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Failure to Contribute: An Estimate of the Consequences of Non- and Underpayment of Self-Employment Taxes by Independent Contractors and On-Demand Workers on Social Security

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Failure to Contribute: An Estimate of the Consequences of Non- and Underpayment of Self-Employment Taxes by Independent Contractors and On-Demand Workers on Social Security

Caroline Lewis Bruckner and Thomas L. Hungerford*

EXECUTIVE SUMMARY

Over the past ten years, companies such as Uber, Etsy, Lyft, Airbnb, Care, and Rover have become household names by connecting service providers and sellers with consumers online and through app-based programs. This work continues to grow, along with the technology-enabled convenience of accessing goods and services through apps on smartphones in this new sector of the economy (hereinafter "On-Demand Economy"). While self-employed workers, independent contractors, freelancers, and contingent workers have long been present in America's workforce, the proliferation of companies that connect sellers and service providers with customers and process payment online and via apps (hereinafter "On-Demand Platforms"), as well as the increasing prevalence of cashless transactions for work on demand, has raised important questions as to how efficiently our current tax collection system works.

While existing research has focused on the size, growth trajectory, and labor law implications of the On-Demand Economy, as well as the tax, compliance, and benefits issues triggered by the rise of its workforce, less academic work has been devoted to quantifying the Social Security implications of the On-Demand Economy and its workers. Although it is not new that the self-employed present tax compliance and income reporting issues, the existing reporting rules applicable to most workers earning income working with On-Demand Platforms substantially increase the likelihood that these taxpayers will fail to contribute to Social Security and Medicare through payment of Self-Employment (SE) tax. This article sheds light on the Social Security implications of the current federal tax rules for the self-employed generally, and in particular, workers earning income through occupations occurring in the On-Demand Economy through estimating the population and earnings of these workers using data from the U.S. Census Bureau redesigned *Survey of Income and Program Participation* (SIPP).

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By analyzing 2014 SIPP data, we are able to identify populations of (1) self-employed, non-employer respondents working outside of a traditional employment relationship (hereinafter "Independent Contractors"); and (2) individuals who work in occupations that occur in the On-Demand Economy (hereinafter "On-Demand Workers"). SIPP data has the potential to capture workers earning income using On-Demand Platforms to connect with customers and process payment (hereinafter "On-Platform Workers") as well as workers earning income in occupations occurring in the On-Demand Economy not using On-Demand Platforms (hereinafter "Off-Platform Workers").

Additionally, with SIPP data, we can estimate the earnings that Independent Contractors and On-Demand Workers earned in 2014. Then, using existing Internal Revenue Service (IRS) data on the tax gap, U.S. Treasury audit data specific to the underpayment of SE tax as well as survey data of tax compliance of On-Platform Workers and the self-employed, we are able to create an estimate of how much SE tax should have been paid on this income but likely was not. To provide context for our findings, we developed estimates on the likely underpayment of SE tax from data published by the U.S. Bureau of Labor Statistics in 2018 on the number of Independent Contractors and On-Platform Workers from data published by the U.S. Treasury Inspector General for Tax Administration in 2017 and 2019. In addition, using SIPP, we were able to provide demographic data on Independent Contractors and On-Demand Workers, not typically derived from tax data. Ultimately, we found that:

- According to SIPP, approximately 7.1 million individuals were Independent Contractors, and 3.12 million individuals were On-Demand Workers in 2014.
- Using SIPP data, we estimate the collective earnings of Independent Contractors were approximately $204.1 billion 2014, while On-Demand Workers collectively earned approximately $35.97 billion in 2014.
- Based on our review of SIPP data and existing measures of misreporting self-employment income, we estimate at least 3.1 million Independent Contractors underreported self-employment income in 2014. This underreporting would result in approximately $4.84 billion in unpaid SE tax, with approximately $3.92 billion constituting non-payment of Social Security contributions.
- Using SIPP as well as existing research on tax compliance and information reporting for On-Platform workers and the self-employed, we estimate that there is as much as $2.51 billion in unpaid SE tax by On-Demand Workers in 2014. This discrepancy translates to approximately $2.03 billion not paid into Social Security in 2014.
- In terms of demographics, using SIPP, we found that Independent Contractors in 2014 were most often Baby Boomers (that is, aged 55 and over), more likely to be women than men, and are more often White than a member of any other race or ethnicity. On-Demand Workers in 2014 were more often a member of Generation X (that is, aged 34 to 54), more likely to be women than men, and were most frequently White.

- Our estimates of likely additional SE tax owed by the populations we identified is attributable, in part, to current information-reporting rules and directly undermines efforts to fund Social Security. Further, failure to contribute owed SE tax by these populations could translate to lower Social Security benefits for these workers upon retirement. While our estimates are illustrative rather than definitive, they are intended to highlight the immediate need for (1) additional research on the tax compliance of these workers and (2) legislative action to combat extensive underreporting of SE tax by these populations.
- Since 2016, Congress, the U.S. Department of Treasury (Treasury), and the IRS have been aware of tax compliance challenges triggered by the current information reporting regime with respect to the On-Demand Platform workers. In addition, since at least 2007, the Treasury and IRS have been aware of the widespread underreporting of SE taxes and its impact on the tax gap. With the advent of the On-Demand Economy and its workforce, these problems have exponentially grown notwithstanding efforts to increase tax compliance through additional information reporting.

We conclude that policymakers should move forward with considering proposals targeted to increase tax compliance and Social Security contributions for Independent Contractors generally, and, in particular, for the On-Demand Economy workforce. We suggest that Congress can take steps to modernize information reporting, to update quarterly estimated payment requirements, and to require distribution of tax guidance to help combat underreporting of self-employment income and support the solvency of Social Security.

INTRODUCTION

In the past ten years, companies like Uber, Etsy, Lyft, Airbnb, and Rover have become household names by connecting service providers, sellers, and consumers online and through app-based programs that users download to their smartphones (the On-Demand Economy or Gig Economy).[1] The most comprehensive banking industry data show that, in recent years, at least 2.3 million Americans each month earned income by renting rooms, giving rides, running errands, and selling goods using an app-based platform.[2] In fact, as many as 5.5 million

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1 CAROLINE BRUCKNER, KOGOD TAX POLICY CTR., KOGOD SCH. OF BUS., SHORTCHANGED: THE TAX COMPLIANCE CHALLENGES OF SMALL BUSINESS OPERATORS DRIVING THE ON-DEMAND PLATFORM ECONOMY 1 (2016), https://www.american.edu/kogod/research/upload/shortchanged.pdf.

