Understanding the Online Platform Based "Gig" Workforce in the U.S.: Evidence from the Entrepreneurship in the Population Survey[*]

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Abstract

The rise of digital platform technologies raised concerns, given their potential to fundamentally alter labor market arrangements by increasing the share of workers employed in the "gig economy." This paper uses data from a new nationally representative survey, the Entrepreneurship in the Population Survey, to examine these work arrangements, focusing on work coordinated through an online platform. We estimate that roughly 1.6 percent of adults perform online platform work as a primary job, with an additional 2.8 percent performing online platform work periodically over the past 6 months. We then document the demographic characteristics of these workers and explore the motivations of workers engaged in online platform work.

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1 Introduction

The rise of online platforms that coordinate the payment and provision of services has generated substantial attention in both the popular press and academic research. While these platforms might allow workers greater flexibility and provide a pathway to developing new skills, many observers worry that there is an exploitative effect given the lower regulations and lack of benefits offered to these workers. Observers are also concerned that these potentially exploitative effects may impact categories of workers who are already among the most vulnerable in the labor market. Therefore, how much work is facilitated by digital platforms and who works for these platforms are essential questions for determining policy.

Obtaining an understanding of the characteristics of the online platform workforce is itself challenging due to difficulties with measurement. In addition to differences in the legal structure of employment, online platform work can also be distinguished based on factors such as the type of service provided or goods sold, whether it is a primary job, and the timing of the work. We attempt to address these challenges using the Entrepreneurship in the Population (EPOP) Survey data. The EPOP Survey is a nationally representative survey that asks a series of questions related to platform work, including questions related to the timing of work and the name of the platform coordinating the work. This allows for a detailed investigation of different categories of online platform work. We estimate the size of the online platform workforce and document their characteristics as compared with individuals engaged in other work arrangements. We then investigate differences in platform work by platform type and timing of the platform work, including an examination of online platform workers' demographic characteristics and motivations.

We estimate that roughly 1.6 percent of adults, or 2.2 percent of workers, perform online platform work as their primary job. These workers were more likely to be Black or Hispanic than workers in other arrangements. Online platform workers engaged in selling activity were more likely to be female, while those performing service tasks had gender compositions similar to other types of workers. An additional 2.8% of adults performed online platform work periodically over 6 months. Online platform

workers also have differing motivations for pursuing this work. As expected, primary job platform workers were more likely to pursue this work as a primary source of income. In contrast, periodic workers were more likely to engage in this work for supplemental income or "for fun."

Our study makes several contributions to the literature and policy discussions by using unique nationally representative survey data to estimate the size of the online platform workforce. In addition to previous survey-based measures of the gig economy primarily conducted using online probability panels (e.g., Robles and McGee, 2016; Bracha and Burke, 2021; Osterman, 2022), other estimates use data sources such as bank account records (Farrell et al., 2018), tax records (Jackson et al., 2017; Garin et al., 2022). We add to this existing literature using nationally representative data from online panels and traditional address-based samples (ABS). The EPOP survey also asks respondents to list the name of the platform they work for, providing a detailed understanding of the prevalence of online platform work across platform types.

Beyond measuring the size of the online platform workforce, our study also examines platform workers' demographic characteristics and motivations. This is particularly relevant to policy discussions that raise concerns about the role of the digital platform economy in exacerbating inequality within the labor force in ways that may harm historically marginalized workers. While our study does not attempt to make causal claims about why workers enter the online platform economy, we can offer insights into the motivations of platform workers and variation in motivation by the type and frequency of work performed. These findings can help to inform policy discussions surrounding the extent to which workers are pushed or pulled into platform work by factors related to labor market conditions vs. personal preferences for autonomy and flexibility.

2 Literature Review

A robust literature attempts to estimate the size of the "gig" workforce, yielding sometimes contradictory results (e.g., Abraham et al. 2021; Osterman 2023; Katz and Krueger 2019; Robles and McGee 2016; Bracha and Burke 2021). In some part, these differences in results are explainable due to differences in definitions. For example, survey-based research has produced a variety of estimates ranging from 1% of workers on the low end (Osterman 2023) to as high as 36% (Robles and McGee 2016) depending on whether the study investigates work explicitly facilitated by online platforms or broader work arrangements that are informal or non-traditional. However, various data sources are also used, covering multiple surveys using different sources of survey frames and various administrative data sources.

Multiple studies have used surveys to understand the nature of non-traditional work with various survey methods and questionnaire design approaches. Early examples include Katz and Kruger (2019b), who use a probability-based online panel survey to show that in late 2015, about 15.8 % of workers reported some category of "alternative work arrangement," suggesting growth from prior estimates of 10.7 percent in the 2005 CPS-CWS. While online platform work may have grown since the fielding of their survey, their data indicated that 0.5 percent of workers reported income from online digital platforms, a relatively small share of the broader non-standard worker category. Earlier work by Katz and Krueger (2019a) uses the RAND-Princeton survey data to estimate the share of workers whose activity is electronically mediated and finds that just 0.5 percent of workers reported income from online digital platforms.

Abraham et al. (2024) investigate issues with survey question design, focusing on the subset of workers in alternative arrangements who are independent contractors. They show that about 10% of workers who initially report being in an employer-employee work arrangement are independent contractors. They then estimate that independent contractors account for 15% of the workforce, indicating that this is an essential component of the workforce and that measurement challenges must be addressed when studying the informal workforce. While this study did not estimate the size of the online platform-

based workforce earlier work from Abraham et al. (2019) reports that about 3% of workers use online mediaries.

Another factor contributing to variation in platform work estimates reported in the literature is the timing of platform work. For example, Katz and Krueger (2019) and Abraham et al. (2024) ask about work performed in the prior week, Abramowitz and Joung (2024) capture activity over the past year, and Bracha and Burke (2021) report platform work in the past month. In our results below, we investigate further the distinction between individuals who report using platform work as their primary job the prior week and individuals who perform more periodic platform work.

