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Executive Summary

A growing number of American workers earn income outside of traditional employee-employer relationships through self-employment and business ownership. In 2014, 24.9 million individuals filed returns reporting the operation of a nonfarm sole proprietorship and 16.8 million earned a profit (and paid self-employment tax) from those activities, representing a 34 percent and 32 percent increase, respectively, from their levels in 2001.[4] The almost 17 million self-employed workers represented 12 percent of all tax filers with earnings.[5] While self-employment offers certain advantages, as workers shift away from traditional work arrangements many will no longer receive important employee benefits, labor protections, and tax benefits that operate through the employee-employer relationship.[6] Hence, understanding the implications of the changing U.S. workforce is an important step towards improving labor and tax policies.

This paper draws on administrative tax records to provide a more complete picture of the self-employed, including how they differ from employees (which we define as workers receiving wages reported on Form W2) and how their numbers have increased over time. Administrative data provides new information that can help address certain shortcomings of survey-based measures, which appear to underestimate self-employment activity (Katz and Krueger 2016; Abraham et al. 2016). In particular, the large samples and ability to link multiple pieces of information in administrative records allow for a detailed examination of demographic and economic characteristics of self-employed individuals, how their share of the workforce has changed over time, and the implications of that change for tax filing behavior and benefit coverage.

Self-employed individuals engage in a wide variety of economic activities ranging from operating businesses like restaurants, law offices, or partnerships; providing contract or consulting labor; earning platform-based or "gig economy" income; to house cleaning and babysitting services. Many earn income from both wages and self-employment. To understand how the characteristics and activities of the self-employed have changed over time, we provide a simplified categorization of individuals with self-employment earnings based on the source of those earnings, whether the self-employment earnings is a primary or secondary source of earnings, and whether the individual engages in a substantial amount

[4] We exclude dependent filers from these counts.
[5] Also, 11.8 percent of individuals with SSA earnings reported at least some SE earnings.
[6] These benefits include, though are not limited to, health insurance and retirement coverage, tax compliance and administration, and protections under labor, occupational safety, and discrimination laws.

of business-related activities.[7] Using these criteria, we identify selected groups of filers with similar characteristics, such as "small business owner" (individuals with more than a de minimus level of business-related expenses and business income but less than $10 million of either), "contractor," "household worker", or even "misclassified employee" (for individuals with few business-related activities whose earnings is largely from labor income), or "gig economy worker" (individuals whose income is associated with online platforms or service providers).

Looking at trends over time, we find that essentially all of the increase in self-employment is due to increases in sole proprietors who have little or no business-related deductions, and who therefore appear to almost exclusively provide labor services (i.e. the contractors or misclassified workers). In contrast, the share of filers that were small business owners was essentially unchanged.

These trends have important implications for the income, health insurance coverage, and retirement security of self-employed workers. In 2014, individuals who earned a significant share of their earnings from self-employment, which we will refer to as "primarily self-employed", were less likely to be covered by health insurance or to participate in or make contributions to a retirement account. For instance, while more than 87 percent of individuals with only wages were covered by health insurance in 2014,[8] only about 75 percent of individuals who were primarily self-employed were covered. Similarly, only about 8 percent of primarily self-employed individuals made any retirement contribution to an IRA or to an employer plan if applicable in 2014 compared to the 42 percent of wage earners. Among workers whose income was not primarily from wages, almost 10 percent purchased insurance through the Affordable Care Act's Heath Insurance Marketplaces; such workers represented about 28 percent of all workers (excluding dependents or non-working spouses) with Marketplace coverage.

Some of the differences found in benefit coverage across groups could be an artifact of differences in economic circumstances of these individuals, but even for individuals within similar AGI classes, substantial differences persist. For instance, among individuals with AGI between $25,000 and $75,000, about 87 percent of wage earners had health insurance, compared to about 78 percent of self-employed individuals. Moreover, the source of that coverage varied significantly. About 13 percent of small-

[7] This distinction, also used in Knittel et al. 2011 as one part of a test to differentiate small business owners from other tax filers, acts to differentiate Schedule C filers between those that predominately use Schedule C to report labor earnings (e.g. from contracting work or as a misclassified employee) from those whose income arises, at least in part, from organizing a host of other business inputs to production.

[8] Health coverage is defined as not paying the individual responsibility payment for having no health coverage as required by the ACA, nor claiming an exemption for themselves or anyone in their family from the health coverage requirement.

business owners and primarily self-employed individuals in that income range purchased health insurance through a Health Insurance Marketplace, compared to about 3.5 percent of wage earners.

1. Background: Measuring Self-Employment

Information on the self-employed is poorly or incompletely captured by standard survey data. For instance, the Current Population Survey (CPS) has shown declining rates of self-employment as a share of the labor force almost continuously since the early 1980s, whereas self-employment indicated in administrative data, such as Schedule C filings, has increased. Abraham et al. (2016), using matched administrative and survey data, show that a large share of individuals who report being an employee in response to surveys also file a tax return that reports self-employment earnings rather than wages. In addition, some workers earn income from both wages and self-employment, but do not report their self-employment status in surveys. Much of the gap between people with self-employment income reported in administrative data versus the self-identified self-employed from survey data can be accounted for by these two types of respondents. The interpretation of this pattern is less clear. For instance, these differences may simply reflect differences in the definition of "self-employed" used in the survey versus in the tax system. Individuals who work at one firm might describe themselves as employees of the firm, regardless of how they were paid or what forms they filed. Alternatively, this pattern in which individuals report being employees but are not paid with wages could also reflect the misclassification of employees as contractors. Differentiating these alternative interpretations is challenging without a more detailed understanding of the relationship between the firm and the worker than what is available in current data sources.

Beyond differences in the aggregate trends in self-employment, data on the detailed activities of the self-employed is collected infrequently and often incomplete as the questions tend to focus on workers who describe their jobs as being temporary. For instance, the CPS contained a Contingent Worker Supplement (CWS) in 1995, 2001 and 2005, which collected comprehensive information on contingent workers defined as those "who do not expect their jobs to last or who reported that their jobs are temporary." These surveys found that contingent workers comprised a relatively small and stable share of the labor market between 1995 and 2005. Although the CWS was discontinued in 2005, the Bureau of Labor Statistics (BLS) will rerun it beginning in May 2017.

A handful of recent work has tried to characterize the activities and work experiences of the self-employed and of workers engaged in contingent or temporary work arrangements in the U.S. labor market. To fill the gap left by the discontinuation of the CWS, Katz and Krueger (2016) conduct their own version of the CWS in the RAND American Life Panel. They include temporary agency workers, on-call workers, contract company workers, and independent contractors/freelancers in their definition of those with alternative work arrangements.[9] They find a substantial increase in alternative work arrangements between 2005 and 2015.

In a 2015 study, the U.S. General Accountability Office (GAO) uses various nationally-representative survey data to assess the size of the contingent workforce. GAO finds an increase in alternative work arrangements, which includes a large swath of job types in their definition, from 35.3 to 40.4 percent of employment between 2006 and 2010. In addition, they find that contingent employment tends to correspond with lower wages and benefits, acknowledging however that different definitions of the contingent work leads to different conclusions.

A subset of the contingent workforce that is facilitated through online intermediaries comprise the so-called “gig economy,” “platform economy,” or the “on-demand economy.” Some media suggest that the gig economy is a large and growing segment of the U.S. labor market, revealing a marked shift in the nature of work relationships. However, there is little empirical evidence that this is the case. The few studies that have tried to infer the size of gig economy consistently find this segment of the workforce is quite small. The gig economy comprises only 0.5 percent of workers according to Katz and Krueger (2016). Similar estimates are found in, Farrell and Grieg (2016), where only 0.6 percent of the working-age population are gig workers, and in Harris and Krueger (2015) who find 0.4 percent of workers are gig workers

Farrell and Grieg (2016) use a random, anonymized sample of approximately 1 million Chase Bank customers between October 2012 and September 2015 to examine the gig economy. They define the gig economy as 30 companies (which are unnamed) whose work is characterized by discrete tasks and who directly connect buyers and sellers through an online intermediary. Over this period, the percentage of adults working in the gig economy within a month increased from less than 0.1 percent to 1 percent, and by the end of the period, approximately 4.2 percent of adults had taken part in some sort of gig work. However, the reliance on income from platform firms remained fairly stable, and was often used to offset reductions in their regular earnings.

Hall and Krueger (2015) analyze a specific gig economy company, Uber, using administrative data from on their drivers coupled with survey data from a subset of these drivers. They find that Uber drivers

[9] According to the Bureau of Labor Statistics “Contract company workers" are employed by a company that provides their services to others under contract; they are usually assigned to only one customer and work at the customer's worksite.

rarely turn to this form of gig work because they are unable to find other employment opportunities, but rather prefer the flexibility of this type of work. In addition, they report that Uber drivers appear to earn at least as much as taxi drivers and chauffeurs, even though they appear to be more similar to the general workforce than these other drivers.

Understanding changes in alternative work arrangements is likely to be relevant for designing and improving economic policies. For instance, whether workers are classified as employees versus independent contractors for tax purposes can have important implications for how individuals are treated under various law and regulations. Many benefits and worker protections are available only for workers who are classified as employees. The classification of an employee as an independent contractor could lead to a worker not receiving benefits for unemployment insurance, workers' compensation (insurance against on-the-job injuries), not being subject to minimum wage laws, or not being protected by various other labor, discrimination, or health and safety requirements.

The different treatment of employees and independent contractors can create incentives for employers to misclassify workers as contractors to avoid costs associated with providing those benefits or complying with the regulations. For instance, misclassification could lower an employer's costs for paying employment taxes. In addition, misclassification is also likely to provide increased opportunities for noncompliance by the employee. The IRS has not been permitted to issue general guidance addressing worker classification since 1978, and has limited ability to directly address or correct instances of misclassification. Changes in the share and characteristics of individuals working as independent contractors are also likely to have implications for understanding the importance and extent of worker misclassification.

The self-employed include a broad set of worker-types, engaged in a variety of economic activities. In order to make meaningful comparisons to past work and alternative data sources, we describe and categorize those who report having some form of self-employment income. Below we develop a grouping system for the self-employed based on information we can observe in tax data.

2. Data and Methods

3.1 Administrative Tax Data on Self-Employment

This paper draws on detailed administrative data from a variety of tax forms and information returns. The primary focus of our analysis is on individuals who earn income outside of the employee-employer relationship (e.g. not from wages). In particular, we focus on employees who file Schedule SE and Schedule C because these forms are used to report labor income earned outside of a formal employee-employer relationship (Schedule SE) and the income-generating activities of sole proprietorships (Schedule C).[10]

Our analysis starts with a sample of workers in 2014. We sample individuals who had positive earnings, defined as total wages and self-employment income (reported on Schedule SE) and individuals who had no earnings but report operation of a sole proprietorship on Schedule C. We select 2014 both because it is the most recent year in which we have relatively complete return information available and because it is the first year in which information is available regarding health-insurance coverage. This sample is constructed from the combination of a 10 percent sample of individuals with either Schedule SE or Schedule C (without SE income or wages) plus a 1 percent sample of wage earners (receive a W2) but without SE income. By design, the wage earner sample includes some individuals that file Schedule C but do not have Schedule SE income because their profits were below the Schedule SE $400 filing threshold. We exclude dependent filers. Using the appropriate weights, this sample provides complete coverage of non-dependent individuals (versus tax units) who file a return and either earn income from wages or self-employment or who operate a sole proprietorship.

In addition, to observe trends in self-employment over time, we pull a 1 percent sample of individuals who reported earnings on Schedule SE from 1999 to 2014. Because of data limitations, this sample includes only individuals with positive self-employment income (and thus excludes two groups in the main 2014 file: individuals with wages, Schedule C activities, but no SE income and individuals filing Schedule C but without wages or SE income).[11]

To these samples, we merge information on age, gender, household income, wages, and access to and coverage under retirement and health benefits. Specifically, we draw data from forms W2 (wages,

[10] The appendix describes these data sources and the individual forms in greater detail.

[11] Prior to 2008, the Schedule C data used retain only identifiers for the tax unit rather than individual, so it is not possible to link the Schedule C to an individual taxpayer in units filing joint returns. Schedule SE is always reported at the individual level. Thus, we focus on individuals with Schedule SE income.

retirement coverage, health insurance coverage), 1099MISC (box 7, non-employee compensation), 1099K (third-party payments), Schedule C (including receipts, business expenses, profit or loss, industry code, and description of the activity), Schedule SE (self-employment earnings), 1040 (demographic, income, IRA contributions, self-employment health deductions, and health insurance status), 8965 (Health Coverage Exemptions) and 5498 (IRA contributions, IRA Fair Market Value).[12]

In general, tax forms are meant to help administer the tax code and are issued for the purposes of reporting income. Unlike survey data, which has the advantage of asking respondents whether they are employees or contractors, this means that examining the type and nature of work using tax data can be particularly challenging as this type of information is limited. Nonetheless, the presence of various forms can be informative for determining the types of work in which people engage.

Table 1 provides aggregate counts of individuals according to the forms they filed (e.g. Schedule C, SE, Form 1040) and the forms they received (e.g. W-2, 1099K, 1099MISC).[13] The first column indicates that in 2014, about 190 million individuals filed a tax return and roughly 146 million individuals had positive earnings, where earnings is defined as total wages and self-employment income. Looking at the bottom panel of Table 1, of those with non-zero earnings, the vast majority (86.7 percent) earned their income solely from an employer through an employee-employer relationship (as indicated by having received wage income reported on a W2) and had no self-employment income reported on Schedule SE. An additional 7.2 percent earned income solely from self-employment and the remaining 6.1 percent earned from a mix of both.

Focusing on those who file a Schedule SE, the vast majority also file Schedule C. In particular, Column 1 of Table 1 shows that of the roughly 19.4 million individuals who filed a Schedule SE, about 16.9 million (87 percent) also filed a Schedule C reporting a profit. In other words, the individual earned income from operating a sole proprietorship and used Schedule SE to pay employment taxes on their earnings. Individuals who file a Schedule SE but who do not file a Schedule C include mostly partners in partnerships (whose distributive share of the partnership income is reported as earnings subject to payroll tax) or farmers (farm proprietorships). About 6.4 percent of SE filers (1.2 million) filed Schedule E but not Schedule C, which implies that their self-employment income is likely to have derived from

[12] These samples are drawn from unedited administrative data and hence sometimes values or identifiers are missing or erroneous (e.g. a dollar value missing a decimal place) or include duplicate forms (e.g. in the case of reissued information returns).

