some do contribute records to the population of wage and salary jobs and jobholders we characterize.

Table 2: Workforce composition in 2014 and 2019

	2014		2019	
Income source	Count (millions)	Share of total	Count (millions)	Share of total
Self-employed only	14.1	8.0%	14.7	7.8%
Wage and salary only	148.0	83.2%	156.7	82.7%
Both self-employment and wage and salary	15.8	8.9%	17.9	9.5%
Total	177.9	100.0%	189.4	100.0%

Notes: Authors' tabulations of the SEJ matched with the Wage and Salary Job Frame.

not working or receiving business income. This fourth category is omitted from Table 2 but will be important when we consider transition dynamics later in this section. In 2019, 189.4 million workers had wage and salary or nonemployer business income. Of these, about thirty-three million (32.6=14.7+17.9 million), or nearly one-fifth (17.3%) of workers had some nonemployer business income. More of these self-employed workers also did wage and salary work in 2019 than did not (17.9 million vs. 14.7 million, or 9.5% vs. 7.8% of all workers). More than four-fifths (82.7%) of workers had only wage and salary income and no nonemployer business income in 2019.

Comparing 2014 and 2019, Table 2 demonstrates that although the count of workers who receive wage and salary income alone grew by nearly nine million, their share of all workers fell by half a percentage point (from 83.2% to 82.7%). The share of workers with only self-employment earnings declined by 0.2 percentage points. Workers who received income from both sources were more numerous (by more than two million) in 2019 compared to 2014. As a share of the overall workforce, this group grew by 0.6 percentage points.

We next group workers by broad age groups, under age 35 ("younger"), age 35-54 ("prime age"), or age 55 or above ("older"). As shown in Table 3, workers are more frequently self-employed as they age. About one-tenth of younger workers have self-employment income, compared to more than one-fifth of older workers. Younger workers are more likely than not to combine self-employment income with wage and salary earnings (in 2019, 7.5% vs. 2.9%). Older self-employed workers, by contrast, are more likely to have this as their sole source of income than to combine it with wage and salary work (in 2019, 12.2% vs. 10.3%).

Table 3: Workforce composition, by age

	Under 35	35 to 54	55 and older
(a) Age group share of all workers			
2014	36.1%	40.5%	23.4%
2018	35.5%	39.2%	25.3%
(b) 2014 income sources, by age group			
Self-employment only	3.0%	6.5%	11.8%
Wage and salary only	90.5%	83.0%	77.6%
Both self-employment and wage and salary	6.5%	10.5%	10.6%
Total	100.0%	100.0%	100.0%
(c) 2019 income sources, by age group			
Self-employment only	2.9%	6.4%	12.2%
Wage and salary only	89.6%	82.2%	77.5%
Both self-employment and wage and salary	7.5%	11.4%	10.3%
Total	100.0%	100.0%	100.0%

Notes: Authors' tabulations of the SEJ matched with the Wage and Salary Job Frame.

3.1.2 Workforce dynamics: entry, exit, and persistence

We now consider how workers transition between wage and salary jobs and self-employment over time. Table 4 shows these transitions between 2018 and 2019 for the 201.7 million people who worked in either year. Panel (b) normalizes the counts in Panel (a) by their 2018 status to provide conditional transition rates. Self-employment was an important avenue for the 14.1 million workers who did not work in 2018 but entered paid work in 2019. Just over 15% of this group earned money only through self-employment in 2019, with another almost 3% combining self-employment with a wage and salary job. Of the 12.3 million workers who exited paid work in 2018 and had no earnings in 2019, an even higher share came from self-employment. Among this group, 2.8 million (22.7%) had self-employment income of some kind in 2018.

Among the three types of workers in 2018, those who only had self-employment income were the most likely to have no job of any kind in 2019. Of the 14.7 million workers in this group, 16.5%

Table 4: Income sources and transitions between 2018 and 2019

Income source in 2018	Income source in 2019: Not working	Self-employment only	Wage and salary only	Both self-employment and wage and salary	Total
		(a) Workers (millions)			
Not working	-	2.1	11.6	0.4	14.1
Self-employment only	2.4	10.8	0.5	1.0	14.7
Wage and salary only	9.5	0.6	139.5	5.5	155.0
Both self-employment and wage and salary	0.4	1.2	5.2	11.1	17.9
Total	12.3	14.7	156.8	17.9	201.7
		(b) Row percentages			
Not working	-	15.1%	81.9%	2.9%	100.0%
Self-employment only	16.5%	73.5%	3.5%	6.5%	100.0%
Wage and salary only	6.1%	0.4%	90.0%	3.5%	100.0%
Both self-employment and wage and salary	2.2%	6.9%	29.1%	61.8%	100.0%

Notes: Authors' tabulations of the SEJ matched with the Wage and Salary Job Frame. Workers who did not work in either 2018 or 2019 are omitted. The row percentages for those not working in 2018 are as a share of all who transitioned into paid employment in 2019.

(2.4 million) did not work in 2019. This exit rate was much higher than for the groups where the worker held a wage and salary job either alone or in conjunction with self-employment. Among wage and salary workers only, 6.1% had no earnings in 2019. The dual-employed were the least likely to leave employment completely, with only 2.2% not working in 2019. Although self-employment is an important entry point for many workers, it can be somewhat volatile.