In addition to these survey-based studies, several studies use administrative data to identify online platform workers through digital platform firms' reported income or financial transaction records. For example, Jackson et al. (2017) analyze administrative data from 2014 tax filers using a 10% random sample of self-employed workers with schedule SE or schedule C filings and a 1% sample of W2 filers without self-employment income. They estimate that 0.7 percent of all workers (whether self-employed, sole proprietors, or employees) earned and reported income from businesses running an online platform. Collins et al. (2019) further find that about 1% of the overall workforce and 8.6% of the contract workforce fall into the online platform worker category. Separately, Farrell et al. (2019) use administrative data on all bank accounts from JP Morgan Chase. They found that 1.6% of accounts included transactions with characteristics consistent with online platform work. Unlike the tax filing studies, their unit of analysis is bank accounts rather than workers, which makes it difficult to compare their results with other estimates. Additionally, it is unclear how representative the JPMC accounts are of all bank accounts held by workforce members.

While several studies report that the characteristics of informal workers are broadly defined (Katz & Krueger 2018b, Abraham et al. 2014, Robles and McGee 2016), relatively few offer insights into the characteristics of online platform workers. Abramowitz and Joung (2024) analyzed data from the Panel Study of Income Dynamics (PSID) to examine trends and flows into or out of self-employment and estimate the characteristics of these workers. For example, their results indicate that among workers

reporting online platform work as a primary job, 63% were male, 41% were White, 22% were Black, and 25% were Hispanic. Abraham et al. (2019) also documented the demographic characteristics of online platform workers and estimated how well those characteristics predicted online platform work. This survey-based evidence suggests that while 3% of all workers reported online platform work, 2.8% of Whites, 4.6% of Blacks, 2.6% of Asians, and 2.7% of Hispanics did so. They also report that 2.8 percent of female and 3.2 percent of male workers indicated online platform mediation. They also show that online digital platform workers tended to be more educated on average than other workers and were more likely to have technical or vocational training. Finally, the CPS-CWS also estimates the characteristics of electronically mediated workers. However, as Abraham et al. (2024) pointed out, accounting for independent contractors who may have been miscoded as employees changes their demographic profile substantially.

Beyond measuring the size and characteristics of the platform workforce, researchers and policymakers are increasingly interested in understanding the motivations of these workers. At least two significant themes appear prominently in the literature's findings: the role of financial motivations and preferences for autonomy or flexibility. Allon et al. (2018) focus on ride-hailing platform workers to investigate how financial incentives and behavioral factors influenced their labor market decisions. They find that monetary incentives affect both the decision to work and the duration of work. Churchill and Craig (2019) explore heterogeneity across genders in online platform work, finding that both groups are motivated by financial concerns and seek platform work to earn income. However, they found that women were more likely to report that platform work was more compatible with their schedules, mainly due to social commitments such as family responsibilities. Doucette and Bradford (2019) use data on Amazon Mechanical Turk workers to explore platform motivations and find differences across gender lines. Additional research by Berger et al. (2019) investigates who becomes an Uber driver in London and how their well-being compares to the broader population of workers in that city. Their survey data reveals that workers were motivated by autonomy, flexible scheduling, or improvements to work-life balance when deciding to join Uber. Notably, most workers surveyed indicated they would require a substantial

pay increase to work a job with more fixed hours. These findings are corroborated by research conducted on Uber drivers in the US. Hall and Krueger (2019) report survey evidence suggesting that in addition to the compensation offered, workers were primarily attracted to the Uber platform due to its flexibility. Finally, Chen et al. (2019) use data on Uber drivers to examine the surplus value they derive from flexibility by estimating driver hourly reservation wage changes. They find that Uber drivers earn twice the surplus they would derive from less flexible work arrangements.

Our analysis below adds to this literature in multiple ways. First, we utilize nationally representative data from the EPOP survey. Second, EPOP asks for the name of the platform coordinating work, allowing for a more detailed look at the type of platform work. Finally, EPOP captures workers who engage in digital platform work over shorter and longer time horizons, specifically those who worked in the prior week and those who may not have worked in the preceding week but did work in the previous 6 months. In addition, we then examine the characteristics and motivations of online platform workers across these differing types of platform work. For example, research on the motivations driving workers to choose online platforms is limited, and many existing studies focus on a single platform or platform type. We contribute to this literature by examining various financial and non-pecuniary motivations for choosing online platform work and examine differences by platform type and platform work timing.

3 Data and Measurement

Our analysis uses a new instrument developed for the EPOP Survey. The EPOP Survey was designed and conducted by the NORC at the University of Chicago with grant funding from the Ewing Marion Kauffman Foundation. As part of its focus on entrepreneurship, the survey also includes a series of questions regarding engagement with "gig work," including motivations for this gig/online platform work, as well as information on the name of the platform.

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3.1 The EPOP Survey

EPOP is designed to provide information on a range of entrepreneurial activities among non-institutionalized adults aged 18 years and older in the United States. Data collection ran from February into June of 2022. The survey uses a stratified sample selected from three separate sources: (1) NORC's AmeriSpeak Panel, (2) an ABS sample built from the USPS Delivery Sequence File, and (3) opt-in panels. AmeriSpeak is a probability-based panel where households are recruited into the panel and receive survey invitations periodically. The sample is designed to support the estimation of key entrepreneurial activities at the state and Metropolitan Statistical Area (MSA) level (for the top 50 MSAs) both overall and by gender and race/ethnicity subgroups.

