



Article

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Using earnings history to characterize quality of nonemployee employment

We use the 2014 and 2018 panels of the Survey of Income and Program Participation to map out the prevalence of employee and nonemployee earnings among workers. Employee earnings are from a job or incorporated business, while nonemployee earnings are from an unincorporated business or other work arrangement. We devise a typology of workers based on the composition of their earnings from employee and nonemployee sources; describe workers of each type along dimensions of demographics, financial well-being, and beneficiary status; and use regressions to identify key predictors of earnings' sources.

Do nonemployee work arrangements reflect the preference of the firm to save money or the worker to gain flexibility? In this article, we study which workers have nonemployee employment and use the characteristics of those work arrangements to determine whether it is the firm or the worker that is driving the classification.

To begin, we define some terms. "Employment" broadly refers to the relationship in which a person sells labor in exchange for compensation. "Employee employment" covers specific work arrangements in which the person selling labor is legally recognized as an employee of a firm. "Nonemployee employment" covers an array of work arrangements, including independent contracting and working "under the table." Underlying the employee and nonemployee distinction is the jurisdiction and application of labor law and whether earnings are subject to employer-paid or employee-paid payroll taxes. Because employee workers and nonemployee workers are treated differently under the law, employers could misclassify employees as nonemployees in order to reduce their own liability and save money.¹

An individual's motivations for pursuing nonemployee work arrangements are well-documented: nonemployee work arrangements can offer certain benefits, such as flexible scheduling, diversity in tasks, ability to work from home, and key supplemental income. The downsides are equally well-documented: nonemployee work arrangements often lack (employer-provided) health insurance or retirement benefits, protection under labor regulations, or access to paid time off.² A separate motivation in seeking nonemployee work arrangements is to supplement income from employee jobs, and the rise in alternative work arrangements (including nonemployee) is credited in part to an increase in workers who are seeking supplemental earnings.³

To better understand the characteristics of each type of work arrangement, we define work arrangements as either "employee" or "nonemployee." We show the prevalence of employee and nonemployee work arrangements in the 2014 and 2018 panels of Survey of Income and Program Participation (SIPP), which were fielded by the U.S. Census Bureau after a large redesign of the survey following the 2008 panel. We then classify workers into types based on their experience in employee and nonemployee work arrangements over a 1-year period.

To our knowledge, we are the first to study work arrangements using the newly redesigned SIPP and the first to produce a coincidental study of work arrangements and multiple job holding. We find that workers with any nonemployee earnings are highly heterogeneous but there are predictable patterns of earnings across employee and nonemployee arrangements that may provide insight into this segment of the labor market.

Data

The SIPP is a household survey that collects data on the nation's economic well-being, including measures of wealth, employment, participation in government-assistance program, and more. Following the 2014 redesign, each household in the SIPP is followed over the course of 4 years.⁴ Households are interviewed once per year. Our analysis uses the SIPP 2014 and SIPP 2018 panels, which provide data from 2013 to 2020. For our initial descriptive statistics, we only include people who entered their respective SIPP panels at age 19 or older. This restriction avoids cases in which someone transitions from high school to college or to the labor force and therefore has fewer than 4 potential years of employment. In table 1, we show the raw, person-month sample sizes for each panel in each year for both the unbalanced and balanced analytic sample, the latter signifying households that were surveyed in all 4 years of the panel.

Table 1. SIPP panels and sample size in study by wave, 2013–20

Year	2014 Panel		2018 Panel	
	Unbalanced (raw)	Balanced analytic sample	Unbalanced (raw)	Balanced analytic sample
2013	870,352	257,364 [1]	[1]	[1]
2014	676,105	257,364 [1]	[1]	[1]
2015	556,943	257,364 [1]	[1]	[1]
2016	492,776	257,364 [1]	[1]	[1]
2017	[1]	[1]	763,186	147,036
2018	[1]	[1]	422,860	147,036
2019	[1]	[1]	395,834	147,036
2020	[1]	[1]	356,883	147,036

[1] Not applicable.

Note: SIPP = Survey of Income and Program Participation. Sample counts are person-month. Unbalance sample makes no restriction for inclusion; balanced analytic sample requires individuals to begin the panel at 19 years of age or older and be observed in each of the 4 years of the panel.

Source: U.S. Census Bureau.

Survey earnings information and respondent classification scheme

Our research question explores the extent of employee and nonemployee work arrangements in the U.S. labor market. The SIPP collects data on up to seven sources of labor earnings per person and identifies the type of work arrangement: work for an employer, self-employed (owns a business), or another type of work arrangement. Additionally, in the case of self-employment, it identifies whether the person’s business is incorporated. Self-employment without an incorporated business can be interpreted as independent contracting. As such, we can split employment and earnings into two types: earnings from employee work arrangements and earnings from nonemployee work arrangements. Employee work arrangements are work for an employer and self-employment work for an incorporated business. Nonemployee work arrangements span all other types of work arrangements and unincorporated self-employment.⁵

The possible earnings combinations span three source types—no earnings, employee earnings, and nonemployee earnings. Each source type can have single or multiple work arrangements within (for example, working two employee jobs or having more than one nonemployee contract). From these combinations, we create a schema of four earner types: employee earners with one job, employee earners with multiple jobs, nonemployee earners, and straddlers—workers who have both employee and nonemployee earnings. Table 2 lays out our schematic for classifying people into one of these four categories (plus a fifth category for nonearners). The schematic flows left to right based on conditional response, starting with whether the person earned employee earnings, nonemployee earnings, or multiple sources of earnings.