[13] Total individuals include all primary filers and if filing jointly, their spouses. Also, we exclude any primary filers who are also reported as a dependent on another return.

their ownership and active participation in a partnership. An additional 1.3 million SE filers (6.8 percent) appear to file neither C nor E. These filers may include Schedule F (farm proprietors), but also could include individuals where a form is missing or was not matched (e.g. because of a missing or erroneous identifier). Table 1 also indicates that two-thirds of the 24.9 million individuals who filed a Schedule C reported both a profit and the resulting self-employment income on Schedule SE. A substantial number of Schedule C filers report a loss (or have net income less than the $400 Schedule SE filing threshold) therefore are not required to pay self-employment tax using Schedule SE.

The remaining columns in Table 1 provide tabulations for each subgroup indicating other forms that the filer reported or received. Administratively, the distinction between receiving a 1099 as opposed to a W-2 is crucial for determining whether an individual must file Schedule C as a sole proprietor and/or Schedule SE to report earnings not subject to employer withholding for payroll tax. Column 3 shows that of the 135.4 million filers who received any W-2 wage income, about 8.8 million also reported earning income on Schedule SE, and about 13 million individuals both filed a Schedule C and received wage income. Column 5 indicates that about 54.8 percent of individuals filing Schedule SE received a 1099-MISC, while Column 7 shows that relatively few individuals, about 6.1 percent of individuals filing Schedule SE, received a 1099-K. (In addition to differences in the actual number of people participating in activities that would result in a 1099 MISC versus a K, the relative infrequency of reported 1099Ks could stem from differences in the reporting threshold. As described in the appendix, the filing threshold for 1099 MISC is generally $600 but is $20,000 (or 200 transactions) for certain types of income reported on 1099 K.)
Whether individuals receive or file certain forms is a helpful proxy for employment status; however, this information is less informative for identifying the nature of the work. For those who file Schedule C, additional detail is provided on the types of activities that people take on in self-employment. Table 2 lists the top ten self-reported descriptions Schedule C filers use for their business (column 1) and shows that the types of activities that people engage in are quite diverse.[14]

Specifically, the list includes consultants—a catch all for a wide range of activities—real estate activities (mostly real estate agents), construction workers, housekeeping or janitorial services, child care, and landscaping. Aside from the description provided by the taxpayer and other information on Schedule C, we have little information on the self-employed individual's activities. One piece of information we do

[14] More information could be available on the business returns they file, including Forms 1120 or 1065; however, those returns are difficult to tie back to the owners' individual returns.

observe is whether the individual has received a 1099-K or 1099-MISC form. However, by themselves, the receipt of forms by itself tends not to provide much independent information because they are received by many individuals for many purposes. As a result, the listings of business descriptions in columns 2 and 3 are very similar to the descriptions of the population of Schedule C filers as a whole.[15]

Tables 1 and 2 highlight some of the difficulties in attempting to classify the employment status of individuals using tax and administrative data and, reconciling that classification with other data sources. For instance, in survey data, an individual who operates their own business may respond that they are "self-employed." That individual would file Schedule C if their business was a sole proprietorship, but not if she filed a partnership return because her business was incorporated as an LLC or partnership. Moreover, even if she filed a Schedule C, she may not file a Schedule SE if she had no earnings. That means that Schedule SE—which is used by the Social Security Administration and Census in certain cases to measure the size of the workforce or estimate the reliability of survey data—may also not provide a definitive answer of respondents' employment status. A related issue further complicating comparisons of a tax data to survey data that we will return to later in the paper, is that many sole-proprietors who work exclusively for one or several employers may in fact self-report as employees in survey data despite not receiving a W-2 and having to file a Schedule SE. Finally, the business activities reported in tax data are diverse and potentially difficult to distinguish from one another without additional information. As seen from the self-reports on Schedule C, activities grouped by tax form can range from relatively large businesses, such as construction firms, law offices, restaurants, and grocery stores to individual occupations like babysitting and housecleaning. Moreover, income from platform or "gig economy" work and reporting of sporadic or supplemental income like honoraria or consulting payments are also subject to the same type of reporting on Schedule C and in some cases, Schedule SE. Taking these issues into account and, building on the work of Knittel et al 2011, we create a taxonomy that provides a complete accounting of all filers who report self-employment income.[16]

3.2 Classifying Self-Employed Individuals

Business activity reported on Schedules C and SE can vary dramatically in both size and scope. In particular, these filers tend to differ in whether their self-employment activity represents a primary or

[15] Information on the 1099 payer could provide more information and we provide a case study of that below.
[16] Matthew Knittel, Susan Nelson, Jason DeBacker, John Kitchen, James Pearce, and Richard Prisinzano, "Methodology to Identify Small Businesses and Their Owners," OTA Technical Paper 4, August 2011.

secondary source of income, and thus, in whether they are likely to have employer-provided benefits or more stable employment relationships. In addition, self-employed filers differ in whether their self-employment activity represents the return from labor (e.g. contract work) or a combination of returns from labor and capital (e.g. operating a restaurant or owning ones' own taxi or ride-sharing vehicle). These differences, which are likely to manifest as large differences in total business expenses, help to distinguish individuals who look more like employees as opposed to business owners.

A major distinguishing factor among the self-employed is whether and to what extent their primary source of income is from wages paid by an employer. Figure 1 shows the distribution of individuals with any earnings by the share of earnings from self-employment. The figure shows that the distribution is polarized, with the majority of self-employed individuals receiving essentially all their earnings from self-employment, but a substantial minority receiving mostly wages with only small amounts of self-employment income. For these latter groups of employees, because their primary source of income is from wages, they are much more similar to other wage earners than to more traditional self-employed individuals, both in their economic characteristics, their propensity to receive employer-provided benefits, and also based on a qualitative analysis of why they report Schedule C income—often these individuals file Schedule C to report non-wage or unusual compensation like honoraria or small contract payments for incidental activities.

A second clear differentiator is the size of business-related deductions claimed by the taxpayer on Schedule C. The amount of business expenses provides an indication of the size of the enterprise and whether the proprietor's income arises from organizing multiple factors of production to produce income (e.g. owning, operating, repairing equipment like trucks, restaurant equipment, or furniture; paying utilities for a building; employee wages or benefits) or whether the individual had few business expenses and earned income primarily from their own labor. For example, a contract worker (or misclassified employee or a household worker) who works at the contracting firm's establishment and uses the firm's equipment or supplies would likely have few business-related expenses. Indeed, the data illustrate a clear relationship between the level of business expenses and the type of business activity the proprietor reports. Figure 2 shows several large self-reported business activities ranked by the average share of those businesses reporting expenses over $5,000. About 92 percent of restaurants and 83 percent of law offices report business expenses in excess of $5,000, but among babysitters and housekeepers, the share is 7 percent and 18 percent, respectively.

Based on Figures 1 and 2, a cross-tabulation of the fraction of earnings attributed to self-employment along with business expenses provides straightforward way to group individuals. Table 3 shows the relationship between the source of earnings (described in rows) and the size of business-related expenses (columns). The source of earnings is based on one of six categories: wage only (no SE income); primarily wage earner (at least 85 percent of earnings from wages); earnings from both wages and sole proprietorship (between 85 percent and 15 percent wages; files Schedule C with a profit); primarily self-employed sole proprietor (less than 15 percent wages, files Schedule C with a profit); and partner, farmer, or other SE filer (reports at least 15 of earnings from SE without filing Schedule C). We also describe the characteristics of individuals who file a Schedule C, but who have neither wages nor income reported on SE ("files Schedule C but reports no earnings"). This group likely operates a sole proprietorship at a loss as they are not required to file as Schedule SE.

This categorization helps to separate workers into groups with more similar employment situations and business activities. For example, individuals that are primarily wage earners tend to have relatively few business-related expenses. In particular, 57 percent of primarily wage earners had less than $5,000 in business expenses versus 42 percent of primarily self-employed individuals. About 26 percent of primarily self-employed individuals had business expenses in excess of $25,000 compared to only 7.7 percent of wage earners. Individuals who earn their income primarily from self-employment are more of a mix with some reporting substantial business expenses while others reporting relatively small amounts.

Column 6 of Table 3 shows the number and share of individuals in each group that receives a 1099-MISC for non-employee compensation or a 1099-K for income received from a third-party payment processor. Just over half of all individuals reporting self-employment income received a 1099. For many individuals, these two forms comprise most or all of the receipts reported on Schedule C.

Table 3 also gives the share of each group that would be characterized as a "small business" under the measures developed in Knittel et al 2011. In that paper, Schedule C filers are classified as participating in a small business as long as they meet a business activities test (having business expenses exceeding $5,000) and a de minimis test (having total income or total deductions exceeding $10,000 or their sum exceeding $15,000). These two criteria are intended to indicate that the business required significant time and effort on the part of the owner, and are used to differentiate those businesses from filers who may be engaged in hobby activities.[17] Column 7 of Table 3 indicates that about 9.8 million individuals (of the 24.9 million Schedule C filers) meet these small businesses tests, and for just over half of them (about 5.5 million), their business is their primary source of earnings, while 1.1 million individuals earned a mix of wages and self-employment income. Of those who operated a small business, about 1 million individuals did so at a loss and reported no earnings.[18] Finally, 2.1 million small business owners were primarily wage earners whose small business income made up only a small share of their earnings.

In addition to small business owners, another interesting subgroup of the self-employed includes individuals engaged in the "Gig economy". Table 3 uses information in the descriptions provided by individuals on their Schedule C and the 1099 information returns to identify workers in the "Gig economy" or platform-coordinated employment. Specifically, we identify all individuals who report that their "principle business or profession" included specific phrases like "ride sharing" or a company-specific name corresponding to the roughly 25 prominent online or platform-based services identified in Harris and Krueger (2016) (or any payment processing firm associated with those platform firms). We identify the issuers of the 1099-Miscs and 1099-Ks to individuals who self-identified as working for a platform firm and then use that information to identify any other Schedule C or SE filers who received payments from those same employers. This method produces what is likely to be an undercount of the true number of individuals that participated in the "gig economy" because some participants may not have filed a return or not filed a Schedule C reporting that income; because some platform firms do not provide 1099s to all of their participants; and also because not all prominent service providers could not be found in the data (perhaps as a result of the prior two causes). Nevertheless, we are confident that the data include the vast majority of filers who received a 1099 from the largest platform providers in sectors like ride sharing, courier or delivery services, local labor services (handyman, errand runner), and online computing, programming, or consulting services. Hence, we believe the sample reflects the characteristics of individuals who participate in those activities and who file a Schedule C to report those activities. However, the statistics pertaining to "gig economy" workers are given with the caveat that they do not necessarily reflect the income narrowly generated by their gig economy work, but may also include income from other sources (e.g. a taxi driver who owns his own cab and also participates in ridesharing would have both sources of income mixed on Schedule C).

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[17] The test also imposes a maximum of $10 million in either gross income or expenses; essentially all Schedule C filers fall below that threshold and are thus "small" by this definition.

[18] While a substantial number of Schedule Cs report a loss, the "hobby loss" rules attempt to prevent businesses from continually being in a loss position.

In 2014, only a small group—about 109,700 individuals—file a return reporting income from participating in a "gig economy" or online platform based business (about 0.7 percent of all workers). A large share (39 percent) of gig economy participants were primarily wage earners and an additional 19.5 percent reported a mix of earnings from wages and self-employment. For roughly 33 percent, gig economy work was their primary source of earnings. The remaining 8 percent did not report any earnings from either self-employment or wages (filed Schedule C to report a loss). On the one hand, the estimated 0.7 percent of all workers who appeared to have worked for some part of the year through an online platform is quite close to estimates derived by Katz and Kruger (2016) of 0.5 percent. On the other hand, the total count of workers filing a return appears low relative to the number of participants in online platforms reported in Hall and Krueger (2015).[19] This is consistent with our estimates providing a lower bound for the gig workforce.

3. Changes in the Fraction of Employees, the Self-Employed, and Sole Proprietors over Time

For each of the six groups described above, we examine trends in the number of individuals and the share of the total labor force (measured as a proportion of all individuals reporting either wages or self-employment income that is subject to employment taxes). These trends are based on a 1 percent sample of individuals who file both the Schedule C and Schedule SE between 1999 and 2014.

Figure 3 shows more individuals over time filing either Schedule SE or Schedule C to report earnings from self-employment and activities operating a sole proprietorship. For comparison, the number of individuals with any taxable wages or self-employment earnings reported to the Social Security Administration (SSA) increased by about 7 percent between 2000 and 2014.[20][21] Over that same period, the number of individuals filing Schedule C increased by 37 percent, and the number of individuals with self-employment income increased by 29 percent. These changes resulted in the share of individuals with self-employment earnings with respect to the SSA-reported workforce increasing by 2.1 percentage points from 10 to 12 percent. Similarly, the share of the workforce reporting self-employment income on Schedule C income increased from about 8.5 percent to 11 percent.

[19] For instance, they report that there were 160,000 active Uber driver-partners at the end of 2014.

[20] The SSA-reported workforce exceeds the number of workers in the non-dependent tax-filing sample because the earnings of dependents or non-filers are reported to SSA on W2s.

[21] The tabulations reported in Table 3 do not necessarily line up with the 2014 numbers in Table 6 as they are based on a 10 percent sample and a 1 percent sample, respectively.

Figure 4 examines how the composition of the self-employed changed over time. The figure shows that most of the increase in self-employment, both in the number of workers and as a share of the employed population, is the result of increases in the number of individuals with few business deductions. This is not only true both for individuals whose primary source of income is wages, and for those with some wages, but also true for those whose primary source of income is self-employment. The share of primarily wage earners increased slightly as a share of the workforce (by 0.5 percentage point), and the share of people with substantial business expenses increased by less (0.2 percentage point). The share of those with few business-related activities increased by 1.7 percentage points out of the total increase in Schedule C filers of 2.1 percentage points. Hence, the increase in self-employment over the last 15 years is largely the result of a surge in the number of individuals filing Schedule C to report labor income with relatively little business expenses.

Table 4 provides detail regarding the trends graphed in Figures 3 and 4 as well as other trends among the self-employed. Table 4 shows, for instance, that the number of filers with earnings from both wages and sole proprietorships and expenses less than $5,000 increased by about 70 percent compared to a 5 percent increase in such filers with more than $5,000 of expenses. The share of the workforce attributed to those with earnings primarily from a sole proprietorship and with less than $5,000 in expenses increased by 88 percent. In contrast, the number of small business owners filing Schedule C increased 8 percent, and the number of partners with self-employment earnings fell by 2 percent. The share of individuals receiving a 1099MISC was largely unchanged over the same time frame.

