



441 G St. N.W.  
Washington, DC 20548

Accessible Version

January 29, 2019

The Honorable Robert C. Scott  
Chairman  
Committee on Education and Labor  
House of Representatives

**CONTINGENT WORKFORCE: BLS is Reassessing Measurement of Nontraditional Workers**

Dear Mr. Scott:

The nature of employment for many Americans is changing. The Bureau of Labor Statistics (BLS) data show millions of workers are no longer in traditional full-time, year-round jobs. Several companies that have been established since 2008 rely on nontraditional types of employment arrangements, with workers who typically use electronically-mediated platforms such as websites and mobile applications (apps) to secure work.<sup>1</sup>

Comprehensive, nationally representative data on nontraditional workers were first collected in 1995 when BLS introduced the Contingent Worker Supplement (CWS) to its Current Population Survey (CPS).<sup>2</sup> The CWS asks a series of questions about workers' employment, including whether their jobs are contingent. CWS has been administered six times: 1995, 1997, 1999, 2001, 2005, and the focus of our report, 2017. For the purposes of this report, we refer to contingent, alternative, and electronically-mediated employment comprehensively as nontraditional employment.

BLS defines contingent workers as those with temporary employment. In our prior work, we found that the discourse on contingent employment, which BLS defines as people who do not expect their jobs to last or who reported that their jobs are temporary, is shaped by limitations in available data.<sup>3</sup> We also found researchers and analysts were mining a number of alternative datasets to provide insights about segments of the nontraditional workforce. We reported that the data limitations at that time could make identifying emerging trends difficult.

In response to GAO, stakeholder, and researchers' concerns, BLS again fielded the CWS in May 2017. BLS worked with stakeholders to draft four additional questions for the 2017 CWS. The purpose was to obtain data about work arrangements that have emerged since 2005, the

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<sup>1</sup> BLS lists some businesses that commonly facilitate electronically-mediated work, such as Uber, Lyft, TaskRabbit, Handy, Amazon mTurk, and Crowdfunder, in their September 2018 Monthly Labor Review on electronically-mediated work.

<sup>2</sup> For the purposes of this study, the term nontraditional is used by GAO to cover workers classified as contingent, alternative, and electronically-mediated workers.

<sup>3</sup> GAO, Contingent Workforce, Size, Characteristics, Earnings, and Benefits, [GAO-15-168R](#) (Washington, D.C.: April 20, 2015).

last time CWS was administered. The four questions were to measure electronically-mediated employment, or employment found through websites and mobile apps.<sup>4</sup>

The May 2017 CWS estimated, by its broadest measure, that 3.8 percent of all employed individuals are contingent workers, compared to 4.1 percent in the 2005 CWS. This decrease in the contingent worker population amid a rise in electronically-mediated platforms for locating employment raised concerns for researchers, stakeholders, and policymakers about whether this segment of the workforce is being accurately measured.

You asked us to review BLS's measurements of nontraditional workers and whether they appropriately represent the workers. This report describes (1) how BLS defines and measures contingent, alternative, and electronically-mediated employment workers in the CWS and other BLS data sets and (2) what limitations of the CWS BLS has identified and what steps BLS has taken to address them. On November 30, 2018, we briefed members of your staff on the results of our review. This report formally transmits the briefing slides (see Enclosure 1).

To determine how BLS defines and measures nontraditional workers, we reviewed technical documentation and interviewed agency officials. We reviewed documentation from 2017 and 2018 on which populations BLS data sets cover to determine how BLS defines different populations of nontraditional workers. Additionally, we reviewed the technical documentation on how the CWS is administered to better understand how BLS solicits responses and measures the populations of nontraditional workers as reported by those surveyed. Finally, we interviewed officials at BLS and the U.S. Census Bureau about information found in the technical documentation and to clarify the purposes of the data sets.

To determine limitations BLS has identified in measuring nontraditional work and steps BLS has taken to address them, we reviewed prior BLS reports and technical documentation. Specifically, we reviewed prior BLS reports from fiscal years 2016 through 2018, to identify the limitations of data sets as identified by BLS and reviewed BLS's technical documentation on how the data sets are created to determine what steps BLS has taken to address the limitations. Additionally, we interviewed BLS officials to better understand the limitations and steps BLS has taken, or steps planned to address them.

