Independent Contract, Informal, and Online Intermediary Work: Preliminary Evidence on Developing Better Measures in Household Surveys[*]

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June 2019

ABSTRACT

The apparent rise of contract, informal, and online "gig" work has drawn considerable attention in recent years. Although fears about the disappearance of the traditional employer-employee relationship appear overblown, there are valid concerns about the growth of alternative work arrangements, including nonemployee work. Existing household surveys such as the Current Population Survey (CPS), however, are not well designed to monitor the prevalence and evolution of such work. We present initial estimates from a Gallup survey module on contract and other non-employee work administered by telephone to over 60,000 respondents. Our results suggest that a sizable number of workers doing non-employee work are miscoded as employees and that some non-employee work is missed in household surveys such as the CPS. We also find slightly higher rates of work facilitated by online intermediaries than other recent studies, though the reporting of online intermediary work is highly sensitive to survey question wording. Our results suggest that miscoding of non-employee work is especially common among individuals with multiple jobs and those who work part-time.

Numerous media reports in recent years have warned about the rapid growth in independent contractor and informal employment, including short-term "gig" work. These arrangements may offer desired flexibility and independence for some workers, but they often are associated with low pay, few if any benefits, and less stability in employment and earnings than a traditional job. In addition, workers in these arrangements are not employees of the organizations for which they work, and so are not covered by social insurance programs and employment and labor laws. This situation has raised concerns that the system of legal protections for workers—whose foundation was laid nearly 100 years ago with the traditional employee-employer arrangement in mind—fails to adequately protect workers today.

Despite widespread reporting of the growth in various types of "nonemployee" work in the press, government household surveys provide no evidence of such growth. Individuals working as independent contractors or in informal or short-term nonemployee or gig arrangements should be coded as self-employed in household surveys such as the Current Population Survey (CPS) and the American Community Survey (ACS), but data from these surveys have shown no upward trend in self-employment in recent decades. Moreover, the Contingent Worker Supplement (CWS) to the CPS, administered in May 2017 for the first time since 2005, found no increase over that twelve-year interval in the incidence of any of the alternative work arrangements it measures, including independent contractor work.

In contrast, other research based on administrative data reveals substantial growth in the share of individuals with income from nonemployee work (Katz and Krueger 2016, Jackson, Looney and Ramnath 2017, Abraham et al. 2018), suggesting that some of the self-employed are being miscoded as employees and that some self-employment work activities are being missed altogether in these government household surveys. Abraham et al. (2018) provide the most direct

evidence of these problems. Using a sample of respondents to the Annual Social and Economic (ASEC) supplement to the CPS linked to tax records, the researchers conclude that roughly one-third of the growth in self-employment between 1996 and 2012 captured in administrative data but missing from the CPS-ASEC was accounted for by people who reported only employee work in the CPS-ASEC but had only self-employment income in the tax data; about one-third by people for whom no work-related income was reported on the CPS-ASEC; and about one-third by people for whom secondary self-employment was not captured in the CPS-ASEC.

Motivated in part by concerns that the CPS is missing informal work activities, researchers have sought to measure its prevalence in several surveys designed for that purpose. The Federal Reserve Bank of Boston's Survey of Informal Work Participation (SIWP), the Federal Reserve Board's Enterprising and Informal Work Activities (EIWA) Survey, and modules on the Federal Reserve Board's Survey of Household Economics and Decisionmaking (SHED) have included detailed questions on respondents' participation in informal work activities. The types of work they ask about include personal services (e.g., childcare, eldercare, housecleaning, property maintenance, and running errands), work obtained through mobile apps and online platforms, and the selling of goods both offline and online.

Each of the three surveys finds very high levels of participation in informal work. In data for 2015 from the SIWP, 33 percent of adult respondents age 21 and older indicated that they were "currently engaged" in one or more types of informal work activity (Bracha and Burke 2017). Data for 2015 from the EIWA suggest that 36 percent of the U.S. population age 18 and older engaged in at least one informal work activity outside their main job during the preceding six months (Robles and McGee 2016). In data from the 2016 and 2017 SHED surveys, 28 percent of adults age 18 and older reported participating in informal work outside of a main job

in the preceding month (Abraham and Houseman 2018).

The high prevalence of informal work found in the EIWA and the SHED, which ask about work that is not part of the main job, is inconsistent with the low incidence of multiple job holding in the CPS. The high prevalence of informal work in these surveys may in part reflect unmeasured characteristics of the respondents. Each of the three surveys is administered through an online panel and had a response rate under 5 percent; although the survey respondents are weighted to reflect the demographic characteristics of the population, those who are willing to participate in these online panel surveys may be more likely to engage in informal work compared to those with similar observable characteristics. Recent research, however, suggests that the CPS may miss much informal work. Using a sample of respondents recruited through Amazon's Mechanical Turk, Abraham and Amaya (2018) first asked respondents employment questions from the CPS and then probed them about informal work activity. They found that probing resulted in a substantial amount of additional work activity both when respondents were reporting for themselves and when they were reporting for other individuals in the household.[1]

Given likely problems in measuring contract and informal work in household surveys, it is tempting to turn to other sources, such as administrative data and business surveys, for information on these work arrangements. Although much important research in recent years on the incidence and growth of self-employment work arrangements has exploited data from other sources, particularly from administrative sources, these data also have shortcomings. Administrative (tax) data linked to household survey data, for example, can identify the legal arrangements under which work occurs, but they cannot capture off-the-books work—which is likely to be especially prevalent in informal work—and they are available only at an annual

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[1] Abraham and Houseman (2018) provide a more thorough review of the literature on measuring alternative work arrangements, including independent contractor and informal work.

frequency. Respondents to business surveys may not be able to provide accurate information on workers at their organizations who are not employees. Household surveys, therefore, will continue to be an important source of information on self-employment work, underscoring the importance of improving the questions asked of household survey respondents about all types of self-employment, including independent contractor and informal work.

Our study uses the Gallup Education Consumer Pulse Survey as a vehicle to examine how well typical household survey questions capture various types of contract and informal work and to inform ways in which household surveys might be improved to better measure these types of work. We developed a survey module for the Gallup survey that includes 14 questions on respondents' employment and the nature of their work arrangements. In several places in the module, we randomly assign respondents to different question versions to test how question wording affects responses. Our survey module was included on this Gallup survey for four month-long fielding periods, spaced at three-month intervals, and yielded information from approximately 61,000 adults.

In this paper, we report selected findings from all four waves of the module that pertain to three questions about alternative work: 1) potential miscoding of workers as employees, 2) underreporting of work activity in household surveys, and 3) the prevalence of work through online intermediaries. We begin by describing the Gallup Education Consumer Pulse Survey and our survey module and comparing the structure of employment questions in this survey to those in the CPS. We then describe findings that support concerns that a sizable number of workers doing nonemployee work may be miscoded as employees and that some work activity, especially non-employee work that supplements a primary job, is missed in household surveys such as the CPS. We conclude with a discussion of possible implications of our findings for other household

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surveys, as well as caveats to these tentative conclusions, and directions for future research.

THE GALLUP EDUCATION CONSUMER PULSE SURVEY AND MODULE

The Gallup Education Consumer Pulse Survey is a large, nationally representative telephone survey. Like the Current Population Survey (CPS) and the American Community Survey (ACS), the Gallup survey collects employment information for a specified week (the seven days preceding the interview), and so should be subject to little recall bias. Further, like the CPS, the Gallup Education Consumer Pulse is an interviewer-administered survey, rather than an online survey. This should mean that our findings are more likely to be directly applicable to the possible modification of the current CPS questions. The survey also collects detailed demographic information (including age, gender, race, ethnicity and education) and data on the respondent's annual income. The target population for the Gallup Education Consumer Pulse survey is adults age 18 to 64, but during the periods that our survey module was in the field, Gallup also administered the employment and core demographic questions to individuals ages 65 to 80. (Few adults over age 80 work for pay.) The survey yields approximately 500 completed responses per day. Gallup weights its survey responses to match the demographic characteristics of the adult population, as recorded in the CPS-ASEC.