Taken together, the information described in Table 4 suggests that the number independent contractors (or potentially misclassified workers) has increased over time, and the increase in the prevalence of such employment is driving up the number of self-employed individuals. This surge in contractors and potentially misclassified workers could have large implications for how benefits such as retirement savings plans and health insurance coverage are distributed. In the next two sections, we focus on the 2014 sample of self-employed filers to look at how demographic characteristics and benefit coverage differ by income source. These potential differences could be informative for improving upon a number of policies aimed at protecting workers.

4. Demographic and Economic Characteristics of Employees, the Self-Employed, and Sole Proprietors

Using the classifications based on business income and activities described in Section 3, Table 5 shows the demographic characteristics of individuals within each group.

Compared to wage-only workers—which are 50 percent male, 50 percent married, 41 percent parents, and have a median age of 42—the self-employed group are slightly more likely to be male, somewhat older, and more likely to be married and to have children. However, that rough characterization masks considerable heterogeneity across the different groups of self-employed individuals. Perhaps the most different group includes those who are likely to be partners, since they filed a Schedule SE but no Schedule C, where two thirds are male and three quarters are married. Self-employed individuals with relatively few business expenses, which include some mix of contract workers, misclassified workers, household employees, and others, are also substantially different than workers who earned primarily wages in that the self-employed group are predominately female, less likely to be married, and somewhat more likely to have children. Small business filers are two thirds male, have a median age of 49, and 61 percent are married. The vast majority of gig economy workers are male (85 percent), but otherwise look relatively similar to the overall workforce in terms of their marriage rate (46 percent vs 52 percent) and likelihood of having children (44 percent vs 42 percent). The median age of a gig economy worker is 38.

Table 6 provides information on the economic characteristics of the self-employed, including mean adjusted gross income (AGI), where AGI is reported at the tax unit level, and the distribution of AGI within each group. We also show whether the individual received a 1099 as well as individuals' total earnings, wage earnings, and self-employment earnings. For sole proprietorships, we show the net profits, gross income, and expenses.

The average earnings among all workers and workers with only wage earnings, who comprise the vast majority of all workers, was about $47,000. Individuals whose income came primarily from wages but who also reported some self-employment earnings earned on average about $71,000, of which about $69,000 was wages. Individuals who relied to a larger extent on self-employment earnings tended to earn relatively less than those whose earnings was entirely or largely from wages. For instance, those who had a mix of wage and self-employment earnings earned about $43,000 per year, of which about $25,000 was wages. Those who were primarily self-employed earned about $28,000 per year with the majority of their earnings coming from self-employment. One caveat for all of these figures regarding the self-employed is that they exclude those who file a Schedule C, but who have no earnings. Hence, the actual earnings of all Schedule C filers, which would include those with losses or zero income, would be lower. Individuals whose self-employment income comes from sources other than Schedule C—largely partners—are substantially higher earners. The average AGI for that group is $243,000 with average earnings of about $109,000.

In general, the relative earnings and income within each group differs considerably by the size of the corresponding business activity. Individuals who report more than $5,000 of business related expenses tend to have relatively higher earnings than those with smaller levels of expenses. Looking specifically at small business filers, the average AGI and total earnings of Schedule C small business filers is roughly $89,000 and $47,000, respectively.

Gig economy or platform workers earned on average about $24,000, most of which came from wages ($17,500). The actual profit (or loss) reported on Schedule C among gig workers was about $5,700 per year. While these workers report gross income of close to $20,000 per year, they also report about $14,000 of expenses. Moreover, the income reported on Schedule C generally reflects a combination of income from platform and other sources, so the income from the platform work is lower. Essentially all gig economy workers that file a Schedule C also receive a 1099.[22] Overall the gig economy workers have lower AGI's and lower total earnings compared the workforce as a whole.

5. Benefit coverage of Employees, the Self-Employed, and Sole Proprietors

This section examines how benefit coverage differs across groups based on their predominant economic activities.

Table 7 summarizes the information on health insurance coverage available that pertains to the individuals in the sample. Information on health insurance coverage comes from three primary sources: Forms 1040, 8965, and 1095-A.[23] Under the Affordable Care Act, those who do not have health coverage must pay a penalty, which is reported on the 1040. Under certain circumstances taxpayers are

[22] To some extent, this is an artifact of how they are identified. However, the rate of 1099 receipt among self-identified gig economy workers is very high.

[23] Form W2 now includes in Box 12 (code DD) the amount of the workers compensation that was paid for employer-provided health insurance, but such reporting is incomplete because it is was required only of larger employers (with at least 250 employees).

exempt from the coverage requirement, in which case the filer must submit a Form 8965. Form 1095-A is used to report Marketplace coverage. We create a proxy for health coverage that is defined as someone who does not claim an exemption on Form 8965 or pay a penalty (either for themselves or for any dependent household member) on Form 1040. The first column of Table 7 shows shares of people with health insurance based on this definition by the source of income. The second column indicates whether the individual purchased coverage through a Marketplace and column 3 indicates whether the taxpayer or the taxpayer's spouse if married filing jointly claimed the self-employed health insurance deduction on Form 1040.

Table 7 underlines the variation in access to health insurance coverage across the different groups. Individuals who are primarily wage earners have the highest coverage rate of 89.7 percent. More generally, individuals with most or all of their earnings from wages have higher rates of coverage than those with a substantial portion of their income coming from Schedule C income. This is evident as those with a mix of wages and self-employment earnings as well as those with primarily self-employment income are more likely to claim an exemption, 13.8 percent and 17.3 percent respectively. Both of these groups were also somewhat more likely to pay a penalty for a lack of coverage than employees.

Marketplace coverage is an important source of health insurance coverage for small business owners and the self-employed. Almost one in ten small business owners relies on marketplace coverage as their source of health insurance, and that coverage is even more important for business owners with relatively larger business-related expenses and who rely on their self-employment earnings as their principal livelihood. In addition, 9.3 percent of gig economy workers are covered by Marketplace coverage. In contrast, wage-only workers are less likely to rely on Marketplace coverage (2.9 percent) compared to those with any self-employment income. (Of course, because the number of wage-only workers is much larger, the number of wage-only workers purchasing Marketplace coverage is also large.) Gig workers have lower rates of employer-sponsored health insurance than those who earn most or all of their earnings from wages. Partners, farmers and other self-employed filers have high rates of health insurance coverage, 89.3 percent, which is comparable to wage earners. These individuals are also the most likely to claim a self-employment health deduction, 33.4 percent.

Table 8 focuses on two important measures from Table 7 to examine how coverage in each group differs across the income distribution. The five classes of AGI were selected to be roughly quintiles of the income distribution among wage-only earners.

First, the most striking pattern to emerge from Table 8 is that health insurance coverage substantially increases with income irrespective of classification. In the highest income class where AGI is greater than or equal to $110,000, essentially all households are covered. For the highest income class, there is little difference in coverage by income source with the difference between the most insured group and least insured group around 1.3 percentage points.

In contrast, among lower-income groups, not only is coverage less likely generally, but it varies more substantially based on income source where the gap in coverage is as a large 19 percentage points among the bottom income class.

Individuals in the second lowest AGI class are the most likely to have insurance coverage from Marketplaces. Given that an AGI between $20,000 and $40,000 roughly corresponds to 138 percent-250 percent of the federal poverty line for a household size of two in 2014, these are individuals who would benefit from the premium tax credit available when purchasing insurance through Marketplaces.

In addition to health insurance coverage, employees with more formal employee-employer relationships are often provided access to retirement savings plans. Table 9 shows how retirement savings rates differ across the different groups defined by sources of income. Column 1 of Table 9 identifies an individual as having made any contribution to a retirement savings plan if they contributed to either an employer-sponsored plan or an IRA. The second column indicates if an individual was offered an employer-sponsored plan, which includes both defined contribution (401k-type) plans and defined benefit (pension) plans as indicated on Form W-2, box 13. A little more than half of wage only and primarily wage earners were offered employer plans and about 40 percent contributed to these plans.[24] Again, gig workers are offered retirement plans at higher rates compared to those who are primarily self-employed or small business owners, but this again likely stems from the fact that about 40 percent of gig workers are also primarily wage earners.

Partners, farmers and other self-employed individuals are the most likely to contribute to an IRA and have a positive IRA balance. Those with no earnings but who file a Schedule C are less likely to

[24] Note that only 401K-type plans allow for elective employee contributions. Also, this measure does not include any contributions made by employers to the 401K-type plan.

contribute to an IRA relative to the overall workforce, but are more likely to have a positive IRA balance. Small business owners are more likely than wage earners to contribute to an IRA.

Table 10 demonstrates how retirement contributions vary across the income distribution for each group. The rates of coverage are increasing in income for all groups. Interestingly, unlike health insurance coverage, the differences across groups is starkest in the top income class rather than at the bottom. For those in the highest income class, the largest gap in having any plan of 58.6 percentage points exists between the Schedule C group with no earnings and the wage-only group. Wage earners more generally are twice as likely as business owners to have a plan, where the difference is driven by access to an employer plan.

For those in the lowest income category, the share of those with a plan is relatively low with the highest percentage of those with a plan coming from primarily wage earners at 17.9 percent. Roughly half of gig workers at the high end of the AGI distribution have access to a plan compared to the 5 percent at the bottom end of the distribution.

Overall, it appears that access to retirement plans comes primarily from employer-sponsored plans despite the availability of IRAs. This suggests that as people move away from traditional employee-employer relationships ownership of any retirement plan may decline.

6. Summary and Conclusion

This paper shows that a rising share of American workers are earning income outside of traditional employee-employer relationships. Many of these new workers appear primarily to be providing labor services as contractors or freelancers or, perhaps, as employees misclassified as contractors. These data make it clear that workers who earn their living outside of the formal employee-employer relationship earn less, are less likely to have health insurance coverage, or to participate in or contribute to a retirement account. The Affordable Care Act—specifically the availability of marketplace coverage—appears to have provided insurance for a large share of self-employed individuals, particularly for middle-income workers. Nevertheless, while health insurance coverage is improving for these groups, gaps in coverage for health and, especially, retirement benefits remain for this growing group of workers.

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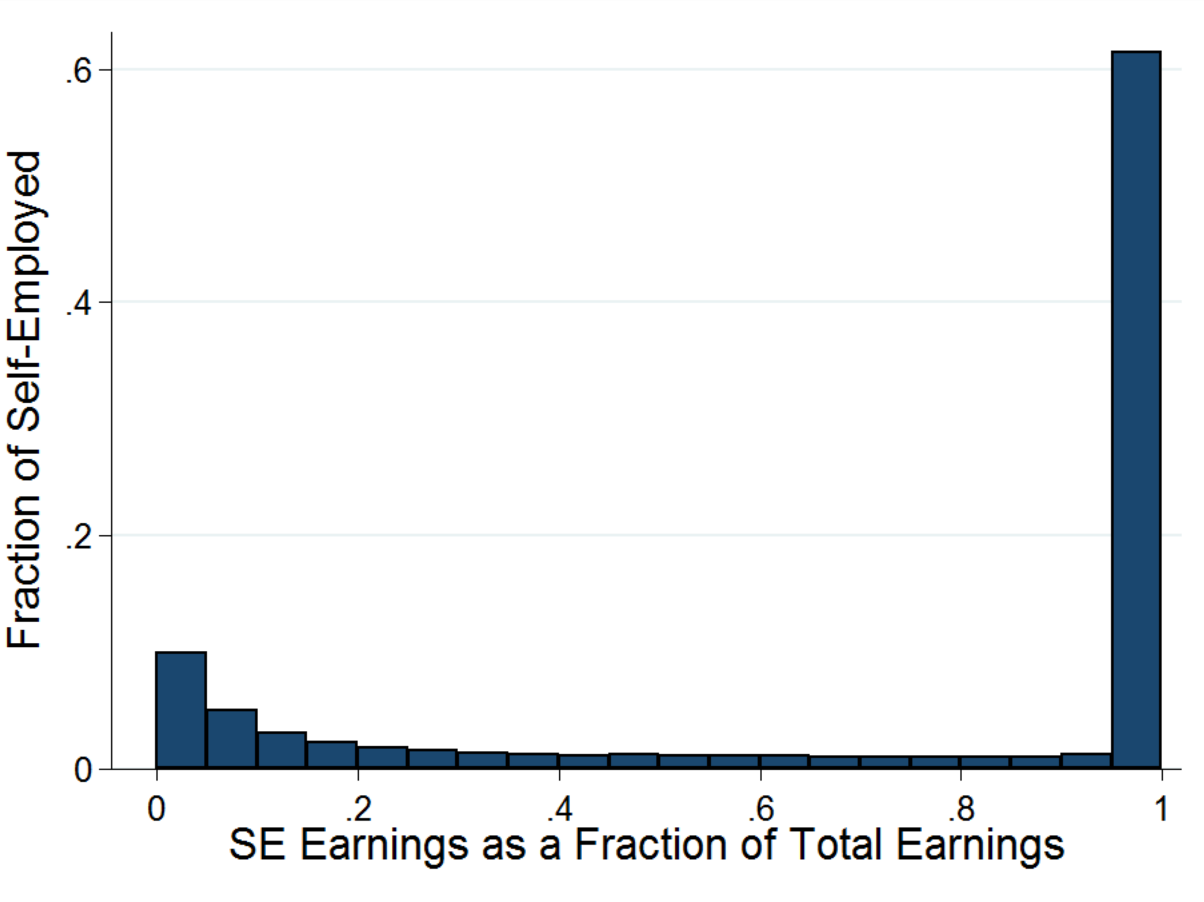
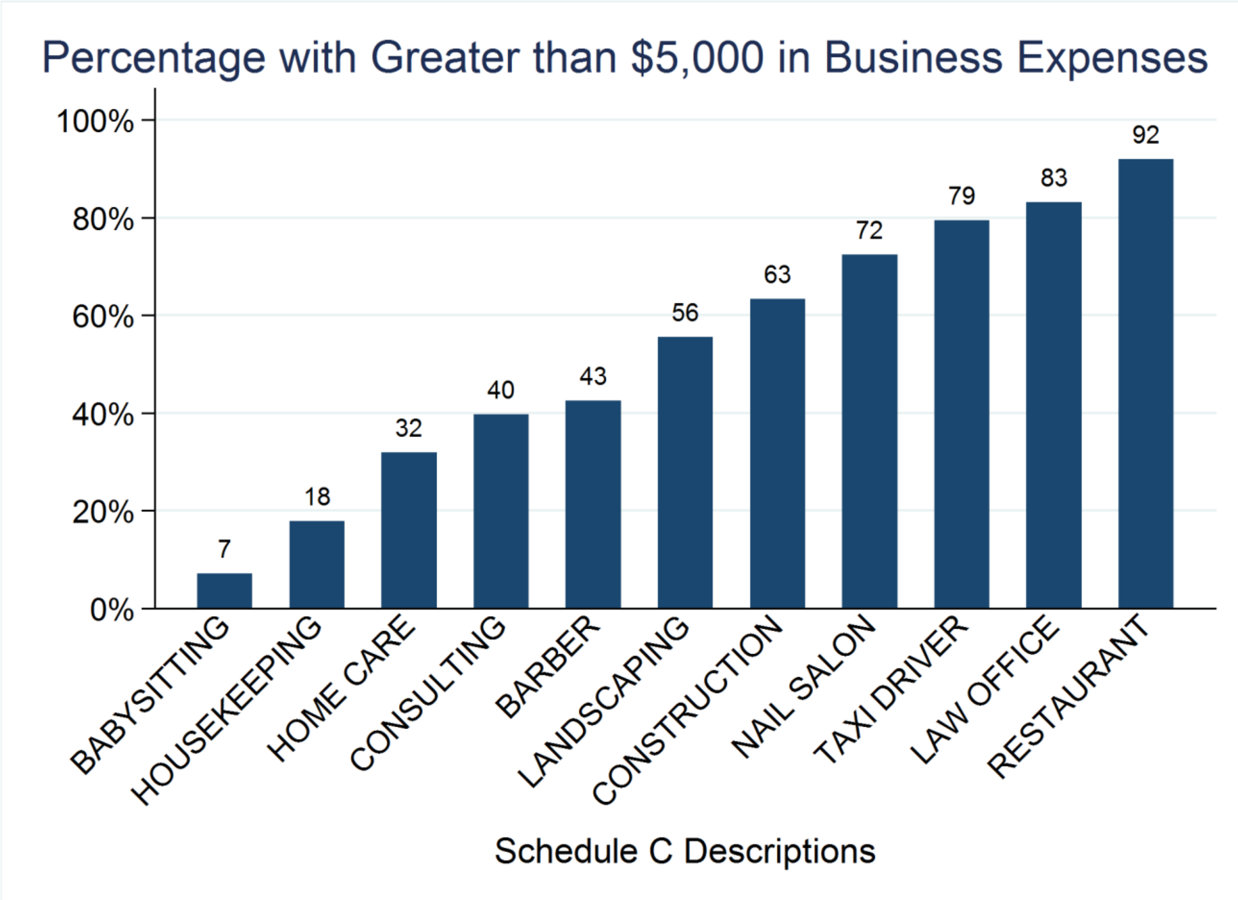
Figure 1. Distribution of Self-Employment Earnings as a Fraction of Total Earnings, 2014