Throughout the survey, many efforts were made to encourage participation from a wide range of potential respondents. Outreach materials emphasized the importance of responding to the survey even if an individual is not currently engaged in entrepreneurial activities. A telephone prompting operation was also used for the probability sample to encourage participation from individuals who did not respond to mail and email invitations. Finally, targeted incentive increases were enacted late in the fielding period to encourage participation from individuals in geographic areas with lagging response rates.

3.2 Survey Questionnaire Development Process

The EPOP questionnaire was tested using a multistage process, including cognitive interviews, pretests, and debriefings. Cognitive interviews were conducted in the fall of 2021 with a sample of 15 participants purposefully selected to represent individuals involved in various entrepreneurial pursuits and demographic backgrounds. Respondents were recruited via email to participate in the study, and all participants were compensated for their participation. Cognitive interview participants successfully navigated the questionnaire, but based on responses to the interviews, additional examples of jobs classified as "gig work" were added to the survey to provide further clarification for respondents.

Following adjustments to the questionnaire during the cognitive interviews, a pretest survey was conducted in December 2021 with a random sample of roughly 2000 respondents using a sample design

that mirrored the design used in the primary EPOP survey. In addition to testing that the survey logic worked appropriately, a subsample of roughly 200 individuals was randomly selected to be debriefed using an interview protocol. This allowed for a qualitative understanding of whether respondents felt the survey classification aligned with their work activities. The results of this pretest were positive, with only 3.8% of debrief respondents classified as "gig workers" disagreeing with this classification.

3.3 Measurement of Platform Work in EPOP

EPOP uses a screener to identify entrepreneurs and gig workers, using a gig worker definition of a respondent who is "engaged in work that consists of short, paid tasks or jobs that are conducted through companies that coordinate payment for the service."

The EPOP survey also prompts respondents to do additional work activities, which can be important for measuring non-standard work arrangements (Abraham and Amaya 2019). Following a question asking the respondent if they worked for pay at a job or business in the last week, the survey asks respondents who respond that they did not work "in the last week, did you do ANY work for pay, even for as little as one hour?" Any respondent whose first or second job is reported as freelance work or work for a company is asked a follow-up question related to platform-based work. Given the potential for lack of clarity in what counts as gig work, the survey includes extensive examples of gig work activities and includes a definition of gig work in the main text of the question:

"Some people earn money through short, paid tasks or jobs online or in-person conducted through companies that coordinate payment for the service. This is sometimes referred to as 'gig work.'"

For respondents who do not classify as gig workers for either of their first two jobs, a final follow-up question asks if respondents are engaged in gig work regardless of the prior responses. This final follow-up asks respondents to consider all work conducted in the past 6 months to include more irregular work

that may not have occurred in the past week. Note that this question is intentionally very broad and could include in-person companies that coordinate payment for service as well.

Respondents were asked for the name of the platform that coordinated their work to provide a more detailed understanding of platform-based work. These responses were then coded into categories based on the name of the platform provided by the respondent, which is the basis for our classifications of online platform work.[1] Below, we focus on three categories of online platform work that are derived from the platform name:

1. *Services*. This is the largest category of online platform work in the results, encompassing any platform that coordinates relationships with customers and payment for services the worker provides (e.g., ride-share, task-based service work, food delivery).

2. *Selling/renting of goods*. Some respondents reported a platform that coordinates relationships with customers and payment for selling or renting goods/property. While renting is, in theory, different than selling, the sample size of respondents reporting platforms coordinating rentals is too small to warrant its own category.

3. *Online surveys*. Some respondents reported that a survey company was their platform. Given the circular nature of this being counted as platform work when taking an online survey, we classify this as its own category. As shown below, the number of respondents in this category is small enough to not qualitatively affect the results. Nonetheless, they are not considered as a "confirmed online platform" throughout the results.

In addition to these platforms, some respondents reported names of platforms that indicated confusion regarding the question (e.g., reported a major company or university as a "platform") or did not report a platform name. The results below do not consider these responses to be confirmed online platforms.

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[1] The full questionnaire for all rounds of the EPOP Survey may be found at https://epop.norc.org/us/en/epop/researchers/public-use-files.html. Specific questions most relevant to the analyses here are reproduced in Appendix B.

4 Results

4.1 Measurement of Platform Work in the EPOP Survey

Table 1 shows estimates of job activities for the respondent's primary job last week by different sample types in the EPOP survey.[2] The top four rows provide estimates of not working last week, working as an employee, being a self-employed business owner, and doing freelance work that is not classified as platform work; the bottom rows provide estimates of different types of platform work. In the leftmost panel, Table 1 presents weighted estimates both for the total sample and the probability sample only. In the full sample, 1.64 percent of respondents report that their primary job involved platform work through platforms coordinating services or selling or renting goods. Because the vast majority of the survey was collected online, we also separately coded platform work that involved online survey-taking. However, the fraction of respondents reporting this as a primary job was very small. The full weighted estimates are very similar across all variables when comparing the total sample and the probability sample only. For example, restricted to the probability sample, 1.57 percent of respondents reported that their primary job involved platform work. This similarity is not surprising, given that the weighting procedure for the nonprobability sample explicitly attempts to match the coverage properties between the probability and nonprobability samples (Yang et al., 2022).

The right two sets of columns in Table 1 present weighted and unweighted estimates separately by sample type. For weighted estimates, we see that the probability of platform work is similar in the ABS and AmeriSpeak samples (1.66 compared to 1.56 percent) but is substantially higher in the nonprobability sample (2.51 percent). Note that this estimate intentionally excludes individuals whose platform work involves taking online surveys, so while the proportion of individuals taking online surveys is higher in the nonprobability sample, this does not fully explain the differences in platform work between these two samples. Instead, this reflects that individuals in the nonprobability sample are more likely to engage in all forms of platform work. This result is important given the differences in

[2] Full descriptive statistics for the sample may be found in Appendix Table A.1.

survey frames across studies examining platform work and suggests that probability samples provide

important advantages for studying these questions. While there are noticeable differences in unweighted

estimates across sample types, we urge caution with interpreting the unweighted results across sample

type, as sampling probabilities will differ by sample type. We also note that because the nonprobability

sample has unknown coverage properties, the unweighted estimates for the nonprobability sample are

likely to exhibit bias in key estimates. Because of these unknown coverage properties, the remainder of

the paper focuses on estimates using only the probability sample.

