

Informal Work and Official Employment Statistics: What's Missing?

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EXTERNAL

Disclaimer: The views expressed here are those of the speakers and do not necessarily represent the views of the Federal Reserve Bank of Boston or the Federal Reserve System.

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Source: “Statement on Longer-Run Goals and Monetary Policy Strategy.” Adopted effective January 24, 2012; as reaffirmed effective January 31, 2023.

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- Analyze eight surveys of informal or “gig” work, 2015-2022
- Estimate amount of gig work missing from official statistics on extensive and intensive margins
- Consider implications for assessing the state of the labor market
- Examine why gig work is missing from official surveys

Main Takeaways

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- Gig work often not viewed as a job, for diverse reasons
- Gig participation may be indicative of labor market slack
- Results suggest full employment could be revised upward

Survey of Informal Work Participation (SCE-SIWP)

- Special December module of Survey of Consumer Expectations (SCE)
- Fielded annually 2015-2022
- Features novel questions regarding gig work participation
- Simulates individual employment status under BLS criteria

Analysis Sample Matches Demographics of US Household Heads

| | American Community Survey (2014-2021) | SIWP Analysis Sample (2015-2022) |
|-----------------------------------|--|-------------------------------------|
| Household Income | | |
| Less than \$50,000 | 0.41 | 0.41 |
| Greater than or equal to \$50,000 | 0.59 | 0.59 |
| Age Group | | |
| Under age 40 | 0.27 | 0.27 |
| Aged 40-59 | 0.38 | 0.38 |
| 60 or older | 0.35 | 0.35 |
| Education | | |
| Up to HS Grad | 0.34 | 0.32 |
| Some College | 0.30 | 0.32 |
| College Grad Or Higher | 0.35 | 0.36 |
| Census Region | | |
| Northeast | 0.18 | 0.18 |
| Midwest | 0.22 | 0.22 |
| South | 0.38 | 0.37 |
| West | 0.22 | 0.22 |
| Sample Size | 9,692,468 | 8,139 |

All values are calculated using the given survey's weights

Snapshot of Main SIWP Questions

- General personal info
Demographics, household size, etc.

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- Employment info

CPS-style employment questions
SCE-style employment questions

- Informal work probes

Participation, hours, and income
Itemized by task
Timing of last gig work

Eliciting Informal Work Participation

For each of the informal paid activities or side jobs listed in the table below, please respond to the following question:

Please provide a response for each row listed below.

| | Are you <u>currently</u> engaged in this activity? | |
|--|--|-----------------------|
| | Yes | No |
| Babysitting | <input type="radio"/> | <input type="radio"/> |
| House sitting | <input type="radio"/> | <input type="radio"/> |
| Dog walking | <input type="radio"/> | <input type="radio"/> |
| Yard or lawn care (i.e., mowing, weeding, etc.) | <input type="radio"/> | <input type="radio"/> |
| Housecleaning | <input type="radio"/> | <input type="radio"/> |
| House painting | <input type="radio"/> | <input type="radio"/> |
| Eldercare services | <input type="radio"/> | <input type="radio"/> |
| Providing services to other people (for example picking up their dry cleaning, helping people move houses, running errands, booking travel, or other personal assistance) | <input type="radio"/> | <input type="radio"/> |
| Selling goods at consignment shops | <input type="radio"/> | <input type="radio"/> |
| Selling goods on eBay, craigslist, or similar websites | <input type="radio"/> | <input type="radio"/> |
| Renting out property such as your car, your place of residence, or other items you own | <input type="radio"/> | <input type="radio"/> |
| Driving for a ride sharing service like Uber, Lyft, or Sidecar | <input type="radio"/> | <input type="radio"/> |
| Responding to surveys, including phone surveys, online surveys, and in-person surveys | <input type="radio"/> | <input type="radio"/> |
| Getting paid to complete tasks online through websites such as Amazon Mechanical Turk, Fiverr, or similar sites (examples of such tasks include, but are not limited to, editing documents, reviewing resumes, writing songs, creating graphic designs, rating pictures, etc.) | <input type="radio"/> | <input type="radio"/> |
| Posting videos, blog posts, or other content online, such as on YouTube, and receiving pay (including ad revenues or commissions) as a result | <input type="radio"/> | <input type="radio"/> |
| Other informal paid activity or side jobs (please specify) <input type="text"/> | <input type="radio"/> | <input type="radio"/> |

Eliciting Hours and Earnings in Informal Work

You reported that you have engaged in the following informal paid activity:

Babysitting

The following questions refer to a typical month (within the past two years) in which you engaged in this activity.

In a typical month in which you engaged in this activity for pay, how much time do/did you spend on this activity? If less than one hour, report only in minutes.

Please enter numbers in the box(es) below.

hours and

minutes per month

In a typical month in which you do/did this activity, how much money do/did you typically earn doing this activity?

Please enter a number in the box below.

dollars per month

Do/did you use websites and/or mobile platforms in the course of doing this work, and/or finding such work?

Please select only one.