Table 2. Definition of earner types based on monthly aggregates of work arrangements

Employee earnings in at least one month	Yes	Nonemployee earnings in at least one month within a year	Yes	Straddler		
			No	Earnings from more than one employee source in at least one month	Yes	Employee, multiple job
			No		No	Employee, single job
No	No	Nonemployee earnings in at least one month	Yes	Nonemployee		
No	No	Nonemployee earnings in at least one month	No	Nonearner		

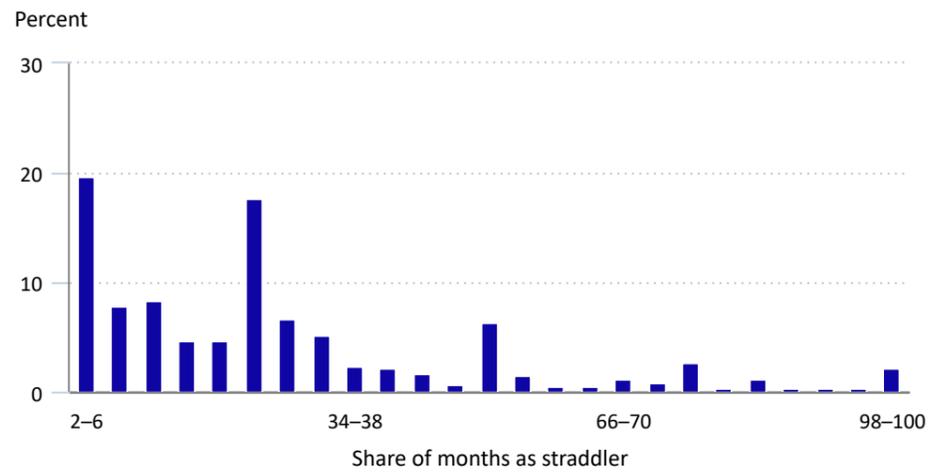
Source: Authors' definitions.

Work-related variables in the SIPP are available at the person-month level as described in table 2. We aggregate the monthly categorizations up to an annual level and conduct our analyses at the person-year level, sorting people into four (exhaustive and mutually exclusive) earner types:

1. single jobholder (employee earner with one job)
2. multiple jobholder (employee earner with multiple jobs)
3. nonemployee jobholder (nonemployee jobholder who worked solely in nonemployee work arrangements, whether it be one nonemployee job or more)
4. straddler (a worker who earned income from both employee and nonemployee work arrangements in a single year).

Multiple jobholders and nonemployee jobholders must have concurrent earnings in a single month and straddlers must have concurrent earnings in a single year.⁶ To further explore the notion of straddling, chart 1 shows the frequency that a worker had both employee and nonemployee earnings in a month, as a share of total work months.

Chart 1. Straddlers' share of work-months with both employee and nonemployee earnings, 2013–20



Hover over chart to view data.
 Note: A straddler is a worker who earns employee and nonemployee earnings in a single month. The chart shows the distribution of straddlers (individuals must have at least one straddler month to be included in the distribution) by frequency of straddling as expressed as the share of all work months the worker straddled.
 Source: U.S. Census Bureau.

[View Chart Data](#)



Straddling tends to be somewhat uncommon. About one in five straddlers only earned coincidental income in a single month. Only a small share (5 percent) have both employee and nonemployee sources in each month.

Descriptive statistics stratified by respondent characteristics

In table 3, we show the person-year distribution of people across earner types (with the total distribution in the column headers). In the first column, we show the characteristic as a percent of the total sample (that is, the first column sums to 100 within groups) and in each row of the subsequent columns we show the distribution across types (that is, each row sums to 100). For example, starting in the first row: 68.8 percent of our sample are White, non-Hispanic person-years; of those, 44.8 percent are person-years for nonearners, 46.9 percent are single jobholders, 6.0 percent are multiple jobholders, 1.7 percent are nonemployee jobholders, and 0.7 percent are straddlers.