Employment questions on the Gallup Survey

The Gallup Education Consumer Pulse Survey includes a standard battery of questions on respondents' employment status used in other Gallup surveys. The employment section of the Gallup survey begins by asking respondents if they do any work for an employer. Those who answer in the affirmative are coded as employees and are asked the number of hours per week they usually work

for an employer (across all employers if they have more than one). Respondents are then asked about self-employment work activities and, if applicable, the usual hours they work per week in self-employment.

Our module consists of 14 questions that are interspersed, as appropriate, among the standard employment questions in the Gallup survey. Gallup's flexibility and the size of the survey sample also permitted us to vary the wording for selected questions randomly in order to test how respondent answers are affected by alternative phrasing. The module has several broad purposes:

- Identify potential problems in standard household surveys with respondents being miscoded as employees and test alternative wording for capturing such miscoding;

- Measure all sources of work for pay, including self-employment and other informal, nonemployee work involving few hours, and test alternative question wording for eliciting this information;

- Measure employment arrangements in which employers contract out workers to clients and test alternative wording for capturing this type of outsourcing in household surveys;

- Provide evidence on older workers' use of independent contractor arrangements as a transition to retirement;

- Provide evidence on the extent to which individuals obtain their work through mobile apps or online platforms, and test alternative household survey question wording for eliciting this information.

In developing questions for the module, we first conducted six focus groups using convenience samples of individuals from diverse socioeconomic backgrounds living in Southwest Michigan. Insights from these focus groups informed the development of draft questions. We then cognitively tested the module to ensure that respondents understood the

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questions and were answering them as we intended; we revised some questions based on this feedback. Separately, Gallup cognitively tested all questions in the survey module and suggested further modifications to the wording of some questions.

Gallup administered the module in four waves spread evenly across a year. Collecting data at different times during the year should provide valuable information on the seasonality of alternative work arrangements, although we leave investigation of this issue for a later draft. In each wave of data collection, Gallup fielded our questions until about 15,000 completed interviews had been obtained, which in each case took about a month. A great strength of our survey is its size. Across the four waves, the survey yielded information on contract and informal work from some 61,000 respondents, more than any other household survey investigating related topics outside the CWS. The first wave was administered from mid-May through mid-June 2018, the second wave from mid-August through mid-September 2018, the third wave from mid-November through mid-December 2018, and the fourth and final wave from late February through late March 2019.

In this paper, we provide a first look at evidence from all four waves of data collection. We focus on selected questions from the survey that address three of the study goals listed above: 1) identifying potential problems with workers being miscoded as employees, 2) measuring all sources of work for pay, including self-employment work that is informal or involves few hours, and 3) gauging the prevalence of work through online intermediaries.

Testing for miscoding of workers as employees in the Gallup survey

The employment section of the Gallup Education Pulse Survey begins by asking respondents about any employment they had with an employer in the preceding 7 days:

> Thinking about your WORK SITUATION over the past 7 days, have you been
> employed by an employer—even minimally like for an hour or more—from

whom you receive money or goods? (This could be for one or more employers.)

Consider how an individual—such as an IT worker, engineer, construction worker, or maintenance worker—who is hired on a contract basis by a private company might answer that question. The private company is not treating the worker as an employee under applicable law—and so does not contribute to the individual's social security account, deduct social security or income taxes from the individual's pay, provide workers' compensation or unemployment insurance coverage for the worker, or offer the worker any benefits that the company may provide to its employees. Additionally, for workers hired on a contract basis the company is not subject to wage and hour laws or a host of other regulations designed to protect employees. In answering the Gallup question about whether she is employed by the company, the respondent may know that legally she is treated as self-employed and so reply "no." On the other hand, the worker obtains employment through the company, and, unless she is cued to think about her legal employment arrangement, it would be reasonable for her to report that she is "employed by an employer." Consistent with the term's common usage, she may even think of herself as the company's "employee." In focus groups and cognitive testing conducted while developing the module, we found that individuals working on a contract basis often considered themselves employees.

Note that, although the question wording used to classify workers as employees differs on the CPS from that in the Gallup survey, the CPS arguably suffers from similar problems of interpretation. CPS respondents who reply "yes" to the question "Last week, did you do ANY work for either pay or profit?" are classified as employed.[2] To distinguish whether they are

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[2] Note that CPS respondents also are asked about the employment of other working age household members, whereas in the Gallup survey, individuals answer only for themselves.

employees or self-employed, employed respondents are asked: "Were you employed by government, by a private company, a nonprofit organization, or were you self-employed or [if applicable] working in the family business?" Someone working on a contract basis for a company might respond that they are self-employed if they are thinking about their legal employment status when answering the question. Alternatively, it would be reasonable and accurate for the respondent to answer that she is employed by a private company. She might be particularly inclined to report being employed by a private company if the term self-employment carries certain connotations for her, such as running her own business.

To test whether miscoding of workers as employees is a significant problem in the Gallup survey, we probed about the nature of the employment arrangement. Those answering that they were "employed by an employer" in the preceding seven days were randomly asked one of two questions. The first variant asked, "Were you an employee on this job or were you an independent contractor, independent consultant, or freelance worker?" Those reporting that they had more than one employer were asked, "Were you an employee on each of your jobs; an independent contractor, independent consultant, or freelance worker on each of your jobs; or did the arrangement vary across jobs?" In this question, respondents are asked explicitly whether they are employees and must choose between the two classifications. The terms independent contractor, independent consultant, and freelance worker are used in the Contingent Worker Supplement to classify workers as independent contractors.

We were concerned, however, that these categories are not well-defined and may have different connotations for different groups of respondents. For example, some focus group participants indicated that they thought of independent contractors, independent consultants, and freelance workers as terms applying only to professionals or workers in the construction

trades. Some thought that an independent contractor was "the boss" who directed the work of others, as on a construction site.

To avoid vague terminology, the second variant asked respondents, "Did this employer take any taxes out of your pay?" Or, if respondents reported more than one employer, they were asked, "Did all of your employers take out taxes from your pay, did none of them take out taxes from your pay, or did it vary across employers?" If the worker is not an employee (or the employer is misclassifying the worker as an independent contractor), then the employer will not withhold social security taxes (mandated for employees) or other taxes from the worker's pay. Although cognitive testing indicated that respondents would be able to answer this question accurately, we were concerned that any question about taxes might be sensitive and cause some respondents to terminate the interview or refuse to answer the question. According to Gallup, however, the question did not prompt interview terminations; further, the question's item nonresponse rate was very low and comparable to the item nonresponse rate for other questions.

Measuring all sources of work for pay

A second goal of the survey is to capture all sources of work for pay, even if the usual weekly hours spent on a specific work activity are low or the work is informal in nature. The wording of the standard Gallup employment questions encourages respondents to report work that includes low-hours jobs. As noted, the first question in the employment section of the Gallup survey asks respondents if they are employed by an employer, "even minimally like for an hour or more," and the question instructions clarify that this work "could be for one or more employers." Similarly, the following question about self-employment, which appears on the Gallup survey, encourages respondents to think broadly about the types of work that are considered self-employment and to include activities that involve a small number of hours:

Again, thinking about the last 7 days, were you self-employed, even minimally like for an hour or more? This means working for yourself, freelancing, or doing contract work, OR working for your own or your family's business.

Self-employment also includes fishing, doing farm work, or raising livestock for either your own or your family's ranch.

The Gallup survey normally asks the self-employment question only of respondents who do not report being employed by an employer or who report being employed by an employer for fewer than 30 hours per week. Because we want to see how individuals combine employee and self-employment work, this question is asked of *all* respondents included in our module sample.