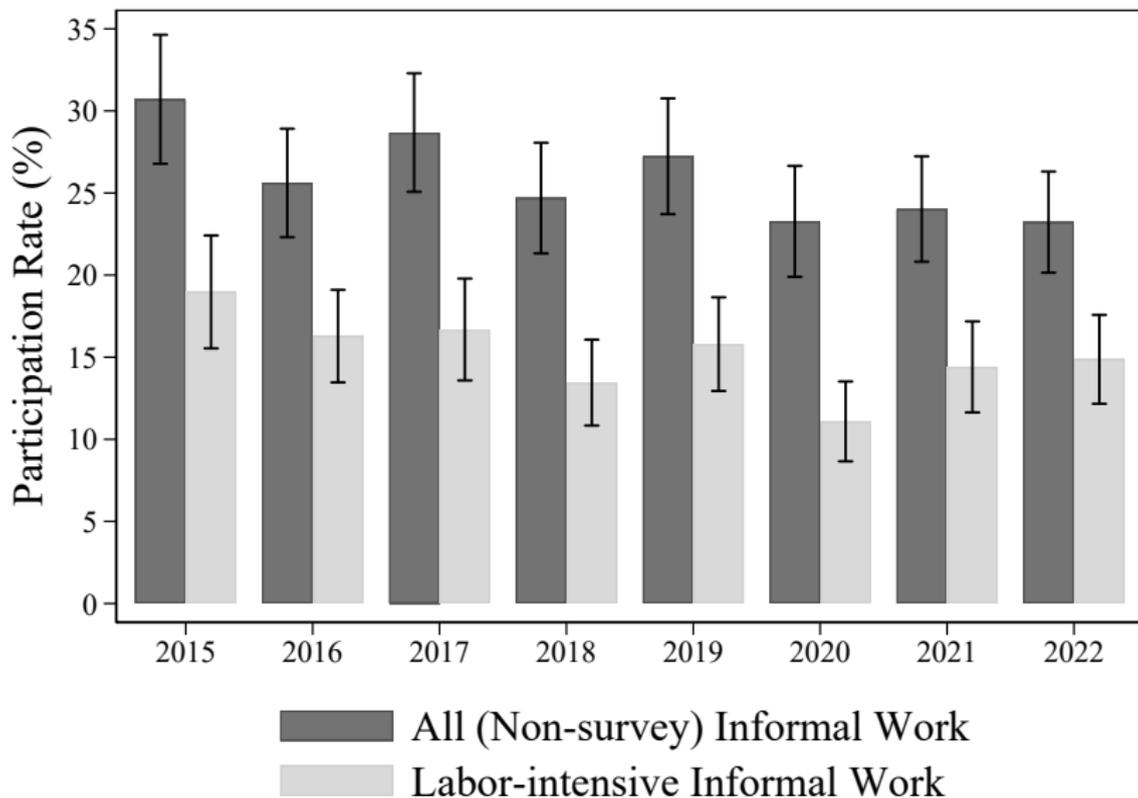
Yes

No

Defining Non-survey and Labor-intensive Gig Work

| | Non-survey Task | Labor-intensive Task |
|---|-----------------|----------------------|
| Babysitting | ✓ | ✓ |
| House sitting | ✓ | ✓ |
| Dog walking | ✓ | ✓ |
| Yard or lawn care | ✓ | ✓ |
| House cleaning | ✓ | ✓ |
| House painting | ✓ | ✓ |
| Eldercare services | ✓ | ✓ |
| Personal services (running errands for others, etc.) | ✓ | ✓ |
| Selling goods in consignment shops | ✓ | |
| Selling goods online | ✓ | |
| Renting out property such as a car or place of residence | ✓ | |
| Responding to surveys | | |
| Driving for a ridesharing service like Uber, Lyft, or Sidecar | ✓ | ✓ |
| Paid online tasks, such as on Amazon Mechanical Turk or Fiverr | ✓ | ✓ |
| Posting content online (such as Youtube, blogs, etc.) and receiving commissions | ✓ | ✓ |
| Other informal paid activity | ✓ | ✓ |