We conducted this performance audit from May 2018 through January 2019 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary, we found the following:

BLS periodically collects data on and measures contingent, alternative, and electronically-mediated workers in the CWS. BLS broadly defines 1) contingent workers as those with temporary employment; 2) alternative workers as those that are independent contractors, on-call workers, temporary help agency workers, and workers provided by contract firm; and 3) electronically-mediated workers as those who obtain employment through mobile apps and websites that both connect workers with customers and arrange payment for tasks. According to BLS reports, there is overlap in BLS's three groups identified. For example, a worker that temporarily drives for a ride-share company while waiting to start a new job would be

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<sup>4</sup> These four questions are included in Enclosure 1.

considered both a contingent worker and an electronically-mediated worker. BLS measures populations of contingent, alternative employment, and electronically-mediated workers across its datasets – CWS, Occupational Employment Statistics, and Current Employment Statistics. According to BLS, there are several possible explanations for why there was a decline in the estimated number of contingent workers, from 4.1 percent in 2005 to 3.8 percent in 2017. However, they offered no definitive explanation for the decline but said this is an area for additional research.

BLS has identified several limitations that require additional research regarding the May 2017 CWS’s measurement of nontraditional workers. According to officials we interviewed and documentation we reviewed:

- CWS measures only respondents’ main jobs for contingent and alternative employment, thus potentially missing workers with nontraditional second or supplementary income jobs.<sup>5</sup>
- CWS only asks respondents about their work in the past week and may fail to capture seasonal workers or workers that supplement their income with occasional work.
- BLS officials said in evaluating the gathered data, they found the added questions regarding electronically-mediated employment resulted in a large number of false positive answers.<sup>6</sup> False positives are when people responded "yes" to the new questions when the description of job duties and employers was incompatible with electronically-mediated work.<sup>7</sup> BLS officials said after manually adjusting the data to correct for false positives, the questions regarding electronically-mediated employment provide an accurate measure.<sup>8</sup> BLS officials said they plan to perform additional research before administering the questions again.

BLS officials stated they are implementing changes to address limitations in the CWS:

- According to these officials, BLS is currently working with stakeholders on CWS questions that will better capture nontraditional employment, including:
  - contracting with the Committee on National Statistics of the National Academies of Science, Engineering, and Medicine (CNSTAT) to evaluate the CWS and other existing measures, and consider the methodological issues and factors that could improve the design of a new supplement; and
  - planning, as part of the contract, a CNSTAT-hosted panel of experts, a public workshop, and a report with objectives for achieving a more reliable measurement of contingent and alternative employment workers as well as insights on the electronically-mediated economy.
- BLS expects the contractor to finish its work by March 2020.

### **Agency Comments and Our Evaluation**

We provided a draft of this report to the Department of Labor (DOL) and BLS for review and comment. DOL and BLS provided technical comments, which we incorporated into the report as appropriate.

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<sup>5</sup> BLS included questions regarding second and supplemental jobs for electronically-mediated employment, only.

<sup>6</sup> The four electronically-mediated employment questions are included in Enclosure 1.

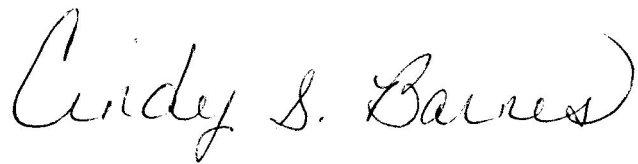
<sup>7</sup> For example, a fast food manager and a vice president of a major bank said they had used a website or mobile app to connect with customers and were paid through that same website or app.

<sup>8</sup> However, according to BLS officials, manually adjusting the data to correct for false positives answers regarding secondary and supplemental income jobs was not as accurate because BLS did not have enough data collected on those jobs.

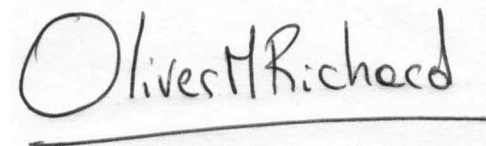
We are sending copies of this report to the Secretary of Labor, relevant congressional committees, and other interested parties. In addition, this report will be available at no charge on GAO's website at [www.gao.gov](http://www.gao.gov).