Given the structure of the Gallup questions, there is a risk that those who report being employed by an employer but who with further probing indicate that they are not employees subsequently may report this work in response to the self-employment question. To avoid double counting of work, we ask the relevant respondents the following question: "Just to check, was all or was some of the self-employment work you did in the last 7 days work you already told me about, or not?" For those answering that they had reported some of the work in response to an earlier question, we ask about the hours worked in this additional self-employment: "Excluding the work you already told me about, in a typical week (7 days), how many additional hours do you work as a self-employed individual?"

Although the standard employment questions on the Gallup survey probe for even minimal work for an employer or in self-employment, these questions may miss certain types of informal work if those doing it do not consider themselves to be working for an employer or do not view themselves as self-employed, independent contractors, or freelance workers. To capture such work, our survey randomly assigns all respondents to

one of two questions. The first asks "Did you do anything in the last 7 days that you have not already mentioned for which you received (or expect to receive) payment?" The second repeats that question and adds examples of such work, stating, "Examples might include babysitting or eldercare, cleaning or maintenance work, data entry tasks, driving for a car service, or making and selling handicrafts." Findings in the survey methodology literature suggest that adding examples to questions encourages more accurate reporting, whether because the examples clarify for respondents what they should be reporting or because the examples remind them of things they might otherwise have forgotten (see, e.g., Tourangeau et al. 2014). We expect that providing examples of different types of informal work should increase the share of respondents reporting such work. If respondents report doing additional work for pay, they are asked the number of hours that they spend on such activities in a typical week.

Gauging the role of online intermediaries

A third goal of the survey is to learn about the use of online intermediaries in facilitating work and payments for that work. Recent research has found that a growing number of people are obtaining work through such online intermediaries. Online intermediaries include websites and mobile apps such as Uber, Lyft, TaskRabbit, and Upwork. The increased use of online intermediaries could explain at least some of the recent rise in contractor work captured in tax data (Abraham et al. 2018, Collins et al. 2019).

Existing studies of this phenomenon vary in their methodology and approach. The 2017 CWS asked respondents about their use of websites or mobile apps during the reference week to connect with clients for in-person or online tasks. The relevant questions on the CWS also stipulate that website or app companies coordinate payment for this work. While 3.3 percent of

employed workers reported the use of a website or app for this purpose, an examination of the verbatim answers to the survey suggested to the Bureau of Labor Statistics (BLS) that many respondents were confused about what the question was asking. More specifically, although the relevant CWS questions stipulate that the website or app companies coordinate payment for the work, many respondents seemed to be confused about the use of technology in simply connecting with clients and customers versus the use of technology both *in connecting with clients and customers and in facilitating transactions of fees for services*. A possible reason for respondent confusion was that the questions were lengthy, and some individuals may not have fully processed the information about the website or app coordinating payments for their services. Eliciting information through a series of shorter, simpler questions rather than through one complex, lengthy question may be a way to improve the accuracy of responses. Given concerns about respondent confusion, the BLS used the information contained in the verbatim answers to recode the survey responses. This recoding reduced the estimated incidence rate by two-thirds to just over 1.0 percent (BLS 2018).[3]

Using data on deposits to the universe of JPMorgan Chase deposit accounts, Farrell, Greig, and Hamoudi (2018) found that 1.6 percent of households received payment from an online platform in March 2018; they also found that over the preceding 12 months, 4.5 percent of households had received at least one payment from an online platform. Both figures represent a substantial increase compared to the corresponding levels at the end of 2014. As the authors themselves note, however, the distribution of JPMorgan Chase accounts over-represents the West, the Great Lakes states, New York, and Florida and Georgia, as well as urban rather than rural locations. In addition, the JPMorgan Chase data will miss payments from online

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[3] Unlike the majority of CWS questions, the questions about use of a website or mobile app were asked about *any* job the respondent had.

platforms that do not flow through a Chase financial account, something that may have grown

in prevalence as platforms have introduced new payment options such as having money added

directly to a debit card.

Finally, in an analysis of tax data, Collins et al. (2019) found that about 1 percent of

workers received pay from online intermediaries in 2016. Receipt of a 1099 can be viewed as

an indicator that a person has worked as an independent contractor. Recent increases in the

number of 1099 tax filings have been driven largely by payments from online intermediaries.

Though growing in prevalence, at this point these payments represent a small share of income.

An obvious caveat is that tax data may not capture work that does not lead to the issuance of a

1099, whether because the payment does not generate a filing requirement or because of

noncompliance with applicable rules.[4]

Although there is general agreement that those obtaining work through online

intermediaries represent a small fraction of all workers, all of the various sources of data about

their prevalence and use have notable limitations. There is thus an important reason to seek

better measurement of this channel for obtaining work in household surveys. To measure the

incidence of online intermediaries, our module asked the following question of all respondents

who reported any nonemployee work (including those who initially reported themselves to be

employed by an employer but on further probing reported being an independent contractor,

independent consultant, or freelancer):

> For any of the work you did in the past seven days, did you connect directly with
> new customers or clients through a mobile app or online platform?

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[4] A company that pays nonemployee compensation to an individual is required to submit a 1099-MISC for payments in excess of $600 per year. Because they are treated as payment intermediaries rather than payers of nonemployee compensation, however, online platforms are not required to report payments on a 1099-MISC. Rather, where applicable, they are required to file a 1099-K. The 1099-K filing threshold is much higher; reporting is required only when an individual receives more than $20,000 in payments and has at least 200 transactions during the year. Until recently, many online platforms appear to have reported platform earnings using a 1099-MISC or sent 1099-K's to everyone who received platform earnings, but this appears to be changing. See Collins et al (2019) for details.

Half of the eligible working population was randomly assigned to receive a version of the question that also included the following examples, which were intended to further clarify for respondents the type of work the question intended to capture:

> For example, you might have given rides to people using a ridesharing app; used an app to find people looking for cleaning, delivery or handyman services; or used an online platform where people can bid on data entry or other tasks.[5]

In our examination of the data following the first two waves of fielding, we noticed that positive responses to this question were much higher than we had expected. To reduce possible confusion and in view of problems experienced with the CWS questions on online intermediary use, for the third and fourth waves we added a question to the module for respondents who answered affirmatively to either version of the question described above:

> Did the customers pay you directly, or did they pay the mobile app or online platform which then pays you?

This question was intended to better capture the incidence of online intermediaries facilitating payment and is consistent with the CWS definition of this type of work. We count respondents who answered affirmatively to *both* questions as participants in the online intermediary workforce.

FINDINGS

In this section, we report selected findings from our Gallup module. We focus on three topics: 1) miscoding of workers as employees in the survey and the characteristics of these workers; 2) the incidence of multiple job holding, and the characteristics of those holding multiple jobs; and 3) the use of mobile apps and online platforms that facilitate finding clients

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[5] Unlike the 2017 CWS, we did not attempt to distinguish between whether work *obtained* through an online intermediary was *performed* online or in-person.

or customers and receiving pay from them.

Miscoding of workers as employees

Table 1 shows, among those who report being employed by an employer, the percent who upon probing indicate they are not employees. (We weight all tabulations using the population weights provided by Gallup, showing weighted frequencies for all respondents and for those with selected demographic and job characteristics.) The first column of Table 1 reports tabulations for the first version of the question—the percentage who answered that they are an independent contractor, independent consultant, or freelance worker rather than an employee on at least one job. The second column reports tabulations for the second version of the question—the percentage who indicate that their employer (or, if they have multiple employers, at least one employer) does not take taxes out of their pay. The third column of the table combines responses from the two question versions.