Participation Rates Economically Significant

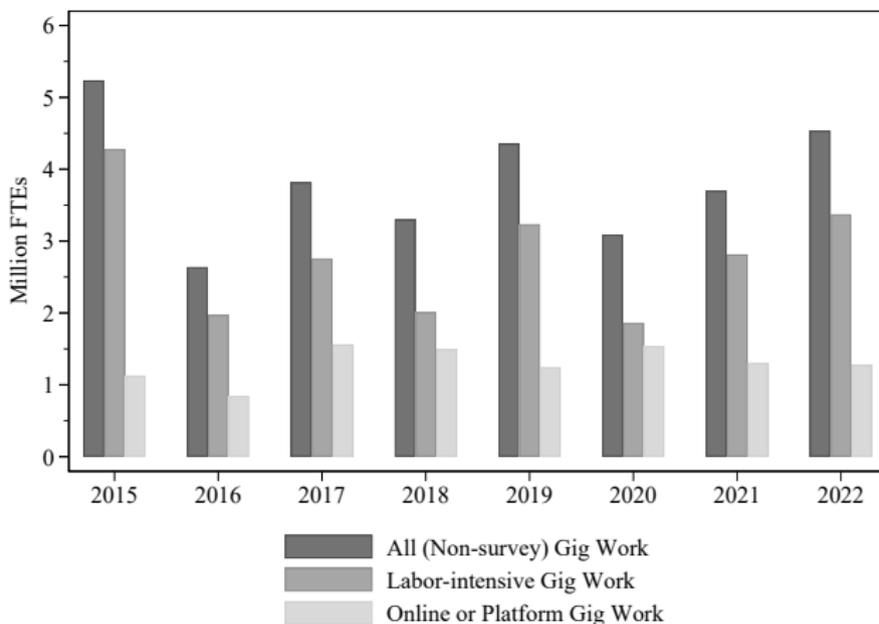


Average Monthly Earnings and Hours from Gig Work are Substantial

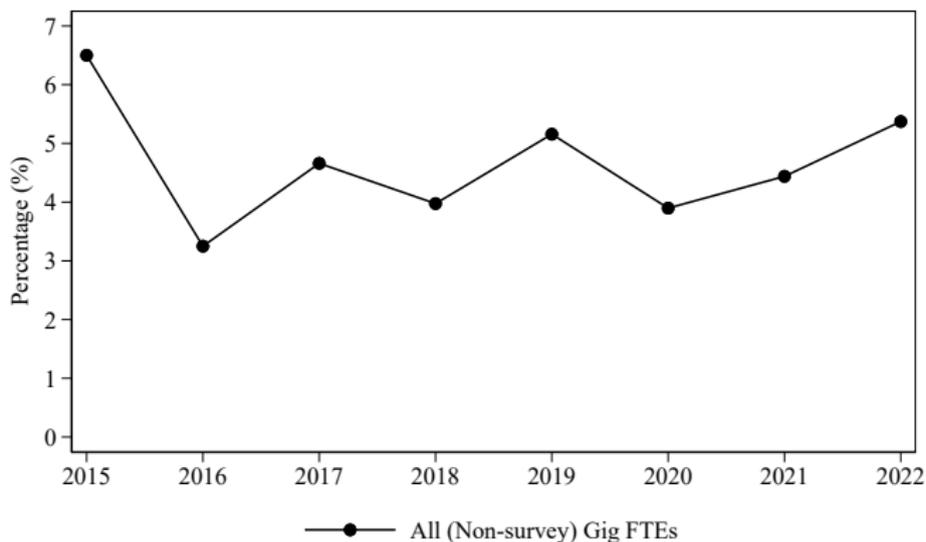
| | Monthly Pay | Monthly Hours |
|---------------------------|-------------|---------------|
| All (Non-survey) Gig Work | \$449 | 18 |
| Labor-intensive Gig Work | \$373 | 23 |

All values are averages over the relevant set of gig workers, 2015-2022

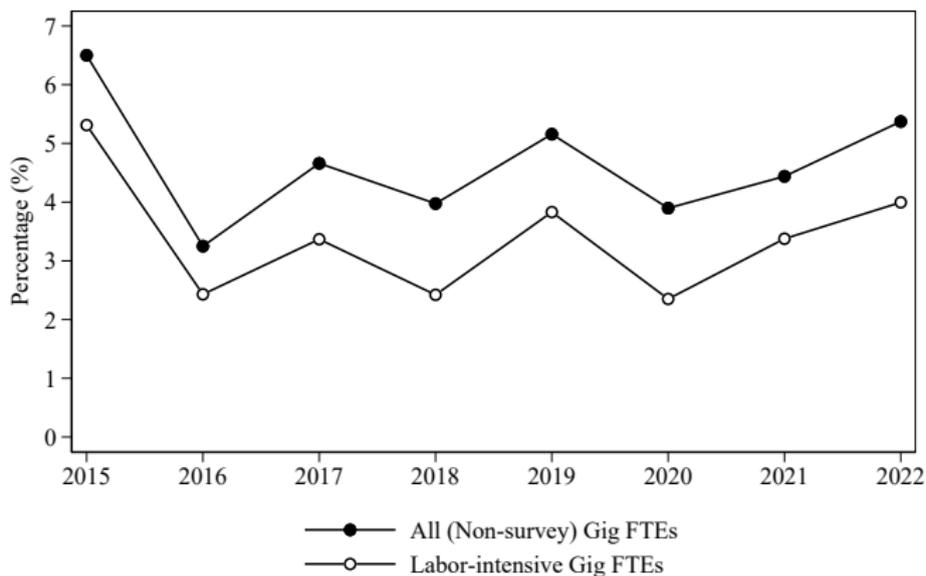
Aggregate Gig Work among US Household Heads Estimated at 3.8 M Full-Time Equivalents (FTEs), Average