2 JPMORGAN CHASE & CO. INST., THE ONLINE PLATFORM ECONOMY IN 2018: DRIVERS, WORKERS, SELLERS, AND LESSORS 2–3 (2018), https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/institute/pdf/institute-ope-2018.pdf [hereinafter JPMCI 2018 STUDY]. The findings reflect data from a sample of 39 million Chase checking accounts that tracked payments from 128 online platforms to 2.3 million families from October 2012 to March 2018. *Id.* at 2. In the study, the online platforms, which connect customers to sellers or service providers and mediate payment, were grouped into four categories: transportation (driving goods or people); non-transport (dog walking, home care, home repair, telemedicine, etc.); selling through an online marketplace; and leasing (renting homes, parking spaces, and other assets).

households earn income from the On-Demand Economy every year.[3] This sector of the economy continues to grow, along with the convenience of accessing goods and services through apps on smartphones.[4] In fact, the payroll industry stakeholders are banking on it. For example, in February 2020, the ADP Research Institute conducted a study that reviewed the anonymized, aggregated payroll data from more than 75,000 large companies with more than 18 million workers; it found that from 2010 to 2019 "the share of gig workers in companies has increased from 14.2% to 16.4%, a 2.2 percentage point increase, or 15%."[5]

Although independent contractors have been a long-standing feature of the U.S. workforce, paid work facilitated by online platforms that connect customers with sellers and service providers and process payment electronically (hereinafter "On-Demand Platforms") are a common strategy for workers to earn income outside of traditional work arrangements, with the supplemental income being "a luxury for some but a necessity for others."[6] Some industry research suggests that workers are looking to the On-Demand Economy as a means of supplementing their retirement savings and to "age in place."[7]

As the use of On-Demand Platforms has grown, academic research and policymakers have begun to consider the tax compliance challenges and federal tax

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Id.; *see also* DIANA FARRELL & FIONA GREIG, JPMORGAN CHASE & CO. INST., PAYCHECKS, PAYDAYS, AND THE ON-DEMAND PLATFORM ECONOMY: BIG DATA ON INCOME VOLATILITY (2016) [hereinafter *JPMCI 2016 Study*], https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/institute/pdf/jpmc-institute-volatility-2-report.pdf.

3 JPMCI 2018 STUDY, *supra* note 2, at 23.

4 *Id*. In fact, MBO Partners, a tax and accounting firm focused on the independent workforce that has produced an annual study of the size of the independent workforce since 2010, estimating that there were 41.1 million independent workers in 2019, a slight decline from the previous year, due to a strong labor market and the exit of "reluctant independents" (that is, workers who would prefer traditional employment from independent work). MBO PARTNERS, THE STATE OF INDEPENDENCE IN AMERICA 2–3 (2019), https://s29814.pcdn.co/wp-content/uploads/2019/06/MBO-SOI-2019.pdf [hereinafter MBO 2019 REPORT]. However, the study also noted the extraordinary growth of "occasional independents" (that is, workers who do sporadic or irregular independent contract work like Uber drivers) increased by more than 6% to more than 15 million (up from 14.1 million in 2018) and more than 40% since 2016. *Id.* at 6–7; *see also* MICROECONOMIX, THE APP ECONOMY IN THE UNITED STATES: A REVIEW OF THE MOBILE APP MARKET AND ITS CONTRIBUTION TO THE UNITED STATES ECONOMY 19 (2018), https://www.ftc.gov/system/files/documents/public_comments/2018/08/ftc-2018-0048-d-0121-155299.pdf (finding that the app economy in 2018 represented $339.6 billion in direct economic impact).

5 ADP RESEARCH INST., ILLUMINATING THE SHADOW WORKFORCE: INSIGHTS INTO THE GIG WORKFORCE IN BUSINESS 3 (2020), https://www.adp.com/-/media/adp/resourcehub/pdf/adpri/illuminating-the-shadow-workforce-by-adp-research-institute.ashx. Additionally, the Freelancers Union and Upwork, as part of their annual series of reports on freelancing in America, found that 57 million Americans (or 35% of the workforce) freelanced, which was up from 53 million in 2014. Press Release, Upwork, Sixth Annual "Freelancing in America" Study Finds That More People than Ever See Freelancing as a Long-Term Career Path (Oct. 3, 2019), https://www.upwork.com/press/2019/10/03/freelancing-in-america-2019/ [hereinafter FIA 2019 Report].

6 Aaron Smith, *Gig Work, Online Selling and Home Sharing*, PEW RES. CTR. (Nov. 17, 2016), www.pewinternet.org/2016/11/17/gig-work-online-selling-and-home-sharing.

7 AIRBNB, AIRBNB'S GROWING COMMUNITY OF 60+ WOMEN HOSTS 8–9 (2016), https://www.airbnbcitizen.com/wp-content/uploads/2016/03/Airbnb_60_Plus_Women_Report.pdf [hereinafter AIRBNB, WOMEN HOSTS]; AIRBNB, AIRBNB'S GROWING ECONOMIC OPPORTUNITIES FOR D.C. SENIORS 2 (2018), https://www.airbnbcitizen.com/wp-content/uploads/2018/03/REPORT_-Senior-Airbnb-Hosts-in-D.C.-March-2018-1.pdf [hereinafter AIRBNB, D.C. SENIORS] (noting the typical D.C. senior host made $10,600 renting their home to D.C. visitors).

policy implications of service providers and sellers earning income in the On-Demand Economy.[8] For example, in July 2018, the U.S. Senate Committee on Finance heard testimony indicating that the current tax rules for reporting income for On-Demand Economy earnings virtually ensure that more taxpayers will misreport their income and be exposed to audits and penalties.[9] In fact, IRS taxpayer data confirm these consequences to a certain degree. According to a 2017 analysis prepared by *The Wall Street Journal*, "the number of filers penalized for underpaying estimated taxes rose nearly 40% between 2010-2015—to 10 million."[10]

Not only do the tax compliance challenges of these taxpayers result in widespread underreporting, penalties, and audit exposure for income taxes but these challenges also implicate the Social Security and Medicare taxes due on self-employment income ("SE tax"). Failure to properly report income and pay SE tax undermines Social Security solvency and can reduce workers' future Social Security retired-worker benefits that are calculated based on a worker's "average indexed monthly earnings."[11] Social Security is a "self-financing program" that is funded primarily by payroll taxes paid by covered workers and employers in addition to SE taxes paid by self-employed individuals.[12]

While there is private and academic research reviewing the size, growth trajectory, and labor law implications of the On-Demand Economy—as well as the income tax, compliance, and benefits issues triggered by its workers—less emphasis has been placed on quantifying the SE tax and Social Security implications of the fact that a significant number of these taxpayers either underreport or fail to remit