Table 3. Distribution of earner types within demographic by person-year, 2013–20

Demographic	Sample size and proportion (in percent)	Nonearner (in percent)	Single jobholder (in percent)	Multiple jobholder (in percent)	Nonemployee jobholder (in percent)	Straddler (in percent)
Total	100.0	43.8	47.9	5.8	1.8	0.7
Race and ethnicity						
White, non-Hispanic	68.8	44.8	46.9	6.0	1.7	0.7
	(92,764)	(41,519)	(43,460)	(5,568)	(1,546)	(671)
Black, non-Hispanic	11.3	47.5	44.9	5.6	1.5	0.6
	(15,292)	(7,261)	(6,862)	(856)	(224)	(89)
Hispanic	13.2	37.5	53.9	5.2	2.7	0.7
	(17,748)	(6,660)	(9,567)	(918)	(477)	(126)
All other, non-Hispanic	6.7	40.1	52.2	5.4	1.8	0.6
	(8,996)	(3,603)	(4,697)	(483)	(160)	(53)
Education						
Less than high school	12.6	63.8	31.4	2.3	2.2	0.3
	(16,940)	(10,811)	(5,311)	(388)	(379)	(51)
High school & equivalent	28.7	50.5	43.4	3.9	1.6	0.5
	(38,636)	(19,523)	(16,785)	(1,512)	(631)	(185)
Some college	27.5	41.3	49.9	6.3	1.8	0.7
	(37,112)	(15,340)	(18,505)	(2,347)	(678)	(242)
Bachelors	18.6	31.7	57.4	8.1	1.7	1.1
	(25,048)	(7,952)	(14,381)	(2,027)	(418)	(270)
Graduate/professional	12.7	31.7	56.3	9.1	1.8	1.1
	(17,064)	(5,417)	(9,604)	(1,551)	(301)	(191)
Sex						
Male	46.6	38.3	53.0	6.0	2.0	0.8
	(62,832)	(24,055)	(33,287)	(3,780)	(1,228)	(482)
Female	53.4	48.6	43.5	5.6	1.6	0.6
	(71,968)	(34,988)	(31,299)	(4,045)	(1,179)	(457)
Age group						
Age 19 to 25	6.3	24.6	62.5	11.0	1.0	0.9
	(8,520)	(2,095)	(5,324)	(939)	(83)	(79)
Age 25 to 35	13.2	19.2	68.6	9.5	1.7	1.0
	(17,860)	(3,432)	(12,260)	(1,694)	(303)	(171)
Age 35 to 45	14.6	20.4	68.2	8.2	2.2	1.1
	(19,656)	(4,004)	(13,402)	(1,613)	(426)	(211)
Age 45 to 55	17.1	27.0	62.9	7.3	2.0	0.8
	(23,012)	(6,220)	(14,473)	(1,674)	(458)	(187)
Age 55 to 65	21.3	44.2	47.8	5.0	2.3	0.7
	(28,748)	(12,702)	(13,749)	(1,435)	(651)	(211)
Age 65 and older	27.5	82.7	14.5	1.3	1.3	0.2
	(37,004)	(30,590)	(5,378)	(470)	(486)	(80)
<p>Note: The first column expresses distribution across demographic groups within demographic category (e.g., distribution among age groups), the subsequent columns express distribution of a distinct demographic group across earner types (e.g., distribution of women among earner types). Distributions are presented as percentage with number of observations in parentheses.</p> <p>Source: U.S. Census Bureau.</p>						

In general, just under 2 percent of person-years have solely nonemployee earnings, and an even smaller share—less than 1 percent—have both sources. In table 4, we recreate table 3 but drop nonearners so that the shares across worker types are limited to the sample of workers, making it easier to discern patterns among workers. However, in terms of education and age, the groups with the highest share of nonearners have the highest share of solely nonemployee earnings. This can be seen by contrasting tables 3 and 4. People without a high school degree have the highest share of nonearners (63.8 percent in table 3) and the highest share of nonemployee jobholders (6.2 percent in table 4). However, this association does not hold when the data are stratified by race. Hispanics have the lowest share of person-years as nonearners (37.5 percent in table 3) but the highest share of person-years as nonemployee jobholders (4.3 percent, in table 4).

Table 4. Distribution of earner types within demographic by person-year, workers only, 2013–20

Demographic	Single jobholder (in percent)	Multiple jobholder (in percent)	Nonemployee jobholder (in percent)	Straddler (in percent)
Total	85.3	10.3	3.2	1.2
Race-ethnicity				
White, non-Hispanic	84.8	10.9	3.0	1.3
	(43,460)	(5,568)	(1,546)	(671)
Black, non-Hispanic	85.4	10.7	2.8	1.1
	(6,862)	(856)	(224)	(89)
Hispanic	86.3	8.3	4.3	1.1
	(9,567)	(918)	(477)	(126)
All other, non-Hispanic	87.1	9.0	3.0	1.0
	(4,697)	(483)	(160)	(53)
Education				
Less than high school	86.7	6.3	6.2	0.8
	(5,311)	(388)	(379)	(51)
High school & equivalent	87.8	7.9	3.3	1.0
	(16,785)	(1,512)	(631)	(185)
Some college	85.0	10.8	3.1	1.1
	(18,505)	(2,347)	(678)	(242)
Bachelors	84.1	11.9	2.4	1.6
	(14,381)	(2,027)	(418)	(270)
Graduate/professional	82.5	13.3	2.6	1.6
	(9,604)	(1,551)	(301)	(191)
Sex				
Male	85.8	9.7	3.2	1.2
	(33,287)	(3,780)	(1,228)	(482)
Female	84.6	10.9	3.2	1.2
	(31,299)	(4,045)	(1,179)	(457)
Age group				
Age 19 to 25	82.9	14.6	1.3	1.2
	(5,324)	(939)	(83)	(79)
Age 25 to 35	85.0	11.7	2.1	1.2
	(12,260)	(1,694)	(303)	(171)
Age 35 to 45	85.6	10.3	2.7	1.3
	(13,402)	(1,613)	(426)	(211)
Age 45 to 55	86.2	10.0	2.7	1.1
	(14,473)	(1,674)	(458)	(187)
Age 55 to 65	85.7	8.9	4.1	1.3
	(13,749)	(1,435)	(651)	(211)
Age 65 and older	83.8	7.3	7.6	1.2
	(5,378)	(470)	(486)	(80)

Note: The first column expresses distribution across demographic groups within demographic category (e.g., distribution among age groups), the subsequent columns express distribution of a distinct demographic group across earner types (e.g., distribution of women among earner types). Distribution is presented as percentage with number of observations in parentheses. Source: U.S. Census Bureau.