Table 2 shows substantial confusion for respondents who self-report that they are platform

workers using these prompts above. Just over 20% of respondents who indicated that they performed

platform work reported a confirmed online platform when asked to list the name of the platform

coordinating their work. Most respondents were confused because they listed employers unlikely to be

online platform operators. This indicates the complicated nature of using survey measurement to capture

online platform work and reinforces the importance of capturing verbatim information on the platform

that coordinates payment and customer relationships.[3]

To further explore how workers may have been misclassified if they only used their initial report

of job type, Table 3 displays the percentage of respondents who engaged in platform work by their self-

reported primary job. Of all respondents who were eventually coded as online platform workers engaged

on a confirmed platform, 23.4% initially indicated that they worked for an employer. This implies that

nontrivial numbers of platform workers report working as an employee for a company rather than as an

independent contractor when given the choice and is consistent with prior work, suggesting many online

platform workers are misclassified as being in traditional employee work arrangements on household

surveys (Abraham et al., 2023).

Table 4 reports the percentage of respondents who report working for an employer, traditional

self-employment, freelance work, and online platform work as their primary job. Thirty percent of

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[3] Appendix Table A.2 provides further demographic details on the respondents who exhibit this confusion.

respondents reported not working in the prior week. The vast majority of respondents, over 93 percent, indicated that they performed no platform work in the last 6 months. Only 1.57 percent of respondents were identified as online platform workers. An additional 2.85 percent of adults reported performing platform work in the past six months but not as a primary job last week. Adding these together implies that 4.42% of adults participated in platform work at some point in the past 6 months. Within platform workers for whom this work was their primary job last week, the majority of online platform workers, 76% (1.20/1.57), perform service work. This includes driving for Uber, delivering for Doordash, or completing home repairs through Angi. A smaller share of these workers, roughly 20 % (0.31/1.57), work on selling platforms such as Etsy, Mercado, or Airbnb. The final 4 percent of online platform workers engage in online survey work through platforms such as Prolific. Focusing on more periodic platform workers (within the last 6 months but not last week), 68% of periodic platform workers were involved in service work, with 29% involved in selling/renting goods.

An additional 0.83% of respondents report what we refer to as "other platform work" as their primary job. Workers in this category performed services or completed transactions using companies that acted as platforms but did not engage in online platform-based work that is typically classified as online platform work. Examples include traditional in-person services such as landscaping or childcare that were not coordinated through online platforms or responses such as Instagram, Facebook, or Robinhood, which are online apps but likely would not have been involved in coordinating relationships with customers like traditional online platforms. Among periodic platform workers, 1.04% of respondents indicated that they performed tasks in our "other platform work" category, a much smaller share than those engaged in other platform work over the past week.

While the majority of our analysis focuses solely on the first year of data collection for EPOP (EPOP:2022), there are two additional waves of data collection in 2023 and 2024 with similar batteries of questions. To examine changes over time, Figure 1 plots these key estimates from Table 4 across these three years. These results show no large changes over this period. There are modest increases across all estimates between 2022 and 2024, with the most noticeable increase being in the largest group of

platform workers (service platform workers). Nonetheless, these changes are minor in magnitude and within the margin for error.

4.2 Characteristics and Motivations of Online Platform Workers in the United States

Table 5 compares the characteristics of online platform workers to all other employed workers,[4] disaggregating online platform workers based on whether they perform services or engage in selling. We report each of these categories by whether the work was their primary job in the prior week or not in the last week but sometime in the past month. Female workers comprised about half of service-based platform work regardless of timing, that is, whether the work was completed in the prior week or prior 6 months. However female workers accounted for 72 percent of selling platform workers in the prior week and 74 percent of selling platform workers in the prior 6 months. Only the latter percentage was statistically different from the female share of all employed workers.

The racial composition of online platform workers differed from all other employment with larger shares of Black and Hispanic workers. While Black workers account for 12 percent of all employment, they comprise 27 percent of workers who performed online service-based work in the prior week and   19 percent of those performing this work in the prior 6 months. Both shares were statistically different from the Black share of employment. While the shares of Black workers were higher for online selling platforms than for non-platform workers, the values were not statistically different from non-platform workers. White workers accounted for smaller shares of online platform work as compared with their share of all employment. However, the differences were only statistically significant for service platform work performed in the prior week, 38 percent, as compared with 59 percent for non- platform workers. The Hispanic worker shares were hire relative to their share of all employees for online platform work performed in the prior week and for online selling platform work performed in the prior six months. The

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[4] Refer to Appendix Table A.3 for a more detailed table comparing the characteristics of all groups of workers included in Table 4 who had a job the primary week.

share was lower for online platform services performed in the prior 6 months, but none of the values were statistically significant.

Workers performing online platform work in the prior week were less college-educated than the total non-platform workforce, with 23 percent of workers holding at least a bachelor's degree. Forty-seven percent of other workers had a bachelor's degree, and the difference was statistically significant. Differences in education levels were not statistically different for any other categories except for selling platform workers, among whom workers with some college comprised a smaller share (18 percent) than the non-platform workforce (30 percent).

With few exceptions, family structure was not statistically different between online platform and all other workers. Fifty-four percent of non-platform workers were married, while just 37 percent of workers engaged on online platforms in the prior 6 months were married. Among workers using selling platforms in the prior 6 months, just 24 percent reported children in the household, a smaller share than the nearly 36 percent of non- platform workers who reported having children.