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8 *See* BRUCKNER, *supra* note 1; *see also* Shu-Yi Oei & Diane M. Ring, *Can Sharing Be Taxed?*, 93 WASH. U. L. REV. 989, 989 (2016) [hereinafter *Can Sharing Be Taxed?*]; Shu-Yi Oei & Diane M. Ring, *The Tax Lives of Uber Drivers: Evidence from Internet Discussion Forums*, COLUM. J. TAX L., 1 (2017); Kathleen DeLaney Thomas, *Taxing the Gig Economy*, 166 U. PA. L. REV. 1415, 1415 (2018); *Targeted Tax Reform: Solutions to Relieve the Tax Compliance Burdens for America's Small Businesses: Hearing Before the S. Comm. on Small Bus. and Entrepreneurship*, 114th Cong. 64–70 (2015) (statement of Caroline Bruckner Executive-in-Residence, Accounting and Taxation and Managing Director, Kogod Tax Policy Center); *The Sharing Economy: A Taxing Experience for New Entrepreneurs Part I: Hearing Before the H. Comm. on Small Bus.*, 114th Cong. 4–6 (2016) (statement of Caroline Bruckner), https://smallbusiness.house.gov/uploadedfiles/5-24-16_bruckner_testimony_.pdf; [hereinafter *The Sharing Economy: Part I*] *Small Business Tax Reform: Modernizing the Code for the Nation's Job Creators*: *Hearing Before the H. Comm. on Small Bus.*, 115th Cong. 10–23 (2017) (statement of Caroline Bruckner, Executive-in-Residence, Accounting and Taxation and Managing Director, Kogod Tax Policy Center), https://smallbusiness.house.gov/uploadedfiles/10-4-17_bruckner_testimony.pdf; Caroline Bruckner, *Congress Failed to Fix Tax Woes for Gig Workers*, CHI. TRIB. (Feb. 15, 2018, 3:00 PM), http://www.chicagotribune.com/news/opinion/commentary/ct-perspec-gig-economy-taxes-uber-lyft-airbnb-0216-20180215-story.html; Letter from Caroline Bruckner, Managing Dir., Kogod Tax Policy Ctr., to Co-Chairs of the Bipartisan Individual Income Tax Reform Working Grp. (Apr. 15, 2015) (on file with American University).

9 *Improving Tax Administration Today: Hearing Before the Subcomm. on Taxation and IRS Oversight of the Comm. on Fin.*, 115th Cong. 29 (2018) (statement of Caroline Bruckner Executive-in-Residence, Accounting and Taxation and Managing Director, Kogod Tax Policy Center) [hereinafter *July 2018 Senate Testimony*].

10 Laura Saunders, *Number of Americans Caught Underpaying Their Taxes Surges 40%*, WALL ST. J. (Aug. 11, 2017, 5:30 AM), https://www.wsj.com/articles/the-numberof-americans-caught-underpayingsometaxes-surges-40-1502443801.

11 BARRY F. HUSTON, CONG. RESEARCH SERV., R42035, SOCIAL SECURITY PRIMER 8 (2020); *see also infra* text accompanying notes 131–40.

12 *See* HUSTON, *supra* note 11, at 1.

Social Security contributions.[13] The failure to consider these implications matters because "the most fundamental shortcoming of the current [U.S. retirement] system is that millions of working Americans have no easy way to save for retirement on the job outside of Social Security."[14]

This Article provides new insight on the Social Security implications of On-Demand Economy work using the U.S. Census Bureau's (Census) redesigned *Survey of Income and Program Participation* (SIPP)[15] to estimate the populations and earnings of self-employed, non-employer workers working outside of a traditional employment relationship (Independent Contractors),[16] as well as individuals working in occupations that occur in the On-Demand Economy (On-Demand Workers).[17]

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13 However, there has been some important work on On-Demand Workers' income insecurity, Social Security and retirement issues. *See* Janine Berg, *Income Security in the On-Demand Economy: Findings and Policy Lessons from a Survey of Crowdworker*s, 37 COMP. LAB. L. & POL'Y J. 543, 544 (2016); Paul M. Secunda, *Uber Retirement*, 2017 U. CHI. LEGAL F. 435, 436–37 (2017). More recently, in 2019, the U.S. Treasury Inspector General for Tax Administration published the results of an audit finding that underreporting of SE tax of On-Platform gig workers in recent years warrants a focus on SE tax compliance. TREASURY INSPECTOR GEN. FOR TAX ADMIN., EXPANSION OF THE GIG ECONOMY WARRANTS FOCUS ON IMPROVING SELF-EMPLOYMENT TAX COMPLIANCE 1 (2019); *see also* Caroline Bruckner & Annette Nellen, *Failure to Innovate: Tax Compliance and the Gig Economy Workforce*, 96 ST. TAX NOTES 485, 486 (2019).

14 DAVID S. MITCHELL, ASPEN INST. FIN. SEC. PROGRAM, BUILDING A MORE ROBUST AND INCLUSIVE U.S. RETIREMENT SYSTEM AMID A CHANGING ECONOMY 4 (2017).

15 Data on business ownership and individual earnings can be obtained through a number of Census products. *See, e.g.*, U.S. CENSUS BUREAU, 2015 SIPP PRODUCTION: SIPP PUBLIC USE METADATA REPORT (2018) [hereinafter 2015 SIPP PRODUCTION]. One of the main surveys to measure this data is SIPP, which is conducted in a series of national panels, with sample sizes ranging from approximately 14,000 to 36,700 interviewed households. The duration of each panel lasts one year. SIPP is the third-largest household survey administered by Census, focused on providing accurate and comprehensive information about the income and program participation of individuals and households in the United States. The re-engineered 2014 SIPP survey provides a unique analysis that other instruments do not capture. Specifically, it measures self-employment and participation in concurrent employment measured by industry and occupation. Additionally, it provides analysis on the amount of income derived from each type of employment. Because of this unique ability, SIPP provides a foundation to estimate the number of self-employed individuals, the number of self-employed individuals in particular industries and occupations, and the amount of income that these individuals derive from these types of employment. As with any survey, there are some limitations with these estimates. The data is self-reported, meaning that individuals can incorrectly report their self-employment status, their occupation or industry, and the amount of income that they derived from these employment relationships.

16 Using SIPP data, we define "Independent Contractors" as respondents who stated that they were self-employed with no employees, owned their own business instead of being employed by another employer, or were in an "other work arrangement" for their type of work arrangement. *Id.* at 1451–57. This definition excludes individuals employed by an employer or in an "other work arrangement, with no employees, in specified occupations." *Id.*

17 Using SIPP data, we define "On-Demand Workers" as individuals employed by an employer or in an "other work arrangement, with no employees, in specified occupations including babysitting and child care services; dog walking; house sitting; disabled adult or eldercare services; house cleaning; house painting; yard work; property maintenance work; other personal services work such as running errands or helping people move; jewelers; or driving. Dummy variable created by merging EJB1_JBORSE through EJB7_JBORSE, variables TJB1_EMPB through TJB7_EMPB, and selected occupations in TJB1_OCC through TJB7_OCC in the 2014 Panel Wave 2 Metadata. *Id.* at 1451–57, 1689–95, 1570–1642. One of the limitations of using SIPP data is that this definition is too broad in that it could include employees of employers. In addition, the Census SIPP experts we consulted in indicated this definition could include