Multiple jobholders have educational patterns more similar to straddlers than straddlers have to nonemployee jobholders. That is, the two groups with multiple sources of earnings have more similar education than the two groups with nonemployee earnings. As education increases, a person is more likely to work multiple jobs. The proportion of person-years for employee workers with multiple jobs rises with education, from 6.3 percent of workers with less than a high school degree to 13.3 percent of workers with a graduate degree. The share of straddlers similarly rises, from 0.8 percent to 1.6 percent. By contrast, the proportion of nonemployee workers falls with education, from 6.2 percent of those without a high school degree to 2.6 percent of those with a graduate degree. Together, these two patterns of secondary and nonemployee earnings across educational groups suggest a low-wage/high-wage split in nonemployee earnings, from being the sole source versus being a supplemental source of income. Second, the proportion of person-years with solely nonemployee earnings increases with age, from 1.3 percent for workers under 25 to 7.6 percent for workers over 65. Straddling is relatively age constant, around 1.1 to 1.3 percent for all ages.

These patterns suggest a high level of variation in the quality of, preferences for, and access to nonemployee earnings sources. We explore these further through regression analysis.

Nonemployee earnings and survey data quality

Like nearly all studies of nonemployee earnings, our data and subsequent analysis has broad issues of data quality. Nonemployee earnings are difficult to capture and correctly classify in any survey. The new SIPP does have some advantages over existing surveys. For example, it asks about seven sources of earned income with the same set of questions for each. But it is not perfectly clear what “other work arrangements” signifies, either in aim of the survey instrument or in respondents who answer affirmatively that that describes their earnings situation.

A comparative assessment of the SIPP, American Community Survey, and Current Population Survey found that the SIPP captured slightly higher rates of self-employment, both incorporated and unincorporated, compared with the other surveys.⁷ Yet, those are not necessarily good benchmarks, as self-employment earnings are regarded as not well measured in surveys in general and can be difficult to verify even with tax records. Measuring self-employment earnings is difficult because the surveys may misclassify or not capture the earnings and because many self-employed people underreport their income on taxes.⁸ And critical to our discussion is how to interpret self-employment earnings—even when well measured—in the context of independent contracting or gig work. Prior research in the American Community Survey found that roughly 4 in 10 digital platform workers classify themselves as self-employed.⁹

We use reports of nonemployee earnings and work history to glean some indication of employment quality and preference for nonemployee respondents. In that sense, our analysis relies only on what is in the survey to make conclusions and only extends those conclusions to nonemployee respondents. However, self-employment is hard to measure, and our analysis should not be interpreted as fully representing the nascent platform economy.

Methods

We use regression analysis to explore which factors affect the probability that a respondent is a specific type of nonemployee earner. A basic regression would use a set of characteristics to predict the type of earner. However, even within this frame, there are several options of how to approach the specific regression method.¹⁰

In our regression, we limit our sample to prime-age workers and use a year as our unit of time (rather than defining the variables over a 3-, 6-, or 36-month period) as indicated in our construction of earner types. We use three dependent variables for worker type, each binary: straddler, solely nonemployee jobholder, or any nonemployee jobholder (i.e., either). For independent variables, we use the demographic characteristics listed in table 3, measures of household financial strength, and a variable for economic context. Formally,

$$W_{i,t} = X_{i,t}^D \beta^D + X_{i,t}^E \beta^E + \varepsilon_{i,t},$$

where W is the worker type, X^D are individual characteristics, and X^E are economic characteristics for worker i in year t . We include in X^D all the characteristics from table 3. Some of the characteristics are time invariant, but we do not pursue a fixed effects approach. We are not estimating the change in behavior or any treatment. Further, we want to be as inclusive as possible in producing coefficient estimates, especially for characteristics such as race and educational level.

Our method is not causal. We do not have identifying variation; our use of “predict” in this context is a statistical relationship. There are some variables that are more exogenous to the dependent variables than others, such as the unemployment rate, but we do not assert or emphasize these over others. The contribution of this paper is to provide a landscape—inclusive of as many descriptors as possible—of nonemployee workers that serves as a base of, and motivation for, future research. We use a linear probability model because its coefficients are easy to interpret.¹¹ Next, we present what we think are the biggest research questions raised by our analysis, and in our discussion we note various approaches to exploring those further.

Results

By construction, the coefficients from the first variable (and first column in table 5) is a sum of the subsequent two. In interpretation, we consider the relationship between the coefficient and the dependent variable, as well as the coefficient’s pattern across the three dependent variables. Our motivation is to understand who engages in nonemployee work and how those individuals differ based on their overall (employee and nonemployee) earning patterns. Hence, we refer here to “types” of workers rather than “work” to emphasize those different patterns. In general, the regression had more precision in coefficients predicting nonemployee jobholders, as opposed to straddlers, likely because the sample mean of the latter is so low.

Table 5. Results from regression of worker types on demographic and economic characteristics, prime-age workers, 2013–20