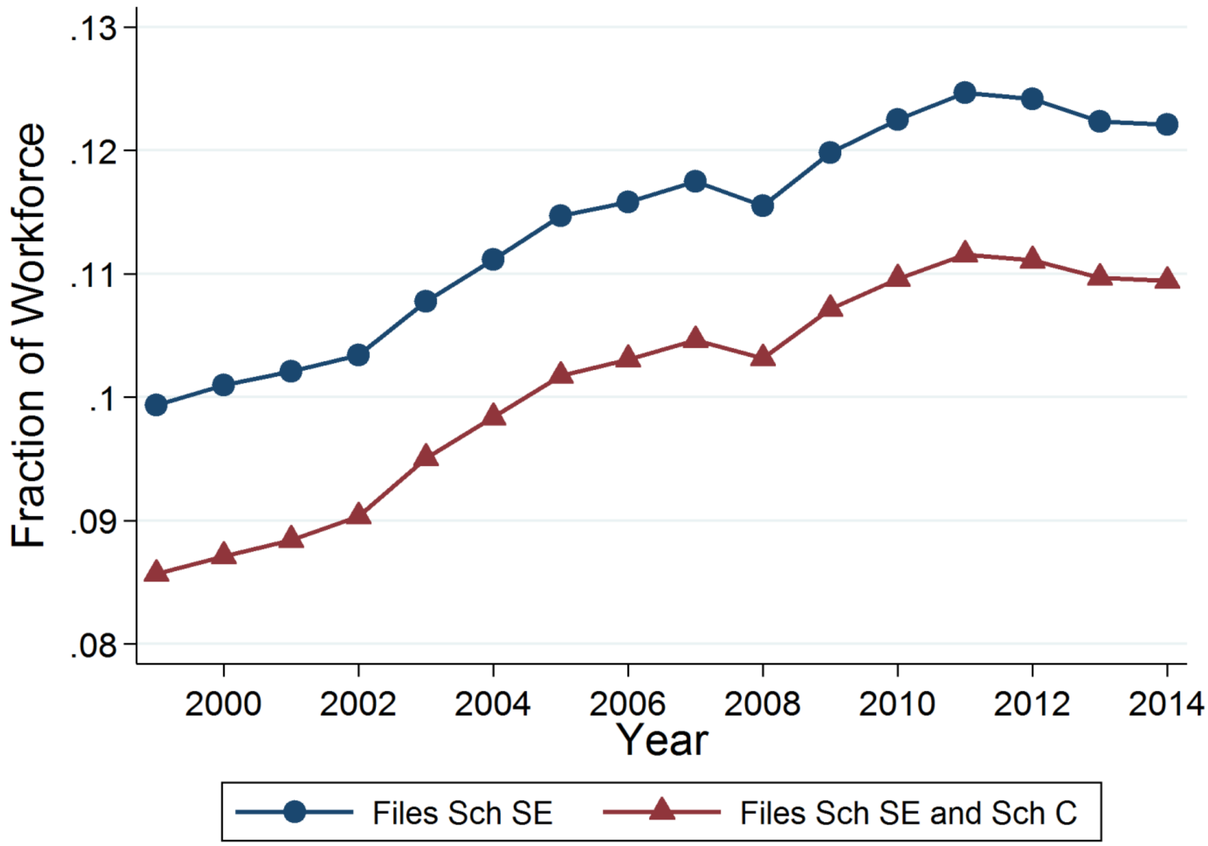
Notes: Sample restricted to self-employed individuals and excludes those with only wages. "Total Earnings" is defined as the sum of self-employment earnings and wages.

Figure 2. Fraction of Self-Reported Business Activity with Expenses Greater Than $5,000, 2014



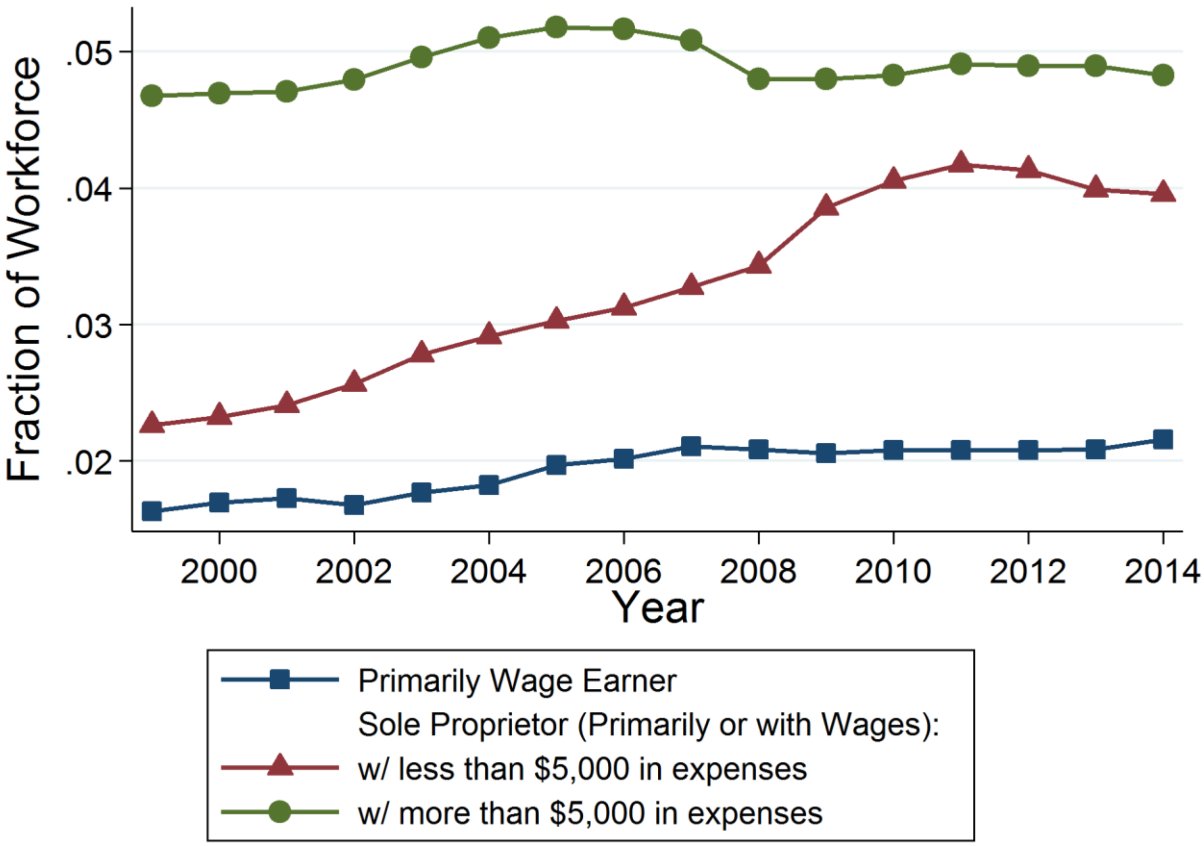
Notes: "Schedule C Descriptions" indicate several large self-reported business activities on Schedule C. Business activities are ranked by the percentage with at least $5,000 in business expenses. The bar for each business activity indicates the percentage of forms filed as that activity that report total business expenses of at least $5,000.

Figure 3. Trends in the Self-Employed



Notes: Trends are presented as a fraction of SSA-reported workforce. Figure presents the trends of individuals who file Schedule SE (with or without Schedule C) and those who file both Schedule SE and Schedule C.

Figure 4. Composition Changes in the Self-Employed



Notes: Trends are presented as the fraction of SSA-reported workforce. "Primarily Wage Earner" indicates that more than 85% of earnings are from wages. "Sole Proprietor (Primarily or with Wages)" indicates that an individual files schedule C and has less than 85% of earnings from wages. Sole proprietors with small business activity have less than $5,000 in business expenses and those with at least $5,000 in business expenses are considered to have large business activity.

Table 1: Filing Characteristics and Information Returns of Employees, the Self-Employed, and Sole Proprietors (2014)

	All individuals filing a non-dependent return				Filers with either Schedule C or Schedule SE			
2014	Total	Filed Schedule C	Received Any W2	Received Multiple W2s	Received Any 1099Misc	Received Multiple 1099Miscs	Received Any 1099K	Received Multiple 1099Ks
Total non-dependent Filers	190,166,666	24,931,810	135,376,670	38,592,610	15,525,350	4,372,540	1,826,530	412,070
Has Earnings	145,941,290	22,491,370	135,376,670	38,592,610	14,590,320	4,092,990	1,635,850	366,600
Wages Only	126,540,900	5,514,700	126,540,900	35,860,500	3,957,200	651,300	453,000	53,000
Self-employment Income Only	10,564,620	9,348,660			5,368,060	1,985,190	845,180	231,580
With Wages and SE	8,835,770	7,628,010	8,835,770	2,732,110	5,265,060	1,456,500	337,670	82,020
Filed Schedule SE	19,400,390	16,917,080	8,835,770	2,732,110	10,633,120	3,441,690	1,182,850	313,600
With Schedule C Profit	16,834,250	16,834,250	7,558,690	2,431,360	9,927,960	3,310,400	1,142,780	308,340
With Schedule E Income (but no Schedule C profit)	1,242,550	82,830	572,300	111,410	279,750	66,740	21,850	2,830
With neither Schedule C Profit nor Schedule E	1,323,590	59,590	704,780	189,340	425,410	64,550	18,220	2,430
Filed Schedule C	24,931,810	24,931,810	13,142,710	4,150,030	10,929,550	3,615,540	1,342,710	356,160
Files Schedule SE for C Profit	16,834,250	16,834,250	7,558,690	2,431,360	9,927,960	3,310,400	1,142,780	308,340
Does not file SE	8,097,560	8,097,560	5,584,020	1,718,670	1,001,590	305,140	199,930	47,820
Of those with Earnings, Fraction with:	100.0%	15.4%	92.8%	26.4%	10.0%	2.8%	1.1%	0.3%
Wages Only	86.7%	3.8%	86.7%	24.6%	2.7%	0.4%	0.3%	0.0%
Self-employment Income Only	7.2%	6.4%	0.0%	0.0%	3.7%	1.4%	0.6%	0.2%
With Wages and SE	6.1%	5.2%	6.1%	1.9%	3.6%	1.0%	0.2%	0.1%
Of those who Filed Schedule SE, fraction with:	100.0%	87.2%	45.5%	14.1%	54.8%	17.7%	6.1%	1.6%
With Schedule C Profit	86.8%	86.8%	39.0%	12.5%	51.2%	17.1%	5.9%	1.6%
With Schedule E Income (but no Schedule C profit)	6.4%	0.4%	2.9%	0.6%	1.4%	0.3%	0.1%	0.0%
With neither Schedule C Profit nor Schedule E	6.8%	0.3%	3.6%	1.0%	2.2%	0.3%	0.1%	0.0%
Of those who Filed Schedule C, fraction with:	100.0%	100.0%	52.7%	16.6%	43.8%	14.5%	5.4%	1.4%
Files Schedule SE	67.5%	67.5%	30.3%	9.8%	39.8%	13.3%	4.6%	1.2%
Does not file SE	32.5%	32.5%	22.4%	6.9%	4.0%	1.2%	0.8%	0.2%

Notes: Sample is restricted to non-dependent filers.