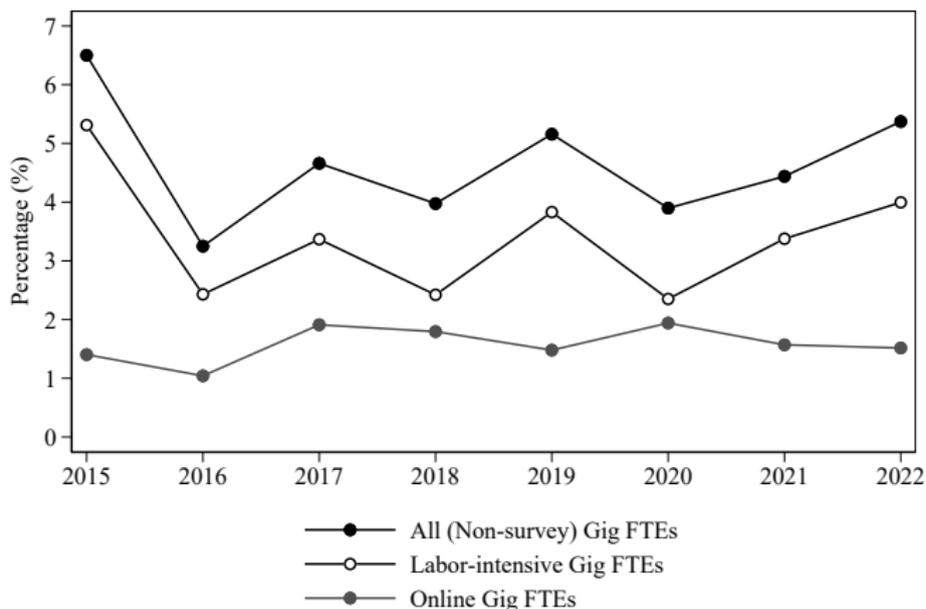
Relative to Total FTEs Observed in Current Population Survey, Gig FTEs Amount to 4.7 Percent on Average



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Identifying Missing Employment (Extensive Margin)

- Evaluate employment status based on CPS-style questions
- If NOT employed, check for gig work within past 14 days

| Employment Status | Gig Worker Status | Did Gig Work Past 14 Days | Revised Employment Status |
|-------------------|-------------------|---------------------------|---------------------------|
| Unemployed | No | No | Unemployed |