Demographic	Any nonemployee earnings	Nonemployee type	Straddler type	Multiple employee job holder
White, non-Hispanic	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
Black, non-Hispanic	-0.0049	-0.0053 ^[2]	0.0004	0.0097
	(0.0029)	(0.0023)	(0.0018)	(0.0052)
Hispanic	0.0145 ^[4]	0.0143 ^[4]	0.0002	-0.0116 ^[3]
	(0.0029)	(0.0025)	(0.0015)	(0.0041)
All other, non-Hispanic	-0.0019	0.0027	-0.0046 ^[3]	-0.0344 ^[4]
	(0.0031)	(0.0027)	(0.0017)	(0.0050)
Less than high school	0.0160 ^[4]	0.0201 ^[4]	-0.0041 ^[2]	-0.0056
	(0.0048)	(0.0045)	(0.0019)	(0.0054)
High school & equivalent	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
Some college	-0.0002	-0.0005	0.0003	0.0228 ^[4]
	(0.0025)	(0.0022)	(0.0014)	(0.0039)
Bachelor's	-0.0012	-0.0057 ^[3]	0.0045 ^[3]	0.0342 ^[4]
	(0.0026)	(0.0021)	(0.0016)	(0.0043)
Graduate/professional	-0.0038	-0.0086 ^[4]	0.0048 ^[3]	0.0593 ^[4]
	(0.0028)	(0.0022)	(0.0018)	(0.0050)
Male	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
Female	0.0001	0.0015	-0.0013	0.0119 ^[4]
	(0.0018)	(0.0015)	(0.0010)	(0.0029)
Age 19 to 25	-0.0091 ^[4]	-0.0082 ^[4]	-0.0009	0.0144 ^[4]
	(0.0023)	(0.0018)	(0.0014)	(0.0038)
Age 25 to 35	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
Age 35 to 45	0.0004	0.0005	-0.0001	-0.0060
	(0.0022)	(0.0018)	(0.0012)	(0.0034)
Age 45 to 55	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
Age 55 to 65	-0.0038	0.0001	-0.0039 ^[3]	-0.0167 ^[4]
	(0.0023)	(0.0018)	(0.0014)	(0.0038)
Age 65 and older	-0.0071	-0.0067	-0.0004	0.0023
	(0.0093)	(0.0078)	(0.0053)	(0.0146)
Divorced or separated	-0.0050	-0.0034	-0.0015	0.0068
	(0.0032)	(0.0026)	(0.0019)	(0.0053)
Not an SSA recipient (self)	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
SSA recipient (self)	0.0107	0.0142	-0.0034	-0.0084
	(0.0123)	(0.0113)	(0.0049)	(0.0152)
Not an SSA recipient (household)	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
SSA recipient (household)	0.0040	0.0051	-0.0010	-0.0072

[1] Baseline category.

[2] Statistically significant at the 10-percent confidence level.

[3] Statistically significant at the 5-percent confidence level.

[4] Statistically significant at the 1-percent confidence level.

Note: SSA = Social Security Assistance. For mutually exclusive and exhaustive groups of independent variables, one variable must be the baseline to which the others are compared.

Standard errors in parentheses.

Source: U.S. Census Bureau.

Demographic	Any nonemployee earnings	Nonemployee type	Straddler type	Multiple employee job holder
	(0.0032)	(0.0027)	(0.0017)	(0.0048)
Household in poverty	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
Household income 100 to 200 of poverty threshold	-0.0316 ^[4]	-0.0296 ^[4]	-0.0020	0.0102
	(0.0061)	(0.0055)	(0.0027)	(0.0065)
Household income 200 percent above poverty threshold	-0.0435 ^[4]	-0.0404 ^[4]	-0.0031	0.0236 ^[4]
	(0.0056)	(0.0051)	(0.0025)	(0.0061)
Unemployment rate	-0.0027 ^[4]	-0.0013 ^[2]	-0.0013 ^[4]	-0.0043 ^[4]
	(0.0006)	(0.0005)	(0.0004)	0.0102
State minimum wage less than federal minimum wage	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
State minimum wage greater than federal minimum wage	0.0006	-0.0012	0.0018	0.0089 ^[3]
	(0.0019)	(0.0016)	(0.0011)	(0.0031)
State per capita income less than then federal average	[1]	[1]	[1]	[1]
	[1]	[1]	[1]	[1]
State per capita income greater then federal average	0.0028	0.0021	0.0007	-0.0082 ^[3]
	(0.0019)	(0.0016)	(0.0011)	(0.0032)
Constant	0.0918 ^[4]	0.0688 ^[4]	0.0230 ^[4]	0.0908 ^[4]
	(0.0072)	(0.0064)	(0.0036)	(0.0092)
Observations	45,799	45,799	45,799	45,799

[1] Baseline category.

[2] Statistically significant at the 10-percent confidence level.

[3] Statistically significant at the 5-percent confidence level.

[4] Statistically significant at the 1-percent confidence level.

Note: SSA = Social Security Assistance. For mutually exclusive and exhaustive groups of independent variables, one variable must be the baseline to which the others are compared.

Standard errors in parentheses.

Source: U.S. Census Bureau.

Worker characteristics

The means of sample demographic characteristics presented in tables 3 and 4 cohere with the regression results in table 5. Relative to the baseline group (White, non-Hispanic workers), Black, non-Hispanic workers are less likely (-0.0053) to be a nonemployee jobholders and Hispanic workers are more likely (0.0143) to be a nonemployee jobholder.¹² These results hold for predicting any nonemployee jobholder but not for predicting straddlers. Though the residual “other” category of non-White, non-Black, non-Hispanic workers are less likely to be a straddler (-0.0046).

Relative to the baseline group (workers with a high school degree or equivalent), workers with less than a high school degree are much more likely to be a nonemployee jobholder (0.0201), while workers with a bachelor’s (-0.0057) or graduate (-0.0086) degree are less likely to be a nonemployee jobholder. In contrast, higher educated workers are more likely to be straddlers (0.0045 and 0.0048, respectively).

We do not find consistent age or marriage effects. Workers age 25 to 34 are less likely than workers age 35 to 54 to be *only* nonemployee, and being married is associated with a lower likelihood of being a straddler, but otherwise there is not a clear age or relationship-status pattern to nonemployee work.