Table 4 also shows that income sources tend to persist from one year to the next. This is especially true for workers with only wage and salary earnings in 2018, nine out of ten (90.0%) who continued as such in 2019. About three-fourths (73.5%) of solely self-employed workers in 2018 remained so in 2019 compared to three-fifths (61.8%) of dual-employed workers who continued to combine wage and salary income with self-employment the next year.

One reason why dual-employment is the least persistent state over time is that many of these workers are in transition between wage and salary jobs and self-employment. This change generally

involves a year in which the income sources overlap. Transitions often do not occur at the start or end of a calendar year (i.e., the former job ends at the end of December, the new one starts at the start of January) and gaps between jobs are often less than a year long. For example, if a worker leaves a wage and salary job at the end of June and starts self-employment at the beginning of August, they would have 6 months of wage and salary earnings and 5 months of self-employment earnings and would be classified as a dual-earner in 2018 but not in 2019.

Transitions between wage and salary jobs and self-employment can involve a year in which a person receives income from both. In Table 4, we observe 6.4 (=1.2+5.2) million dual-employed workers in 2018 who no longer have a second income source but remain employed in 2019. Among this group, workers leave self-employment more often than their wage and salary jobs, but both types of change happen as workers move in one direction or the other. Likewise, transitions into and out of self-employment can also produce a year of dual employment. Wage and salary workers in 2018 are almost ten times as likely (5.5 million vs. 0.6 million) to add self-employment income in 2019 rather than end their relationship with their employer and change income sources completely. Self-employed workers in 2018 are twice as likely (1.0 million vs. 0.5 million) to have both forms of income in 2019 rather than wage and salary income alone.

Despite the likelihood of transitions, many workers who earn income from both self-employment and wage and salary work have multiple jobs concurrently, likely including most of the 11.1 million workers classified as dual employed in both 2018 and 2019 and probably some of those who transition into or out of dual employment. Because Table 4 reports total annual income, the receipt of two types of income can reflect either simultaneous multiple job holdings or switching between jobs or both.

Table 5 summarizes transition rates by our three age groups. Overall, roughly one worker in 15 enters (7.1%) or exits (6.2%) the workforce each year. Among workers under 35, about one worker in nine (11.8%) is a new entrant but only one in 20 (5.5%) stops working. Prime age workers (those 35 to 54) are the most attached with fewer than one in 20 entering or leaving (4.7% and 4.4%, respectively). Among workers 55 and older, the rate of entry to work is similar to the rate for prime aged workers but one in ten stops working between 2018 and 2019.

In general, among workers under 35 years of age, entry to any given type of work is substantially greater than exit, while entry and exit rates are comparable among prime aged workers. Among older workers (55 and up), exit rates from all work categories are considerably higher than entry rates. For example, among workers under 35 who make all their earnings via self-employment, over half have

Table 5: Transition rates between income sources from 2018 to 2019, by age

	New in 2019				Ending in 2018			
	Any age	Under 35	35 to 54	55 and over	Any age	Under 35	35 to 54	55 and over
Any work	7.1%	11.8%	4.7%	4.8%	6.2%	5.5%	4.4%	10.0%
Wage and salary only	11.0%	14.7%	8.5%	8.0%	10.0%	9.6%	8.4%	12.7%
Self-employment only	28.8%	47.4%	29.2%	21.3%	28.2%	41.3%	27.9%	24.2%
Both self-employment and wage and salary	38.1%	52.5%	35.6%	26.2%	38.0%	48.6%	35.6%	32.4%

Notes: Authors' tabulations of the SEJ matched with the Wage and Salary Job Frame. Workers who did not work in either 2018 or 2019 are omitted. Percentages for those not working in 2018 ("new in 2019") are as a share of all who had any self-employment or wage and salary income in the relevant group ("any work," "wage and salary only," etc. within the specified age range) in 2019. Percentages for those not working in 2019 ("ending in 2018") are as a share of all who had any self-employment or wage and salary income in the relevant group in 2018.

newly entered self-employment, compared to roughly three-tenths among prime aged workers and roughly one-fifth of workers 55 and older. Entry rates also differ by type of employment. Across all age categories, workers with any self-employment have higher entry and exit rates than those who have only wage and salary jobs.

3.2 Findings from the LBD-NE

Having considered self-employed workers and their transitions, we now turn to business dynamics. With the LBD-NE infrastructure in place, including the longitudinally consistent business identifier, we can calculate a variety of statistics. In this section, we measure business transitions by legal form. We focus on entry and exit rates, a dynamic element of the nonemployer data that is not available in currently published government statistics. These tables are prototypes for statistical products that could feasibly be introduced as regularly produced, published estimates.

Table 6 shows the total number of active nonemployer firms, for sole proprietors, partnerships, and corporations, in 2014 and 2019. We include both S and C corporations in these business-level tabulations, even though we cannot attach owners to C corporations and therefore omit them from person and job level tables. We make a further distinction between sole proprietors that include an

Table 6: Active nonemployer firms

	2014		2019	
Legal form	Firms (millions)	Share of total	Firms (millions)	Share of total
Sole proprietor, no EIN	19.5	70.8%	21.5	68.4%
Sole proprietor, with EIN	4.1	14.9%	5.3	16.8%
Partnership	2.2	8.0%	2.6	8.2%
S corporation	1.2	4.5%	1.5	4.8%
C corporation	0.5	1.7%	0.6	1.8%
Total	27.5	100.0%	31.5	100.0%

Notes: This table reports the number of nonemployer firms in the LBD-NE for 2014 and 2019, by legal form. Active firms are defined as businesses that report any positive net receipts during the tax year.