Table 2: Top 10 Schedule C Descriptions and by Receipt of Third Party Form

Rank	All Schedule C Filers	Received 1099K	Received 1099MISC
1	CONSULTING	CONSULTING	CONSULTING
2	REAL ESTATE	SALES	CONSTRUCTION
3	CONSTRUCTION	HAIR SALON	REAL ESTATE
4	CLEANING/JANITORIAL	SERVICE	SALES
5	SALES	TAXI DRIVER	TRUCKING/TRANSPORTATION
6	TRUCKING/TRANSPORTATION	PHYSICIAN/DENTIST/CHIRO.	SERVICE
7	SERVICE	ATTORNEY	CLEANING/JANITORIAL
8	HAIR STYLIST	RETAIL	INSURANCE
9	CHILD CARE	TRUCKING/TRANSPORTATION	CHILD CARE
10	LANDSCAPING	RESTAURANT	LANDSCAPING

Table 3: Classification of workers by source of earnings, size of business expenses, and type of activity

Based on 10% random sample of Schedule SE or Schedule C (No earnings)	Total	Schedule C Filers with Business Expenses of: Less than $5,000	$5,000 to $10,000	$10,000 to $25,000	$25,000+	Receives 1099Misc/K	OTA Small Business	Platform or "Gig" Worker
Total employees, self-employed, or sole-proprietors	148,381,730	12,830,630	3,448,800	4,346,850	4,305,530	16,707,710	9,798,230	109,700
Wage Only (does not File C or SE)	121,026,200					2,115,500		
Primarily Wage Earner	9,456,410	5,415,960	1,363,050	1,349,330	726,220	4,933,060	2,131,020	42,960
Earnings from both wages and sole proprietorship	3,452,910	2,170,070	424,380	469,440	389,020	2,107,420	1,108,040	21,440
Primarily Self-Employed Sole Proprietor	10,183,900	4,233,190	1,266,360	2,014,970	2,669,380	6,088,730	5,516,430	36,050
Primarily Partner, Farmer, or other SE filer	1,821,870					398,870		700
Files Schedule C but reports no earnings	2,440,440	1,011,410	395,010	513,110	520,910	1,064,130	1,042,740	8,550
As a share of each type of worker (denominator is column 1):								
Total employees, self-employed, or sole-proprietors	100.0%	8.6%	2.3%	2.9%	2.9%	11.26%	6.6%	0.07%
Wage Only (does not File C or SE)	81.6%					1.43%		
Primarily Wage Earner	6.4%	57.3%	14.4%	14.3%	7.7%	52.17%	22.5%	0.45%
Earnings from both wages and sole proprietorship	2.3%	62.8%	12.3%	13.6%	11.3%	61.03%	32.1%	0.62%
Primarily Self-Employed Sole Proprietor	6.9%	41.6%	12.4%	19.8%	26.2%	59.79%	54.2%	0.35%
Primarily Partner, Farmer, or other SE filer	1.2%					21.89%		
Files Schedule C but reports no earnings	1.6%	41.4%	16.2%	21.0%	21.3%	43.60%	42.7%	0.35%
As a share of each expense or activity category (denominator is row 1):								
Wage Only (does not File C or SE)	81.6%					12.7%		
Primarily Wage Earner	6.4%	42.2%	39.5%	31.0%	16.9%	29.5%	21.7%	39.2%
Earnings from both wages and sole proprietorship	2.3%	16.9%	12.3%	10.8%	9.0%	12.6%	11.3%	19.5%
Primarily Self-Employed Sole Proprietor	6.9%	33.0%	36.7%	46.4%	62.0%	36.4%	56.3%	32.9%
Primarily Partner, Farmer, or other SE filer	1.2%					2.4%		
Files Schedule C but reports no earnings	1.6%	7.9%	11.5%	11.8%	12.1%	6.4%	10.6%	7.8%

Note: “Wage only” indicates that an individual receives wages and did not file Schedule C nor SE. “Primarily wage earner” indicates an individual receives wages, filed Schedule C, and at least 85 percent of earnings were from wages. “Earnings from both wages and sole proprietorship” indicates that between 15 and 85 percent of their earnings were from wages and files both Schedule C and SE were filed. “Primarily self-employed sole proprietor” indicates that less than 15 percent of earnings were from wages and both Schedule C and SE were filed. “Partner, Farmer, or other SE filer” indicates an individual filed Schedule SE without filing Schedule C and at least 15 percent of earnings were from self-employment income. “Files Schedule C but reports no earnings” indicates that an individual filed Schedule C but reported no earnings from either wages or self-employment income reported on Schedule SE.

Table 4: Trends in Classification of Employees, the Self-Employed, and Sole-Proprietors

1% sample of Schedule SE Filers	**2000**	**2002**	**2004**	**2006**	**2008**	**2010**	**2012**	**2014**
Total Non-dependent Filers	NA	171,864,279	174,468,765	183,329,101	187,997,840	189,148,254	189,740,148	189,356,583
Work Force (from SSA)	148,114,000	148,068,992	149,439,008	153,852,992	155,435,008	150,399,008	153,632,000	158,187,008
Schedule C Filers	18,210,055	19,241,918	20,954,049	22,407,056	22,878,114	23,285,783	23,840,701	24,931,810
Schedule SE Filers	14,953,900	15,314,700	16,609,300	17,817,900	17,957,300	18,421,200	19,074,100	19,311,600
<u>Of SE Filers (excluding any C filers without SE income):</u>								
Primarily Wage Earner	2,510,100	2,482,800	2,725,300	3,101,700	3,238,900	3,129,200	3,195,400	3,416,300
Earnings from both wages and sole proprietorship	2,577,200	2,613,100	2,910,500	3,205,400	3,184,400	3,191,400	3,374,900	3,518,900
Business Activity: Less than $5,000 of Expenses	*1,252,200*	*1,313,800*	*1,504,300*	*1,693,500*	*1,815,100*	*1,926,000*	*2,042,300*	*2,132,800*
Business Activity: More than $5,000 of Expenses	*1,325,000*	*1,299,300*	*1,406,200*	*1,511,900*	*1,369,300*	*1,265,400*	*1,332,600*	*1,386,100*
Primarily Self-Employed Sole Proprietor	7,818,900	8,281,200	9,066,000	9,552,000	9,609,000	10,165,200	10,496,700	10,375,800
Business Activity: Less than $5,000 of Expenses	*2,190,000*	*2,483,000*	*2,851,400*	*3,115,400*	*3,520,200*	*4,170,800*	*4,306,900*	*4,125,200*
Business Activity: More than $5,000 of Expenses	*5,628,900*	*5,798,200*	*6,214,600*	*6,436,600*	*6,088,800*	*5,994,400*	*6,189,800*	*6,250,600*
Partner, Farmer, or other SE filer	2,047,700	1,937,600	1,907,500	1,958,800	1,925,000	1,935,400	2,007,100	2,000,600
OTA Small Business Owner (w/ SE Earnings)	6,252,300	6,450,700	7,036,900	7,533,600	7,190,600	7,020,200	7,375,000	7,597,900
SE Earnings from Schedule C Profit	12,632,800	13,032,600	14,327,700	15,440,400	15,602,500	16,079,500	16,667,600	16,926,400
<u>Size of Business Activity (all Schedule C filers with SE Income)</u>								
Less than $5,000 of Expenses	5,192,600	5,538,000	6,276,200	7,032,900	7,730,400	8,405,000	8,737,700	8,840,200
More than $5,000 of Expenses	7,713,600	7,839,100	8,425,600	8,826,200	8,301,900	8,080,800	8,329,300	8,470,800
Has 1099-MISC (SE Filers)	7,337,400	7,552,500	8,308,500	9,006,700	8,943,300	8,825,800	9,238,700	9,526,900
Has 1099-K (SE Filers							821,500	897,900

Note: Sample includes individuals filing Schedule SE. Prior to 2008, individuals filing Schedule C but not SE could not be separately identified in the data. Relative to the 2014 sample analyzed elsewhere, the excluded individuals are (1) those who have wage earnings, file schedule C (showing no profit), and thus do not file Schedule SE and (2) individuals without earnings (either from wages or self-employment) but who file Schedule C (showing no profit).

Table 4 Continued: Trends in Classification of Employees, the Self-Employed, and Sole-Proprietors, continued, as a share of the SSA workforce

Based on 1% random sample of Schedule SE Filers	**2000**	**2002**	**2004**	**2006**	**2008**	**2010**	**2012**	**2014**
Schedule C Filers	12.3%	13.0%	14.0%	14.6%	14.7%	15.5%	15.5%	15.8%
Schedule SE Filers	10.1%	10.3%	11.1%	11.6%	11.6%	12.2%	12.4%	12.2%
Of SE Filers (excluding any C filers without SE income):								
Primarily Wage Earner	1.7%	1.7%	1.8%	2.0%	2.1%	2.1%	2.1%	2.2%
Earnings from both wages and sole proprietorship	1.7%	1.8%	1.9%	2.1%	2.0%	2.1%	2.2%	2.2%
Business Activity: Less than $5,000 of Expenses	*0.8%*	*0.9%*	*1.0%*	*1.1%*	*1.2%*	*1.3%*	*1.3%*	*1.3%*
Business Activity: More than $5,000 of Expenses	*0.9%*	*0.9%*	*0.9%*	*1.0%*	*0.9%*	*0.8%*	*0.9%*	*0.9%*
Primarily Self-Employed Sole Proprietor	5.3%	5.6%	6.1%	6.2%	6.2%	6.8%	6.8%	6.6%
Business Activity: Less than $5,000 of Expenses	*1.5%*	*1.7%*	*1.9%*	*2.0%*	*2.3%*	*2.8%*	*2.8%*	*2.6%*
Business Activity: More than $5,000 of Expenses	*3.8%*	*3.9%*	*4.2%*	*4.2%*	*3.9%*	*4.0%*	*4.0%*	*4.0%*
Partner, Farmer, or other SE filer	1.4%	1.3%	1.3%	1.3%	1.2%	1.3%	1.3%	1.3%
OTA Small Business Owner (w/ SE Earnings)	4.2%	4.4%	4.7%	4.9%	4.6%	4.7%	4.8%	4.8%
SE Earnings from Schedule C Profit	8.5%	8.8%	9.6%	10.0%	10.0%	10.7%	10.8%	10.7%
Size of Business Activity (all Schedule C filers with SE Income)								
Less than $5,000 of Expenses	3.5%	3.7%	4.2%	4.6%	5.0%	5.6%	5.7%	5.6%
More than $5,000 of Expenses	5.2%	5.3%	5.6%	5.7%	5.3%	5.4%	5.4%	5.4%
Has 1099-MISC (SE Filers)	5.0%	5.1%	5.6%	5.9%	5.8%	5.9%	6.0%	6.0%
Has 1099-K (SE Filers							0.5%	0.6%

Table 5: Demographic Characteristics of Employees, the Self-Employed, and Sole-Proprietors

	Male	Married	Has Children	Age Groups					Age	
				18-24	25-39	40-54	55-64	65-100	Mean	Median
Total employees, self-employed, or sole-proprietors	51%	52%	42%	9%	33%	32%	18%	7%	44	43
Wage Only (does not File C or SE)	50%	50%	41%	10%	34%	32%	17%	6%	43	42
Primarily Wage Earner	58%	58%	45%	4%	32%	38%	19%	6%	45	45
Earnings from both wages and sole proprietorship	50%	47%	53%	10%	38%	31%	15%	7%	42	41
Business Activity: Less than $5,000 of Business Exp.	*42%*	*40%*	*56%*	*13%*	*41%*	*26%*	*13%*	*7%*	*40*	*37*
Business Activity: More than $5,000 of Business Exp.	*63%*	*59%*	*47%*	*4%*	*32%*	*38%*	*19%*	*7%*	*45*	*45*
Primarily Self-Employed Sole Proprietor	56%	56%	47%	3%	27%	34%	21%	14%	48	48
Business Activity: Less than $5,000 of Business Exp.	*43%*	*48%*	*52%*	*6%*	*32%*	*29%*	*17%*	*16%*	*47*	*45*
Business Activity: More than $5,000 of Business Exp.	*66%*	*62%*	*44%*	*2%*	*23%*	*38%*	*24%*	*13%*	*50*	*50*
Partner, Farmer, or other SE filer	68%	74%	40%	2%	20%	34%	24%	20%	52	52
Schedule C no earnings	54%	69%	28%	2%	15%	25%	23%	35%	57	59
Business Activity: Less than $5,000 of Business Exp.	*45%*	*70%*	*28%*	*2%*	*15%*	*20%*	*21%*	*42%*	*58*	*61*
Business Activity: More than $5,000 of Business Exp.	*60%*	*69%*	*28%*	*1%*	*15%*	*28%*	*24%*	*31%*	*56*	*57*
Small Business Filer	*66%*	*61%*	*44%*	*2%*	*25%*	*38%*	*22%*	*12%*	*49*	*49*
"Gig" or Platform Worker	*85%*	*46%*	*44%*	*5%*	*49%*	*33%*	*11%*	*3%*	*40*	*38*

Notes: Primarily wage earner indicates that more than 85% of earnings are from wages. "Small Business filer" is defined using the criteria in Knittel et al 2011 using a de minimis test (at least $10,000 of business expenses or profits, or $15,000 in combined business expenses and profits and a business activity test (having at least $5,000 of business expenses). A gig worker reports the occupation of their sole proprietorship to include specific words and phrases such as ride share or ridesharing; or the names of specific platform providers; or 1099 payments from those sources.