Service platform workers tended to be younger than all other employed workers. Approximately 34 percent of those on service platforms in the prior week and 33 percent of those on service platforms in the prior 6 months were between the ages of 18 and 29. Among all other workers, this age bracket comprised just 18 percent of the total. Thirteen percent of service platform workers in the prior week were between age 50 and 64, a smaller share than the 28 percent of all other employed workers who fell into this age category.

The EPOP survey does not capture worker income disaggregated by source of income, so we cannot compare income derived only from platform work to income from other sources. However, we can observe where online platform workers fall in the income distribution. Among workers not engaged in online platform work, about 30 percent had household incomes of less than $50K. By contrast, nearly 50 percent of workers on service platforms in the prior week reported household incomes of less than $50K. The shares were not statistically different between non-platform workers and workers in all other online platform categories. At the other end of the distribution, the share of workers reporting household

incomes of $100K or more were much smaller for workers on online platforms in the prior week, 13 percent, as compared with non-platform workers, 37 percent. Only 24 percent of workers on selling platforms in the prior 6 months reported income in this bracket. Shares for all other groups of online platform workers were not statistically different from the share of non-platform workers reporting a household income of $100K or more.

Finally, we examine the motivations behind pursuing platform work for both primary jobs and periodic online platform workers. Motivation statistics are displayed in Table 6. As expected, primary job platform workers were more likely to report that this was their primary source of income. Similarly, 61.3 percent of periodic workers were more likely to indicate that online platform work provided them with supplemental pay as compared with 36.4 percent of primary job workers.

Autonomy was another major motivating factor behind online platform workers' occupational choices, though this was more frequently cited as a motivation for primary job platform workers than periodic workers. Forty-four percent of primary job online platform workers cited flexibility as a motivating factor. By contrast, 22 percent of periodic platform workers reported flexibility as motivation for platform work. We also observe suggestive differences between primary job and periodic platform workers in their likely to report being motivated by a desire to work for themselves or start a business, but these latter differences are not statistically significant.

There was a gap between primary job and periodic platform workers in the share motivated by fun. Thirty-two percent of periodic platform workers reported fun as motivation, as compared with 19 percent of primary job workers. The difference was statistically significant. A sizable share of workers from both categories indicated a desire to help family or friends through their online platform work, 20 percent of primary job and 19 percent of periodic workers. Online platform workers also indicated career transitions were a reason for engaging in this work, with 16 percent of primary job platform workers and 9 percent of periodic workers selecting this motivation category.

5 Conclusion

As technological advances increase the extent to which online platforms can coordinate non-standard work and tasks, a significant amount of interest has emerged seeking to understand the role of technology in the evolution of work arrangements. In this analysis, we use data from the EPOP survey to provide more evidence on the size of the online platform workforce and how the size of the platform workforce changes when the definition is expanded to include periodic platform workers in addition to primary job workers. The survey includes a battery of questions to measure online platform work and disaggregate it by the type of platform.

We show that online platform workers comprise a small but meaningful percentage of the workforce. We further show that the timing of work is important, with the prevalence of online platform work more than doubling when considering any work over the past 6 months as opposed to only work performed the prior week. Regardless of timing, most work conducted via online platforms is service-based work. Finally, the characteristics of primary job platform workers are different from those of periodic platform workers when examining race, gender, education, age, and income.

Our study has implications for the measurement of non-standard work more generally. We show that asking for verbatim answers on platforms can be particularly important to resolve respondent confusion related to these various types of work. Moving forward, future research can explore how these measurements can be augmented to capture even more detailed characteristics of jobs to better understand the job arrangements faced by workers in the US.

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Figures

Figure 1: Key Platform Work Estimates by Year
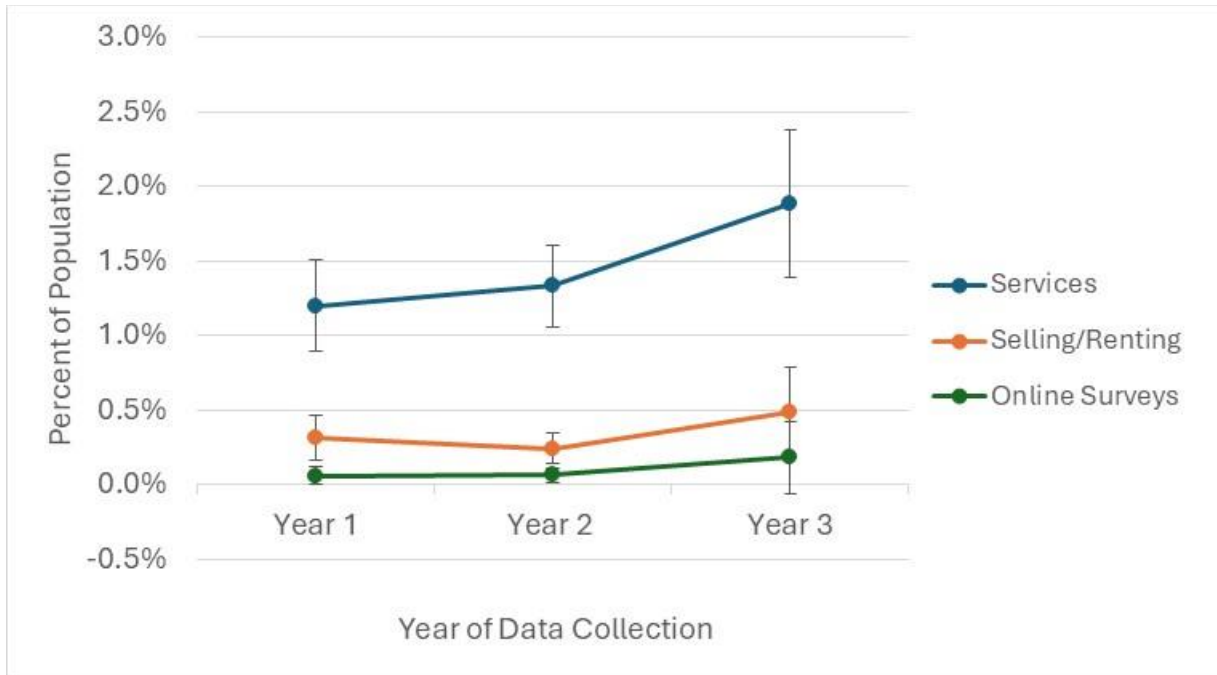
Source: EPOP (2022), EPOP (2023), and EPOP (2024). Cells refer to the percentage of respondents categorized into a given type of employment for their primary job last week. All estimates use the probability sample only and are weighted to account for the complex sampling design of the EPOP survey.