EIN on their Schedule C filing, and those that do not. The total number of active nonemployer firms increased from 27.5 million in 2014 to 31.5 million in 2019, with growth in all legal forms.[20] The majority of these are sole proprietorships without EINs, which represent more 21.5 million businesses in 2019, or more than two-thirds (68.4%) of all nonemployer firms. Additionally, another 5.3 million sole proprietors report using an EIN in 2019. The remainder of these nonemployer businesses are partnerships, S corporations, and, least commonly, C corporations. The share of businesses that are sole proprietors without EINs declined slightly (from 70.8% to 68.4%) from 2014 to 2019, and the shares of each other legal form increased. In 2019, partnerships constituted 8.2% of nonemployer businesses, S corporations 4.8%, and the remaining 1.8% were C corporations.

Next, we explore firm dynamics in the LBD-NE. Our new longitudinal identifer for nonemployer businesses, as described in Section 2.3, lets us link each nonemployer businesses between two years to determine whether it was still active, and whether it remained in the same legal form. To explore such year-to-year flows, Table 7 shows a transition matrix for the years 2018 to 2019. The rows are denoted by a firm's legal form in 2018, and the columns denote its status in 2019. Each cell thus contains the firms that flowed from one given state to another across the two years, including whether it was inactive in 2018 or 2019.[21] A firm that is not active in 2018 but is active in 2019 is considered

[20] For comparison, the U.S. Census Bureau (2025a) reports that, among employer businesses, there were approximately 5.3 million firms and 7.2 million establishments in 2019.

[21] A firm is classified as nonactive if it did not file a tax return in the year, or if it filed a return reporting zero revenue. Note also that since our infrastructure currently only comprises nonemployer firms, a transition to or from employer status will simply be captured in the relevant year's "nonactive"category, since we cannot currently observe the link. Once further work to integrate the nonemployer and employer universes has been completed, we will be able to tabulate these transitions.

Table 7: LBD-NE transition matrix 2018-2019

Legal form in 2018	Legal form in 2019: Sole proprietor, no EIN	Sole proprietor, with EIN	Partnership	S corporation	C corporation	Nonactive	Total
	(a) Firms (thousands)						
Sole proprietor, no EIN	13,220	463	16	24	0	7,854	21,577
Sole proprietor, with EIN	28	3,413	5	8	0	1,219	4,673
Partnership	14	4	2,146	3	1	311	2,479
S corporation	10	3	0	1,122	1	290	1,426
C corporation	0	0	0	6	377	117	500
Nonactive	8,266	1,391	418	352	176	-	10,603
Total	21,538	5,274	2,585	1,515	555	9,791	41,258
	(b) Row percentages						
Sole proprietor, no EIN	61.3%	2.1%	0.1%	0.1%	0.0%	36.4%	100.0%
Sole proprietor, with EIN	0.6%	73.0%	0.1%	0.2%	0.0%	26.1%	100.0%
Partnership	0.6%	0.2%	86.6%	0.1%	0.0%	12.5%	100.0%
S corporation	0.7%	0.2%	0.0%	78.7%	0.1%	20.3%	100.0%
C corporation	0.0%	0.0%	0.0%	1.2%	75.4%	23.4%	100.0%
Nonactive	78.0%	13.1%	3.9%	3.3%	1.7%	-	100.0%

Notes: This table shows transition matrices for all nonemployer firms active across the 2018-2019 year pair. "Nonactive" indicates that a firm was not in operation during the relevant year. Firms that are inactive in both 2018 and 2019 are omitted. Some zeros are due to rounding: in panel (a), this indicates less than 500 firms, in panel (b) it indicates less than 0.05%.

an entrant in 2019. Conversely, a firm that is active in 2018 but inactive in 2019 is a firm exit. Because the table includes these entering and exiting firms, the sample represents the union of all nonemployer firms that are active in at least one of the two years.

