

Working draft

**Independent Contract and Informal Work: Preliminary Evidence on
Developing Better Measures in Household Surveys**

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In recent years, there have been numerous reports in the media concerning 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 a 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, about a third by people for whom no work-related income was reported on the CPS-ASEC and roughly another 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, including personal services (e.g., childcare, eldercare, housecleaning, property maintenance, and running errands), work obtained through mobile apps and online platforms, and selling goods offline.

Each survey finds very high levels of participation in informal work. In 2015 data 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); 2015 data from the EIWA suggests that 36 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); and 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 be a reflection of the 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 CPS employment questions and then probed respondents 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 members 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 has exploited data from other sources, particularly from administrative sources, to shed light on the incidence and growth of self-employment work arrangements, these data also have shortcomings. Administrative 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—

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

which is especially likely to be prevalent in informal work—and they are available only at an annual frequency. Respondents to business surveys may not be able to provide accurate information on their organization’s employment of workers who are not employees or on the demographic characteristics of these workers. 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 to better capture 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 have developed a survey module for the Gallup survey that includes 13 questions on respondents’ employment and the nature of their work arrangements. In several places in the module, we randomly assign respondents to different versions of questions to test how question wording affects responses. Our survey module is being included on this Gallup survey for four month-long fielding periods, spaced at three month intervals, and will yield information from approximately 60,000 adults.

In this paper, we report selected findings from the first two waves of the module that pertain to potential miscoding of workers as employees and underreporting of work activity in household surveys. 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 preliminary findings, which support concerns that a sizable number of workers are miscoded as employees and that some work activities, particularly secondary jobs, are missed in household surveys like the CPS. We conclude with a discussion of possible

implications of our findings for other household 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 means 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 is in the field, Gallup also is administering 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.

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). Those reporting that they do not work for an employer or that they work fewer than 30 hours per week for an employer are asked about any self-employment work and if applicable the usual hours they work per week in self-employment.

Our module consists of 13 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 permit us to vary the wording for selected questions randomly, allowing us 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, non-employee 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 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 is administering the module in four waves spread evenly across a year. Having data for different times during in the year will provide important, new information on the seasonality of alternative work arrangements. In each wave of data collection, Gallup fields our questions until 15,000 completed interviews have been obtained, which typically takes about a month. A great strength of our survey is its size. Across the four waves, the survey will yield information on contract and informal work from a total of at least 60,000 respondents, more than any other household survey 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, and the third through mid-November until mid-December 2018. The final wave of data will be collected starting in mid-February 2019.

In this paper, we provide preliminary evidence from the first two waves of data collection, which includes responses from over 30,000 individuals. We focus on selected questions from the survey that address the first two goals of the study listed above: 1) identifying potential problems with workers being miscoded as employees and 2) measuring all sources of work for pay, including self-employment work that is informal or involves few hours.

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 for 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 hours laws and 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

² Note that CPS respondents are also 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 one’s 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 7 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 explicitly asked 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 question asks 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, which is mandated for employees, or other taxes from the worker’s pay. Cognitive testing indicated that respondents would be able to accurately answer this question. We were concerned that any question about taxes would 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 during the days our module is administered.

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 may subsequently 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 work: "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 version 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.” Research in survey methodology shows that the provision of examples can significantly affect responses. In this instance, we expect that such examples would increase the incidence of those reporting additional work by suggesting types of informal work that respondents might not think of as jobs and so fail to report in surveys. 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.

FINDINGS

In this section, we report selected findings from the first two waves of our Gallup module, focusing on 1) miscoding of workers as employees in the survey and the characteristics of these workers, and 2) the incidence and characteristics of those who hold multiple jobs, which may include work for employers, self-employment work, and informal, non-employee work.

Miscoding of workers as employees

Table 1 shows, among those who report being employed by an employer, the percent who, with probing, indicate that they are not employees. All tabulations are weighted using the population weights provided by Gallup and are shown for all respondents and by 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 (or, if they have multiple employers, the percent who answered that they are an independent contractor, independent consultant, or freelance worker for at least one of their employers). The second column of the tables 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 are miscoded as employees in the survey. Among respondents reporting that they work for an employer, 11.5 percent and 9.1 percent indicate that they are not employees in response to version 1 and version 2 of the question, respectively.³ The difference in percentages between the two question versions is statistically significant (p -value < 0.01). Combining the responses to the two question variants indicates that 10.3 percent of respondents saying that they are employed by an employer are miscoded in the survey as employees. Although the estimate of miscoding is somewhat higher when asking version 1 of the question than when asking version 2, 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

³We 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 these individuals are misclassified as independent contractors by employers.