The responses to both versions of the question suggest that a significant minority of those reporting themselves to be employees are miscoded. Among respondents reporting that they work for an employer, 10.8 percent and 8.9 percent indicate that they are not employees in response to version 1 and version 2 of the question, respectively.[6] The difference in percentages between the two question versions is statistically significant (p-value < 0.01), although substantively modest. Combining the responses to the two question variants indicates that 9.9 percent of respondents saying that they are employed by an employer, some of whom may have multiple jobs, are miscoded in the survey as employees on at least one job. Although the estimate of miscoding is somewhat higher when asking version 1 of the question than when

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[6] The standard error of each estimate is about 0.3 percent. We emphasize that the classification problem lies in the way individuals working on an independent contractor basis are coded in the survey and does not necessarily imply that employers have misclassified these individuals as independent contractors.

asking version 2, as shown in the rest of the table, the incidence patterns by demographic and job characteristics are similar. Compared to prime-age workers, younger (age 18–24) and older (age 65–80) workers are more likely to be miscoded as employees. The incidence of miscoding is also relatively high among minorities—especially blacks and Hispanics—compared to whites, among men, and among those without a high school degree.

The estimated incidence of employee miscoding in the survey is especially strongly correlated with certain job characteristics. The fraction reporting that they are not an employee with an employer jumps dramatically when the worker reports having multiple employers. For versions 1 and 2 of the question, the estimated incidence is 7.5 and 6.4 percent, respectively, among workers with only one employer; that percentage jumps to 44.4 and 32.4 percent among those with two employers and to 64.7 and 51.7 percent among those with three or more employers.[7] Those with multiple jobs who report not being an employee for at least one employer indicate that it "varies across employers" in about two-thirds of the cases. This pattern suggests that the employment arrangement in a secondary job is especially likely to be on a contract basis.

Miscoding of workers as employees is also strongly and negatively associated with work hours. Among those who report that they usually work 40 or more hours per week for an employer, 8.1 and 5.3 percent indicated that they are not an employee in versions 1 and 2 of the question, respectively. In contrast, those figures are 28.8 and 30.1 percent among those usually working only 5 to 14 hours per week, and 59.6 and 41.3 percent among those usually working fewer than 5 hours per week.[8]

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[7] Slightly over 6 percent of those who report being employed by an employer also report having two jobs; just under 2 percent report having three or more jobs.

[8] Approximately 4 percent of those who report being employed by an employer also report working 5 to 14 hours per week; about 1 percent report working fewer than 5 hours per week.

Table 2 presents selected coefficient estimates and standard errors (robust to heteroskedasticity) from linear probability models predicting employee miscoding. The regression sample includes individuals who report being employed by an employer in at least one job. The dummy dependent variable equals one if, in response to our follow-up question, the respondent indicates not being an employee (i.e., that they were an independent contractor, independent consultant, or freelance worker or that their employer did not take taxes out of their pay) in at least one job. Coefficient estimates for those asked the first version of the question are reported in the first column, estimates for those asked the second version of the question are reported in the second column, and, based on the combined sample, estimates for both versions together are reported in the third column. In addition to the variables reported, all regressions include controls for the wave and respondent's state of residence; the final column also controls for question version.

The estimates from these linear probability models generally reinforce the descriptive evidence presented in Table 1. Working for an employer as a contractor rather than as an employee is strongly associated with secondary and low-hours jobs, controlling for other factors. Relative to having one employer, having two employers raises the estimated probability of being miscoded as an employee by 39 percentage points with question version 1 and by 27 percentage points with question version 2. Having three or more employers raises the estimated probability by 61 and 44 percentage points for the two question versions, respectively. Estimates of the probability of working on a contract basis for an employer fall monotonically with hours worked. Relative to working 40 or more hours per week, those working 5 to 14 hours per week, for example, are an estimated 22 percentage points (question version 1) and 21 percentage points (question version 2) more likely to be miscoded as an employee. Controlling

for other factors, being 65 or older or male also has a consistent positive association with working for an employer on a contract basis.[9]

Capturing all work for pay: Evidence on secondary jobs with employers, in self-employment, and in informal work

Another goal of the survey module is to capture all sources of work for pay. As noted earlier, recent research findings have raised concerns that standard household surveys including the CPS may miss some individuals engaged in work for pay and thus underestimate the employment rate (Bracha and Burke 2017, Abraham et al. 2018). Moreover, several recent surveys point to high rates of work for pay to supplement earnings from main jobs (Robles and McGee 2016, Bracha and Burke 2017, Abraham and Houseman 2018). Much of this secondary work is in self-employment or informal non-employee work that may not be fully captured in the CPS. Additionally, any growth in secondary independent contractor or informal non-employee work will not be measured in the CWS, which asks respondents only about the employment arrangement in their main job.

In our Gallup sample, 46.0 percent of respondents report working for one or more employers but not in self-employment, 10.3 percent report only self-employment, and 9.6 percent report working both for an employer and in a self-employment arrangement. Combining the responses from the two question versions pertaining to other work not previously reported, an additional 0.7 percent of respondents who reported no employer or self-employment work indicated that they did other work for pay in the preceding seven days. The weighted employment rate for our sample is therefore 66.6 percent if miscellaneous other work

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[9] The Gallup survey also collects data on personal income, but it is missing for about 30 percent of respondents. We estimated models that included categorical income variables as controls, but the coefficient estimates on the income variables generally were insignificant and their inclusion had no substantive effect on the coefficients estimated for other variables.

is counted and 65.9 percent if only employer and self-employment work is counted. These figures are slightly higher than the employment rate based on data from the CPS for the months corresponding to the four waves of data collection.[10]

The multiple-job-holding rate in our Gallup sample is high—18.7 percent among those reporting some work for pay in the preceding seven days.[11] We use information on weekly hours worked to classify workers into five, mutually exclusive primary job categories: employee (not miscoded); miscoded employee (reports working for an employer but then indicates not an employee); self-employed, not an independent contractor; self-employed, independent contractor (excludes miscoded employees); and informal work only (reports no work for an employer and no self-employment). Hours of work are collected as a categorical variable for employees and the self-employed. In cases where an individual reported working both for an employer and in self-employment and reported the same hours range for each, we classified the individual as working for an employer. For those with multiple employers who reported that whether they were an employee or had taxes taken out of their pay varied across employers, the survey asked which accounted for the majority of their work hours. We used this response to categorize workers as employees or as miscoded employees.

The first column of Table 3 displays the distribution of main job status as a percentage of all respondents. Just over half of respondents, 50.8 percent, indicated that they work for an employer and, with further probing, were truly employees. Another 4.4 percent reported working for an employer but in response to further probing indicated that they were not an

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[10] The average employment rate in the CPS for individuals age 18–79 during the months of our data collection was 65.0 percent—between 0.9 and 1.6 percentage points lower than estimates from the Gallup survey for those age 18–79 (excluding those age exactly 80 because they cannot be identified in the CPS).
[11] This figure includes those identifying as employed by multiple employers as well as those employed by a single employer who also report self-employment.

employee (i.e., had contractor status or did not have taxes taken out of their pay). Half of those primarily employed in self-employment activities reported that they were not an independent contractor, independent consultant, or freelance worker (5.3 percent of all respondents), while the other half characterized their self-employment work in that way (5.4 percent of all respondents). As already noted, another 0.7 percent of respondents reported other work for pay when probed but had not reported any work earlier in the survey.

The other columns in Table 3 show, for those with each indicated main job status, the percent with a secondary work activity by type of work arrangement for that other paid work— any secondary work, work for at least one employer, self-employment, and other informal work for pay. With respect to the last, all respondents were asked one of two variants of a question on whether they engaged in any other work for pay, not previously mentioned, during the preceding seven days. The second version differed from the first by giving examples of informal work. The last three columns of Table 3 show the percentage responding that they had other work when asked question version 1, when asked question version 2, and when pooling the two variants. The second version, which gave examples of informal work, elicited a significantly higher share reporting that they had engaged in other work for pay. This finding is consistent with the pattern reported in Abraham and Amaya (2018).