If you or your staff members have any questions concerning this report, please contact me at (202) 512-9345 or [brownbarnesc@gao.gov](mailto:brownbarnesc@gao.gov) or Oliver Richard at (202) 512-8424 or [richardo@gao.gov](mailto:richardo@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were Kimberley Granger (Assistant Director), Benjamin Bolitzer (Assistant Director), Michael Naretta (Analyst-in-Charge), Susan Aschoff, David Dornisch, Sarah Gilliland, Michael Kniss, Dan Luo, Mimi Nguyen, James Rebbe, and Almeta Spencer.

Sincerely yours,

A handwritten signature in cursive script that reads "Cindy S. Barnes".

Cindy S. Brown Barnes  
Director, Education, Workforce, and Income Security

A handwritten signature in cursive script that reads "Oliver M. Richard".

Oliver M. Richard  
Director, Applied Research and Methods

Enclosure

# Contingent Workforce

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## BLS is Reassessing Measurement of Nontraditional Workers

November 30, 2018

## Contents

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- Objectives
- Methodology
- Background
- Findings

## Objectives

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- What is known about how the Bureau of Labor Statistics (BLS) defines and measures contingent, alternative, and electronically-mediated workers in the Contingent Worker Supplement (CWS) of the Current Population Survey (CPS) and other BLS data sets?
- What limitations of the CWS has BLS identified and what steps has BLS taken to address them?

## Methodology

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- We reviewed BLS data set documentation for CWS, Current Employment Statistics (CES), and Occupational Employment Statistics (OES), including:
  - how the data sets are gathered and reported,
  - worker populations covered and their definition, and
  - supplementary questions and data.
- We reviewed the contract between BLS and Committee on National Statistics (CNSTAT) of the National Academies of Sciences, Engineering, and Medicine for an evaluation of the CWS.
- We interviewed BLS and U.S. Census Bureau officials.
- We reviewed prior GAO reports and existing literature on the nontraditional workforce and its measurement. For the purposes of this report, we refer to contingent, alternative, and electronically-mediated employment comprehensively as nontraditional employment.



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## Background

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- Comprehensive, nationally representative data on nontraditional workers were first collected in 1995 when BLS introduced the CWS to its CPS, a monthly survey of about 60,000 households that collects data on the U.S. labor force.
- CWS asked a series of additional questions about workers' employment, including whether their jobs were contingent. CWS has been administered six times: 1995, 1997, 1999, 2001, 2005, and the focus of our report, 2017.
- In a 2015 report, GAO stated limitations of the current CWS data may prompt interest among stakeholders to weigh the advantages versus cost of collecting better information about contingent workers.<sup>1</sup>
- For the purposes of this report, we refer to contingent, alternative, and electronically-mediated employment comprehensively as nontraditional employment.

## Background (cont.)

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- On September 28, 2018, BLS released data obtained through four questions added to the May 2017 CWS regarding employment obtained through mobile applications and websites that both connect workers with customers and arrange payment for tasks.<sup>2</sup> BLS calls this type of work electronically-mediated employment; others more broadly call it gig employment.
- In developing the four questions, BLS sought feedback through:
  - presentations and briefings to stakeholders outside BLS on the new questions;
  - outreach to members of Congress and their staff;
  - circulation of the draft questions to academics, industry experts, special interest groups, and other data users for comment;
  - discussions in the Department of Labor's Structure of Work Policy Working Group; and
  - soliciting and reviewing public comments.

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<sup>2</sup> The four new questions are included in the last two slides below.

## Objective 1: BLS Collects Data On and Measures Nontraditional Workers

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- BLS collects data on nontraditional workers in three key categories: contingent, alternative employment, and electronically-mediated workers (see table 1).
- In addition, BLS uses three measures to estimate contingent workers ranging from a narrow definition to a broad definition, as shown in Table 1; all three definitions are included in BLS's report on the CWS.
- According to BLS, there are several possible explanations for why there is a decline in BLS's estimate of contingent workers from 2005 to 2017. However, they offered no definitive explanation for the decline but said that this is an area for additional research.
- BLS estimated a decline in contingent workers from 4.1 percent of the total working population in 2005 to 3.8 percent in 2017, a decline in independent contractors from 7.4 percent in 2005 to 6.9 percent in 2017, and a decline in on-call workers from 1.8 percent in 2005 to 1.7 percent in 2017. Also in 2017, after manually adjusting the data to improve accuracy by removing false positive responses, BLS estimated 1 percent of the total working population worked as electronically-mediated employment. Since these populations overlap, the net change in total nontraditional workers is unclear.