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 8.0 and 6.7 percent, respectively, among workers with only one employer; that percentage jumps to 48.6 and 32.9 percent among those with two employers and to 62.6 and 50.7 percent among those with three or more employers. 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, 8.8 and 5.7 percent indicated that they are not an employee in versions 1 and 2 of the question, respectively. In contrast, those figures are 34.0 and 33.8 percent among those usually working only 5 to 14 hours per week, and 52.4 and 43.4 percent among those usually working fewer than 5 hours per week.

Table 2 presents selected coefficient estimates and standard errors from linear probability models predicting employee miscoding. The sample in the regressions includes individuals who report being employed by an employer in at least one job, and the dummy dependent variable equals one if, in response to our followup 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, respondent's state of residence, and, in the final column, question version.

The estimates from these linear probability models 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 42 percentage points with question version 1 and by 26 percentage points in question version 2. Having three or more employers raises the estimated probability by 60 and 46 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 25 percentage points (question version 1) and 22 percentage points (question version 2) more likely to be miscoded as an employee. Controlling for other factors, being 65 or older and male also have consistent positive associations with working for an employer on a contract basis.⁴

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

⁴ Data on personal income also is collected in the basic Gallup survey, 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.

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 be missing some individuals engaged in work for pay and thus undercounting 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, 47.2 percent of respondents reports working for one or more employers but not in self-employment, 10.2 percent report only self-employment, and 7.9 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 0.8 percent of respondents who reported no employer or self-employment work indicated that they did other work for pay in the preceding 7 days. The weighted employment rate for our sample is therefore 66.2 percent if miscellaneous other work is counted and 65.3 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 two waves of data collection.⁵

The multiple-job-holding rate in our Gallup sample is high—19.3 percent among those

⁵ The average employment rate in the CPS for individuals age 18–79 during the months of our data collection was 65.0 percent—between 0.7 percentage points 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).

reporting some work for pay in the preceding 7 days. 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 worked for employers and in self-employment are collected as categorical variables. 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. Exactly half of respondents indicated that they work for an employer and, with further probing, were employees. Another 4.6 percent reported working for an employer but in response to further probing indicated that they were not an employee (i.e., had contractor status or did not have taxes taken out of their pay). About half of those primarily employed in self-employment activities reported that they were not an independent contractor, independent consultant or freelance worker (5.4 percent of all respondents) while the other half characterized their self-employment work in that way (5.3 percent of all respondents). As noted, another 0.8 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 the indicated main job status, the

percent with other paid work by type of work arrangement: work for at least one employer, work for multiple employers, 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 7 days. The second version differed from the first by giving examples of informal work. The last 3 columns of Table 3 show the percentage responding that they had other work when asked question version 1, when asked question version 2, and in data that combine answers to the two questions, respectively. 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 findings reported in Abraham and Amaya (2018).

Among those whose main job involves working for an employer as an employee, 6.6 percent work for more than one employer, 13.2 percent have some self-employment work activities, and 2.2 percent have other informal work (1.6 percent in question version 1 and 2.7 percent in 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 miscoded employees, 22.4 percent report working for more than one employer, 19.8 percent report being engaged in some type of additional self-employment activity, and 7.1 percent report other, informal work for pay (4.9 percent in version 1 and 9.3 percent in question version 2).

The next two rows show the incidence of multiple job holding for those whose main work activity is self-employment. Interestingly, among these self-employed, the share who also hold jobs with employers is relatively low—irrespective of whether they consider themselves to be independent contractors. Among those who do not consider themselves

independent contractors, 4.0 percent reported having at least one job with an employer and 0.2 reported having jobs with multiple employers; among the self-employed who are independent contractors, 4.1 percent work for at least one employer and 0.9 percent work for at least two employers. 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.⁶ The propensity to engage in informal work activities differs among the two categories of self-employed.

Whereas 7.8 percent of self-employed independent contractors report informal work activities in the preceding 7 days, 4.0 percent of those in self-employment who are not independent contractors report informal work activities. Interestingly, the prevalence of informal work is similar among those working in a contract work arrangement, whether they describe their employment as working for an employer (miscoded employee) or as self-employment (self-employed, independent contractor). The prevalence of informal work among the self-employed who are not independent contractors, while lower than that among the self-employed independent contractors, is nearly double the prevalence among employees (4.0 percent versus 2.2 percent).

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 7 days. Separate regressions were estimated for the sample asked the first question version, the sample asked the second question version, and the full sample which

⁶We classified the main job as working for an employer for 94.6 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 19 percent of the cases involved ties; even without these cases, three-fourths of those working for both an employer and in self-employment unambiguously worked more hours in their employer job.

combines answers from the two versions. The mean of the dependent variables, which represents the fraction reporting other work and is reported in the top line of the table, is 0.021 for version one of the question, 0.037 for version two, 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) and status of main job. The regression that combines responses includes 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 points more likely to have informal work and those who are self-employed independent contractors are 5 to 6 percentage points more likely to have informal work, compared to employees. Those who did not report work for an employer or self-employment work were one percentage point more likely than employees to report informal work in two of the specifications.