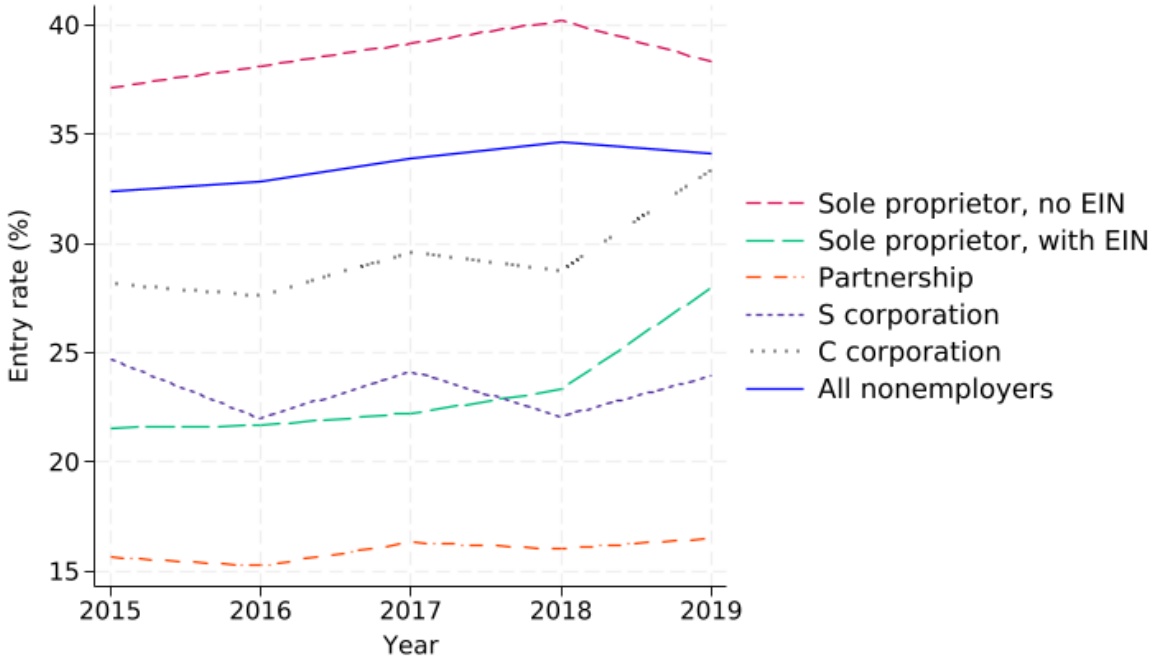
Panel (a) of Table 7 reports the number of firms that make each type of transition between legal forms, expressed in thousands. Panel (b) reports the same information but instead expressed as a row percentage, or the conditional probability of making a particular transition in 2019 given its status in 2018. It is apparent from both these panels that the diagonal elements of the matrices dominate, demonstrating that a nonemployer firm in a given year tends to remain in the same legal form in the following year. However, year-to-year persistence is nowhere near universal, only ranging from about 61% among sole proprietors without EINs, to 87% among partnerships. A substantial number of nonemployer businesses exit each year. This is most common among sole proprietors without an EIN, more than one-third (36.4%) of whom exited during 2018. Sole proprietorships with an EIN in 2018 were about ten percentage points less likely to exit (26.1%) in 2019, suggesting that owners filing for an EIN maintain their businesses longer. The exit propensity of the other legal forms is even lower for corporations (20.3% and 23.4% for S and C, respectively), and the lowest (12.5%) for partnerships.

A firm is much more likely to exit than to change its legal form. For example, while 463 thousand sole proprietorships without EINs in 2018 acquired an EIN in 2019, this only represents about 2.1% of such firms. About 53 thousand sole proprietorships in 2018 (with and without EINs) transitioned into partnerships and S corporations in 2019, but this represents only about 0.2% of such businesses. The opposite direction of flows is rare but non-negligible, with 13 thousand S corporations and 18 thousand partnerships transitioning into sole proprietorships in 2019. Three thousand partnerships transitioned to S coprorations in 2019, but we do not record any opposite flows. This is consistent with U.S. Internal Revenue Service (2025d) provisions that allow a business "that has been treated as a partnership for several years to prospectively change its classification to be treated as a corporation" but not for an S corporation to transition to a partnership without dissolving the business.

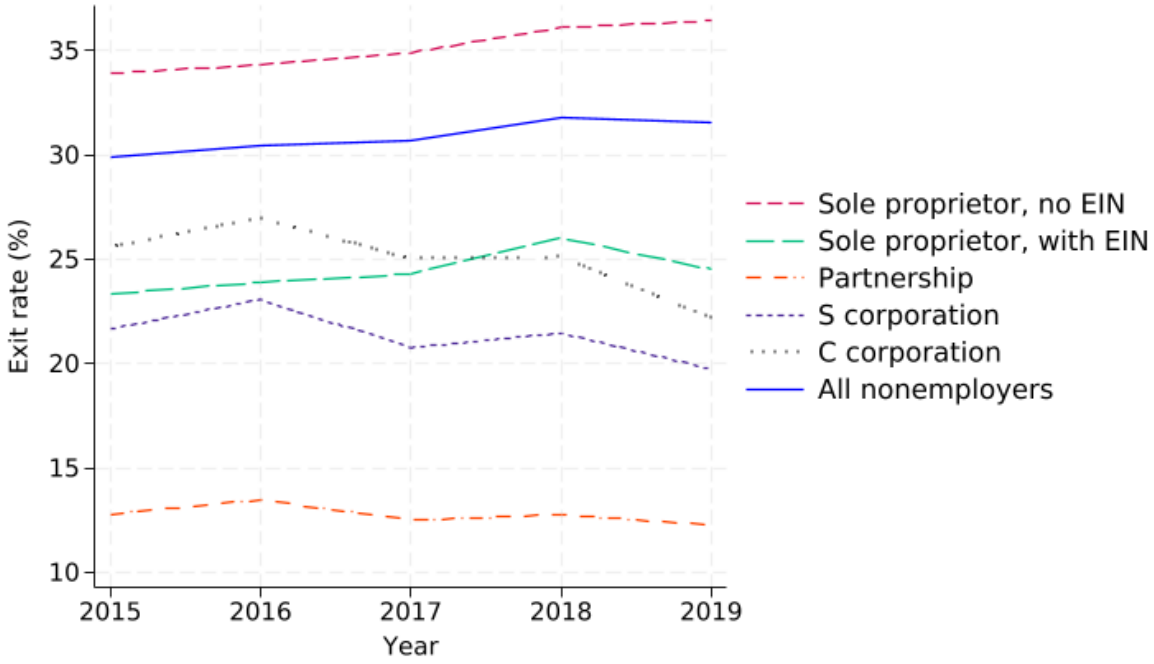
As noted, while the above table shows that all types of transitions occur, the two most frequent and arguably important transitions are firm entry and exit. Figure 5 reports these rates for all nonemployers by legal form over 2014–2019, with panel (a) showing entry rates and panel (b) showing exit rates. To calculate these rates in a way that reflects a common baseline, our denominator is the average number of active firms in the two relevant years, following the convention for employer businesses used by