Household financial characteristics

In addition to worker demographics, we examine an array of household financial characteristics and economic conditions in the worker’s state. We include in table 5 household income relative to the official poverty threshold, the unemployment rate, and whether the state has a minimum wage or per capita income higher than the federal level or federal average, respectively.

Compared with the baseline group (families below the poverty line), the likelihood of being a solely nonemployee jobholder is lower for workers with incomes that are 1 to 2 times the poverty line level (-0.0296) and even lower for workers with incomes that are more than double the poverty line level (-0.0404). Both the likelihood of being a solely nonemployee jobholder and the likelihood of being a straddler fall with the unemployment rate in a state, at -0.0013. Otherwise, the minimum wage and per capita income in the state are not predictive of the type of nonemployee earnings, alone or in combination.

We examined numerous independent variables not shown in table 5, including cash on hand, value of held assets, debt, presence of children, the state minimum wage, state per capita gross domestic product, state median income, and others. We also tried numerous measures of self-reported program participation. We found that many of these estimators were close substitutes (e.g., participation in the Supplemental Nutrition Assistance Program and low-income household), or participation rates were low given the population (prime-age workers with earnings in a year). We also tested using year fixed effects, interacting certain variables (such as education, race, and unemployment) and did not see strong or consistent findings.

Discussion

So far, we have developed a typology of workers based on survey data. We then used regression analysis to understand which demographic or economic factors help us predict

whether a worker with nonemployee earnings is solely a nonemployee jobholder or is a straddler.

Nonemployee type as a function of barriers

Our definition of a nonemployee worker is a worker who does not have any earnings from employee sources in a calendar year. Such a situation could either be because the worker prefers nonemployee earnings sources or because they are unsuccessful in attaining employee earnings. Our results suggest that the latter is true. Nonemployee types are predicted by factors associated with barriers to the employee labor market, such as having less than a high school degree or a lower household income. Future research could focus on specific low-wage populations in the labor market, such as people without work documentation, formerly incarcerated people, and people with disabilities, and examine their tendency toward these types of work.¹³

These and related topics can be thought of as investigating the supply of nonemployee types and raises several questions. If a predisposition toward nonemployee work is the result of barriers, then which barriers? And how do these barriers vary in regulatory or economic conditions, and to what degree? A companion topic is investigating the demand for nonemployee workers through a study of nonemployee earnings sources, such as misclassification of contractors, off-the-book hiring, and others.¹⁴ A natural continuation from the supply and demand of nonemployee workers is that of the price of nonemployee work, in terms of wage and nonwage compensation, working conditions, and secondary outcomes that result from nonemployee wages and working conditions.

In terms of supply, there has been a bevy of research in the last 10 to 20 years studying monopsony in the labor market and the concentration of employer power.¹⁵ This research primarily focuses on employee wages and has said less about the effect of monopsony on earnings from, and employment in, nonemployee employment. Our article shows that nonemployee type arrangements are not necessarily sporadic or temporary but instead that a share of the workforce works only in such arrangements. Given that nonemployee workers are representative of workers who are subject to labor market barriers, future monopsony research could measure the relationship between the market presence of nonemployee types and that market's concentration of employer power.

Straddlers to proxy for nonemployee motivation

Straddlers, a convention we introduce in this article, have much less prior research compared with other worker types. Straddlers exist somewhere between multiple job holders and workers who have some form of side income. As we noted in the introduction, nonemployee employment could be driven by either preferences or constraints. A worker could want a flexible or independent work arrangement or, alternatively, be unsuccessful at finding employee employment. The only consistent predictor of being a straddler is that straddling is less likely when the unemployment rate is higher and is more common among higher educated, older workers. If our predictors for nonemployee jobholders provide support for constraints, then, to a degree, our predictors for straddlers provide support for preference being the driver toward this type.

By extension, a key benefit of our analysis is that it provides a clear, easy to identify, and frequently observed indicator that could serve as a proxy for whether nonemployee employment is the result of preference. That indicator is whether the worker recently had an employee job.

Definitionally, the only difference between nonemployee jobholders and straddlers is that straddlers received employee earned income in the same calendar year they received nonemployee income. Yet, the two types have almost no overlapping predictors. This result could prove to be a useful identifier in the study of nonemployee employment and allows future researchers to understand that workers who receive nonemployee earnings is made of at least two distinct groups.

Caveats

There are two primary reasons why our findings presented here may not be representative of nonemployee earnings experiences in the United States. First, our data span the years 2013 to 2020. Almost the entirety of our data are from an economic expansion. The United States was steadily adding payroll employment jobs, the unemployment rate was falling, and labor force participation was increasing. Given the suggestive relationship between the unemployment rate and straddlers, we expect nonemployee earnings rates to vary during an economy-wide contraction, but our data do not allow us to examine this directly.

Second, there is reason to think that the prior iteration of the SIPP, before the most recent redesign, might have performed better at capturing nonemployee work specifically. Rather than asking about seven sources of earned income with identical questions, the prior SIPP (covering the 1996–2008 panels), instead asked about two jobs and two sources of business income. Beyond that, it asked if the recipient ever “moonlighted” and earned money on the side. In a separate part of the survey on income sources, recipients are asked if they had any casual earnings.