Tables

Table 1: Key EPOP Estimates by Sample Type, Primary Job Last Week

Category	Overall (Weighted)	Prob Only (Weighted)	<u>Weighted</u>			<u>Unweighted</u>		
			ABS	AmeriSpeak	Opt-In	ABS	AmeriSpeak	Opt-In
Did not work last week	30.90	29.99	29.63	30.02	39.20	30.05	33.40	40.3
Work as employee	53.97	55.05	55.76	54.98	43.74	55.71	51.41	42.65
Traditional self-employment	5.61	5.45	5.23	5.47	6.45	5.35	5.51	6.52
Freelance but no platform work	6.74	6.79	6.44	6.82	7.12	6.06	7.06	6.73
Any online gig platform work	**1.64**	**1.57**	**1.66**	**1.56**	**2.51**	**1.48**	**1.49**	**2.61**
Online Gig Platform Work - Services	1.24	1.20	1.59	1.16	1.78	1.29	1.13	2.01
Online Gig Platform Work - Selling/Renting	0.33	0.31	0.04	0.34	0.53	0.13	0.32	0.39
Online Gig Platform Work - Online survey	0.07	0.06	0.03	0.06	0.20	0.06	0.04	0.21
Missing	1.14	1.16	1.28	1.15	0.98	1.35	1.13	1.17
N	32,021	11,174	1,551	9,623	20,847	1,551	9,623	20,847

Source: EPOP (2022). Cells refer to the percentage of respondents categorized into a given type of employment for their primary job last week.

Table 2: Respondent Confusion of Platform Work

	Type of Platform Work	
	Primary Job Last week	**Any Platform Work in Past 6 Months**
Confirmed Online Platform Work	**20.7%**	**21.6%**
Not Platform Work	**79.3%**	**78.4%**
Payment Provider	2.2%	2.1%
Reports platform, but unlikely gig work	32.9%	26.9%
Platform information is missing	44.3%	49.4%
Total	**100%**	**100%**
N	835	2,258

Source: EPOP (2022) probability sample data. Sample is restricted to only respondents who initially reported platform work. All estimates are weighted using EPOP probability sample weights.

Table 3: Initial Report of Type of Job for Platform Workers

| | | Type of Job Reported Prior to Question about Online Platform Work | |
| | | Freelance/Independent Contractor | Work for Employer |
Type of Worker	N		
Confirmed online platform worker	167	76.3%	23.4%
Any worker reporting work is "coordinated through platform"	835	60.2%	39.8%

Source: EPOP (2022) probability sample data. Restricted to platform workers who report platform work as their primary job the past week.

Table 4: Measurement of "Other" Platform Work in EPOP, Primary Job Last Week, Year 1 Only

Category	Examples	Platform Work Last Week	Platform Work Past 6 Months but not Last Week	Total (Any Platform Work in Past 6 Months)
No platform work		**97.60%**		**93.72%**
Confirmed Online Platform Work		**1.57%**	**2.85%**	**4.42%**
Services	Uber, Doordash, Angi	1.20%	1.93%	3.13%
Selling/Renting	Etsy, Mercado, AirBnB	0.31%	0.82%	1.13%
Online survey	Prolific	0.06%	0.10%	0.16%
Other Platform Work		**0.83%**	**1.04%**	**1.87%**
Unconfirmed Services	Local landscaping company	0.71%	0.94%	1.65%
Social Media	Instagram, Facebook	0.04%	0.00%	0.04%
Arts/Reselling	"antiques," "arts"	0.06%	0.10%	0.16%
Finance	Robinhood	0.02%	0.00%	0.02%
Total		**100%**		**100%**

Source: EPOP (2022) probability sample data. Percentages refer to the percent out of the entire adult population over the age of 18. All estimates are weighted using EPOP probability sample weights.

Table 5: Characteristics of Platform Workers by Time Period Observed

	All Other Employed Workers	Primary Job Last Week		Last 6 Months, Not Last Week	
		Online Platform: Services	Online Platform: Selling/Renting	Online Platform: Services	Online Platform: Selling/Renting
Demographics					
Female	52.3	53.8	71.5	49.9	73.7**
Black	12	26.5*	15.1	18.7*	14.5
White	59.1	38.4**	50.7	58.3	46.7
Hispanic	18.7	22.6	24.0	12.5	31.5
HS Diploma or Less	22.6	35.1	36.5	22.4	33
Some College	30.4	34.9	34.7	27.8	17.8*
BA+	47	23.2***	28.8	45.5	44.4
Immigrant	11.2	3.9**	1.5***	7.1	7.1
Married	54.1	39.6	60.7	36.8*	50.1
Children in Household	35.9	44.3	57.0	38.9	23.8*
Age 18-29	18.1	34.3*	9.0	33.2**	20.1
Age 30-49	44.4	44.8	43.6	39.5	45.4
Age 50-64	27.5	13***	22.9	20.2	22.4
Age 65+	10	7.9	24.5	6.8	12.1
HH Income <$50,000	29.5	48.8**	48.8	33.5	27.2
HH Income $50000-$99,999	33.7	36.5	17.9*	30.6	48.6
HH Income $100,000+	36.8	12.5***	33.3	35.2	23.5*
N	7,046	129	33	230	96

Source: EPOP (2022) probability sample data. Cells refer to the percentage of workers in a column who are in a given demographic group. All estimates are weighted using EPOP probability sample weights, and significance testing refers to tests of the composition of a given column relative to all other employed workers. *p<0.05 ** p<0.01 *** p<0.001.