Table 6: Economic Characteristics of Employees, the Self-Employed, and Sole-Proprietors

	AGI	AGI < \$20,000	\$20,000 ≤ AGI < \$40,000	\$40,000 ≤ AGI < \$65,000	\$65,000 ≤ AGI < \$110,000	AGI ≥ \$110,000	Received 1099 Misc/K	Total Earnings	Wages	SE Earnings	Schedule C: Profit (Loss)	Schedule C: Gross Receipts	Schedule C: Expenses
Total employees, self-employed, or sole-proprietors	83,134	22%	21%	17%	20%	20%	11%	47,396	43,806	3,590	12,587	37,970	25,383
Wage Only (does not File C or SE)	79,304	19%	22%	18%	21%	20%	2%	47,325	47,325				
Primarily Wage Earner	121,607	14%	18%	18%	23%	28%	52%	70,969	69,372	1,597	(2,005)	10,945	12,950
Earnings from both wages and sole proprietorship	83,425	42%	16%	11%	13%	17%	61%	43,113	24,731	18,381	17,794	36,437	18,643
Business Activity: Less than \$5,000 of Business Exp.	*64,683*	*53%*	*14%*	*9%*	*11%*	*12%*	*53%*	*30,636*	*18,177*	*12,459*	*11,048*	*12,243*	*1,194*
Business Activity: More than \$5,000 of Business Exp.	*115,131*	*24%*	*19%*	*15%*	*17%*	*25%*	*74%*	*64,218*	*35,818*	*28,399*	*29,205*	*77,365*	*48,160*
Primarily Self-Employed Sole Proprietor	66,373	45%	17%	11%	12%	14%	60%	28,146	188	27,957	28,021	65,105	37,084
Business Activity: Less than \$5,000 of Business Exp.	*55,450*	*59%*	*13%*	*8%*	*10%*	*11%*	*46%*	*14,483*	*147*	*14,336*	*12,836*	*14,261*	*1,425*
Business Activity: More than \$5,000 of Business Exp.	*74,144*	*35%*	*20%*	*14%*	*14%*	*17%*	*70%*	*37,865*	*218*	*37,647*	*38,823*	*101,274*	*62,451*
Partner, Farmer, or other SE filer	242,859	23%	13%	13%	16%	34%	22%	108,983	15,993	92,991			
Schedule C no earnings	74,310	37%	15%	14%	16%	17%	44%				(6,240)	24,958	31,198
Business Activity: Less than \$5,000 of Business Exp.	*90,017*	*31%*	*14%*	*14%*	*19%*	*21%*	*31%*				*145*	*2,129*	*1,984*
Business Activity: More than \$5,000 of Business Exp.	*63,194*	*42%*	*15%*	*14%*	*14%*	*15%*	*52%*				*(10,759)*	*41,115*	*51,874*
Small Business Filer	88,859	30%	20%	15%	16%	20%	65%	46,853	20,500	26,353	23,651	82,658	59,008
"Gig" or Platform Worker	37,041	42%	26%	15%	12%	5%	97%	23,778	17,468	6,311	5,678	19,669	13,991

Notes: Primarily wage earner indicates that more than 85% of earnings are from wages. "Small Business filer" is defined using the criteria in Knittel et al 2011 using a de minimis test (at least \$10,000 of business expenses or profits, or \$15,000 in combined business expenses and profits and a business activity test (having at least \$5,000 of business expenses). A gig worker reports the occupation of their sole proprietorship to include specific words and phrases such as ride share or ridesharing; or the names of specific platform providers; or 1099 payments from those sources.

Table 7: Health Insurance Coverage of Employees, the Self-Employed, and Sole-Proprietors

	Covered by Health Insurance	Marketplace Coverage	SE Health Deduction	Claimed Exemption	Paid Penalty
Total employees, self-employed, or sole-proprietors	86.2%	3.6%	3.9%	8.4%	6.0%
Wage Only (does not File C or SE)	87.1%	2.9%	1.5%	7.7%	5.8%
Primarily Wage Earner	89.7%	4.2%	5.0%	5.8%	5.0%
Earnings from both wages and sole proprietorship	78.4%	7.3%	12.6%	13.8%	8.8%
Business Activity: Less than $5,000 of Business Exp.	*77.4%*	*6.1%*	*7.5%*	*15.5%*	*8.0%*
Business Activity: More than $5,000 of Business Exp.	*80.1%*	*9.5%*	*21.3%*	*10.9%*	*10.1%*
Primarily Self-Employed Sole Proprietor	74.7%	9.5%	22.3%	17.3%	9.0%
Business Activity: Less than $5,000 of Business Exp.	*74.1%*	*6.7%*	*11.8%*	*19.8%*	*7.0%*
Business Activity: More than $5,000 of Business Exp.	*75.2%*	*11.4%*	*29.8%*	*15.5%*	*10.5%*
Partner, Farmer, or other SE filer	89.3%	6.3%	33.4%	6.4%	4.8%
Schedule C no earnings	85.5%	5.5%	6.1%	11.7%	3.1%
Business Activity: Less than $5,000 of Business Exp.	*88.1%*	*4.3%*	*6.5%*	*9.6%*	*2.6%*
Business Activity: More than $5,000 of Business Exp.	*83.6%*	*6.4%*	*5.8%*	*13.2%*	*3.5%*
Small Business Filer	79.8%	9.3%	21.8%	12.4%	8.8%
"Gig" or Platform Worker	75.5%	11.0%	4.5%	15.8%	9.6%

Note: "Covered by health insurance" indicates that the taxpayer did not either pay any penalty nor claim any exemption for anyone in their tax unit. "Marketplace Coverage" indicates that the individual was covered by an healthcare marketplace exchange plan, according to Form 1095-A. "SE Health Deduction" indicates that the individual claimed an above-the-line deduction for self-employed health insurance outlays on their 1040. "Claimed Exemption" indicates that the individual claimed an exemption, according to form 8965 . "Paid Penalty" indicates that a household made a healthcare individual responsibility payment on line 61 of form 1040.

Table 8: Health Insurance Coverage by Income Class of Employees, the Self-Employed, and Sole-Proprietors

	Adjusted Gross Income Class (AGI)									
	AGI < $20,000		$20,000 ≤ AGI < $40,000		$40,000 ≤ AGI < $65,000		$65,000 ≤ AGI < $110,000		AGI > $110,000	
	Covered by Health Insurance	Marketplace Coverage	Covered by Health Insurance	Marketplace Coverage	Covered by Health Insurance	Marketplace Coverage	Covered by Health Insurance	Marketplace Coverage	Covered by Health Insurance	Marketplace Coverage
Total employees, self-employed, or sole-proprietors	69.5%	5.4%	79.8%	6.2%	89.1%	3.7%	95.8%	1.6%	98.7%	0.7%
Wage Only (does not File C or SE)	70.3%	4.3%	80.6%	5.1%	89.5%	3.0%	96.0%	1.2%	98.8%	0.5%
Primarily Wage Earner	72.8%	8.8%	81.7%	7.9%	89.1%	4.6%	95.5%	2.0%	98.7%	1.0%
Earnings from both wages and sole proprietorship	68.8%	6.5%	69.4%	14.6%	81.4%	10.5%	92.5%	5.3%	97.7%	2.2%
Business Activity: Less than $5,000 of Business Exp.	*70.4%*	*4.8%*	*70.2%*	*13.2%*	*82.6%*	*9.5%*	*93.4%*	*4.7%*	*97.9%*	*2.0%*
Business Activity: More than $5,000 of Business Exp.	*63.0%*	*12.7%*	*68.5%*	*16.3%*	*80.2%*	*11.5%*	*91.6%*	*6.0%*	*97.5%*	*2.3%*
Primarily Self-Employed Sole Proprietor	63.3%	9.2%	67.7%	17.4%	82.0%	12.0%	92.6%	5.1%	97.5%	2.4%
Business Activity: Less than $5,000 of Business Exp.	*65.8%*	*5.9%*	*69.9%*	*14.9%*	*84.2%*	*9.5%*	*94.3%*	*3.9%*	*98.1%*	*1.8%*
Business Activity: More than $5,000 of Business Exp.	*60.3%*	*13.1%*	*66.7%*	*18.5%*	*81.0%*	*13.1%*	*91.7%*	*5.7%*	*97.2%*	*2.7%*
Partner, Farmer, or other SE filer	79.2%	7.1%	79.2%	15.3%	87.9%	10.3%	94.1%	4.6%	98.3%	1.5%
Schedule C no earnings	73.3%	8.0%	84.6%	8.1%	91.3%	5.0%	96.1%	2.2%	97.7%	1.5%
Business Activity: Less than $5,000 of Business Exp.	*76.5%*	*6.0%*	*84.7%*	*7.5%*	*91.3%*	*4.6%*	*96.3%*	*2.0%*	*98.1%*	*1.3%*
Business Activity: More than $5,000 of Business Exp.	*71.6%*	*9.1%*	*84.5%*	*8.4%*	*91.2%*	*5.3%*	*95.8%*	*2.5%*	*97.3%*	*1.7%*
Small Business Filer	64.3%	12.2%	72.4%	14.9%	83.6%	10.3%	92.8%	4.8%	97.5%	2.2%
"Gig" or Platform Worker	65.9%	12.9%	75.2%	14.4%	83.9%	8.0%	92.7%	3.6%	95.0%	2.1%

Note: "Covered by health insurance" indicates that the taxpayer did not either pay any penalty nor claim any exemption for anyone in their tax unit. "Marketplace Coverage" indicates that the individual was covered by an healthcare marketplace exchange plan, according to Form 1095-A.

Table 9: Retirement Coverage of Employees, the Self-Employed, and Sole-Proprietors

	Made Any Contribution	Offered Employer Plan	Contributed to Employer Plan	Contributed to IRA	Contributed to Traditional IRA	Contributed to Roth IRA	Had a Positive IRA Balance
Total employees, self-employed, or sole-proprietors	38.3%	47.9%	34.8%	6.2%	2.5%	3.8%	27.4%
Wage Only (does not File C or SE)	41.9%	53.4%	38.9%	5.8%	2.2%	3.8%	25.8%
Primarily Wage Earner	44.9%	56.0%	39.9%	8.7%	3.7%	5.3%	36.5%
Earnings from both wages and sole proprietorship	21.3%	24.6%	15.3%	7.6%	3.8%	4.1%	28.8%
Business Activity: Less than $5,000 of Business Exp.	*17.3%*	*21.0%*	*12.6%*	*6.1%*	*2.8%*	*3.4%*	*23.2%*
Business Activity: More than $5,000 of Business Exp.	*27.9%*	*30.6%*	*20.0%*	*10.2%*	*5.4%*	*5.1%*	*38.2%*
Primarily Self-Employed Sole Proprietor	7.8%	0.8%	0.3%	7.6%	4.2%	3.5%	31.1%
Business Activity: Less than $5,000 of Business Exp.	*5.0%*	*0.7%*	*0.2%*	*4.8%*	*2.5%*	*2.4%*	*23.8%*
Business Activity: More than $5,000 of Business Exp.	*9.8%*	*0.8%*	*0.3%*	*9.5%*	*5.5%*	*4.3%*	*36.3%*
Partner, Farmer, or other SE filer	17.0%	11.0%	7.2%	10.7%	6.4%	4.5%	47.6%
Schedule C no earnings	4.4%	0.0%	0.0%	4.4%	2.2%	2.2%	38.8%
Business Activity: Less than $5,000 of Business Exp.	*4.3%*	*0.0%*	*0.0%*	*4.3%*	*2.2%*	*2.2%*	*43.8%*
Business Activity: More than $5,000 of Business Exp.	*4.4%*	*0.0%*	*0.0%*	*4.4%*	*2.3%*	*2.2%*	*35.2%*
Small Business Filer	18.8%	15.6%	10.9%	8.8%	4.8%	4.2%	35.8%
"Gig" or Platform Worker	18.8%	22.3%	15.9%	4.1%	1.3%	2.9%	14.8%

Note: "Made Any Contribution" indicates individual contributed to an Employer Plan or made a contribution to a traditional or roth IRA. "Offered Employer Plan" indicates that the retirement plan indicator is checked on Form W-2, Box 13. "Contributed to Employer Plan" indicates that the individual had a positive amount of elective deferrals on Form W-2, Box 12. "Contributed to IRA" indicates an individual either contributed to a Traditional IRA and/or a Roth IRA. "Contributed to Traditional IRA" indicates a positive amount of contribution to a traditional IRA on Form 5498, Box 1. "Contributed to Roth IRA" indicates a positive amount of contribution to a Roth IRA on Form 5498, box 10. "Had a Positive IRA Balance" indicates a positive amount of Fair Market Value of all accounts at the end of year on Form 5498, Box 5.

Table 10: Retirement Coverage by Income Class of Employees, the Self-Employed, and Sole-Proprietors

	Contributions to Retirement Plans by Adjusted Gross Income Class (AGI)									
	AGI < $20,000		$20,000 ≤ AGI < $40,000		$40,000 ≤ AGI < $65,000		$65,000 ≤ AGI < $110,000		AGI > $110,000	
	Employer Plan	Any Plan	Employer Plan	Any Plan	Employer Plan	Any Plan	Employer Plan	Any Plan	Employer Plan	Any Plan
All workers	8.5%	9.8%	27.1%	29.5%	38.6%	42.3%	46.6%	51.5%	55.8%	61.7%
Wage Only (does not File C or SE)	10.4%	11.4%	29.7%	31.5%	42.0%	45.0%	50.6%	54.6%	61.9%	66.8%
Primarily Wage Earner	15.5%	17.9%	29.3%	32.6%	37.7%	42.7%	45.1%	51.3%	55.9%	62.3%
Earnings from both wages and sole proprietorship	4.9%	6.7%	12.3%	18.1%	18.8%	27.1%	24.3%	35.1%	35.0%	45.7%
Business Activity: Less than $5,000 of Business Exp.	*4.7%*	*6.0%*	*12.5%*	*17.9%*	*18.8%*	*26.8%*	*23.0%*	*33.4%*	*32.8%*	*44.2%*
Business Activity: More than $5,000 of Business Exp.	*5.7%*	*9.6%*	*12.1%*	*18.3%*	*18.7%*	*27.6%*	*25.6%*	*36.9%*	*36.9%*	*47.0%*
Primarily Self-Employed Sole Proprietor	0.1%	2.7%	0.2%	7.0%	0.3%	11.1%	0.4%	14.9%	0.9%	15.9%
Business Activity: Less than $5,000 of Business Exp.	*0.2%*	*1.5%*	*0.2%*	*5.1%*	*0.3%*	*8.5%*	*0.3%*	*12.0%*	*0.7%*	*14.8%*
Business Activity: More than $5,000 of Business Exp.	*0.1%*	*4.1%*	*0.2%*	*7.9%*	*0.3%*	*12.2%*	*0.4%*	*16.3%*	*1.0%*	*16.5%*
Partner, Farmer, or other SE filer	1.5%	4.7%	5.3%	13.9%	7.8%	19.5%	9.2%	22.8%	10.6%	22.8%
Schedule C no earnings	0.0%	2.1%	0.0%	3.3%	0.0%	4.6%	0.0%	6.0%	0.0%	8.4%
Business Activity: Less than $5,000 of Business Exp.	*0.0%*	*1.4%*	*0.0%*	*2.8%*	*0.0%*	*3.9%*	*0.0%*	*5.8%*	*0.0%*	*8.5%*
Business Activity: More than $5,000 of Business Exp.	*0.0%*	*2.4%*	*0.0%*	*3.7%*	*0.0%*	*5.1%*	*0.0%*	*6.3%*	*0.0%*	*8.2%*
Small Business Filer	3.6%	7.3%	9.1%	15.3%	11.7%	21.0%	14.6%	26.6%	20.4%	32.0%
"Gig" or Platform Worker	3.9%	5.9%	14.9%	17.1%	30.2%	34.8%	33.4%	37.7%	38.6%	45.7%

Note: "Made Any Contribution" indicates individual contributed to an Employer Plan or made a contribution to a traditional or roth IRA. "Contributed to Employer Plan" indicates that the individual had a positive amount of elective deferrals on Form W-2, Box 12.