Hence, in the prior SIPP, the classification of nonemployee earnings includes moonlighting income and casual earnings, which are not included in the redesigned SIPP. In tables 6 and 7, we show the annual rates of earner types in both surveys. Included in tables 6 and 7 is the proportion of people with at least one job and (among those with at least one job) the shares that are single or multiple jobholders, nonemployees jobholders, or straddlers. The two survey estimates span over 20 years of labor market activity, during which labor force participation was not constant, two recessions occurred, and the opportunity for nonemployee earnings changed with the advent of platform-based gig work and the trend toward independent contracting.

Table 6. Employee and nonemployee earnings in the first SIPP design era, 1996–2012

Year	Survey sample size	People with at least one job (in percent)	Employee worker (in percent)	Nonemployee worker (in percent)	Straddler (in percent)
1996	27,905	71.0	78.8	7.7	13.5
1997	50,048	70.6	82.1	6.9	11.1
1998	47,119	70.1	83.3	6.6	10.0
1999	35,326	70.4	84.3	6.5	9.1
2001	44,282	72.0	81.9	6.5	11.6
2002	41,762	70.2	84.4	6.5	9.0
2003	10,599	68.7	86.1	6.6	7.3
2004	62,273	68.4	87.3	3.6	9.2
2005	56,379	67.2	89.6	3.2	7.2
2006	25,447	65.8	90.7	3.2	6.0
2007	6,274	64.2	91.9	3.4	4.7
2009	55,410	64.7	89.8	3.5	6.7
2010	51,559	62.7	90.6	3.5	5.9
2011	48,621	61.7	90.8	3.6	5.6
2012	45,975	61.1	90.9	3.6	5.5

Note: SIPP = Survey of Income and Program Participation.

Source: U.S. Census Bureau and Survey.

Table 7. Employee and nonemployee earnings in the second SIPP design era, 2013–20

Year	Survey sample size	People with at least one job (in percent)	Employee worker (in percent)	Nonemployee worker (in percent)	Straddler (in percent)
2013	54,322	59.7	96.4	2.9	0.8
2014	42,071	60.2	95.8	3.1	1.1
2015	34,818	58.9	95.9	2.9	1.2
2016	30,924	59.0	95.8	3.0	1.2
2017	48,823	60.3	96.2	2.8	1.0
2018	27,391	58.0	95.4	3.4	1.2
2019	25,996	57.5	95.3	3.3	1.4
2020	23,562	56.5	95.3	3.4	1.3

Note: SIPP = Survey of Income and Program Participation.

Source: U.S. Census Bureau.

The SIPP's prior design generated much higher estimates of nonemployee work, though this varies by type. The share of nonemployee jobholders goes from 7.0 percent in 1996, to around 3.5 percent in 2007, and hovers around that level for the rest of the measurement period, even though the SIPP's redesign that provides data for 2013 onward. As such, nonemployee jobholders can be consistently measured across the 25 years of survey data.

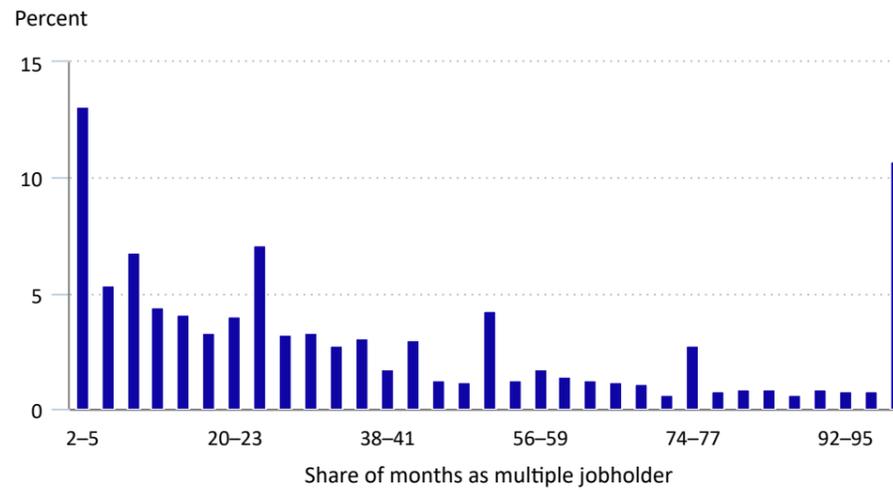
Estimates of the prevalence of straddlers, on the other hand, vary considerably in the survey's two eras. In the prior SIPP, straddlers fall from over 10.0 percent of workers to around 5.5 percent. However, the new SIPP starts with a rate below 1.0 percent for straddlers and does not see rates higher than 1.3 percent. This difference can be explained as a difference in the survey instrument. Asking directly about side income makes it more likely for a respondent to report it. As it is, we have no way of discerning if the differences between the eras are due to real changes, misclassification, underreporting, or a combination of these factors.

A final caveat is that the redesigned SIPP is a more recent release and there is less familiarity among researchers with the survey instrument and population. A panel of the National Academies of Sciences, Engineering, and Medicine performed an assessment of the redesign and noted that, although it outperformed the prior SIPP in employment and earnings data, the data were slow to be released and that more research needs to be done regarding the data's reliability.¹⁶ A hoped-for contribution of this article is to encourage more research into the redesigned SIPP and its uses. We also hope that comparisons of nonemployee types may be applied to other datasets with longitudinal data on employment and earnings sources. Some candidates include the Health and Retirement Study, the Panel Study of Income Dynamics, and the National Longitudinal Surveys of Youth. Comparisons across multiple datasets can further investigate nonemployee earnings and earners in the United States in many eras and groups as well as provide additional insight into the SIPP.