Figure 5: LBD-NE firm entry and exit rates by legal form

(a) Entry rates



(b) Exit rates



Note: Firm entry in year t is defined as being active year t but nonactive in year $t-1$. Conversely, firm exit is defined as being active in year $t-1$ but nonactive in year t. The denominator in the calculation of both entry and exit rates is the average number of active firms in $t-1$ and t, for the given legal form.

Table 8: Concurrent wage and salary employment of nonemployer business owners

	Owner has no wage and salary employment		Owner also has wage and salary employment	
Legal form	Jobs (millions)	Share of total	Jobs (millions)	Share of total
Sole proprietor, no EIN	8.9	21.8%	12.0	29.3%
Sole proprietor, with EIN	2.4	5.9%	2.1	5.1%
Partnership or S corporation	7.9	19.3%	7.5	18.3%
Total	19.2	46.9%	21.6	52.8%

Notes: This table reports the average number of ownership jobs associated with nonemployer firms in the LBD-NE from 2014 to 2018, by legal form. Active firms are defined as businesses that report any positive net receipts during the tax year.

the BDS (Chow et al., 2021).

Figure 5 (red dash line) shows that there has been a slight increase in both nonemployer entry and exit rates during the 2014 to 2019 period. Sole proprietorships without EINs have the highest rates of entry and exit, each in the 30% to 40% range. That means that more than one-third of sole proprietorships without EINs are new in any given year. At the opposite extreme are partnerships, which have entry and exit rates that are only 12% to 15% during the time series. In comparison, according to the U.S. Census Bureau (2025a), the entry and exit rates among employer firms, as published in the BDS tables, were in the range of 8% to 10% from 2014 to 2019. Nonemployer businesses form more often than employer businesses but exit more often as well.

3.3 Combining the SEJ and LBD-NE

We now consider the joint dynamics of businesses and their owners. We take business owner information from the SEJ and track their business entities over time using the LBD-NE. We thus not only observe nonemployer business or self-employed worker characteristics, but self-employed *job* characteristics—the combination of that worker and a business that they own.

3.3.1 Wage and salary employment

We begin by exploring which business owners also work as employees at a business owned by someone else. Table 8 shows the business legal form of 40.8 (=19.2+21.6) million self-employment jobs, by whether the business owner also had additional wage and salary employment. For most self-

Table 9: Nonemployer owner jobs transition matrix, by wage and salary employment

Legal form, current year	Wage and salary employment, current year	Legal form in next year, by next year wage and salary employment: Sole proprietor, no EIN		Sole proprietor, with EIN		Partnership or S corporation		Nonactive		Total
		No	Yes	No	Yes	No	Yes	No	Yes	
(a) Jobs (thousands)										
Sole proprietor, no EIN	No	5,769	617	145	18	23	3	1,787	500	8,862
	Yes	751	6,037	28	144	6	26	410	4,602	12,003
Sole proprietor, with EIN	No	18	2	1,808	149	8	1	382	80	2,447
	Yes	3	16	180	1,219	2	7	66	588	2,080
Partnership or S corporation	No	17	3	4	1	6,603	269	940	93	7,930
	Yes	3	19	1	4	416	6,159	72	875	7,548
Nonactive	No	1,796	461	297	53	930	52	-	-	3,589
	Yes	588	5,171	85	634	118	1,079	-	-	7676
Total		8,944	12,327	2,548	2,222	8,106	7,596	3,657	6,737	52,135
(b) Row percentages										
Sole proprietor, no EIN	No	65.1%	7.0%	1.6%	0.2%	0.3%	0.0%	20.2%	5.6%	100.0%
	Yes	6.3%	50.3%	0.2%	1.2%	0.0%	0.2%	3.4%	38.3%	100.0%
Sole proprietor, with EIN	No	0.7%	0.1%	73.9%	6.1%	0.3%	0.0%	15.6%	3.3%	100.0%
	Yes	0.1%	0.8%	8.6%	58.6%	0.1%	0.3%	3.2%	28.2%	100.0%
Partnership or S corporation	No	0.2%	0.0%	0.1%	0.0%	83.3%	3.4%	11.9%	1.2%	100.0%
	Yes	0.0%	0.3%	0.0%	0.1%	5.5%	81.6%	1.0%	11.6%	100.0%
Nonactive	No	50.0%	12.8%	8.3%	1.5%	25.9%	1.4%	-	-	100.0%
	Yes	7.7%	67.4%	1.1%	8.3%	1.5%	14.1%	-	-	100.0%