# Table 1: Bureau of Labor Statistics Has Multiple Definitions for Nontraditional Worker Populations

Nontraditional Worker Type	Definition 1	Definition 2	Definition 3
Contingent workers – includes temporary help agency workers	<b>Narrowest definition:</b> <ul style="list-style-type: none"> <li>• Wage and salary workers only, excluding the self-employed and independent contractors</li> <li>• Worked at their current job 1 year or less</li> <li>• Do not expect to continue at current job for another year or more</li> </ul>	<b>Middle definition:</b> <ul style="list-style-type: none"> <li>• All workers, including the self-employed and independent contractors</li> <li>• Worked at their current job 1 year or less</li> <li>• Do not expect to continue at current job for another year or more</li> </ul>	<b>Broadest definition:</b> <ul style="list-style-type: none"> <li>• Wage and salary workers who do not expect their job to last (even if they have held it for more than 1 year and expect to continue at the job for longer than 1 year)</li> <li>• Self-employed workers and independent contractors who:               <ul style="list-style-type: none"> <li>○ Have been self-employed for 1 year or less</li> <li>○ Do not expect to be self-employed for another year or more</li> </ul> </li> </ul>

## Table 1: Bureau of Labor Statistics Has Multiple Definitions for Nontraditional Worker Populations (cont.)

Nontraditional Worker Type	Definition
Alternative employment workers	Four different alternative employment arrangements—-independent contractors, on-call workers, temporary help agency workers, and workers provided by contract firms—are considered alternative employment workers.
Electronically-mediated workers	Workers who obtain employment through mobile applications and websites that both connect workers with customers and arrange payment for tasks. This definition is similar to that used by many stakeholders to define gig employment. <sup>a</sup>

Source: GAO analysis of BLS documentation, reports, and interviews | GAO-19-273R

<sup>a</sup> In a previous report, GAO identified gig workers as self-employed individuals providing labor services and completing single projects or tasks on demand for pay, such as performing tasks through digital platforms, ride-hailing services, or in offline work, such as house painting, house cleaning, and babysitting or child care services. GAO, WORKFORCE TRAINING: DOL Can Better Share Information on Services for On-Demand, or Gig, Workers, [GAO-17-561](#), (Washington, D.C.: September 26, 2017).

## **Objective 1: BLS Collects Data On and Measures Nontraditional Workers (cont.)**

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### **Hypothetical examples of nontraditional workers**

- Albert started a job with a local landscaping company at the beginning of summer. He expects the job to only last for the summer. Albert is a contingent worker.
- Brenda works as an independent contractor. She is an alternative employment worker.
- Carl works as a ride-share driver and gets work through an online platform. Carl is an electronically-mediated worker.