Table 6: Motivations of Online Platform Workers

| | Online Platform Work | |
	Primary Job Last Week	Last 6 Months, Not Last Week
Primary Income Source	48.1	19.6***
Supplement Pay	36.4	61.3***
Supplement Retirement	15.5	16.2
Help Family or Friends	20.2	18.8
Starting Own Business	14	7.7
Career Transition	16.3	9.2
Maintain Skills	7.8	4.4
Obtain New Skills	4.7	3.7
Working for Myself	17.1	9.6
Flexibility	44.2	22.1***
Networking	13.2	9.2
For Fun	19.4	32.1**
N	129	271

Source: EPOP (2022) probability sample data. Cells refer to the percentage of workers in a column who report a given motivation. Stars in the second column refer to tests of if the estimates for primary job last week and last 6 months, not last week are equal. ** indicates significance at the 0.05 level and *** indicates significance at the 0.01 level. All estimates are weighted using EPOP probability sample weights.

Appendix A: Supplementary Tables

Table A.1: Descriptive Statistics

Variable	N	Mean
Demographic Variables		
Female	11,149	0.589
Black	11,133	0.131
White	11,133	0.678
Hispanic	11,133	0.110
HS Diploma or Less	10,688	0.177
Some College	10,688	0.329
BA+	10,688	0.494
Age 18-29	11,109	0.082
Age 30-49	10,802	0.535
Age 50-64	11,106	0.275
Age 65+	11,162	0.115
Immigrant	11,162	0.345
Married	11,162	0.278
Has Children	11,162	0.262
HH Income <$50,000	10,976	0.400
HH Income $50,000-$99,999	10,976	0.345
HH Income $100,000+	10,976	0.254
Employment Variables (Primary Job Last Week)		
Employment	11,174	0.671
Has Multiple Jobs	7,481	0.209
Freelancer as Primary Job	7,364	0.123
Self-Employed as Primary Job	7,364	0.083
Employee as Primary Job	7,364	0.794

Source: EPOP (2022) probability sample only. Total N=11,174

Table A.2: Characteristics of Respondents with Confusion

	Primary Job Last Week			Any Platform Work in Past 6 Months		
	Confirmed Online Platform Work (No Confusion)	Not Platform Work (Respondent Confusion)	Difference	Confirmed Online Platform Work (No Confusion)	Not Platform Work (Respondent Confusion)	Difference
Demographics						
Female	56.5	52.6	3.9	56.8	50.3	6.5
Black	24.5	14.4	10.1	19.8	14.5	5.3
White	40.8	49	-8.1	49.8	52.3	-2.5
Hispanic	23.1	29.5	-6.4	20.3	23.8	-3.5
HS Diploma or Less	35.3	32.8	2.5	28.9	28.6	0.3
Some College	35.7	33.2	2.5	28.8	30.6	-1.8
BA+	23.7	30.4	-6.6	37.5	36.7	0.8
Immigrant	3.3	13.7	-10.4***	5.8	12.4	-6.7***
Married	42.8	44.8	-1.9	41.4	43.7	-2.2
Children in Household	46.7	40	6.7	38.3	36	2.3
Age 18-29	30	27	3	28.9	25.6	3.3
Age 30-49	44.2	41	3.2	42	39.4	2.6
Age 50-64	14.7	19.8	-5.1	19.2	23.1	-3.9
Age 65+	11.1	12.2	-1.1	9.8	11.9	-2.1
HH Income <$50,000	48.4	44.7	3.8	37.3	38.8	-1.6
HH Income $50000-$99,999	32.8	31.2	1.6	35	33.6	1.5
HH Income $100,000+	17.2	21.8	-4.6	26.7	26.2	0.4
Motivations for Pursuing Gig Work						
Primary Income Source	51.2	48	3.3	31.5	33.1	-1.6
Supplement Pay	36.6	34.6	2	56	43.4	12.6**
Supplement Retirement	10.1	25.5	-15.4***	15.2	19.9	-4.7
Help Family or Friends	21.7	25	-3.3	22.7	22.1	0.5
Starting Own Business	16.9	12.9	4	15	10.4	4.7
Career Transition	21	11.1	9.8	14.7	9.1	5.6
Maintain Skills	8.8	10.1	-1.3	7.6	8.5	-0.9
Obtain New Skills	4.1	11.4	-7.3**	6.6	8.6	-2
Working for Myself	23.1	13.7	9.4	16	11.4	4.7
Flexibility	53.9	24	29.9***	34.2	19.5	14.8***
Networking	12.8	10.5	2.3	13	10.1	2.9
For Fun	19.4	21.7	-2.3	31	27.7	3.4
N	167	668		509	1,749	

Source: EPOP (2022) probability sample data. Sample is restricted to only respondents who initially reported platform work. All estimates are weighted using EPOP probability sample weights. *p<0.05 ** p<0.01 *** p<0.001.