Notes: This table reports transition counts and shares of owner-business combinations (i.e., ownership jobs) by wage and salary status of the owner and the legal form of the business, across two years. Active firms are defined as businesses that report any positive net receipts during the tax year. Numbers reported are averages across the five year pairs from 2014–2019.

employment jobs, the individual also had a traditional job (52.8%). The distributions of these self-employment jobs across legal forms follow a similar pattern, regardless of whether the owner maintains outside employment. Sole proprietorships without an EIN are the most common legal form, followed by partnerships and S corporations, and sole proprietorships with an EIN are the least common.[22] Despite these broad similarities, among business owners with outside employment, the highest share (29.3%) are sole proprietors without an EIN. Filing business taxes using their personal tax identifier (SSN) is the least complex legal form and is the easiest type of self-employment to begin. The concurrent wage and salary employment of these sole proprietors might therefore indicate that their businesses are a secondary source of income. While this is the single largest group, these jobs still constitute a minority of all self-employment jobs, most of which are either the owner's sole source of income, or a more complex legal form.

Next we consider the transition dynamics of business owners. For simplicity, we look at the average pairwise transitions across the five year pairs in 2014–2019. Table 9 shows transitions of jobs by whether the owner also had wage and salary employment. Panel (a) reports job counts in thousands, while panel (b) reports row percentages (i.e., percentages conditional on the individual's status in the initial year). Conditional on a given business type, we find stronger state persistence for business owners without wage and salary employment—especially for sole proprietors. Among this group, 65.1% of owners without additional wage and salary employment continue in this exact work arrangement in the next year, compared to only 50.3% of owners with wage and salary employment. A similar difference holds for EIN-holding sole proprietors. This is largely driven by the different probabilities of exit between sole proprietors with and without wage and salary employment. As discussed in section 3.3.1, exiting nonemployer sole proprietorships are significantly more likely to have owners with wage and salary employment. Thus we see that 38.3% of non-EIN-holding sole proprietors with wage and salary jobs give up the self-employment job to become just a wage and salary employee in the next year, while only 20% of those without a wage and salary job leave their self-employment job.

For partnerships and S corporations, there is a relatively low probability of the job ending, contributing strongly to the state persistence of this type of job. However, owners of these businesses are

[22]Note the difference from the distribution of *businesses* in Table 6. Partnerships and S corporations have a relatively higher share of self-employment jobs because partnerships and S corporations can both have multiple owners. Sole proprietorships, on the other hand, have a single owner.

Table 10: Ownership jobs by nonemployer business type, other self-employment status

	Owner has no other concurrent self-employment		Owner has other concurrent self-employment	
Legal form	Jobs (millions)	Share of total	Jobs (millions)	Share of total
Sole proprietor, no EIN	17.5	42.8%	3.4	8.3%
Sole proprietor, with EIN	3.8	9.3%	0.8	2.0%
Partnership or S corporation	5.9	14.4%	9.6	23.4%
Total	27.2	66.4%	13.7	33.7%

Notes: This table reports the average number of ownership jobs associated with nonemployer firms in the LBD-NE from 2014 to 2018, by legal form. Active firms are defined as businesses that report any positive net receipts during the tax year.

also less likely to add or leave wage and salary work compared to sole proprietors, as shown by the off-diagonals in panel (b) of Table 9. Among sole proprietors, 6-7% add a wage and salary job in the next year compared to only 3% for partnerships and S corporations.

3.3.2 Parallel entrepreneurship

We now investigate whether owners of nonemployer businesses are parallel entrepreneurs, that is, business owners who operate multiple businesses in the same calendar year. Table 10 shows about one-third (33.7%) of jobs are associated with parallel entrepreneurs, and that the remaining two-thirds are the only business that the owner operated in that year.[23] Table 10 further shows the distribution of jobs across nonemployer business legal form, split by whether the business owner also had other self-employment. While sole proprietors are the most numerous among self-employment jobs, such owners are relatively unlikely to operate a second business simultaneously. Among sole proprietors without an EIN, 17.5 million did not have a second business, while only 3.4 million did.

In contrast, parallel entrepreneurship is more common among those who operate businesses with more complex legal structures. Of the 15.5 (=5.9+9.6) million self-employment jobs of the owners of partnerships and S corporations, more than three-fifths ($61.2\% = 9.6/15.5$) are held by owners who operated multiple businesses in the same calendar year. Sole proprietorship jobs only account for about a third ($30.7\% = (3.4+0.8)/13.7$) of parallel entrepreneurship. These sole proprietorships

[23]Comparing the estimates of Table 10 with those of Table 2, which averages 31.3 million owners for 2014 and 2018, allows us to get a rough (average of endpoints vs. average of years) estimate of how many businesses parallel entrepreneurs operate. If there are about 4.1 (=31.3-27.2) million parallel entrepreneurs, they would on average own about 3.3 (=13.7/4.1) businesses each.

include owners who file multiple Schedule Cs with their IRS Form 1040, which generally reflects those who operated businesses in different industries.