SIPP data can supplement other existing government data sets for federal tax policy purposes because of the large number of individuals surveyed, reporting of earnings, and collection of demographic information. In addition, SIPP has the ability to capture individuals not otherwise represented in other government surveys and instruments of On-Demand Economy workers because SIPP is able to measure multiple on-demand and independent contract arrangements. SIPP data has the potential to capture non-employee workers earning income using On-Demand Platforms to connect with customers and process payment ("On-Platform Workers") as well as non-employee workers earning income in occupations occurring in the On-Demand Economy not using On-Demand Platforms ("Off-Platform Workers"). Most importantly for purposes of this project, SIPP provides data to enable us to estimate the amount of income derived from these work arrangements.[18]

However, SIPP does have its limitations, and the estimates in this Article are supplemental, illustrative estimates designed to add to the existing literature on the Social Security implications of the tax compliance of these self-employed workers.[19] For example, the SIPP data on self-employment do not specifically identify individuals who earn income working with On-Demand Platforms. To address this limitation, we have identified individuals with occupations occurring in the On-Demand Economy as reflected by their SIPP responses. As such, our estimates of On-Demand Workers include both On-Platform Workers and Off-Platform Workers, a population that is likely larger than the On-Demand Platform workforce.[20] In addition, our estimates on the earnings of both populations are not necessarily the net of expenses and are understatements of the collective earnings

individuals who identified as employees, despite the fact they were actually independent contractors. In addition, this definition is too narrow in that it does not include occupations occurring in the On-Demand Economy such as renting rooms, cars, or other assets.

18 A more in-depth discussion of the advantages of SIPP to supplement other government surveys is discussed in the Methodology section. *See infra* pp. 90–93.

19 As with any survey, there are some limitations that will impact the estimates we calculated using SIPP data. The data is self-reported, meaning that individuals can incorrectly report their self-employment status, their occupation or industry, and the amount of income that they derived from these employment relationships. SIPP has its advantages over other estimates because it can capture respondents' data on multiple employment points and is not limited to questions on an individual's main job or primary source of income. *See infra* pp. 90–93.

20 We recognize that the criteria we used to identify Independent Contractors and On-Demand Workers to extrapolate earnings and demographic data from the SIPP are imprecise measures of the total population of these self-employed workers. For example, the Census SIPP experts we consulted in connection with this work indicated that while our estimates on the population of On-Demand Workers were potentially over-inclusive, the measures we used to extrapolate the collective earnings of Independent Contractors and On-Demand Workers were too conservative. In order to provide additional context for our estimates using SIPP data, we included additional estimates using the most recent data on alternative contingent workers and gig-economy workers available from the U.S. Department of Labor Bureau of Labor Statistics (BLS), the JPMCI 2018 Study, and the 2019 TIGTA Audit. *See infra* Table 3.

of the populations of Independent Contractors and On-Demand Workers we identified using SIPP.[21]

Notwithstanding these data limitations, this Article expands the existing research on the SE tax compliance of Independent Contractors and On-Demand Workers by focusing on the Social Security implications of the failure of these taxpayers to accurately report income and pay SE taxes on this income. It also considers corresponding demographic data with respect to these populations of workers and makes critical policy recommendations regarding Independent Contractor tax compliance generally and, more specifically, On-Demand Workers to address the SE tax underreporting we estimate.

Part I summarizes the relevant SE tax, filing, and information reporting rules as well as the corresponding tax compliance issues of both Independent Contractors and On-Demand Workers. Part II introduces the existing challenges of measuring independent and On-Demand Economy workers and provides estimates on Independent Contractors and On-Demand Workers to supplement the existing literature using SIPP data. Part III, relying on SIPP data, estimates how much income Independent Contractors and On-Demand Workers earned in 2014.

Part IV approximates the amount of SE taxes that should have been paid on this income and estimates the Social Security underpayment amount using information from the U.S. Treasury's Inspector General for Tax Administration's analysis of underreporting of SE taxes and information gained from research on On-Demand Platforms and the IRS about issuance of tax reporting forms. Part V examines the demographic makeup of Independent Contractors and On-Demand Workers, estimates the impact of failing to report self-employed income on Social Security in 2014, and discusses the potential long-term implications. Finally, Part VI makes critical policy recommendations targeted to increase the tax compliance of Independent Contractors and On-Demand Workers by modernizing information reporting, updating timing requirements for estimated payments, and developing distribution information on the tax requirements for Independent Contractors and On-Demand Economy workers on the payment of SE taxes.

I. BACKGROUND ON TAX AND REPORTING RULES FOR INDEPENDENT CONTRACTORS AND ON-DEMAND WORKERS

The U.S. tax system is a pay-as-you-go system of tax collection. Since World War II, employees have had a portion of their wages withheld by their employers and remitted to the IRS in anticipation of an employee's annual income and payroll

[21] According to the Census SIPP experts we consulted, the earnings variables we used understated the total amount of earnings of Independent Contractors and On-Demand Workers because we only included earnings for people who reported gross total amounts that they actually received during the year. Some SIPP respondents included in our Independent Contractor and On-Demand Worker populations may have reported their earnings another way (such as their average monthly or bi-weekly income, for example), and the measure we used would not include their earnings at all. *See supra* note 20 discussion.

tax liability, such as Social Security and Medicare.[22] Employee tax withholding was originally enacted as a means to raise revenue to fund increased government operations during wartime and was designed to "smooth [employees'] after-tax income throughout the year and facilitate[] revenue collection by the IRS."[23]

However, Independent Contractors and On-Demand Workers are not generally treated as employees for U.S. tax purposes. Instead, they are treated as self-employed with respect to their earnings.[24] Under current tax rules, self-employed workers are typically not subject to employer income and payroll tax withholding. Instead, Independent Contractors and On-Demand Workers are required to make estimated income tax payments to federal and state tax collection agencies for federal and state income taxes and, when annual net earnings are at least $400, 15.3% in self-employment tax.[25]

The absence of withholding leads to the underreporting of taxes by a significant number of self-employed taxpayers, who have "different pain points than their employee counterparts with respect to their tax filings."[26] Government and academic research on the tax compliance of the self-employed reflect these challenges, and "there is a large literature showing that this group consistently and substantially underreports their income to . . . tax authorities."[27] A 2018 tax preparer industry survey found that 32% of self-employed workers admitted to

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22 Seth D. Harris & Alan B. Krueger, *A Proposal for Modernizing Labor Laws for Twenty-First-Century Work: The "Independent Worker,"* HAMILTON PROJECT 18 (2015), http://www.hamiltonproject.org/assets/files/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf.