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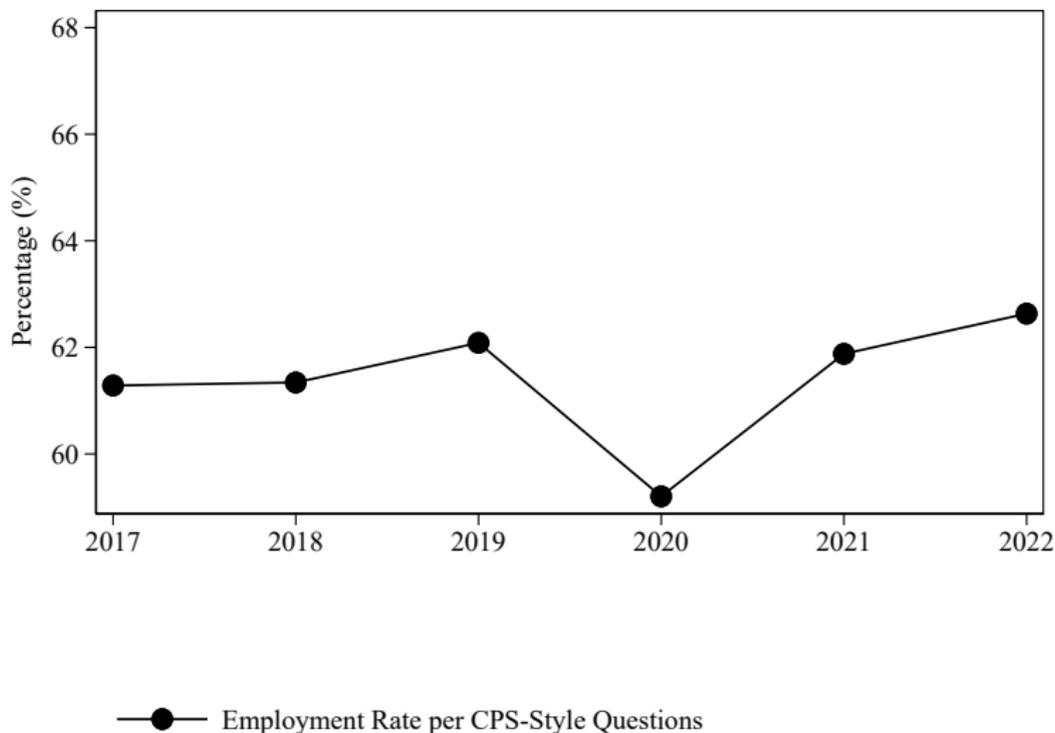
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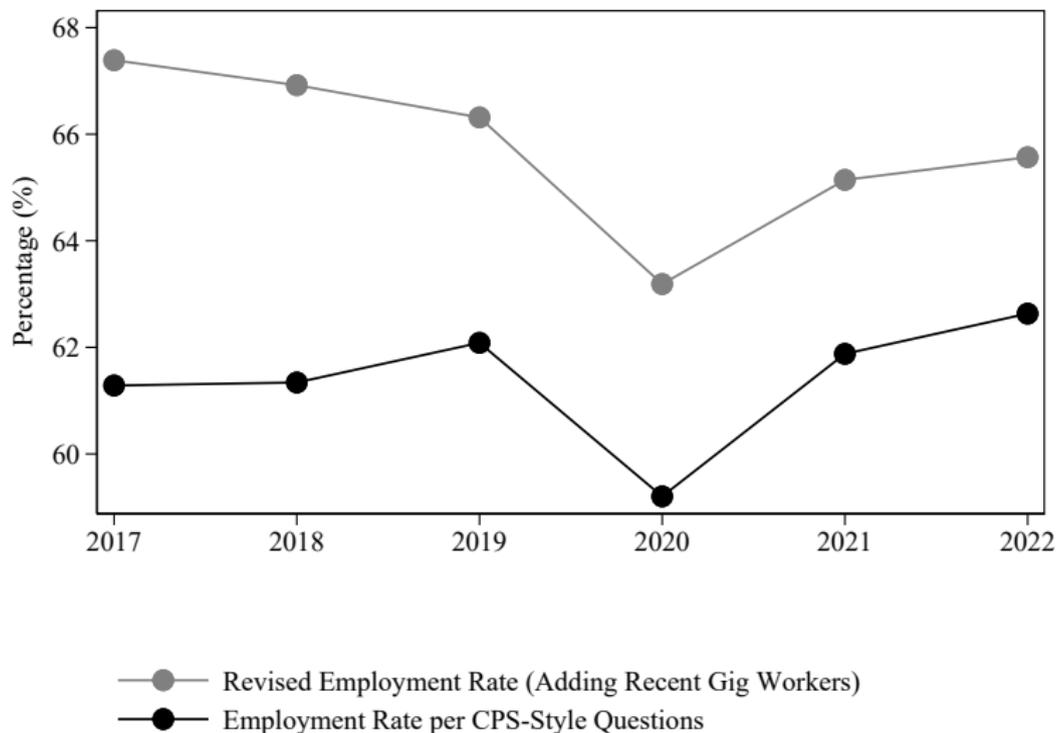
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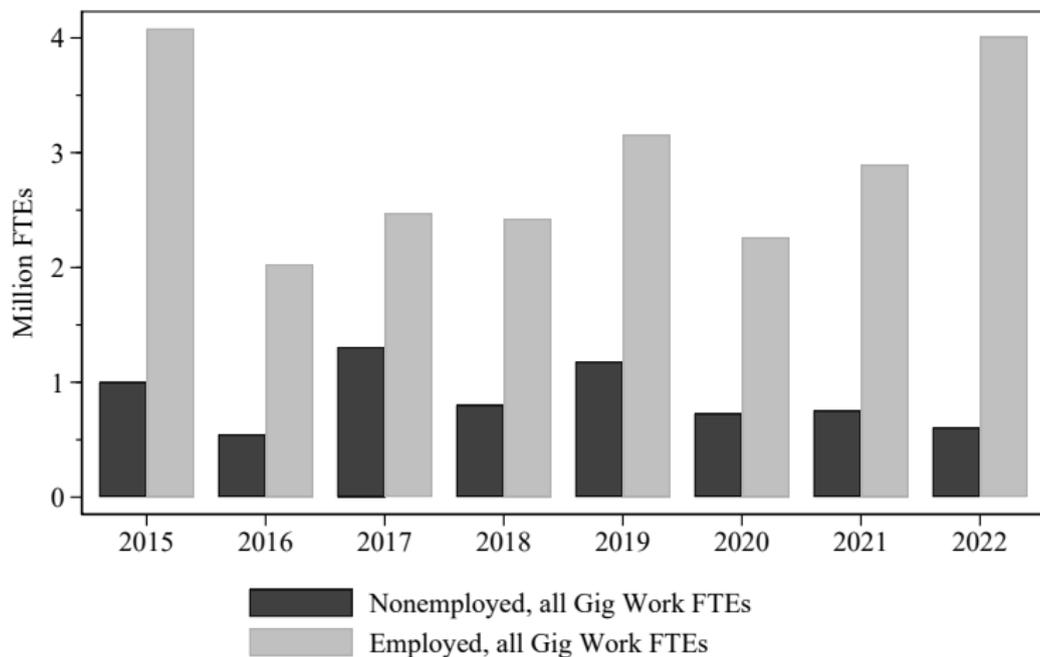
Employment Rates Significantly Higher After Revisions