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 one to three percentage points more likely to report informal work and those age 65 to 80 one to two percentage points less likely to report informal work compared to those age 25 to 49.

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—and therefore is ineligible for social insurance benefits, is not covered by employment laws that stipulate minimum wages and overtime pay, and does 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 suggested that between 9.1 percent and 11.5 percent of those who thought of themselves as working for an employer were not in fact employees, with the lower number based on asking whether their employer took taxes from their pay and the higher number based 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 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 differences 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 providing 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.

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 is important for understanding how families, particularly those experiencing financial stress, make ends meet (Abraham and Houseman 2018). Additionally, any trend 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 findings from the first two waves of our survey module. In future research, we will conduct more detailed analyses of data from 60,000 respondents collected in all four module waves; analyses will include more 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: Percent Indicating They Are Not Employees Among Those Who Are "Employed by an Employer"

| | Question version 1 | Question version 2 | Total |
|----------------------------|---------------------------|---------------------------|--------------|
| ALL Respondents | 11.5 | 9.1 | 10.3 |
| Age | | | |
| 18-24 | 13.5 | 17.3 | 15.4 |
| 25-49 | 10.3 | 6.7 | 8.5 |
| 50-64 | 11.0 | 8.0 | 9.5 |
| 65-80 | 21.1 | 16.6 | 18.8 |
| Race | | | |
| White | 10.0 | 8.3 | 9.2 |
| Black | 12.9 | 11.1 | 12.0 |
| Asian | 12.3 | 6.4 | 9.5 |
| Hispanic | 15.3 | 10.6 | 12.9 |
| Other | 13.5 | 11.8 | 12.6 |
| Gender | | | |
| Female | 9.9 | 8.6 | 9.2 |
| Male | 12.9 | 9.6 | 11.2 |
| Education | | | |
| Less than high school | 21.1 | 16.4 | 18.7 |
| High school or GED | 9.9 | 10.7 | 10.3 |
| Technical/Vocational | 11.2 | 7.1 | 9.3 |
| Some college | 11.9 | 7.8 | 9.8 |
| College graduate | 9.7 | 7.4 | 8.6 |
| Post graduate | 12.2 | 8.3 | 10.2 |
| Number of employers | | | |
| 1 | 8.0 | 6.7 | 7.3 |
| 2 | 48.6 | 32.9 | 40.7 |
| 3+ | 62.6 | 50.7 | 56.8 |
| Hours worked/week | | | |
| 40+ | 8.8 | 5.7 | 7.3 |
| 30 to 39 | 12.2 | 11.2 | 11.7 |
| 15 to 29 | 17.0 | 18.8 | 17.9 |
| 5 to 14 | 34.0 | 33.8 | 33.9 |
| Less than 5 | 52.4 | 43.4 | 48.4 |

Notes: All tabulations are weighted using weights provided by Gallup.

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

| | | Question version 1 | Question version 2 | Total |
|---|-----------------------------|-----------------------|-----------------------|-------------------|
| Age (omitted: 25-49) | | | | |
| | 18-24 | -0.03* (0.01) | 0.06** (0.01) | 0.02~ (0.01) |
| | 50-64 | 0.02* (0.01) | 0.02* (0.01) | 0.02** (0.01) |
| | 65-80 | 0.07** (0.01) | 0.05** (0.01) | 0.06** (0.01) |
| Race (omitted: White) | | | | |
| | Black | 0.01 (0.01) | 0.01 (0.01) | 0.01 (0.01) |
| | Asian | 0.02 (0.02) | -0.01 (0.02) | 0.01 (0.01) |
| | Hispanic | 0.04** (0.01) | 0.00 (0.01) | 0.02* (0.01) |
| | Other | 0.03 (0.03) | 0.01 (0.03) | 0.03 (0.02) |
| Gender (omitted: male) | | | | |
| | Female | -0.05** (0.01) | -0.04** (0.01) | -0.04** (0.00) |
| Education (omitted: high school) | | | | |
| | Less than high school | 0.07* (0.03) | 0.03 (0.03) | 0.05* (0.02) |
| | Technical/Vocational school | 0.00 (0.02) | -0.01 (0.02) | -0.00 (0.01) |
| | Some college | 0.01 (0.01) | -0.02* (0.01) | -0.00 (0.01) |
| | College graduate | 0.02 (0.01) | -0.01 (0.01) | 0.01 (0.01) |
| | Post graduate | 0.03** (0.01) | 0.01 (0.01) | 0.02* (0.01) |
| Number of employers (omitted: 1) | | | | |
| | 2 | 0.42** (0.03) | 0.26** (0.02) | 0.34** (0.02) |
| | 3+ | 0.60** (0.04) | 0.46** (0.05) | 0.53** (0.03) |