Among those whose main job involves working for an employer as an employee, 19.8 percent reported at least one secondary job: 6.9 percent did other work for at least one additional employer, 12.9 percent have some self-employment work activity, and 2.1 percent have other informal work (1.7 percent based on question version 1 and 2.6 percent based on question version 2). The incidence of multiple job holding is considerably higher among those whose main job involves working for an employer but not as an employee. Among these

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miscoded employees, 37.8 percent report some type of secondary work activity, with 21.7 percent reporting other work for at least one employer, 18.9 percent reporting being engaged in some type of additional self-employment activity, and 5.9 percent reporting other informal work for pay (4.1 percent based on question version 1 and 7.7 percent based on question version 2).

The next two rows show the incidence of multiple job holding for those whose main work activity is self-employment. The overall incidence of secondary work activity is considerably lower among those whose primary work activity is self-employment than among those primarily working for an employer: 7.7 percent and 10.5 percent among those who do and do not view themselves as independent contractors, respectively. One caveat to this conclusion is that the self-employed may engage in multiple independent contractor or other self-employment jobs, but the questions do not capture this information. Interestingly, among those whose primary work activity is self-employment, the share who also hold jobs with one or more employers is relatively low—irrespective of whether they view themselves as independent contractors. Among those who do not consider themselves to be independent contractors, 3.8 percent reported having at least one job with an employer; among the self-employed who are independent contractors, 3.2 percent work for at least one employer. The patterns in Table 3 imply that, for the large majority of those reporting both employer and self-employment work, the main job is with the employer.[12] The propensity to engage in informal work activities differs among the two categories of self-employed. Whereas 8.6 percent of self-employed independent contractors report informal work activities in the preceding seven days, 4.9 percent of those in

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[12] We classified the main job as working for an employer for 96.3 percent of those working both for an employer and for themselves. Hours worked is reported in categories, and where the hours worked for an employer and in self-employment work were in the same category, we classified the main job as work for an employer. About 29 percent of the cases involved ties; even without these cases, two-thirds of those working for both an employer and in self-employment unambiguously worked more hours in their employer job.

self-employment who are not independent contractors report informal work activities.

Interestingly, the prevalence of informal work is only slightly lower among miscoded

employees (5.9 percent) than it is for (self-identified) self-employed, independent contractors

(8.6 percent). The prevalence of informal work among the self-employed who are not

independent contractors, while lower than that for self-employed independent contractors, is

more than double the prevalence among employees (4.9 percent versus 2.1 percent).[13]

Table 4 explores the correlates of informal work in a regression framework. The

question regarding informal work was asked of all respondents. The dependent variable in the

regression is a dummy variable equal to one if the respondent reported any informal work in the

preceding seven days. Separate regressions were estimated for the sample asked the first version

of the question, the sample asked the second version, and the sample combining both versions.

The mean of the dependent variable (reported at the bottom of the table) is 0.021 for the first

version of the question, 0.037 for the second version, and 0.029 for the combined sample. As

noted, the responses for the two question versions are significantly different. The linear

probability models include as control variables demographic characteristics of the respondent

(age, race, gender, and education), status of main job, survey wave, and respondent's state of

residence.[14] The regression that combines responses includes also a control for question version.

The regression results confirm the importance of main job status as a predictor of informal

work. The omitted category in the regression is employee, not miscoded. Those who are

miscoded as employees (working for an employer on a contract basis) are 2 to 5 percentage

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[13] The prevalence of informal work for all workers (the first five rows of Table 3) is 2.3 percent (version 1), 3.3 percent (version 2), or 2.8 percent, if pooled. If these workers are included among those holding multiple jobs, as are those with both employee and self-employment jobs, the total multiple job-holding rate is 19.2 percent.
[14] The coefficient estimates shown in the table are essentially unchanged if we omit the survey wave and state of residence controls.

points more likely to report informal work, and those who are self-employed independent contractors are 5 to 7 percentage points more likely to report informal work, compared to employees. Those who reported no work for an employer or self-employment work were about one-half percentage point more likely than employees to report informal work (mostly stemming from version 2 of the informal work question).

With respect to demographic characteristics, consistent, statistically significant relationships with informal work are found only for age. Controlling for other factors, informal work is negatively related to age, with those age 18 to 24 roughly one to two percentage points more likely to report informal work, and those age 65 to 80 roughly one to two percentage points less likely to report informal work, than those age 25 to 49.

Use of online intermediaries

We investigate the incidence of work obtained through online intermediaries in Table 5. As described earlier, similar to the problems observed with the 2017 CWS, the initial question we asked about online intermediaries led to suspiciously high affirmative responses. We were able to modify the module in the last two waves to ask an additional question of those who answered yes to our original question about how they were paid. Restricting our measure to include only those who reported being paid through the online platform or mobile app reduces the estimated incidence of online intermediary work by more than half.

Table 5 thus focuses on respondents from the third and fourth waves who received both questions. It is worth noting that the first of the incidence questions was asked of respondents who reported *any* non-employee work. This included everyone who reported self-employment; work as an independent contractor, independent consultant, or freelancer (including miscoded employees); having an employer that did not take taxes out of their pay; or other informal work

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for pay. In the table, however, in order to be conceptually compatible with the estimates provided in the CWS and the study by Collins et al. (2019), we include in the denominator anyone who reported any work activity. We thus implicitly code respondents who report *only* employee work as not using online intermediaries.

The first pair of columns in Table 5 reports estimates and standard errors for the first version of the question, which asked about use of online intermediaries but did not provide examples. The second set of columns pertains to the second version of the question, in which examples were provided, and the last pair of columns pools both versions. (The same follow-up question about how the respondent was paid was asked for both versions of the initial question.) Approximately 3 percent of workers report using an online intermediary through which they were paid for work performed in the seven days preceding the survey, and this estimate varies trivially across the two question versions. This magnitude is about triple that of the CWS (hand-recoded) estimate (and also larger than the estimates found in Farrell, Greig, and Hamoudi 2018 or Collins et al. 2019). While there are several potential explanations for the discrepancy between our estimate and the CWS estimate, one is that our Gallup module was fielded in late 2018 and early 2019, between 18 and 21 months after the CWS. Given the rapid growth in the use of online intermediaries documented in earlier research, it would not be surprising if the prevalence had risen over this period. Differences between the two surveys in the population receiving the questions about work through online intermediaries also could be a factor.[15]

The other rows in Table 5 provide estimates of prevalence of online intermediaries by

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[15] The CWS questions are asked only of people categorized as employed based on the responses to the basic monthly CPS. To the extent that the standard CPS questions are not well designed to capture informal work activity (Abraham and Amaya 2018), some people who participate in online platform work may not have been categorized as employed and thus not asked the CWS questions. Because the questions on our Gallup module contain prompts designed to capture even small amounts of informal work activity, the universe of those asked our questions about online platform work is likely to be more inclusive.

demographic groups. In most cases, these estimates are quite similar across the two question

versions. Perhaps unsurprisingly, young workers are more likely to use online intermediaries

than older workers, but the difference is slight, less than 1.5 percentage points. Blacks and

perhaps Asians have higher incidence rates than Whites and Hispanics, albeit by small margins,

and there appears to be no difference by gender. Online intermediary use is also more common

among more educated workers and especially among those with a technical or vocational

qualification, although the differences again are small. The more interesting patterns occur by

workers' weekly hours and employment classification. In the case of hours, there is a

pronounced gradient, with those working the fewest hours more than twice as likely to report

use of online intermediaries as those reporting full-time schedules. Workers whose main job is

as an employee report an incidence rate of about 1.5 percent, but those miscoded as employees

(who are actually independent contractors, consultants, or freelancers), and the self-employed,

regardless of contractor status, report rates between 7 and 9 percent. These patterns are

consistent with the findings of Farrell, Greig, and Hamoudi (2018) and Collins et al. (2019) that

much online intermediary work occurs among those with weaker or more tenuous formal

employment.[16]

Table 6 further explores the factors affecting the use of online intermediaries in a

regression context. As before, we show separate regression estimates for each version of the

question, along with estimates for the versions pooled together. With a few notable exceptions,

the regression estimates broadly agree with the patterns in Table 5.