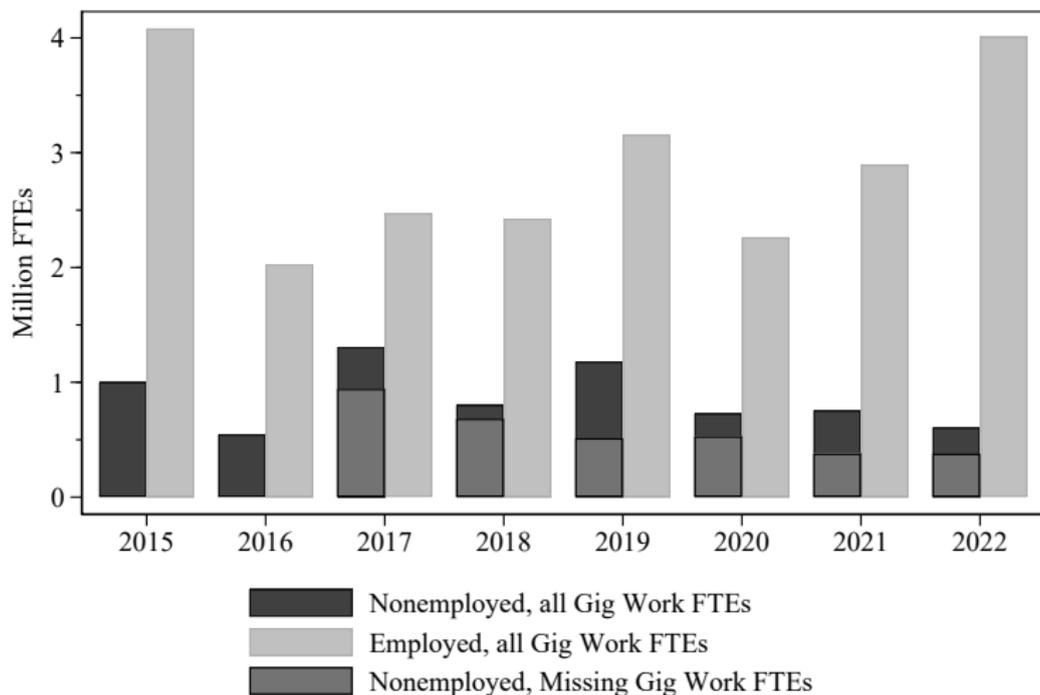
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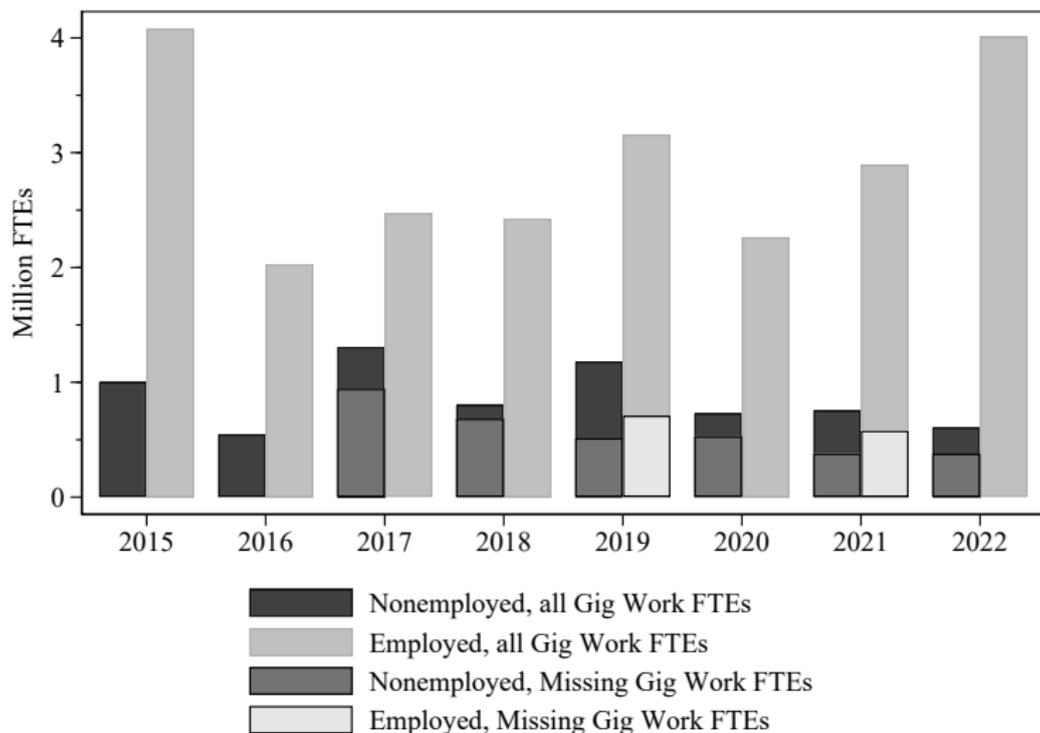
Most Gig Work (FTEs) Done by Employed Individuals; Some FTEs Missing from CPS Despite Recent Engagement