Table A.3: Characteristics of Informal and Platform Workers, Primary Job Last Week

Variable	Work as Employee	Traditional Self-Employed	Freelancer/ Independent Contractor	Online Platform: Services	Online Platform: Selling/Renting	Other Platform
Female	58.3	51.4	59.8	62	78.8	51.7
Black	14.6	9.8	12.8	20.2	12.1	17.7
White	63.1	71.7	65	50.4	60.6	59.3
Hispanic	12.5	10.8	14.5	16.3	18.2	15.3
HS Diploma or Less	14.7	12.7	22.6	19.5	27.3	17.8
Some College	31.3	32.1	32.4	39	39.4	30.5
BA+	54	55.2	45	41.5	33.3	51.8
Age 18-29	9.7	6.9	9	4.7	6.1	11.4
Age 30-49	51.6	63.4	51.1	40.2	54.5	54.3
Age 50-64	34.3	31.1	32.5	34.9	48.5	31
Age 65+	15.2	7.8	14.8	27.9	12.1	9.5
Immigrant	47.2	37.2	37.9	41.1	42.4	40.8
Married	29.1	31.8	26.5	18.6	21.2	35.5
Has Children	8.5	23.2	20.7	12.4	24.2	14.2
HH Income <$50,000	34.4	34.6	48.7	58.3	54.5	41.8
HH Income $50,000-$99,999	36.9	32.7	30.9	29.9	27.3	32.7
HH Income $100,000+	28.7	32.7	20.4	11.8	18.2	25.5
N	5845	613	906	129	33	211

Source: EPOP (2022) probability sample only. Cells refer to the fraction of workers in a column who are in a given demographic group.

Appendix B: EPOP:2022 Platform Work Questions

This appendix provides the exact language from the EPOP:2022 survey for the relevant platform work questions used in the above analyses. The full questionnaire for EPOP:2022 may be found at https://epop.norc.org/content/dam/epop/researchers/pdf/epop-2022-questionnaire.pdf.

Text that appears in black font was displayed to the respondent, and blue text shows variable names, skip logic, and instructions for programming the creation of variables and navigation through the instrument.

B.1 Gig Work for Primary Job

[SHOW IF S_JOB_1 = 2,3,4]
S_GIGCHECK_1.
Some people earn money through short, paid tasks or jobs online or in-person that are conducted through companies that coordinate payment for the service. This is sometimes referred to as "gig work."

Is your <u>main job or work arrangement</u> gig work?

These tasks might include driving for Uber or Lyft, selling goods through Etsy, completing online tasks on Mechanical Turk, providing graphic design, music, or other services via Fiverr or Upwork, or <u>other activities</u>.

[HOVER TEXT ON "<u>other activities</u>":
- Babysitting, childcare services, dog walking and/or house sitting
- Disabled adult and/or elder care services
- Providing personal services to individuals
- Renting out property, such as your car, your phone, your place of residence, or other items]

RESPONSE OPTIONS
    1. Yes
    2. No
    77. Unsure

B.2 Gig Work for Secondary Job

[SHOW IF S_JOB_2 = 2,3,4]
S_GIGCHECK_2.
Some people earn money through short, paid tasks or jobs online or in-person that are conducted through companies that coordinate payment for the service. This is sometimes referred to as "gig work."

Is your <u>second job/work arrangement</u> gig work?

These tasks might include driving for Uber or Lyft, selling goods through Etsy, completing online tasks on Mechanical Turk, providing graphic design, music, or other services via Fiverr or Upwork, or other activities.

[HOVER TEXT ON "other activities":
- Babysitting, childcare services, dog walking and/or house sitting
- Disabled adult and/or elder care services
- Providing personal services to individuals
- Renting out property, such as your car, your phone, your place of residence, or other items]

RESPONSE OPTIONS
1. Yes
2. No
77. Unsure

B.3 Gig Work Over the Past 6 Months

[SHOW IF S_GIGCHECK_1 <> 1 AND S_GIGCHECK_2 <> 1]
S_GIGCHECK_3.
Some people earn money through short, paid tasks or jobs online or in-person that are conducted through companies that coordinate payment for the service. This is sometimes referred to as "gig work."

[IF JOBSTAT_1 = 1 OR JOBSTAT_2 = 1 OR JOBSTAT_5 = 1 OR JOBSTAT_6 = 1: <u>Outside of the forms of employment you have already mentioned</u>, in/ELSE: In] the last 6 months have you been paid for any gig work?

These tasks might include driving for Uber or Lyft, selling goods through Etsy, completing online tasks on Mechanical Turk, providing graphic design, music, or other services via Fiverr or Upwork, or other activities.

[HOVER TEXT ON "other activities":
- Babysitting, childcare services, dog walking and/or house sitting
- Disabled adult and/or elder care services
- Providing personal services to individuals
- Renting out property, such as your car, your phone, your place of residence, or other items]

RESPONSE OPTIONS
1. Yes
2. No
77. Unsure

B.4 Further Questions on Name of Platform

[SHOW IF DOV_CUR_FREE = 1 OR S_GIGCHECK_1 = 1 OR S_GIGCHECK_2 = 1 OR S_GIGCHECK_3 = 1]

S_GIGPLATFORM_1.
Is your [IF DOV_CUR_FREE = 1: freelance, consulting, or independent contract/ELSE: gig] work conducted through a company that coordinates payments or relationships with clients?

RESPONSE OPTIONS
1. Yes

2. No

77. Unsure

[SHOW IF S_GIGPLATFORM_1 = 1]
S_GIGPLATFORM_2.
Is the company that coordinates payments or relationships with clients for your [IF DOV_CUR_FREE = 1: freelance, consulting, or independent contract/ELSE: gig] work an online app?

RESPONSE OPTIONS
1. Yes

2. No

77. Unsure

[SHOW IF S_GIGPLATFORM_1 = 1]
S_GIGPLATFORM_3.
What is the name(s) of the company that coordinates payments or relationships with clients for your [IF DOV_CUR_FREE = 1: freelance, consulting, or independent contract/ELSE: gig] work?