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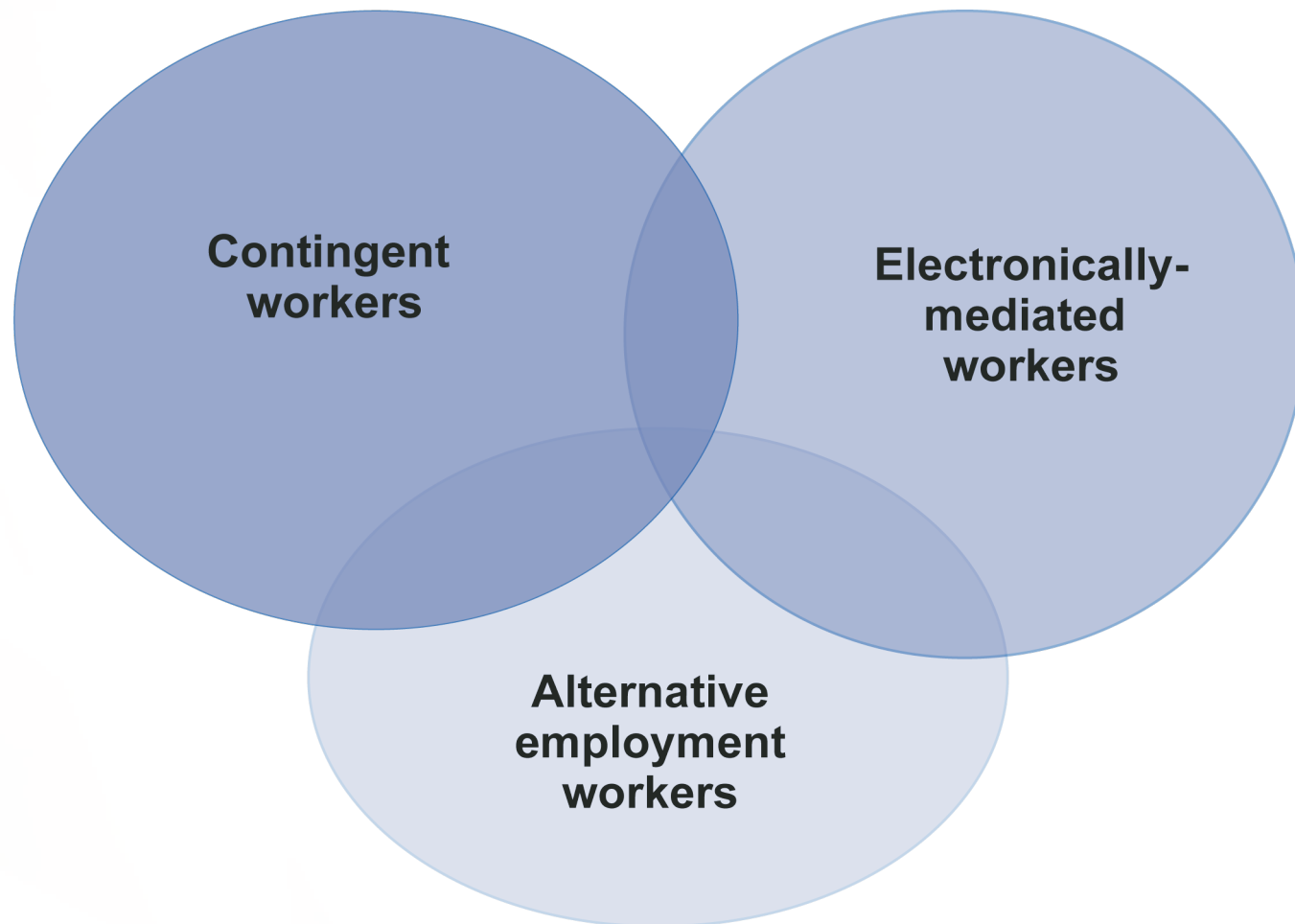
## Objective 1: BLS Collects Data On and Measures Nontraditional Workers (cont.)

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- BLS's three nontraditional worker groups—contingent, alternative employment, and electronically-mediated—share some employment characteristics (see figure 1).
- One example of the overlap of definitions is a worker retired from their main job temporarily drives for a ride-share company to earn supplementary income. This worker would be considered both a contingent worker and an electronically-mediated worker.

# Figure 1: Populations of Nontraditional Workers Overlap Under Bureau of Labor Statistics Definitions

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## **Objective 1: BLS Collects Data On and Measures Nontraditional Workers (cont.)**

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- BLS measures the overlapping populations of contingent, alternative employment, and electronically-mediated workers to varying degrees across its multiple data sets (see table 2).

## Table 2: Bureau of Labor Statistics (BLS) Measures for Nontraditional Worker Populations

Data set	Electronically-mediated Workers	Contingent Workers	Alternative Employment Workers
Contingent Worker Supplement (CWS)	Measures electronically-mediated workers through four questions added to CWS in May 2017; however, BLS officials said the data required significant recoding, i.e. manually adjusting the data, to correct for false positives. This is discussed in more detail below.	Measures contingent workers with three estimates (from narrowest to broadest). The broadest definition of contingent workers showed a decline from 4.1 percent of the total working population in 2005 to 3.8 percent in 2017. <sup>a</sup>	Measures alternative employment workers by giving estimates for independent contractors, on-call workers, temporary help agency workers, and workers provided by contract firms. BLS reported that each of these populations declined from 2005 to 2017, or remained the same for each year. <sup>b</sup>

<sup>a</sup> The narrowest definition of contingent workers declined from 1.8 percent of the total working population in 2005 to 1.3 percent in 2017 and the middle definition, as shown in Table 1, of contingent workers declined from 2.3 percent in 2005 to 1.6 percent in 2017.