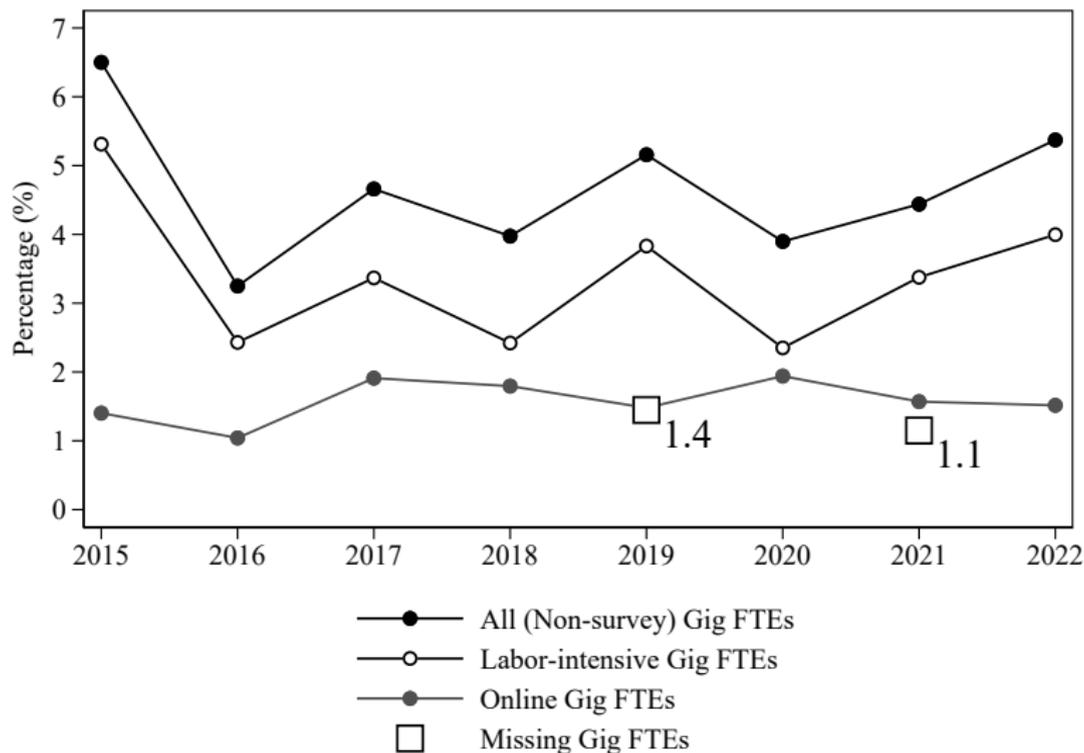
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Missing FTEs of Gig Work Account for An Economically Significant Share of All FTEs (2019, 2021)



Implications: Do Results Mean Labor Market Tighter than we Thought?

- Most gig workers have a payroll job and do gig work for extra pay

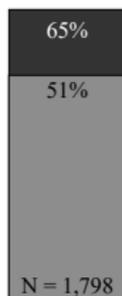
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- Suggests main job earnings inadequate
 - Could face hours constraint at main job
 - Might value flexibility of gig work as side job

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- Most gig workers have a payroll job and do gig work for extra pay
- Suggests main job earnings inadequate
 - Could face hours constraint at main job
 - Might value flexibility of gig work as side job
- Survey responses suggest gig work represents slack for many workers...

Evidence from Gig Workers with Payroll Jobs: Gig Work Points to Labor Market Slack



- Informal pay is lower than formal pay
- Informal pay is less than half of formal pay

- Gig work pays less than payroll job for most

Relevant data not available for 2022

Evidence from Gig Workers with Payroll Jobs: Gig Work Points to Labor Market Slack



- Informal pay is lower than formal pay
- Informal pay is less than half of formal pay



- Somewhat or very willing to give up informal work for 1-1.5x the pay

- Gig work pays less than payroll job for most
- Most would work more hours in payroll job at similar pay

Relevant data not available for 2022

Why Does the CPS Instrument Fail to Capture Gig Work?

- Gig workers misclassified as nonemployed are disproportionately:
 - Older and/or “retired”
 - Disabled
 - Less likely to be motivated by income
 - Suggests gig work not seen as employment

Reclassified Summary Stats

Motivations for Gig Work

Included Gig Work Summary Stats

Gig Worker Summary Stats

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- Gig workers misclassified as nonemployed are disproportionately:
 - Older and/or “retired”
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 - Less likely to be motivated by income
 - Suggests gig work not seen as employment
- Those classified as employed who exclude gig work from responses:
 - Nonetheless did gig work “last week”
 - Tend to have payroll job and relatively high income
 - Relatively few do labor-intensive gig work
 - Suggests gig work not considered real work

Reclassified Summary Stats

Motivations for Gig Work

Included Gig Work Summary Stats

Gig Worker Summary Stats

- Employment rate about 3.5 percentage points higher if missing gig workers are counted; significant number of hours missing as well

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- Participation indicative of slack, not tighter labor market
- Some labor force nonparticipants want work, face barriers to traditional employment
- Maximum employment probably higher than we think

Gig Workers are Younger, Disproportionate Share are Female, Have Child

| | Gig Workers | Non-Gig Workers |
|---------------------|-------------|-----------------|
| Under Age 40 | 0.33 | 0.25 |
| Aged 40–59 | 0.38 | 0.38 |
| 60 or Older | 0.29 | 0.37 |
| Non-Hispanic White | 0.77 | 0.76 |
| Black | 0.07 | 0.08 |
| Asian | 0.03 | 0.02 |
| Other/Multiracial | 0.13 | 0.13 |
| Hispanic | 0.10 | 0.08 |
| Female | 0.55 | 0.48 |
| Child in Household | 0.36 | 0.31 |
| Has Employed Spouse | 0.31 | 0.30 |
| Employed, Full Time | 0.51 | 0.49 |
| Employed, Part Time | 0.22 | 0.11 |
| Multiple Jobs | 0.23 | 0.08 |
| Self-employed | 0.16 | 0.08 |
| Sample Size | 2,181 | 5,958 |