Appendix I: Sources of Data

The primary source for this analysis are administrative tax records including information from individual returns (e.g. form 1040, 1040A, and 1040EZ); Schedule C *Profit or loss from business*; Schedule SE *Self-Employment Tax*; and information returns including Form W-2 *Wage and Tax Statement*, 1099-MISC *Miscellaneous Income,* 1099-K *Payment Card and Third Party Network Transactions; and* 1095-A *Health Insurance Marketplace Statement*.

These forms are designed to facilitate tax administration and compliance for income and payroll taxes, and hence have both advantages and disadvantages for understanding the characteristics of the self-employed population.

The primary focus of this analysis are individuals who file both Schedule C, the form for reporting a profit or loss from operation of a sole-proprietorship, and Schedule SE, which is used to report earned income subject to Self-Employment Tax. Individuals that report a profit from a sole proprietorship are generally required to pay self-employment tax, and thus meet one potential definition of 'self-employed.'

Some individuals who file Schedule C incur a business loss and hence produce no self-employment income. These filers are not required to file Schedule SE. (In fact, the filing threshold for Schedule SE is $400, so filers with Schedule C profit less than $400 generally do not file a SE.) About 12.5 percent of Schedule C filers do not file a corresponding SE. These individuals may consider themselves self-employed, but will not appear as Schedule SE filers in administrative records (including, for instance, Social Security Administration employment records).

Schedule SE is used to assess self-employment tax for not just sole proprietors, but also income of partners in partnerships (e.g. from Schedule K-1 (Form 1065), box 14), farm income (from Schedule F, farm profit or loss), and income of ministers and members of religious orders. Roughly 12 percent of individuals filing schedule SE appear to use the form to report income from sources other than Schedule C. These individuals may identify as self-employed business owners, partners, or employees or executives of partnerships.

To provide more detail on their sources of income and benefits, we match information returns received to individuals with earnings or filing Schedule C. Paid work can be reported on any of three types of information returns summarizing the amounts of payments they received in the previous year:

W-2s report payments to workers considered employees of the business for whom they provided services. This form reports, among other items, their wages and withholding of income taxes and employment taxes. Every employer engaged in a trade or business who pays remuneration, including noncash payments, of $600 or more for the year for services performed by an employee must provide their workers with a W-2.

1099-MISC – Miscellaneous Income with "nonemployee compensation" (NEC).[25] Companies send these to workers if the company considers the individual an independent contractor who does not meet the tests for classification as an employee. This form reports the gross payments from the firm to the worker, with no withholding of income or employment taxes, except as backup withholding if a valid social security number or other taxpayer identification number (TIN) is missing or erroneous.

The main determinant of whether someone is an independent contractor or employee is whether the service recipient (the employer) has the right to control not only the result of the worker's services but also the means by which the worker accomplishes that result. The issue of worker classification is often complex and contentious and has been the subject of an Administration Budget proposal for several years.

Reporting is required if nonemployee compensation equals $600 or more. Nonemployee compensation includes many disparate types of payments including: payments for professional services (e.g., legal fees); golden parachute payments; payments for working interests in gas and oil; directors' fees; certain travel reimbursements; and fish purchased for cash.

1099-MISC can be issued to individuals or businesses but generally not to corporations except for attorneys' fees. A contract worker can receive Form 1099-MISCs based on either an individual SSN or an EIN. It is difficult to know whether increases in Form 1099-MISCs to EINs reflect an increase in business-to-business payments (like increases in reporting of legal fees made to law firms) or increases in self-employment and contracting (where the individual recipient has obtained an EIN). 1099-MISC –

[25] In discussing the 1099-MISC, we sometimes refer to the 1099-MISC and sometimes a 1099-MISC – NEC.

NEC are issued for payments made in the course of a trade or business (broadly defined). Payments for merchandise and personal payments are not reportable.

The dollar values are gross payments to nonemployees and thus not necessarily labor or wage income. For instance, if a company paid a caterer $10,000 for catering an event and issued a Form 1099-MISC for $10,000, that payment might reflect $9,000 of food and employee wages but only $1,000 in compensation to the caterer. In this regard, reporting of Form 1099-MISCs is required only of payments made in the course of a trade or business. While a contract worker could receive a Form 1099-MISC from a business, a self-employed handyman will not receive a Form 1099-MISC from a homeowner. In addition, only payments that total $600 or more to an individual payee need be reported, further limiting the coverage of Form 1099-MISC reporting.

In 2000, 15.5 million individuals were issued Form 1099-MISC with nonemployee compensation, and this figure grew to 17.8 million in 2012, an increase of about 15 percent, most of which occurred by 2005, before the advent of many well-known on-demand economy companies. Over the same time period (2000 – 2012), the number of individual income tax returns increased by about 12 percent, an increase similar to the growth in individuals issued Forms 1099-MISC with nonemployee compensation.

1099-K – Payment Card and Third Party Network Transactions reports information on payments made by debit and credit card companies and third-party settlement organizations (TPSO) to providers of services or goods. TPSOs are central organizations that make payments to payees of third-party network transactions. The TPSO typically provides a framework of some sort (e.g., a web site) through which customers and service providers make transactions. The TPSO collects the payments made by customers and then sends the proceeds to the service suppliers. Well-known examples include PayPal and Amazon. Form 1099-K was introduced in 2011 as a result of legislation enacted earlier by Congress.

Reporting by TPSOs is required only if payments exceed $20,000 and 200 transactions per payee. (Workers are still required to include payments under $20,000 in their self-employment earnings.) There is no de minimis threshold for payment card transactions. The form reports all credit, debit, and third-party network transactions in the economy. Hence, form 1099-Ks report not just most forms of e-commerce but all types of payment card transactions, such as using a credit or debit card at a brick-and-mortar grocery store, restaurant, or other retailer.

If a payment settlement entity (PSE) has contracted with an electronic payment facilitator (EPF) to make the payments to the merchant on its behalf, the EPF needs to file the 1099-K.

Note that while these information returns generally provide the bulk of reported earnings, payments below $600 need not be reported on W-2s or 1099-MISCs, and 1099-Ks need not be filed for recipients of less than $20,000 in payment and few than 200 transactions. Payments below these thresholds will be missed. These payments should still be reported on the worker's 1040 tax return as would be cash payments but compliance is likely lower on payments not subject to information return reporting. However, these different reporting levels may make it difficult to get a complete estimate of third-party reported receipts among some taxpayers.

By their nature, W-2 payments will generally appear on line 7 of the 1040 tax return. 1099-MISC and 1099-K payments to individuals generally are treated as Schedule C or C-EZ sole proprietorship business income and would be reported on 1040 line 12, after deducting any expenses connected to the earning of those payments. That amount of net income would also generally be subject to self-employment taxes and reported on Schedule SE line 2.

These information returns generally show an EIN for the payer and an SSN for the recipient. While some issuers may have SSNs (some sole proprietors) and some recipients may have EINS (partnerships or sole proprietorships and lawyers organized as corporations), we focus on the standard situation where information returns are issued by a business EIN to an individual's SSN. One of our goals is to trace back to the business and collect information on characteristics (such as size, industry, and type of entity) of the businesses issuing the different types of information returns.
In 2013, 5.5 million individuals and businesses were issued Form 1099-Ks, less than a 2-percent increase over the 5.4 million sent in 2011. In 2013, $5.4 trillion in payment card or third-party network transactions were reported on Form 1099-Ks. This was an increase in volume of 15 percent over 2011, the first year that the form was used.

Appendix II: Tax Filing and Compliance

Forms 1099-MISC and 1099-K are intended to promote tax compliance and ease administration by providing third-party reporting on payments to business owners. Form 1099MISC, Box 7 Nonemployee compensation is intended to provide information on payments to non-employees, and business filers are required to issue 1099-MISC to individuals to whom they pay at least $600 of payments. The 1099-K is intended to show payment card and providers and third party network transactions. Payment card settlement reporting is required for all payments; a de minimus test requires only that third party payment processers to issue Ks to individuals that received at least $20,000 or payments and had at least 200 transactions. In practice, many third party payment processers issue Ks to all their participants.

Appendix Figures A1 and A2 show the distribution of dollar amounts on the largest 1099-MISC and 1099-Ks received by individual taxpayers filing schedule C. Appendix Figure A1, which shows the distribution of dollar amounts of 1099-MISC, shows that relatively few payers issue MISCs for amounts less than $600; the spike at $600 shows about 6 percent of all recipients of MISCs receive a MISC for between $600 and $899. More generally, MISCs are often issued in round numbers—as might be natural for agreement between an employer and a contractor over the cost of a project—which explains the 'spikes' at those round dollar amounts (e.g. $5,000, $10,000, $15,000).

In contrast, Appendix Figure A2 shows that 1099-Ks tend to be issued for relatively small dollar amounts, with almost 9 percent issued for less than $1,000. Moreover, while there is a clear increase in the number of 1099-Ks at $20,000 the discontinuity is modest, with about 0.9 percent of all Ks issued for between $19,000 and $19,999 and 1.3 percent issued for between $20,000 and $20,999. In addition, Ks tend not to show bunching at round numbers, which is intuitive as the K amounts generally reflect the sum of payments for individual transactions (e.g. the sum of payments for a driver's ride sharing services, or total credit card payments at a nail salon).

Indeed, taxpayers receive Ks for diverse reasons. While the K was originally conceived for monitoring payments from banks or credit card companies to monitor receipts at businesses, the K is also used to report payments through online platforms or online third-party payment networks. As a result, recipients of Ks include retailers, restaurants, dentists, doctors, chiropractors, online merchants or retailers, and gig economy workers.

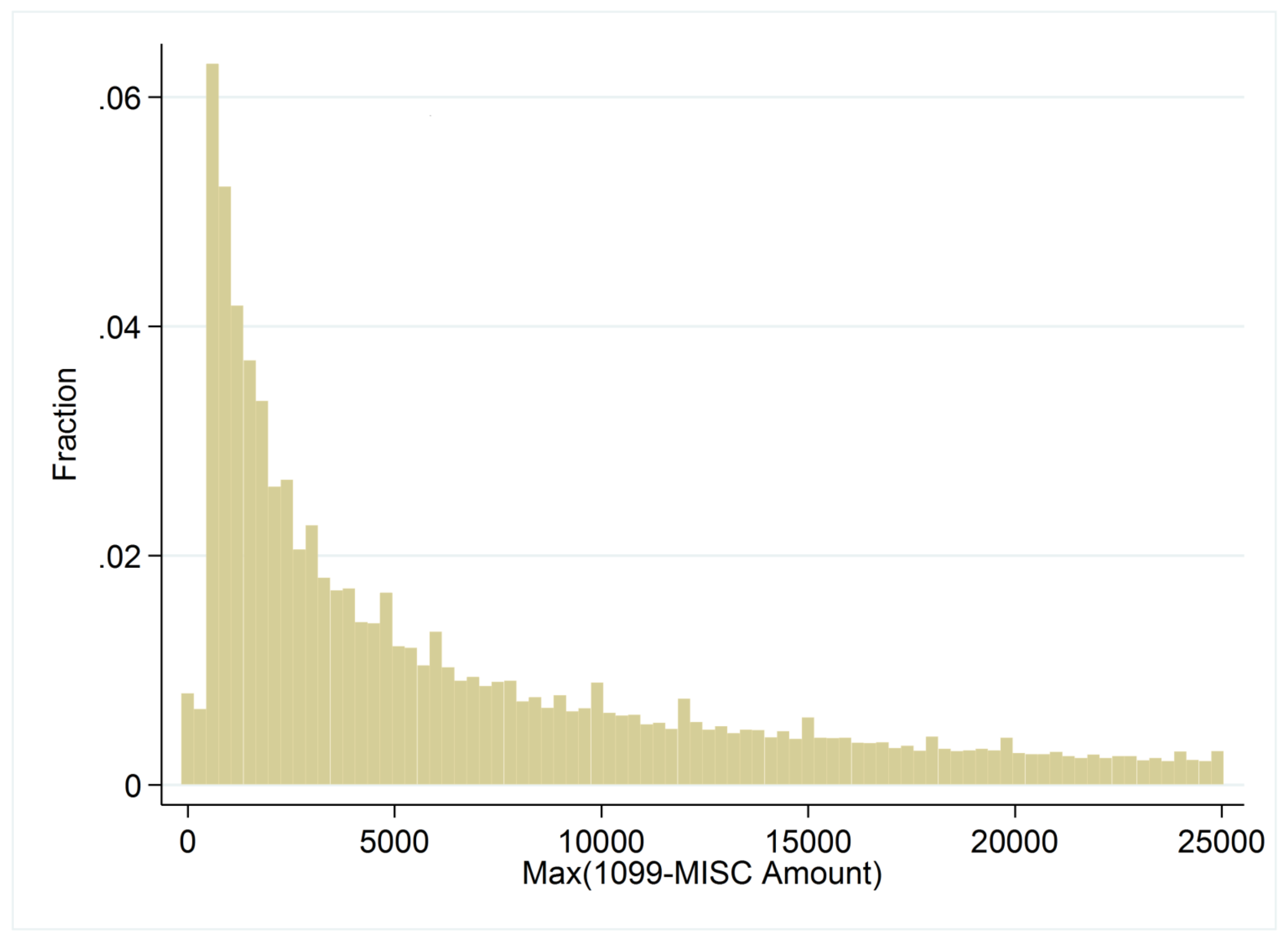
The purpose of the 1099 reporting is to reinforce tax compliance by providing third-party reporting on payments to individuals that would otherwise not be subject to wage reporting or other tax withholding. While the data we use in this paper is conditional on having filed Schedule C, and thus is not designed to measure the effect of 1099 reporting on whether a person files a return, it provides some indication of how the dollar amounts reported on 1099s affect the amounts reported on Schedule C, including receipts, deductions, profit or loss, and thus income subject to income and payroll taxes.