23 *Id.*

24 For background information on worker classification and its relevance to On-Demand Workers and U.S. tax rules, see Annette Nellen, Caroline Bruckner & Jennifer Brown, *Taxes and the Growing Gig Workforce: What to Know*, 128 J. TAX'N 6, 8, 15 (2018). A primary reason for why policymakers, tax and labor experts, and On-Demand Platforms have been slow to tackle the simmering tax and compliance issues underlying the On-Demand Economy is the looming question of whether workers who provide services to customers via On-Demand Platforms are misclassified employees. Misclassification issues have long stymied Congressional efforts to address tax and benefits issues of self-employed workers. Rarely have policymakers been able to reach consensus on strategies to address worker misclassification for either tax or labor law purposes. With the advent of the tech-enabled On-Demand Economy and the at least 2.3 million taxpayers now earning income selling goods and services through On-Demand Platforms every month, Congressional action to address tax compliance challenges of these taxpayers should be the top priority, separate and apart from resolving any corresponding worker misclassification issues. *See* Caroline Bruckner, Response to Questions for the Record in Connection with U.S. Senate Committee on Finance Subcommittee on Taxation and IRS Oversight July Hearing (Sept. 19, 2018) (responding to question from Sen. Thune as to whether resolving misclassification of on-demand workers should be a legislative priority) (unpublished) (on file with author).

25 Financing of the Social Security program is authorized by the revenue collected pursuant to: (1) the Federal Insurance Contributions Act (FICA), which applies to employers and employees, and (2) the Self-Employment Contributions Act, which applies to self-employment income. HUSTON, *supra* note 11, at 3.

26 BRUCKNER, *supra* note 1, at 9, 15.

27 Erik Hurst, Geng Li & Benjamin Pugsley, *Are Household Surveys like Tax Forms: Evidence from Income Underreporting of the Self Employed* 2 (Nat'l Bureau of Econ. Research, Working Paper No. 16527, 2010) (finding that the self-employed underreport their income on household surveys by 30%).

underreporting their income for tax purposes and that 36% "d[id]n't do taxes at all."[28]

The amount and timing requirements of quarterly estimated payments and the information reporting regime for On-Demand Platform work, create tax compliance challenges for SE taxes that often trigger non-filing, underpayment, and nonpayment of taxes—in many cases, unwittingly by taxpayers who are unfamiliar with paying taxes on self-employment income.[29] In fact, anecdotal evidence from tax preparers advising Independent Contractors and On-Demand Workers suggests that while these taxpayers are generally aware that they may owe income taxes on their earnings, many are surprised to learn they owe SE taxes, too.[30]

A. Self-Employment Tax

Unlike traditional employees who are subject to payroll taxes and withholding by employers that also pay a portion of employees' payroll taxes, taxpayers with self-employment income pay the combined employee and employer share of Social Security and Medicare taxes pursuant to the Self-Employment Contributions Act (SECA).[31] Any taxpayer with net earnings of four hundred dollars or more of self-employment income is required to pay SE tax and file a Schedule SE.[32] While self-employed taxpayers pay the combined employer and employee share of Social Security and Medicare taxes, they are allowed a deduction of one-half of their total SE tax paid for federal income tax purposes.[33]

When SE tax is combined with federal income tax, it can add up quickly for Independent Contractors and On-Demand Workers and can create significant tax compliance issues.[34] For example, in a 2015 survey on the tax compliance

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28 *32% of Self-Employed Workers Admit They Under Report Taxable Income*, CPA PRAC. ADVISOR (Apr. 24, 2018), https://www.cpapracticeadvisor.com/news/12409241/32-of-self-employed-workers-admit-they-under-report-taxable-income. Of the 36% of respondents who did not pay taxes at all, 9% admitted to not having a reason, 17% claimed to not make enough to owe taxes, and the remaining 10% answered they had losses that exceeded their profits. *Id.*

29 BRUCKNER, *supra* note 1, at 9–11.

30 *Id.*

31 HUSTON, *supra* note 11, at 3. Specifically, employees and employers each pay 6.2% Social Security tax on up to $137,700 of earnings in 2020 and an additional 1.45% Medicare tax on all earnings (*i.e.*, the two components add up to 7.65% in tax paid by employees and then 7.65% paid by employers). *Id.* For self-employed taxpayers it would be 12.4% in Social Security tax on up to $137,700 on net earnings and 2.9% in Medicare tax on their entire net earnings, which is 15.3% cumulatively.

32 *Self-Employment Tax (Social Security and Medicare Taxes)*, INTERNAL REVENUE SERV., https://www.irs.gov/businesses/small-businesses-self-employed/self-employment-tax-social-security-and-medicare-taxes (last updated Nov. 25, 2020).

33 *Id.*

34 *See* BRUCKNER, *supra* note 1, at 11–12. However, with respect to On-Demand Workers who earn income from home-sharing or real property rental activities, the tax reporting rules are more complicated. For example, many individuals with rental income report that income and those expenses on a Schedule E and are not subject to SE tax on that income; however, certain real estate professionals who earn rental income may be required to file a Schedule C and are subject to SE tax. *See, e.g.*, ERNST & YOUNG LLP, GENERAL GUIDANCE ON THE TAXATION OF INCOME 16 (2017), https://assets.airbnb.com/eyguidance/us.pdf.

challenges of On-Platform Workers, almost forty-three percent of surveyed respondents did not set aside any money and were not aware of how much they would owe on income earned from working with an On-Demand Platform as a service provider or seller.[35]

B. Quarterly-Estimated Payments

In addition to the confusion surrounding the amount of income and SE tax owed by taxpayers with self-employment income, the timing of when to pay presents additional certainty.[36] Under current tax rules, when self-employed taxpayers are expected to owe at least $1,000 in taxes and are not subject to withholding, advance payments of estimated tax are due to the IRS in quarterly installments.[37] These payments are due on April 15, June 15, September 15, and January 15 and are referred to as quarterly-estimated payments.[38]

"In calculating whether a taxpayer needs to make quarterly-estimated payments throughout the year, taxpayers need to include both income taxes and self-employment taxes owed—minus any refundable credits—"on any income not subject to withholding.[39] Added together, income tax and SE tax liabilities for Independent Contractors and On-Demand Workers can quickly reach the $1,000 threshold for triggering quarterly-estimated payments. For example, a ridesharing driver who earns $7,500 driving part-time for an On-Demand Platform and earns no other income would have an SE tax liability of $1,060 triggering a required filing of estimate payments even if no income tax is owed.[40]

Moreover, survey data suggest that many taxpayers are unaware of the requirements of quarterly-estimated payments. For example, a 2015 survey of experienced SE taxpayers found that one-third of survey respondents earning income in the On-Demand Economy reported not knowing whether or not they were required to file quarterly estimated payments with the IRS.[41]

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[35] BRUCKNER, *supra* note 1, at 10.

[36] *Id.*

[37] I.R.C. § 6654 (2018).