Table 2, continued

| Weekly hours (omitted: 40+) | | | | |
|------------------------------------|-------------|--------|--------|--------|
| | 30 to 39 | 0.05** | 0.05** | 0.05** |
| | | (0.01) | (0.01) | (0.01) |
| | 15 to 29 | 0.10** | 0.10** | 0.10** |
| | | (0.02) | (0.01) | (0.01) |
| | 5 to 14 | 0.25** | 0.22** | 0.23** |
| | | (0.03) | (0.03) | (0.02) |
| | Less than 5 | 0.44** | 0.32** | 0.39** |
| | | (0.05) | (0.05) | (0.04) |
| <hr/> | | | | |
| R-squared | | 0.224 | 0.165 | 0.187 |
| Number of observations | | 6,786 | 6,694 | 13,480 |

Notes: Question version 1 asks respondents if they are an employee or if they are an independent contractor, independent consultant, or freelance worker. Question version 2 asks respondents if their employer takes out any taxes from their pay. Sample is respondents who report being employed by an employer. Each column reports coefficient estimates and robust standard errors, in parentheses, from a separate linear probability model. All regressions also control for wave and respondent state of residence. ~ p<0.1; *p<0.05, **<p<.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 | | | | | |
|--|--|--|--------------|---------------|--------------------|--------------------|-----------|
| | | Work for employer | 2+ employers | Self-employed | Other work | | |
| | | | | | Question version 1 | Question version 2 | Total |
| Employee, not miscoded | 50.0 | <i>na</i> | 6.6 | 13.2 | 1.6 | 2.7 | 2.2 |
| Miscoded employee | 4.6 | <i>na</i> | 22.4 | 19.8 | 4.9 | 9.3 | 7.1 |
| Self-employed, not independent contractor | 5.4 | 4.0 | 0.2 | <i>na</i> | 2.7 | 5.3 | 4.0 |
| Self-employed, independent contractor | 5.3 | 4.1 | 0.9 | <i>na</i> | 6.7 | 9.0 | 7.8 |
| Informal work only | 0.8 | <i>na</i> | <i>na</i> | <i>na</i> | <i>na</i> | <i>na</i> | <i>na</i> |

Notes: All tabulations are weighted using weights provided by Gallup.

Table 4: Factors Predicting Probability of Reporting Other, Informal Work

| Mean of dependent variable | 0.021 | 0.037 | 0.029 |
|---|-------------------|-------------------|-------------------|
| | Question | Question | |
| | verion 1 | verion 2 | ALL |
| Age (omitted=25-49) | | | |
| 18-24 | 0.01~ (0.01) | 0.03** (0.01) | 0.02** (0.01) |
| 50-64 | -0.00 (0.00) | -0.01** (0.00) | -0.01* (0.00) |
| 65-80 | -0.01* (0.00) | -0.02** (0.00) | -0.01** (0.00) |
| Race (omitted: White) | | | |
| Black | -0.00 (0.00) | 0.01~ (0.01) | 0.00 (0.00) |
| Asian | 0.02 (0.01) | -0.01 (0.01) | 0.00 (0.01) |
| Hispanic | -0.00 (0.00) | 0.01 (0.01) | 0.00 (0.00) |
| Other | 0.01 (0.01) | 0.00 (0.01) | 0.00 (0.01) |
| Gender (omitted: male) | | | |
| Female | -0.01** (0.00) | 0.00 (0.00) | -0.01** (0.00) |
| Education (omitted: high school) | | | |
| Less than high school | -0.01 (0.01) | 0.02* (0.01) | 0.01 (0.01) |
| Technical/Vocational school | 0.00 (0.01) | -0.01 (0.01) | -0.00 (0.00) |
| Some college | 0.00 (0.00) | 0.01 (0.00) | 0.00~ (0.00) |
| College graduate | 0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Post graduate | 0.01* (0.00) | -0.00 (0.00) | 0.00~ (0.00) |

Table 4, continued**Main job (omitted: employee)**

| | | | |
|------------------------|------------------|------------------|------------------|
| Employee misclassified | 0.02** (0.01) | 0.05** (0.01) | 0.04** (0.01) |
| Self-employed, not IC | 0.01* (0.01) | 0.03** (0.01) | 0.02** (0.00) |
| Self-employed, IC | 0.05** (0.01) | 0.06** (0.01) | 0.06** (0.01) |
| No other paid work | 0.00 (0.00) | 0.01* (0.00) | 0.01** (0.00) |
| R-squared | 0.012 | 0.016 | 0.012 |
| Observations | 14,716 | 14,617 | 29,333 |

Notes: 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 robust standard errors, in parentheses, from a different linear probability model. All regressions also control for wave. ~ p<0.1; *p<0.05, **<p<.01