The dynamics of parallel entrepreneurship are different by legal form. For sole proprietors, parallel entrepreneurship seems related to transitions while for partnerships and S corporations, it is a more established way of doing business. We document this in Table 11 where we report job transitions by whether the owner also had other self-employment. This table contains two panels—one with job transition counts in thousands (a), and the other with row percentages (b). The diagonal of this table shows how frequently these business owners had similar work in two consecutive years, and therefore were likely to be engaged in such activity at the start of the new year. Less than half (46.6%) of sole proprietors with a second self-employment job maintained this state into the next year, the least stable category among any considered in Table 11. This suggests that most sole proprietors who operate a second business in the same calendar year are in transition. For 30.0%, they transition to not operating a business at all in the next year, and the remaining 24.4% operate a different business or combination thereof. In contrast, the most stable self-employment category are those who had a self-employment job at a partnership or S corporation and had at least one other self-employment job. More than three-quarters (78.6%) of these parallel entrepreneurs continue to be so from one year to the next.

3.3.3 Ownership reallocation among continuing businesses

We give further consideration to the owners of nonemployer partnerships and S corporations in Table 12. For simplicity, we report only continuing partnerships and S corporations (i.e., no entering or exiting businesses). We find that, regardless of wage and salary employment status, owners with other self-employment are likely to continue to do so into the following year (84.2% to 86.9%). At the same time, owners are more likely to change their business ownership than their employment status. For example, among owners of exactly one business, 3.0% entered wage and salary work while 4.4% left. In contrast, 12.9% of wage and salary workers with exactly one business added a second, while 7.3% of wage and salary workers with multiple businesses made the reverse move.

While all nonemployer businesses in Table 12 continue into the next year, it is possible for owners to join or leave the continuing businesses.[24] There were about 1.1 million such investments in

[24]The reason we only include this table for partnerships and S corporations is precisely because the business entity can continue even with new owners. For sole proprietorships, the business's identifier is the PIK of the owner herself.

Table 11: Nonemployer jobs transition matrix, by number of businesses owned

Legal form, current year	Number of businesses owned, current year	Legal form in next year, by number of businesses owned: Sole proprietor, no EIN — One	Sole proprietor, no EIN — Multiple	Sole proprietor, with EIN — One	Sole proprietor, with EIN — Multiple	Partnership or S corporation — One	Partnership or S corporation — Multiple	Nonactive — None	Nonactive — One or more	Total
(a) Jobs (thousands)										
Sole proprietor, no EIN	One	10,645	502	242	14	37	8	6,002	57	17,507
	Multiple	461	1,566	25	54	3	10	1,008	232	3,358
Sole proprietor, with EIN	One	23	6	2,661	139	12	3	913	12	3,768
	Multiple	2	8	125	432	1	3	149	41	760
Partnership or S corporation	One	25	2	6	0	4,309	779	778	15	5,913
	Multiple	7	8	2	2	844	7,515	495	693	9,564
Nonactive	None	6,553	1,188	885	132	815	524	-	-	10,097
	One or more	43	232	11	42	32	808	-	-	1,168
Total		17,759	3,512	3,955	814	6,052	9,650	9,344	1,050	52,135
(b) Row percentages										
Sole proprietor, no EIN	One	60.8%	2.9%	1.4%	0.1%	0.2%	0.0%	34.3%	0.3%	100.0%
	Multiple	13.7%	46.6%	0.7%	1.6%	0.1%	0.3%	30.0%	6.9%	100.0%
Sole proprietor, with EIN	One	0.6%	0.2%	70.6%	3.7%	0.3%	0.1%	24.2%	0.3%	100.0%
	Multiple	0.3%	1.0%	16.4%	56.8%	0.1%	0.4%	19.6%	5.4%	100.0%
Partnership or S corporation	One	0.4%	0.0%	0.1%	0.0%	72.9%	13.2%	13.2%	0.2%	100.0%
	Multiple	0.1%	0.1%	0.0%	0.0%	8.8%	78.6%	5.2%	7.2%	100.0%
Nonactive	None	64.9%	11.8%	8.8%	1.3%	8.1%	5.2%	-	-	100.0%
	One or more	3.7%	19.9%	0.9%	3.6%	2.7%	69.2%	-	-	100.0%

Notes: This table reports transition counts and shares of owner–business combinations (i.e., jobs) by other self-employment status of the owner and legal form of the business across two years. Active firms are defined as businesses that report any positive net receipts during the tax year. Numbers reported are averages across the five year pairs in 2014–2019.

Table 12: Nonemployer jobs transition matrix, continuing partnerships and S corporations

Wage and salary work, current year	Business ownership, current year	No wage and salary work next year, and:			Wage and salary work next year, and:			Total
		No self-employment	Owned one business	Owned multiple businesses	No self-employment	Owned one business	Owned multiple businesses	
(a) Jobs (thousands)								
No wage and salary work	No self-employment	-	139	91	-	8	4	242
	Owned one business	208	1,721	234	8	69	14	2,254
	Owned multiple businesses	114	296	3,800	5	21	140	4,375
Wage and salary work	No self-employment	-	10	7	-	188	105	311
	Owned one business	15	100	28	192	1,650	295	2,280
	Owned multiple businesses	9	25	221	84	291	3,354	3,984
Total		346	2,292	4,381	289	2,226	3,913	13,446
(b) Row percentages								
No wage and salary work	No self-employment	-	57.4%	37.5%	-	3.2%	1.8%	100.0%
	Owned one business	9.2%	76.4%	10.4%	0.4%	3.0%	0.6%	100.0%
	Owned multiple businesses	2.6%	6.8%	86.9%	0.1%	0.5%	3.2%	100.0%
Wage and salary work	No self-employment	-	3.3%	2.3%	-	60.6%	33.8%	100.0%
	Owned one business	0.6%	4.4%	1.2%	8.4%	72.4%	12.9%	100.0%
	Owned multiple businesses	0.2%	0.6%	5.5%	2.1%	7.3%	84.2%	100.0%