[38] *Id.* For 2020, the U.S. Department of Treasury and IRS extended some tax due dates in response to the COVID-19 pandemic. *See, e.g.*, Press Release, Internal Revenue Serv., IRS Extends More Tax Deadlines to Cover Individuals, Trusts, Estates Corporations and Others (Apr. 9, 2020), https://www.irs.gov/newsroom/irs-extends-more-tax-deadlines-to-cover-individuals-trusts-estates-corporations-and-others.

[39] BRUCKNER, *supra* note 1, at 10; *see* I.R.S. Form 1040-ES, (2020), https://www.irs.gov/pub/irs-pdf/f1040es.pdf.

[40] Nellen et al., *supra* note 24, at 15.

[41] BRUCKNER, *supra* note 1, at 11.

C. Information Reporting Requirements

Lack of information and understanding of what is required for tax compliance purposes is a common complaint among SE taxpayers.[42] In terms of calculating taxes and reconciling income, employees who have income and payroll taxes withheld and remitted to the IRS by their employers receive an IRS Form W-2 from their employers to use to fill out their tax returns in April.[43] In contrast, SE taxpayers who pay income and SE taxes via quarterly-estimated payments are subject to a separate set of information reporting rules and forms for non-employee compensation (for example, IRS Forms 1099) that are reported to the IRS by payors and third-party settlement organizations ("TPSO").[44] However, On-Demand Workers who are On-Platform Workers are not as likely to have their income reported to the IRS.[45] Under the current tax reporting rules for income of On-Platform Workers, it is unlikely that these workers will receive any Form 1099 to file their taxes.[46]

Generally, SE workers are supposed to receive a Form 1099-MISC for payments by businesses for more than $600 for goods or services that they provide.[47] However, if an SE worker receives payments from customers via an On-Demand Platform, then the IRS generally considers the On-Demand Platform to be a TPSO for tax reporting purposes.[48] This matters because TPSOs are not required to file a Form 1099-K with the IRS or send a copy to a service provider or seller unless the aggregate number of transactions of a service provider or seller exceeds two hundred and the amount reported exceeds twenty thousand dollars ("200/$20K Form 1099-K Threshold").[49]

Most On-Demand Platforms use the 200/$20K Form 1099-K Threshold for providing Form 1099-Ks to service providers and sellers, which is consistent with IRS filing requirements, rather than the $600 Form 1099-MISC threshold.[50] While adopting the higher threshold is consistent with current IRS reporting requirements, it results in fewer Form 1099-Ks being sent to workers and the IRS because most On-Platform Workers do not earn more than $20,000 to trigger the

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42 *See id.* at 12 (noting that more than one-third of survey respondents did not understand record-keeping requirements for tax purposes).

43 Internal Revenue Serv., *About Form W-2, Wage and Tax Statement*, https://www.irs.gov/forms-pubs/about-form-w-2 (last updated Oct. 29, 2020).

44 BRUCKNER, *supra* note 1, at 9.

45 *See id.*

46 *See id.* at 10.

47 I.R.C. § 6041(a) (2018).

48 *See* I.R.S. P.L.R. 201604003 (Jan. 22, 2016); I.R.S. P.L.R. 201619006 (May 6, 2016); I.R.S. P.L.R. 201719009 (May 12, 2017); I.R.S. P.L.R. 201836008 (Sept. 7, 2018).

49 I.R.C. § 6050W (2018).

50 *See July 2018 Senate Testimony*, *supra* note 9 (noting that most platforms do not send 1099-Ks for earnings unless the 200/$20K Form1099-K Threshold is met).

threshold.[51] A survey found that as few as thirty-two percent of On-Platform Workers received a Form 1099-MISC or Form 1099-K in 2015.[52]

In 2019, an analysis prepared by the State of California's Franchise Tax Board ("California Tax Analysis") revealed that of the top 100 On-Demand Platforms in 2016, only twelve percent issued Form 1099-Ks to service providers and, of those twelve percent, only half issued more than fifty-five.[53] The California Tax Analysis also indicated widespread tax compliance issues of gig workers, noting that gig workers may not know how much they earned, what income must be reported, how to report gig income, or any offsets they could claim to lower tax liabilities.[54] More broadly, the California Tax Analysis reflects the underlying reality of the impact of the current information reporting rules for On-Demand Platform workers: the majority of sellers and service providers earning income doing On-Platform work do not receive any Form 1099-K, which means the IRS does not either.[55]

Consequently, efforts to quantify the population of Independent Contractors and, specifically, the On-Demand Platform workforce using information reporting filings (such as Forms 1099) can be particularly challenging.[56] In fact, some experts have concluded that although the Form 1099-K has been used since 2011 to report settlement of payment card transactions or settlement of third-party network transactions, it is "relatively unusual" for self-employed individuals to receive a Form 1099-K and "most are not issued to unincorporated self-employed individuals."[57] Nonetheless, while self-employment earnings may (or may not be) subject to information reporting, taxpayers who earn income for services provided are expected to report those payments on Schedule C of their Form 1040, "even if the individual received no information returns in connection with their taxable

51 *Id.*; *see also* BRUCKNER, *supra* note 1, at 9.

52 BRUCKNER, *supra* note 1, at 10.

53 CAL. FRANCHISE TAX BD., GIG ECONOMY AND TAX COMPLIANCE: PAST, PRESENT, AND FUTURE 14 (2019), https://www.ftb.ca.gov/about-ftb/meetings/board-meetings/2019/october-01/gig-economy-and-tax-compliance.pdf.

54 *Id.* at 16.

55 *July 2018 Senate Testimony*, *supra* note 9.

56 *See* Emilie Jackson, Adam Looney & Shanthi Ramnath, *The Rise of Alternative Work Arrangements: Evidence and Implications for Tax Filing and Benefit Coverage* (2018), https://www.census.gov/content/dam/Census/about/about-the bureau/adrm/FESAC/meetings/Ramnath%20Presentation.pdf (reviewing the findings from their 2017 paper of the same name and noting that a "large fraction of people with SE income did not receive a 1099-MISC," and "very few people receive a 1099-K"); *see also* Letter from the U.S. Dep't. of the Treasury to Sen. Mark Warner (Oct. 27, 2015), https://www.taxnotes.com/tax-notes-today-federal/worker-classification/treasury-suggests-how-senator-can-gauge-size-demand-economy/2015/11/18/g024?highlight%E2%80%A6 (explaining why publicly available taxpayer filings "do[] not provide a good measure of contingent workforce or independent contractor income, let alone the on-demand economy").