Appendix

Unlike straddlers, who also hold multiple jobs in a given year, multiple jobholders are much more likely to spend a substantial amount of time working two jobs simultaneously. Chart A-1 shows the frequency of workers having employee earnings from multiple sources in a month, as a share of total work months.

Chart A-1. Multiple jobholders' share of work-months with employee earnings from multiple jobs, 2013–20



Hover over chart to view data.
 Note: A multiple jobholder is a worker who makes employee earnings every month and works at least one month with earnings from two or more employee jobs. The chart shows the distribution of multiple jobholders by frequency of working two or more employee jobs as expressed as the share of all work months.
 Source: U.S. Census Bureau.



[View Chart Data](#)

SUGGESTED CITATION:

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Notes

¹ See, for example, Christopher Buscaglia, "Crafting a legislative solution to the economic harm of employee misclassification," *UC Davis Business Law Journal* vol. 9 (2008–2009), pp. 111–37, <https://heinonline.org/HOL/P?h=hein.journals/ucdbulj9&i=113>.

² Laura Katsnelson and Felix Oberholzer-Gee, "Being the boss: gig workers' value of flexible work," Working Paper 21-124 (Harvard Business School, May 2021), https://www.hbs.edu/ris/Publication%20Files/21-124_4a28fd0c-e395-46ce-b621-2b32c3dd2fa0.pdf; Alexandre Mas and Amanda Pallais, "Valuing alternative work arrangements," *American Economic Review* vol. 107, no. 12 (December 2017), pp. 3722–59, <https://doi.org/10.1257/aer.20161500>; Jennifer Scott, Kathryn Edwards, and Alexandra Stanczyk, "Moonlighting to the side hustle: the effect of working an extra job on household poverty for households with less formal education," *Families in Society: The Journal of Contemporary Social Services* vol. 101, no. 3 (June 2020), pp. 324–39, <https://doi.org/10.1177/104438942091066>.

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⁴ This 4-year window is inclusive of each member that joins or leaves the household.

⁵ Incorporated self-employment could be considered employee (as we do), nonemployee, or as its own unique type of work arrangement. Our research question is focused on the combination of worker control over and preference for the work arrangement. Incorporation confers control, which is why we group it with employer employment.

⁶ For our analysis, we could instead use "concurrent straddlers." That is, people who, in a single month, have at least one job contributing income from an employee source and another job contributing income from a nonemployee source (e.g., moonlighting, side-hustles, etc.) instead of "seasonal straddlers," who have both sources within a 12-month period. Of individuals who have ever been a concurrent straddler, the majority coincidentally straddle fewer than half the time. Only a small share (5 percent) have both employee and nonemployee sources in each month.

⁷ Clayton Gumber, "2014 survey of income and program participation evaluation report: class of worker, industry, and occupation," SEHSD Working Paper 2019-35 (U.S. Census Bureau, December 2019), <https://www.census.gov/content/dam/Census/library/working-papers/2019/demo/sehswp2019-35.pdf> <https://www.census.gov/content/dam/Census/library/working-papers/2019/demo/sehswp2019-35.pdf>.

⁸ Katharine G. Abraham, John C. Haltiwanger, Claire Hou, Kristin Sandusky, and James R. Spletzer, "Reconciling survey and administrative measures of self-employment," *Journal of Labor Economics* vol. 39, no. 4 (October 2021), pp. 825–60, <https://doi.org/10.1086/712187>; Christian Imboden, John Voorheis, and Caroline Weber, "Self-employment income reporting on surveys," Center for Economic Studies Working Paper CES-23-19 (U.S. Census Bureau, April 2023), <https://www.census.gov/library/working-papers/2023/adrm/CES-WP-23-19.html>.

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¹⁰ For example, an analysis of the overall typology of individuals would lend itself to a multinomial or ordered logit (or probit) regression. And that typology could be based on earnings observed in a month, year, or 3-year period.

¹¹ More statistically sound methods for modeling binary outcomes (like the logit and probit models) have much more difficult-to-interpret results.

¹² We set non-Hispanic White workers as the baseline for the regression because it is the largest group in the sample.

¹³ There are, of course, numerous other groups of people which to apply this analysis to, but we consider the mentioned groups the most salient.

¹⁴ For some existing literature on misclassification and off-the-books hiring, see Mark Erlich, "Misclassification in construction: the original gig economy," *ILR Review* vol. 74, no. 5 (October 2021), pp. 1202–30, <https://doi.org/10.1177/0019793920972321>.

¹⁵ A monopsony is a market with a single buyer. Because firms are purchasers of the labor sold by workers, a market with only one firm is a monopsony. For more information on monopsony, see Orley Ashenfelter, David Card, Henry Farber, and Michael R. Ransom, "Monopsony in the labor market: new empirical results and new public policies," *Journal of Human Resources* vol. 57, no. S (April 2022), pp. S1–10, <https://www.doi.org/10.3368/jhr.monopsony.special-issue-2022-introduction>.

¹⁶ The first wave of the 2014 SIPP was collected in 2014 but not released to the public for another 3 years, a longer lag than the recommended 1 year. For more information, see National Research Council, *The 2014 Redesign of the Survey of Income and Program Participation: An Assessment* (Washington, DC: National Academies Press, 2018), <https://nap.nationalacademies.org/catalog/24864/the-2014-redesign-of-the-survey-of-income-and-program-participation>.



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