In the regression estimates, the negative age gradient in the use of online intermediaries

remains and even strengthens, with workers age 65 or older about 3 percentage points less

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[16] Additionally, although not shown in Table 5, we find online intermediary use to be more common in the South and West and in more densely populated areas.

likely to report use of online intermediaries than those age 25 to 49. Conditional on the other covariates, black workers are approximately 2 percentage points more likely to use online intermediaries than white workers, with few differences among other races or ethnicities, and there is no strong association of gender with use. While the descriptive results in Table 5 indicated that having a technical or vocational education was associated with the highest rate of online intermediary use, the regression estimates show a more monotonic pattern with education. In all three of the models, holding constant other factors, college graduates and those with a postgraduate degree are most likely to report this type of work.

Also in contrast with Table 5, the regression estimates show no association between online intermediary use and total weekly hours. Rather, the strongest conditional associations are by worker classification, with all non-employee groups 5 to 8 percentage points (roughly a factor of three) more likely to use online intermediaries than traditional employees. These results also accord with the findings of Collins et al. (2019) but suggest that even the self-employed who do not report being independent contractors use online intermediaries through which they receive payments for services at relatively high rates.

DISCUSSION

In this paper, we shed light on two concerns about employment statistics derived from household surveys, such as the CPS. The first concern is that a significant number of workers in these surveys are miscoded as employees. The second is that existing surveys significantly understate the number of primary and especially secondary jobs or work activities in which individuals are engaged. Our preliminary findings from a module on the Gallup Education Consumer Pulse Survey support both concerns.

With respect to the first concern, a potential problem with the question wording in some household surveys is the implicit assumption that if organizations "employ" individuals, those workers are the organizations' employees. Yet, in common parlance, a worker who is hired on a contract basis by an organization is employed by the organization, even though the worker is not legally the organization's employee. Such workers are not eligible for social insurance benefits, are not covered by employment laws that stipulate minimum wages and overtime pay, and do not receive employee benefits the organization may provide, among other things.

For individuals who reported being "employed by an employer" in the Gallup survey, we further probed their employment status, randomly assigning individuals to one of two questions. Answers to these questions suggest that between 8.9 percent and 10.8 percent of those who thought of themselves as working for an employer were in fact not employees. The lower number was based on asking whether their employer took taxes from their pay and the higher number on the individual saying they were an independent contractor, independent consultant, or freelancer rather than an employee. In the absence of probing, these individuals would have been miscoded as employees. While the share of respondents indicating that they were not employees differed significantly across the two question versions, the estimates are of a similar magnitude. Moreover, the pattern of variation in the incidence of employee miscoding across worker and job characteristics is reassuringly similar for the two questions; those working for employers but indicating that they were not employees were more likely to be young or post-retirement age, minority, low-educated, hold more than job, and work relatively few hours.

While we believe our findings point to a potentially broader problem in household surveys, one should be cautious in drawing conclusions from our module about the incidence of

miscoding of workers as employees in other surveys. The response rate in the Gallup survey is considerably lower than that in the flagship government surveys, and so the survey sample may be less representative of the U.S. population, even after weighting. In addition, as noted, the CPS question used to classify workers may mitigate miscoding by allowing respondents working for an employer on a contract basis to indicate that they are self-employed. Interestingly, about 14 percent of those who reported being independent contractors, independent consultants, or freelance workers on their main job in the 2017 Contingent Worker Supplement to the CPS had previously reported being an employee on that job in the basic CPS, representing 1 to 2 percent of those reported to be employees on their main CPS job. Although considerably lower than the incidence we find in the Gallup survey, there are reasons to suspect that the CWS understates the problem of miscoding of workers in contract or informal arrangements as employees and the overall incidence of these types of work. For example, unlike the Gallup survey, the CPS includes proxy responses, which are likely to be more prone than self-reports to error. Errors may be especially likely to occur in proxy responses when respondents are answering questions on complicated subjects such as the nature of the employment arrangement. In addition, the CWS asks only about workers' main jobs, and our findings suggest that miscoding of workers as employees is especially prevalent for secondary jobs.

Regarding the second concern that the CPS is missing a significant amount of work activity, the preliminary estimates from our survey module show a modestly higher employment rate than in the CPS and a much higher rate of multiple job holding. The estimated employment rate in the Gallup survey is up to 1.6 percentage points higher than that in the CPS, while we find that among the employed about 19 percent hold more than one job, compared to

only about 5 percent in the CPS. Although unmeasured differences in the characteristics of the individuals in the Gallup as compared to the CPS survey samples could explain these differences in the probability of being employed and, conditional on being employed, in the probability of holding multiple jobs, the differences also are consistent with variations in the questions asked in the two surveys. Individuals in the Gallup survey are asked separately about work for an employer and work in self-employment, and our survey module includes a question about other informal work that may not be captured by either of the other two employment questions. In addition, the Gallup survey question about self-employment is expansive in its definition, providing multiple examples of different types of self-employment—a level of detail not found in the CPS. Prior research suggests that including examples can provide needed clarity for respondents and increase the likelihood of reporting a specific work activity (Abraham and Amaya 2018). Similarly, we find that providing examples of informal work activities significantly increases the likelihood that individuals will report work activity not previously reported in the survey.

Informal work obtained through online intermediaries has received much attention in recent years. We estimate that, when interviewed in November or December of 2018 or in February or March of 2019, about 3 percent of working adults age 16 to 80 had engaged in such work during the previous week, considerably higher than the approximately one percent prevalence rate found in the May 2017 CWS following extensive data cleaning by BLS to remove anomalous results. This disparity may reflect differences in the composition of our survey sample compared to the CWS sample as well as the fact that, in our sample, respondents report only for themselves, whereas the CWS includes both self and proxy responses. It is also possible, however, that the prevalence of work obtained through online intermediaries has

continued to grow.[17] In order to monitor growth in the prevalence of work obtained through online platforms, it will be important to obtain consistent measurements that can be compared over time. The experiences with both the CWS and our Gallup survey module illustrate the challenges of collecting accurate information about online intermediary work in household surveys. Eliciting this information through two or more simple questions, as was done in the last two waves of our Gallup survey module, may prove to be an effective strategy for future surveys.

In summary, our preliminary findings support concerns that household surveys like the CPS may be missing a significant amount of work activity, particularly in the form of secondary jobs, and thus may have missed a significant shift towards self-employment or non-employee work. Accurately measuring whether individuals working for organizations are being treated, in a legal sense, as employees of those organizations is important because a shift toward independent contract or informal non-employee work raises concerns about the adequacy of social insurance programs and employment and labor laws in the United States, which were designed with the traditional employee relationship in mind. Accurately measuring the prevalence of and trends in multiple job holding and informal work activities, including informal work obtained through online intermediaries, is important for understanding how families, particularly those experiencing financial stress, make ends meet (Abraham and Houseman 2018). Additionally, any increase in multiple-job holding could be an indicator of a growing problem with the adequacy of wages, hours, or benefits in primary jobs.

This paper reports selected initial findings from our survey module. In future research,

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[17] The Federal Reserve Board's 2018 SHED survey, fielded approximately one month before the third wave of our module, found a similar estimate of 3 percent of adults using online intermediaries. The reference frame, however, was over one month—rather than seven days as in our module—and the mode of the survey was online rather than via telephone.

we will conduct more detailed analyses, including in-depth comparisons of measures of self-employment and independent contractor work from the Gallup survey with those from other household surveys, including the CPS and CWS. We will evaluate possible explanations for differences and draw implications for ways to improve measurement of contract and informal work in household surveys.