57 Katherine G. Abraham, John C. Haltiwanger, Kristin Sandusky & James R. Spletzer, *Measuring the Gig Economy: Current Knowledge and Open Issues* (Nat'l Bureau of Econ. Research, Working Paper No. 24950, 2018), http://www.nber.org/papers/w24950.pdf.

earnings and even if their business expenses fully offset the gross payments received."[58]

However, even when On-Platform Workers receive a Form 1099-K, tax compliance is not guaranteed. For example, the 2019 Treasury Inspector General for Tax Administration (TIGTA) Audit considered the tax compliance rates of 3.8 million workers who actually received Form 1099-Ks from one of nine specific On-Demand Platforms that processed payment for gig workers from 2012 to 2016.[59] Ultimately, the 2019 TIGTA Audit found that 812,018 individuals (25%) filed a Form 1040 but did not report their Form 1099-K income on either Schedule C or line 21 (other income) of their Form 1040.[60] Also, 13% of individuals with an SE tax liability who received a Form 1099-K failed to file a Schedule SE with their Form 1040.[61]

II. SIZING UP THE PROBLEM: ESTIMATES ON THE SIZE OF THE INDEPENDENT CONTRACTOR AND ON-DEMAND WORKFORCE

While there is consensus that self-employed taxpayers have tax compliance and underreporting issues, the size of the population of independent workers and the On-Demand Economy workforce has been the subject of much debate in recent years. The fundamental problem is that "different data sources provide different answers to the simple question of what is the level and trend of self-employment in the U.S. economy."[62] In addition, "although traditional (offline) informal paid work has always been part of the labor sector, the rise of online enabled paid work activities requires new approaches to measure this growing trend."[63] Put simply, measuring workers with self-employment income subject to SE tax—including both On-Platform and Off-Platform workers—can be challenging.

A. *Government Efforts to Measure Independent Contractors and On-Demand Workers*

Even if government initiatives have endeavored to measure the population and earnings of Independent Contractors or On-Demand Platform Workers, there are practical impediments that can skew results, such as definitional challenges or

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58 *Id.*

59 TREASURY INSPECTOR GEN. FOR TAX ADMIN., EXPANSIONS OF THE GIG ECONOMY WARRANTS FOCUS ON IMPROVING SELF-EMPLOYMENT TAX COMPLIANCE 7 fig. 1 (2019), https://www.treasury.gov/tigta/auditreports/2019reports/201930016fr.pdf [hereinafter 2019 TIGTA AUDIT].

60 *Id.*

61 *Id.*

62 Abraham et al., *supra* note 57, at 15.

63 Barbara Robles & Marysol McGee, *Exploring Online and Offline Informal Work: Findings from the Enterprising and Informal Work Activities (EIWA) Survey* 1 (Fin. and Econ. Discussion Series Divs. of Research & Statistics and Monetary Affairs, Working Paper No. 2016-089 2016), https://doi.org/10.17016/FEDS.2016.089. The EIWA Survey defined on-demand works as "task-for-fee work, renting and selling used items, and other informal work activities among households both online and offline." *Id.* at 3.

the kind of data used.[64] For example, a comprehensive U.S. Government Accountability Office (GAO) analysis of the state of measuring contingent work illustrated the difficulty in measuring these populations because estimates "can range from less than 5 percent to more than a third of the total employed labor force, depending on the definition of contingent work and the data source."[65]

A 2017 analysis of administrative tax records from the U.S. Treasury's Office of Tax Analysis (OTA) found that, in 2014, only a small group—109,700 individuals—filed a tax return reporting income earned from an On-Demand Platform.[66] OTA also acknowledged, however, that the total count of gig workers was:

> [L]ikely to be an undercount of the true number of individuals that participated in the "gig economy" because some participants may not have filed a return or not filed a Schedule C reporting that income; because some platforms firms do not provide 1099s to all of their participants; and also because not all prominent service providers could not be found in the data . . . .[67]

In 2019, the IRS Statistics of Income Joint Statistical Research Program released new findings based on information returns, which found that from 2000 to 2016, workers who received Forms 1099 (including both IRS Form 1099-K and IRS Form 1099-MISC) grew by 1.9% and accounted for 11.8% of the current workforce.[68] In addition, almost all of the "dramatic growth" of this workforce since 2007 was attributable to workers using online platforms to connect with customers and service providers.[69] It should be noted that online labor gig work is a trend that was "virtually non-existent" prior to 2012, but, in 2016, 1.9 million workers had some online platform earnings.[70] Markedly, the study found that only one-third of On-Platform Workers paid SE tax, so the data excluded "the majority of participants in this part of the 'gig' economy."[71]

Tax data is not the only source for measuring the gig economy workforce. In 2018, the U.S. Bureau of Labor Statistics ("BLS") released the results of its 2017 survey of alternative contingent workers ("ACW"), which found that 6.9% of the

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64 *See, e.g.*, Emilie Jackson, Adam Looney & Shanthi Ramnath, *The Rise of Alternative Work Arrangements: Evidence and Implications for Tax Filing and Benefit Coverage* 6 (Office of Tax Analysis, Working Paper No. 114, 2017).

65 U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-15-168R, CONTINGENT WORKFORCE: SIZE, CHARACTERISTICS, EARNINGS, AND BENEFITS 3 (Apr. 20, 2015), https://www.gao.gov/assets/670/669899.pdf [hereinafter GAO].

66 Jackson et al., *supra* note 64, at 18.

67 *Id.* at 15. The IRS developed the Form 1099-K for submission by payers starting in 2012 for reportable payments made in 2011. TREASURY INSPECTOR GEN. FOR TAX ADMIN., THE INTERNAL REVENUE SERVICE IS UNDERUTILIZING FORM 1099-K DATA TO IDENTIFY TAX RETURNS FOR AUDIT 1 (2017).

68 Brett Collins, Andrew Garin, Emilie Jackson, Dmitri Koustas & Mark Payne, *Is Gig Work Replacing Traditional Employment? Evidence from Two Decades of Tax Returns* 3 (Internal Revenue Serv. 2019), https://www.irs.gov/pub/irs-soi/19rpgigworkreplacingtraditionalemployment.pdf.

69 *Id.*

70 *Id.* at 11.

71 *Id.* at 21.

workforce (approximately 10.6 million individuals) were independent contractors, a number that remained virtually unchanged since 2005 when the survey was last administered.[72]

Importantly, this measure applied only where an alternative or contingent work arrangement was a person's "sole or main job" and, therefore, excluded the majority of On-Platform workers who provide services and goods as a secondary, rather than primary, source of income.[73] In an effort to capture this population, in September 2018, BLS released the Contingent Worker Supplement ("CWS") to the Current Population Survey ("CPS"), which included four questions designed to specifically gauge "gig economy" participation through electronically mediated work. The BLS found that, in May 2017, approximately 1.6 million workers did work for an On-Demand Platform.[74] Notably, the 2017 BLS Gig Economy Supplement measured far fewer On-Demand Platform workers than other, more expansive studies had counted.[75] Also, BLS indicated that the questions used to measure gig workers did not work as intended and that, going forward, "BLS should not again attempt to collect data about electronically mediated work using the four new questions fielded in the May 2017 CWS."[76]

B. Non-Government Measures of On-Demand Platform Workforce

There are also various nongovernment and private sector surveys, estimates, and projections on the size and scope of independent workers. Results from these surveys, estimates, or projections are dependent on how "independent contractor" is defined. For example, in 2016, the McKinsey Global Institute found that approximately twenty seven percent of the workforce (sixty-eight million individuals) was engaged in independent contract work.[77] That same study also found that at least "15 percent of the independent workers [it] surveyed have used a digital platform to find work, but the so-called on-demand economy is growing rapidly."[78] Other private sector surveys have found comparably large contingencies

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72 BUREAU OF LABOR STATISTICS, USDL-18-0942, CONTINGENT AND ALTERNATIVE EMPLOYMENT ARRANGEMENTS—MAY 2017 6 (June 7, 2018), https://www.bls.gov/news.release/pdf/conemp.pdf [hereinafter BLS ACW 2017 SURVEY] (finding independent contractor workforce decreased by 0.5% from 2005 to 2017). The 2017 BLS ACW Survey also identified 2.6 million on-call workers, 1.4 million temporary help agency workers, and 933,000 contract workers. *Id.* at 1.