<sup>b</sup> Independent contractors declined from 7.4 percent of the total working population in 2005 to 6.9 percent in 2017, on-call workers declined from 1.8 percent of the total working population in 2005 to 1.7 percent in 2017, temporary help agency workers were 0.9 percent of the total working population in both 2005 and 2017, and workers provided by contract firms at 0.6 percent of the total working population in both 2005 and 2017.

## Table 2: Bureau of Labor Statistics (BLS) Measures for Nontraditional Worker Populations (cont.)

Data set	Electronically-mediated Workers	Contingent Workers	Alternative Employment Workers
Occupational Employment Statistics (OES)	Does not measure electronically-mediated workers	Does not directly measure contingent workers, but does measure temporary help services	Does not directly measure alternative employment workers and does not include self-employed individuals.
Current Employment Statistics (CES)	Does not measure electronically-mediated workers	Does not directly measure contingent workers, but does measure temporary help services	Does not directly measure alternative employment workers and does not include self-employed individuals.

Source: GAO analysis of BLS documentation, reports, and interviews | GAO-19-273R

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## Objective 2: BLS Has Identified Several Areas for Additional Research in the CWS and Is Reassessing Its Measurements

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### BLS identified areas for additional research in the 2017 CWS

- CWS measures only respondents' main jobs for contingent and alternative employment, thus potentially missing workers with nontraditional second or supplementary income jobs.
- CWS only asks respondents about their work in the past week and may fail to capture seasonal workers or workers that supplement their income with occasional work.
- BLS said in evaluating the gathered data, they found the added questions regarding electronically-mediated employment resulted in a large number of false positive answers. False positives are when people responded "yes" to the new questions when the description of job duties and employers was incompatible with electronically-mediated work.<sup>3</sup> BLS officials said after recoding, i.e. manually adjusting, the data, the questions regarding electronically-mediated employment provide an accurate measure for the respondents' main job. Officials said they would perform additional research before administering the questions again.

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<sup>3</sup> For example, a fast food manager and a vice president of a major bank said they had used a website or mobile app to connect with customers and were paid through that same website or app. BLS manually adjusted these false positives by cross-referencing them with individuals' job description. BLS did not have enough data collected on the second or supplemental income jobs to accurately manually adjust the data.

## **Objective 2: BLS Has Identified Several Areas for Additional Research in the CWS and Is Reassessing Its Measurements (cont.)**

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### **BLS is taking steps to implement further changes to the CWS**

- BLS officials said they are currently working with stakeholders on developing CWS questions that will better capture nontraditional employment. Recent steps taken by BLS include:
  - contracting with the Committee on National Statistics (CNSTAT) of the National Academies of Sciences, Engineering, and Medicine to evaluate the CWS and other existing data sets, and to identify the methodological issues and factors that should improve the design of a new supplement; and
  - planning, as part of the contract, a CNSTAT-hosted panel of experts, a public workshop, and a report with objectives to improve CWS's measurements of contingent and alternative employment workers as well as insights on the electronically-mediated economy.
- The period of performance for BLS's contract with CNSTAT is September 24, 2018 to March 23, 2020.

## BLS's Four Electronically-Mediated Employment Questions

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- Q1. Some people find short, IN-PERSON tasks or jobs through companies that connect them directly with customers using a website or mobile app. These companies also coordinate payment for the service through the app or website. For example, using your own car to drive people from one place to another, delivering something, or doing someone's household tasks or errands.
- Does this describe ANY work you did LAST WEEK?
  - Yes
  - No
- Q1a. Was that for your main job, your second job, or other additional work for pay?
  - Main job
  - Second job
  - Additional work for pay

## BLS's Four Electronically-Mediated Employment Questions (cont.)

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- Q2. Some people select short, ONLINE tasks or projects through companies that maintain lists that are accessed through an app or a website. These tasks are done entirely online and the companies coordinate payment for the work. For example, data entry, translating text, web or software development, or graphic design.
- Does this describe ANY work you did LAST WEEK?
  - Yes
  - No
- Q2a. Was that for your main job, your second job, or other additional work for pay?
  - Main Job
  - Second job
  - Additional work for pay