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Table 1: Among Those "Employed by an Employer," Share Who Indicate They Aren't Employees

	Q ver. 1		Q ver. 2		Total	
ALL Respondents	**10.83**	**(0.32)**	**8.87**	**(0.31)**	**9.86**	**(0.22)**
Age						
18–24	11.26	(0.97)	18.01	(1.19)	14.59	(0.77)
25–49	9.84	(0.45)	6.80	(0.40)	8.33	(0.30)
50–64	10.52	(0.54)	6.80	(0.46)	8.68	(0.36)
65–80	21.43	(1.25)	15.32	(1.02)	18.33	(0.81)
Race						
White	9.63	(0.34)	8.09	(0.33)	8.87	(0.24)
Black	12.17	(1.00)	9.07	(0.94)	10.59	(0.68)
Asian	11.34	(1.86)	6.57	(1.45)	9.09	(1.20)
Hispanic	13.80	(1.01)	11.55	(0.96)	12.69	(0.70)
Other	11.92	(2.54)	12.01	(2.60)	11.97	(1.82)
Gender						
Female	9.79	(0.46)	8.35	(0.42)	9.07	(0.33)
Male	11.73	(0.45)	9.34	(1.91)	10.55	(0.30)
Education						
Less than high school	19.40	(2.10)	15.39	(1.91)	17.41	(1.42)
High school or GED	9.42	(0.69)	10.38	(0.75)	9.89	(0.51)
Technical/Vocational	10.23	(1.56)	6.79	(1.28)	8.55	(1.02)
Some college	10.71	(0.54)	8.27	(0.51)	9.50	(0.37)
College graduate	9.26	(0.52)	6.90	(0.48)	8.10	(0.36)
Post graduate	11.83	(0.67)	7.64	(0.55)	9.72	(0.44)
Number of employers						
1	7.48	(0.28)	6.37	(0.28)	6.93	(0.20)
2	44.37	(2.12)	32.36	(1.92)	38.27	(1.43)
3+	64.69	(4.03)	51.07	(4.01)	58.01	(2.86)
Hours worked/week						
40+	8.08	(0.34)	5.31	(0.28)	6.71	(0.22)
30 to 39	12.54	(0.97)	12.13	(1.01)	12.33	(0.70)
15 to 29	16.31	(1.17)	18.52	(1.41)	17.38	(0.91)
5 to 14	28.78	(2.24)	30.05	(2.43)	29.42	(1.65)
Less than 5	59.55	(4.81)	41.29	(5.08)	50.78	(3.53)
N	13,537		13,259		26,796	

NOTE: All tabulations are weighted using sampling weights provided by Gallup. These weights are designed for the sample to replicate the demographic characteristics of the most recent CPS-ASEC. Standard errors in parentheses. Question version 1 (first pair of columns) asks respondents whether they are an employee or an independent contractor, independent consultant, or freelance worker. Question version 2 (second pair of columns) asks respondents whether their employer takes out any taxes from their pay (those who answer "no" are coded as not an employee). The third pair of columns pools both sets of responses.

Table 2: Probability of Indicating not Employee, Conditional "Employed by an Employer"

	Question version 1	Question version 2	Combined
Age (omitted: 25–49)			
18–24	−0.039**	0.058**	0.009
	(0.009)	(0.010)	(0.007)
50–64	0.013*	0.006	0.009**
	(0.005)	(0.005)	(0.004)
65–80	0.055**	0.037**	0.045**
	(0.010)	(0.009)	(0.007)
Race (omitted: White)			
Black	0.018*	−0.007	0.006
	(0.009)	(0.008)	(0.006)
Asian	0.007	−0.021~	−0.008
	(0.014)	(0.013)	(0.010)
Hispanic	0.023**	0.009	0.017**
	(0.009)	(0.008)	(0.006)
Other	0.030	0.011	0.017
	(0.021)	(0.019)	(0.014)
Gender (omitted: Male)			
Female	−0.050**	−0.033**	−0.041**
	(0.005)	(0.005)	(0.003)
Education (omitted: High school)			
Less than high school	0.041*	0.021	0.030*
	(0.019)	(0.018)	(0.013)
Technical/Vocational	0.040	−0.015	−0.006
	(0.013)	(0.013)	(0.009)
Some college	0.010	−0.021**	−0.006
	(0.008)	(0.008)	(0.005)
College graduate	0.014~	−0.012~	0.001
	(0.008)	(0.007)	(0.005)
Post graduate	0.031**	−0.001	0.015**
	(0.008)	(0.008)	(0.006)
Number of employers (omitted: 1)			
2	0.386**	0.267**	0.326**
	(0.018)	(0.016)	(0.012)
3+	0.607**	0.443**	0.525**
	(0.030)	(0.032)	(0.022)
Weekly hours (omitted: 40+)			
30 to 39	0.057**	0.057**	0.057**
	(0.008)	(0.008)	(0.006)
15 to 29	0.098**	0.100**	0.099**
	(0.010)	(0.011)	(0.007)
5 to 14	0.222**	0.210**	0.216**
	(0.018)	(0.018)	(0.013)
Less than 5	0.507**	0.332**	0.426**
	(0.036)	(0.038)	(0.026)
R-squared	0.221	0.172	0.192
Number of observations	13,537	13,259	26,796

NOTE: Question version 1 asks respondents whether they are an employee or an independent contractor, independent consultant, or freelance worker. Question version 2 asks respondents whether their employer takes out any taxes from their pay (in which we code "No" as not an employee). The sample consists of respondents who report being employed by an employer. Each column reports coefficient estimates and standard errors robust to heteroskedasticity, in parentheses, from a separate linear probability model. All regressions also control for wave and respondent's state of residence. ~p<0.10; *p<0.05, **p<0.01.

Table 3: Incidence of Secondary Work by Type of Work Arrangement and Main Job

| | Percent of all respondents by main job | Among those in indicated main job, percent with secondary employment arrangement | | | | | |
| | | Any secondary work | Work for employer | Self-employed | *Other work for pay* | | |
					Question version 1	Question version 2	Total
Employee, not miscoded	50.77	19.81	6.94	12.91	1.71	2.59	2.14
Miscoded employee	4.43	37.80	21.71	18.85	4.12	7.72	5.92
Self-employed, not IC	5.34	7.65	3.76	*n/a*	3.20	6.70	4.94
Self-employed, IC	5.35	10.51	3.17	*n/a*	6.62	10.49	8.59
Informal work only	0.71	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
No work	33.41	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
N		57,861			29,156	28,705	57,861

NOTE: All tabulations are weighted using sampling weights provided by Gallup. These weights are designed for the sample to replicate the demographic characteristics of the most recent CPS-ASEC. The first column of numbers sums to 100 and provides the distribution of respondents by primary job classification as specified in the text. The next six columns show the percentage of respondents in a primary job classification who also engage in a secondary employment arrangement as specified. For example, 6.94 percent of non-miscoded employees report working for at least one additional employer (two or more employers altogether) and 12.91 percent report additional self-employment. The last three columns pertain to respondents reporting additional work for pay across the two versions of the question about informal work (and for the two versions pooled). The sum of the percent working in secondary jobs with an employer, in self-employment, and in other work for pay exceeds the percent with any secondary work because some respondents report multiple types of secondary work activities. The survey questions on self-employment do not permit us to identify whether an individual is engaged in more than one self-employment job.