Notes: This table reports transition counts and shares of owner–business combinations (i.e., jobs) by wage and salary status, self-employment status, and ownership in a single business or of multiple businesses. Each business is either a partnership or S corporation and is active in both years. Active firms are defined as businesses that report any positive net receipts during the tax year. Numbers reported are averages across the five year pairs in 2014–2019.

the average year, and somewhat more (1.3 million) divestments. About half of these investments and divestments are changes among continuing entrepreneurs, and the remainder are associated with those who are beginning or ending ownership entirely.[25] These changes reflect both expansions and contractions in the number of owners, as well as churn among them. Transition rates are greater for owners with no concurrent wage and salary work than for those with such work.

4 Conclusion

The statistics presented in this chapter and the microdata they summarize represent important contributions to national statistics. The SEJ and LBD-NE capture tens of millions of additional workers, businesses and jobs and associated transitions and provide a more comprehensive account of workforce composition, entry, and exit. In 2019, there were thirty-three million individuals, who, collectively, owned more than thirty million nonemployer sole proprietorships, partnerships, and S corporations. Over the years 2014-2018, there were on average more than forty million owner-entity combinations. While most of these individuals own only one business, which is generally a sole proprietorship, there are also "parallel entrepreneurs" who operate multiple businesses at the same time (especially partnerships and S corporations). Linking these data to the Wage and Salary Job Frame, we show that most nonemployer business owners also work as the employee of another business.

With the longitudinal linkages developed by the LBD-NE, we measure the entry and exit rates of nonemployer businesses. Our data show that business transitions between different legal forms are infrequent. We also find a large number of investments into and divestments from continuing partnerships and S corporations. Such ownership transitions are distinct from those that naturally occur when a business enters or exits. These statistics provide a comprehensive illustration of nonemployer business ownership dynamics.

Looking ahead, we will refine our ability to track ownership jobs for parallel entrepreneurs, those owners operating multiple businesses simultaneously. More broadly, we will further stratify self-

[25] Most of the off-diagonal elements of Table 12 reflect investments or divestnments, which are roughly 1.3 million in the average year. There were 552 (=139+91+8+4+10+7+188+105) thousand investments by those who did not own any business in the previous year, and 571 (=234+28+14+295) thousand among those who continued to own a business. There were 634 (=208+114+15+9+8+5+192+84) thousand divestments in which that owner subsequently did not own any business, and 633 (=296+25+21+291) thousand among those who continued to be owners. Note that the number of investments and divestments do not have to equal each other in aggregate because entering businesses do not need to have the same number of owners as exiting businesses.

employed workers and nonemployer businesses into those whose owners receive IRS Forms 1099-MISC or 1099-NEC, relative to those that do not. In addition, we will expand the scope of potential nonemployer business transitions to include transitions that occur when a business hires paid employees and becomes an employer business. We plan to utilize federal applications for EINs (IRS Form SS-4) to identify the PIKs of sole proprietors who apply for an EIN in order to hire employees. This PIK-EIN linkage will capture transitions that we might miss for sole proprietors who fail to list their EINs on their 1040 Schedule C Forms, or who transition to partnerships or S corporations when hiring employees. Records corresponding to ownership of employer businesses already are included in the SEJ. Thus, future versions of the statistics presented in this paper will include these owners and jobs. Finally, we will introduce information on business age and receipts and self-employment earnings. Earnings information will allow us to separate workers with both wage and non-wage earnings into those who receive the majority of their annual earnings from wage and salary work versus those who receive more than half from self-employment. This separation will yield yet another worker grouping based on work type concentration.

As we continue to develop links between nonemployer and employer businesses, we will be able to further investigate what it means to be a parallel entrepreneur. The organization of business activity can be complex and some owners may operate multiple nonemployer businesses together with one or more employer businesses. Businesses may grow by hiring an employee or by opening a new location with employees that is a separate but related business. In this case, nonemployer and employer businesses could be grouped together into a firm, analogous to how multiple employer businesses with common ownership are grouped into a firm. More investigation into tax filings is needed in order to distinguish accounting practices from firm organizational structures.

Our ultimate goal is to produce statistics that combine the characteristics of self-employed individuals with their business activities to provide new knowledge about the careers of entrepreneurs and the long-run growth of businesses. For example, these data could be used to produce statistics on career paths that lead to business ownership, including through adverse events such as job displacement. Similarly, we could produce tabulations on the labor market impacts of business failure, including the extent to which their former owners suffer earnings penalties. It is also possible to distinguish the outcomes of businesses started by first-time entrepreneurs from those with more experience. Finally, new statistics could highlight the career histories that help self-employed nonemployers grow their businesses and ultimately create jobs for other people.

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