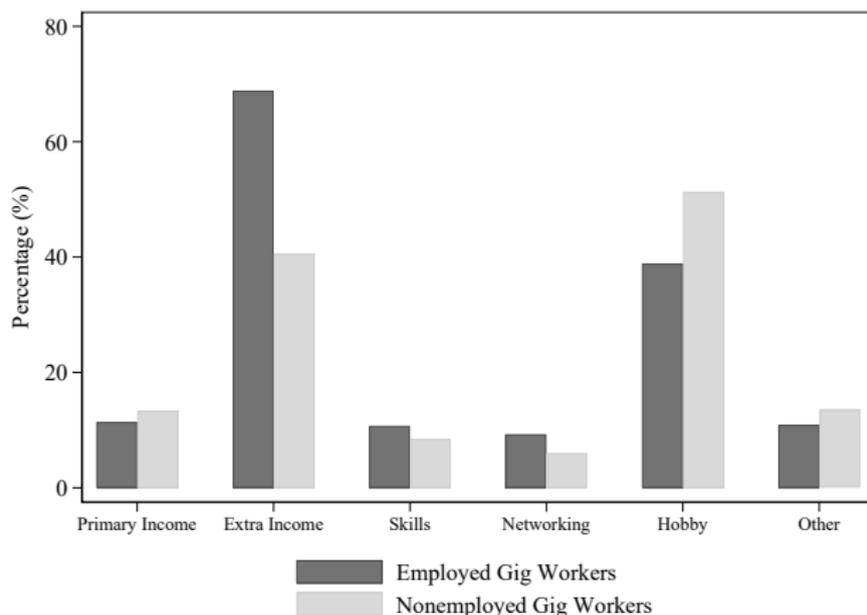
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Gig Workers Reclassified as Employed are Older, with Lower Incomes and Less Education; High Rate of Disability

| | Employed | Reclassified as Employed |
|--------------------------------|----------|--------------------------|
| Under Age 40 | 0.37 | 0.24 |
| Aged 40–59 | 0.42 | 0.23 |
| 60 or Older | 0.20 | 0.53 |
| Less than \$50,000 | 0.37 | 0.57 |
| More than or equal to \$50,000 | 0.63 | 0.42 |
| Up to HS Grad | 0.24 | 0.44 |
| Some College | 0.33 | 0.33 |
| College Grad or Higher | 0.44 | 0.23 |
| Female | 0.55 | 0.61 |
| Retired | 0.09 | 0.45 |
| Disabled | 0.01 | 0.18 |
| Informal Hours (monthly) | 20 | 16 |
| Informal Earnings (monthly) | 493 | 375 |
| Sample Size | 1,239 | 214 |

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Nonemployed Gig Workers Less Likely to be Motivated by Income, More Likely to Engage as Hobby



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Those who Exclude Gig Work in CPS Questions Have Higher Incomes, More Education, Less Likely to do Labor-intensive Gig Work

| | Employed; Included Informal Work | Employed; Did <i>Not</i> Include Informal Work |
|--|----------------------------------|--|
| Less than \$30,000 | 0.21 | 0.13 |
| \$30,000 to \$49,999 | 0.26 | 0.14 |
| \$50,000 to \$99,999 | 0.27 | 0.36 |
| More than \$100,000 | 0.25 | 0.37 |
| Up to HS Grad | 0.27 | 0.24 |
| Some College | 0.36 | 0.27 |
| College Grad or Higher | 0.38 | 0.49 |
| Labor-Intensive Gig Work Participation | 0.65 | 0.48 |
| Sample Size | 216 | 185 |

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Estimating Aggregate Amount of Gig Work among US Household Heads, as Full-Time Equivalents (FTEs)

- Calculate average monthly hours of gig work in SIWP by year
 - Assign zero hours for non-gig workers
 - Convert to FTEs (divide by 160 hrs)
- Multiply result by size of US household head population, from CPS for same year
- Do similar calculations restricted to labor-intensive gig work, online gig work

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Calculating Aggregate FTEs of Work among US Household Heads from CPS

- Observe hours worked last week (all jobs) among household heads in December CPS of a given year
- Convert to FTEs (divide by 36.7 hrs)
- Take weighted sum over all household heads (including zeroes)

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Identifying Missing FTEs of Gig Work Among Employed Workers

- FTEs of gig work among those classified as employed who
 - Said they didn't include gig work in CPS-style questions
 - Did gig work within past 14 days

| FTEs of Gig Work | Did Gig Work Past 14 Days | Included Gig work in CPS-style Questions | Missing FTEs |
|------------------|---------------------------|--|--------------|
| 1 | No | No | 0 |

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| FTEs of Gig Work | Did Gig Work Past 14 Days | Included Gig work in CPS-style Questions | Missing FTEs |
|------------------|---------------------------|--|--------------|
| 1 | No | No | 0 |
| 0.75 | Yes | No | 0.75 |

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|------------------|---------------------------|--|--------------|
| 1 | No | No | 0 |
| 0.75 | Yes | No | 0.75 |
| 0.2 | Yes | Yes | 0 |

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| 1 | No | No | 0 |
| 0.75 | Yes | No | 0.75 |
| 0.2 | Yes | Yes | 0 |