Table 4: Factors Predicting Probability of Reporting Informal Work

	Question version 1	Question version 2	Combined
Age (omitted: 25–49)			
18–24	0.007~	0.022**	0.015**
	(0.004)	(0.006)	(0.003)
50–64	−0.001	−0.015**	−0.008**
	(0.002)	(0.003)	(0.002)
65–80	−0.007**	−0.018**	−0.012**
	(0.003)	(0.003)	(0.002)
Race (omitted: White)			
Black	0.003	0.010*	0.006*
	(0.003)	(0.004)	(0.003)
Asian	0.005	−0.011~	−0.003
	(0.007)	(0.007)	(0.005)
Hispanic	0.002	0.003	0.002
	(0.003)	(0.004)	(0.003)
Other	0.003	0.004	0.004
	(0.007)	(0.008)	(0.005)
Gender (omitted: Male)			
Female	−0.007**	0.004*	−0.002
	(0.002)	(0.002)	(0.001)
Education (omitted: High school)			
Less than high school	−0.004	0.012*	0.004
	(0.004)	(0.006)	(0.003)
Technical/Vocational school	0.007	−0.005	0.002
	(0.005)	(0.005)	(0.003)
Some college	0.003	0.004	0.004~
	(0.002)	(0.003)	(0.002)
College graduate	0.004~	−0.000	0.002
	(0.002)	(0.003)	(0.002)
Post graduate	0.010**	0.001	0.006**
	(0.003)	(0.003)	(0.002)
Main job (omitted: Employee)			
Miscoded employee	0.020**	0.045**	0.033**
	(0.006)	(0.008)	(0.005)
Self-employed, not IC	0.021**	0.040**	0.030**
	(0.005)	(0.006)	(0.004)
Self-employed, IC	0.054**	0.067**	0.061**
	(0.006)	(0.007)	(0.005)
No other paid work	0.002	0.006*	0.004*
	(0.002)	(0.002)	(0.002)
Mean of dependent variable	0.020	0.029	0.025
R-squared	0.013	0.018	0.014
Observations	29,156	28,705	57,861

NOTE: Question versions 1 and 2 ask respondents if they engaged in any other work for pay not previously reported; version 2 provides examples of informal work activities. Each column reports coefficient estimates and standard errors robust to heteroskedasticity, in parentheses, from a different linear probability model. Dependent variable means reflect unweighted statistics to accord with the unweighted regression. All regressions also control for wave and respondent's state of residence. ~$p<0.10$; *$p<0.05$, **$p<0.01$.

Table 5: Use of Online Intermediaries Among Respondents Reporting Any Work

	Q ver. 1		Q ver. 2		Total	
ALL Respondents	**3.02**	**(0.23)**	**3.15**	**(0.23)**	**3.09**	**(0.16)**
Age						
18–24	3.16	(0.73)	4.46	(0.82)	3.83	(0.55)
25–49	3.63	(0.36)	3.27	(0.34)	3.46	(0.25)
50–64	1.92	(0.29)	2.55	(0.36)	2.23	(0.23)
65–80	2.54	(0.49)	2.10	(0.38)	2.31	(0.31)
Race						
White	2.81	(0.25)	2.73	(0.24)	2.77	(0.18)
Black	4.21	(0.81)	4.98	(0.87)	4.60	(0.59)
Asian	2.62	(1.11)	7.22	(2.19)	4.75	(1.19)
Hispanic	2.75	(0.61)	2.62	(0.56)	2.69	(0.42)
Other	5.57	(2.39)	2.60	(1.45)	3.91	(1.34)
Gender						
Female	2.82	(0.36)	3.15	(0.36)	2.98	(0.25)
Male	3.20	(0.30)	3.15	(0.30)	3.18	(0.21)
Education						
Less than high school	1.20	(0.71)	2.76	(0.99)	2.00	(0.62)
High school or GED	2.72	(0.55)	1.98	(0.45)	2.35	(0.36)
Technical/Vocational	3.09	(1.36)	5.25	(1.77)	4.21	(1.13)
Some college	3.07	(0.42)	3.61	(0.46)	3.34	(0.31)
College graduate	3.79	(0.47)	3.89	(0.48)	3.84	(0.33)
Post graduate	3.30	(0.47)	3.18	(0.49)	3.24	(0.34)
Hours worked/week						
40+	2.33	(0.25)	2.54	(0.25)	2.44	(0.17)
30 to 39	2.99	(0.60)	2.52	(0.54)	2.76	(0.41)
15 to 29	4.66	(0.82)	4.68	(0.79)	4.67	(0.57)
5 to 14	6.50	(1.41)	6.71	(1.49)	6.61	(1.03)
Less than 5	5.92	(2.08)	4.52	(1.77)	5.18	(1.35)
Main job classification						
Employee, excl. misclassified	1.63	(0.20)	1.49	(0.18)	1.56	(0.13)
Miscoded employee	7.33	(1.39)	10.13	(1.77)	8.73	(1.13)
Self-employed, not IC	6.91	(1.04)	7.38	(1.19)	7.14	(0.79)
Self-employed, IC	8.38	(1.33)	9.21	(1.29)	8.79	(0.92)
Informal work only	8.64	(4.72)	3.55	(2.47)	6.46	(2.93)
N	8,427		8,376		16,803	

NOTE: All tabulations are weighted using sampling weights provided by Gallup. These weights are designed for the sample to replicate the demographic characteristics of the most recent CPS-ASEC. Standard errors in parentheses. The first pair of columns refers to incidence based on the question that did not provide examples, while the second pair of columns refers to incidence based on the question that *did* provide examples; the last pair of columns pools responses. All statistics in the table are based on responses from waves 3 and 4.

Table 6: Factors Predicting Probability of Online Intermediary Use

	Question version 1	Question version 2	Combined
Age (omitted: 25–49)			
18–24	−0.008	0.013	0.003
	(0.007)	(0.009)	(0.006)
50–64	−0.020**	−0.013**	−0.017**
	(0.004)	(0.004)	(0.003)
65–80	−0.036**	−0.031**	−0.033**
	(0.007)	(0.006)	(0.004)
Race (omitted: White)			
Black	0.012	0.021**	0.017**
	(0.007)	(0.008)	(0.005)
Asian	−0.012	0.030~	0.007
	(0.011)	(0.017)	(0.010)
Hispanic	0.001	−0.004	−0.002
	(0.006)	(0.006)	(0.005)
Other	0.033	0.000	0.014
	(0.022)	(0.014)	(0.013)
Gender (omitted: Male)			
Female	−0.007~	0.001	−0.003
	(0.004)	(0.004)	(0.003)
Education (omitted: High school)			
Less than high school	−0.019*	0.005	−0.007
	(0.008)	(0.010)	(0.006)
Technical/Vocational school	−0.003	−0.018~	0.009
	(0.009)	(0.011)	(0.007)
Some college	0.005	0.016**	0.010**
	(0.005)	(0.005)	(0.004)
College graduate	0.016**	0.026**	0.021**
	(0.006)	(0.005)	(0.004)
Post graduate	0.014*	0.015**	0.014**
	(0.006)	(0.005)	(0.004)
Hours worked/wk (40+ omitted)			
30 to 39	0.010~	−0.003	0.004
	(0.006)	(0.006)	(0.004)
15 to 29	0.015*	0.007	0.011*
	(0.007)	(0.007)	(0.005)
5 to 14	0.011	−0.003	0.004
	(0.009)	(0.09)	(0.007)
Less than 5	0.001	−0.022~	−0.011
	(0.015)	(0.012)	(0.009)
Main job (omitted: Employee)			
Miscoded employee	0.058**	0.078**	0.068**
	(0.012)	(0.013)	(0.009)
Self-employed, not IC	0.055**	0.059**	0.056**
	(0.009)	(0.009)	(0.006)
Self-employed, IC	0.056**	0.081**	0.068**
	(0.009)	(0.010)	(0.007)
Informal work only	0.054*	0.049*	0.050**
	(0.025)	(0.021)	(0.017)
Mean of dependent variable	0.029	0.030	0.029

R-squared	0.033	0.045	0.034
Observations	8,427	8,376	16,803

NOTE: Each column reports coefficient estimates and standard errors robust to heteroskedasticity, in parentheses, from a different (unweighted) linear probability model. The first column refers to incidence based on the question that did not provide examples, while the second column refers to incidence based on the question that did provide examples; the last column pools responses. All estimates in the table are based on responses from waves 3 and 4. All regressions also control for wave and respondent's state of residence. ~p<0.10; *p<0.05, **p<0.01.