Appendix Table A3 below shows basic regression coefficients of payments reported on the relevant 1099 to receipts and profits reported by business owners in different activities. In practice, the 1099-K and 1099-MISC have different implications for sole proprietors depending on how their businesses are structured and the types of services they provide.

For instance, among small business owners filing Schedule C, each dollar of 1099-K payments is associated with $1.06 dollars of additional receipts, which would be consistent with 1099-Ks increasing reporting and providing a proxy for the scale of the business (e.g. businesses with a lot of receipts from credit card transactions are also likely to have a lot of cash transactions). However, each $1 of K payments is associated with only $0.13 of additional profit (suggesting, for instance, that a sizable share of gross receipts covers costs of goods sold or other business expenses).

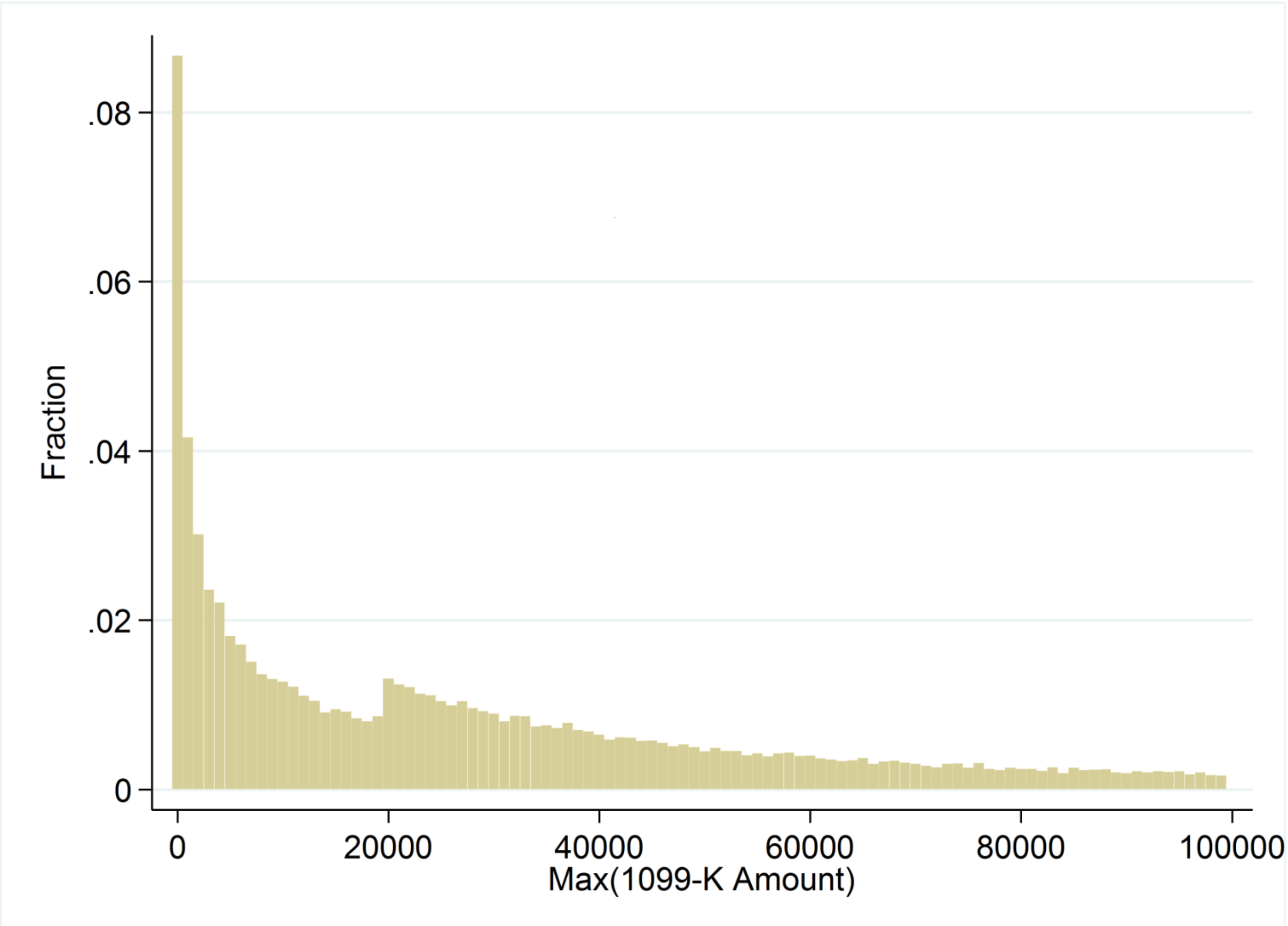
Among Schedule C filers with fewer than $5,000 of business expenses—payments reported on Ks and MISCs also translate almost one-for-one with higher receipts. For 1099-MISC recipients, essentially all of these receipts represent profit (or compensation for labor services). For 1099-K payments, each $1 of K payments is associated with $0.26 of higher profits. Among “gig economy workers,” there is a similarly tight relationship between payments from 1099s and receipts, and a similar pattern of higher reported receipts translating into higher reported taxable profits. These estimates are consistent with the more general experience with third-party reporting, which suggests that they encourage voluntary tax compliance.

Appendix Figure A1. Distribution of 1099-MISC Dollar Amounts, 2014.



Appendix Figure A1 presents the distribution of the largest dollar amount that an individual receives on a 1099-MISC in 2014. The sample is restricted to individuals who filed Schedule C in 2014. The width of each bin is $300 and approximately the top 25% of values are truncated.

Appendix Figure A2. Distribution of 1099-K Dollar Amounts, 2014.



Appendix Figure A2 presents the distribution of the largest dollar amount that an individual receives on a 1099-K in 2014. The sample is restricted to individuals who filed Schedule C in 2014. The width of each bin is $1,000 and approximately the top 25% of values are truncated.

Appendix Table 1: How Information Reporting affects reported receipts and Schedule C Profits

	"Gig Economy" Workers		Small Business Owners		Contractors (less than $5,000 of business deductions)	
	Receipts	Profit or Loss	Receipts	Profit or Loss	Receipts	Profit or Loss
1099-MISC NEC	0.900	0.265	0.762	0.394	0.997	0.925
	(0.0150)	(0.00891)	(0.00158)	(0.00132)	(0.00124)	(0.00279)
1099-K Payments	0.949	0.168	1.063	0.134	1.113	0.258
	(0.0146)	(0.00864)	(0.00289)	(0.00241)	(0.00677)	(0.0152)
Any 1099 Income	217.5	874.7	-19,133	-6,408	-2,976	-6,958
	(1,319)	(782.5)	(126.5)	(105.7)	(28.38)	(63.88)
Constant	8,373	3,257	49,621	14,196	5,096	7,434
	(1,281)	(759.7)	(87.73)	(73.29)	(14.98)	(33.72)
N	5,665	5,665	618,861	618,861	705,418	705,418
R^2	0.563	0.174	0.343	0.135	0.510	0.136
Memo, mean of ind. var:						
1099-K	*4,129*		*21,293*		*3,153*	
1099-MISC NEC	*10,895*		*4,131*		*49*	
Any 1099	*98%*		*69%*		*53%*	

Notes: 1099 dollar amounts are unedited and include duplicates, dollar values where the decimal place is missing, or other errors. Thus, the sample restricted to observations where the total payments on 1099 are less than $250,000, the total value is less than or equal to reported total gross receipts, and the individual has received fewer than three 1099s of either type.

Appendix III: Detail Health Coverage by State and Employment Status

Because marketplace coverage appears to be an important source of health insurance coverage for self-employed individuals and small business owners, appendix Table 2 provides additional estimates of enrollment in marketplace coverage by state. For each category of worker, the first column provides an estimate of the number of individual workers relying on marketplace coverage for health insurance in each state. The second column shows the share of each category of worker with marketplace coverage. And the third column shows the share of insured workers in that category whose insurance is provided by the marketplace.

For example, in Florida, about 178,000 self-employed sole-proprietors have coverage from the marketplace for themselves (these estimates do not include the marketplace coverage for their spouses or children). Those 178,000 individuals represented about 15 percent of all self-employed individuals in the state. About 20 percent of all Florida's self-employed workers with health insurance received that coverage from the marketplace.

Appendix Table 3 tabulates the number of individual workers with marketplace coverage by employment status and income class for the nation as a whole. The top panel shows that about 1.3 million self-employed, sole-proprietors purchased Marketplace coverage for themselves (that figure does not include their spouses or children). Nationwide, those 1.3 million individuals represented about 8 percent of the total self-employed population and was the source of insurance for 11 percent of those with health insurance. However, the rates of coverage vary considerably by income class. For instance, about 21 percent of self-employed individuals with health insurance whose income was between $20,000 and $40,000 had purchased their insurance from a Marketplace.

Appendix Table 4 (online) provides tabulations of the total number of workers, the number of workers with health insurance coverage, and number with marketplace coverage by income (AGI) and type of worker.

Appendix Table 2: Marketplace Enrollment Rates for Self-Employed Workers and Small Business Owners, 2014

	Self-Employed, Sole Proprietors*			Small Business Owners**		
State	Number w/Marketplace coverage	Share with Marketplace Coverage	Share with Marketplace Coverage Among Workers with Any Health Coverage	Number w/Marketplace coverage	Share with Marketplace Coverage	Share with Marketplace Coverage Among Workers with Any Health Coverage
Alabama	14,400	7%	9%	9,790	7%	9%
Alaska	2,220	6%	8%	1,450	6%	8%
Arizona	16,080	5%	7%	11,110	6%	8%
Arkansas	6,030	5%	6%	4,500	6%	7%
California	276,300	12%	15%	204,180	14%	16%
Colorado	22,720	8%	9%	15,030	8%	10%
Connecticut	14,690	8%	9%	10,750	8%	9%
Delaware	2,160	6%	8%	1,560	8%	9%
District of Columbia	3,380	10%	11%	2,280	13%	14%
Florida	177,940	15%	20%	99,540	15%	19%
Georgia	54,330	10%	14%	35,580	10%	12%
Hawaii	2,240	3%	4%	1,820	4%	4%
Idaho	11,330	15%	19%	7,860	16%	21%
Illinois	33,700	5%	7%	20,500	6%	8%
Indiana	17,780	7%	9%	11,930	8%	10%
Iowa	4,260	3%	4%	2,840	3%	4%
Kansas	8,280	7%	8%	5,290	7%	8%
Kentucky	10,520	6%	7%	7,430	7%	8%
Louisiana	15,120	7%	9%	10,360	7%	8%
Maine	10,030	13%	16%	7,090	14%	17%
Maryland	12,110	4%	5%	8,530	4%	5%
Massachusetts	8,620	3%	3%	6,300	3%	3%
Michigan	37,590	8%	10%	24,050	10%	11%
Minnesota	7,230	3%	3%	4,930	3%	3%
Mississippi	8,470	6%	8%	5,160	6%	8%
Missouri	21,550	8%	10%	14,810	9%	12%
Montana	6,800	12%	16%	5,120	14%	19%
Nebraska	5,520	7%	8%	3,830	7%	9%
Nevada	6,730	5%	7%	5,110	6%	8%
New Hampshire	8,450	12%	14%	6,550	13%	16%
New Jersey	27,130	6%	8%	19,330	7%	8%
New Mexico	5,060	6%	7%	3,210	6%	8%
New York	69,660	6%	8%	50,400	9%	10%
North Carolina	54,960	11%	15%	34,650	12%	15%
North Dakota	1,560	5%	6%	1,230	6%	6%
Ohio	22,870	5%	5%	15,510	6%	6%
Oklahoma	11,290	6%	8%	7,560	7%	8%
Oregon	15,000	8%	9%	10,270	9%	10%
Pennsylvania	51,760	10%	11%	34,340	11%	12%
Rhode Island	4,900	10%	11%	3,530	12%	13%
South Carolina	16,180	7%	10%	11,220	8%	10%
South Dakota	1,970	5%	6%	1,340	5%	6%
Tennessee	25,350	7%	9%	16,960	8%	10%
Texas	114,390	8%	12%	78,080	8%	11%
Utah	9,540	9%	11%	6,210	10%	12%
Vermont	7,180	17%	19%	5,610	20%	22%
Virginia	33,340	9%	11%	20,990	9%	11%
Washington	30,060	10%	11%	21,120	11%	13%
West Virginia	2,700	4%	5%	1,650	5%	6%
Wisconsin	18,060	8%	9%	13,110	9%	11%
Wyoming	1,850	7%	9%	1,150	6%	8%
US Total	**1,351,390**	**8%**	**11%**	**912,740**	**9%**	**11%**

* Self-employed, sole proprietors are workers who earn at least 85 percent of their earnings from operating a sole-proprietorship.

** Small business owner is defined using the criteria in Knittel et al 2011 using a de minimis test (at least $10,000 of business expenses or profits, or $15,000 in combined business expenses and profits and a business activity test (having at least $5,000 of business expenses).

Appendix Table 3: Marketplace Enrollment Rates for Self-Employed Workers and Small Business Owners, 2014

	Number w/Marketplace coverage	Share with Marketplace Coverage	Share with Marketplace Coverage Among Workers with Any Health Coverage
Self-Employed, Sole Proprietors*			
Income Group			
< $20,000	586,560	9%	12%
$20,000-$40,000	413,650	16%	21%
$40,000-$65,000	199,190	10%	12%
$65,000-$110,000	97,960	5%	5%
Above $110,000	54,030	2%	2%
All	1,351,390	8%	11%
Small Business Owners**			
Income Group			
< $20,000	355,680	12%	18%
$20,000-$40,000	292,570	15%	19%
$40,000-$65,000	147,810	10%	12%
$65,000-$110,000	73,930	5%	5%
Above $110,000	42,750	2%	2%
All	912,740	9%	11%
Gig Economy Workers***			
Income Group			
< $20,000	6,010	13%	18%
$20,000-$40,000	4,130	14%	18%
$40,000-$65,000	1,330	8%	9%
$65,000-$110,000	460	4%	4%
Above $110,000	110	2%	2%
All	12,040	11%	14%
Compare: Employees	**3,851,260**	**3%**	**3%**

* Self-employed, sole proprietors are workers who earn at least 85 percent of their earnings from operating a sole-proprietorship.

** Small business owner is defined using the criteria in Knittel et al 2011 using a de minimis test (at least $10,000 of business expenses or profits, or $15,000 in combined business expenses and profits and a business activity test (having at least $5,000 of business expenses).

*** “Gig economy workers” are those whose self-employment income derives in part or in whole from activities conducted through an online platform