73 *Id.*; JPMCI 2018 STUDY, *supra* note 2, at 5.

74 U.S. Bureau of Labor Statistics, *Electronically Mediated Work: New Questions in the Contingent Worker Supplement,* MONTHLY LAB. REV., Sept. 2018, at 1–2, https://www.bls.gov/opub/mlr/2018/article/pdf/electronically-mediated-work-new-questions-in-the-contingent-worker-supplement.pdf [hereinafter 2017 BLS Gig Economy Supplement].

75 *Compare id.* at 13, 19, *with, e.g.*, JPMCI 2018 STUDY, *supra* note 2, at 2.

76 2017 BLS Gig Economy Supplement, *supra* note 74, at 14, 24.

77 MCKINSEY GLOB. INST., MCKINSEY & CO., INDEPENDENT WORK: CHOICE, NECESSITY, AND THE GIG ECONOMY 32 (2016), https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Employment%20and%20Growth/Independent%20work%20Choice%20necessity%20and%20the%20gig%20economy/Independent-Work-Choice-necessity-and-the-gig-economy-Full-report.pdf.

78 *Id.*

of independent contractors. For example, Upwork and the Freelancer's Union conducted a survey in 2019 that found that 35% of the workforce (approximately fifty-seven million individuals) was employed as independent contractors.[79] In 2019, MBO Partners, in their annual survey of the independent workforce, found that 41.1 million individuals were independent contractors.[80]

In terms of measuring the On-Demand Economy specifically, a 2015 survey developed by the Aspen Institute, *Time*, and Burston-Marsteller, and conducted by Penn Schoen Berland, found that approximately twenty-two percent of American adults (forty-five million individuals) have participated in the On-Demand Economy as a worker.[81] In 2016, the former Chief Economist at the U.S. Department of Labor, Lawrence Katz, and former Chair of the White House Counsel of Economic Advisors under President Obama, Alan Krueger, published a paper estimating that 0.5% of all workers participated in the On-Demand Economy.[82]

Importantly, in September 2018, J.P. Morgan Chase Institute ("JPMCI") updated its landmark 2016 study on the On-Demand Economy, concluding that 2.3 million families with Chase checking accounts engage in On-Platform work every month and that 5.5 million households have income from On-Platform work every year.[83] The JPMCI 2018 Study is particularly important and serves as a benchmark for measuring On-Platform work participation; both because it relies on actual income flowing into On-Platform Workers bank accounts (as opposed to survey responses or tax filings) and because it includes data from 2012 through 2018—a period of extraordinary growth for this sector.[84]

C. SIPP Data Measuring Independent Contractors and On-Demand Workers

Although not as robust as the JPMCI 2018 Study, SIPP data can provide significant insight into the population of self-employed workers. For example, using SIPP data, we found that 7.1 million respondents identified as self-employed small businesses with no employees, which we defined as Independent Contractors.[85] We further identified 3.12 million On-Demand Workers participating in occupations occurring in the On-Demand Economy, which would include both On-Platform and Off-Platform work.[86]

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[79] FIA 2019 Report, *supra* note 5.

[80] MBO 2019 REPORT, *supra* note 4, at 7.

[81] Catherine Sullivan, *Forty-Five Million Americans Say They Have Worked in the On-Demand Economy, While 86.5 Million Have Used It, According to New Survey,* ASPEN INST. (Jan. 6, 2016), http://www.aspeninstitute.org/news/2016/01/06/forty-five-million-americans-say-they-have-worked-demand-economy-while-865-million.

[82] Lawrence F. Katz & Alan B. Krueger, *The Rise and Nature of Alternative Work Arrangements in the United States, 1995-2015*, 72 INDUS. & LAB. REL. REV. 382, 383 (2019). Notably, this paper did not include accommodation sharing (*e.g.*, Airbnb hosts), which are included in other major studies. *Compare id.*, *with* JPMCI 2018 STUDY, *supra* note 2, *and* BLS ACW 2017 SURVEY, *supra* note 72.

[83] JPMCI 2018 STUDY, *supra* note 2, at 6.

[84] *See id.*

[85] *See supra* notes 16–19 discussion and accompanying text.

[86] *Id.*

However, our results are not entirely consistent with the findings of the JPMCI 2018 Study, which looked at thirty-nine million bank accounts with deposits from 128 On-Demand Platforms.[87] For example, SIPP did not specifically track electronically mediated or On-Platform work, so our estimates rely on approximations of occupations occurring in the On-Demand Economy. In addition, the SIPP data we used to measure On-Demand Workers did not include occupations in the leasing of assets and generating rental income, which were included in the JPMCI 2018 Study.[88]

Our review of SIPP data finds that Independent Contractors and On-Demand Workers combined represented approximately 10.22 million workers. To provide context for this finding, consider that the 2017 BLS ACW Survey identified 10.6 million workers as independent contractors, and another 1.6 million working as On-Platform Workers.[89]

III. Earnings of Independent Contractors and On-Demand Workers

Similar to the discrepancies and disparities in the government and private measurement of the size of the independent contract and on-demand workforce, there is little consensus on the average or median amounts of income earned by these groups of workers. However, the work that has been done consistently suggests that, in general, independent contractors earn more income than On-Platform workers.

A. Private Sector Estimates of Earnings of On-Demand Workforce

In 2019, MBO Partners found that the average income for *full-time* independent contractors was $68,300 and that almost 20% of full-time independent contractors made more than $100,000.[90] Additionally, the Upwork and the Freelancers Union found that in 2019, freelancers (*i.e.*, independent workers) contributed almost 5% to the U.S. gross domestic product, or $1 trillion.[91]

In terms of earnings of On-Platform Workers, the JPMCI 2018 Study found that "platform earnings represent a major source of income for families during the months they participate in the On-Demand Economy, but just 20 percent of income among those who have participated at any point over the prior year."[92] This research suggests that On-Platform Workers, unlike Independent Contractors, do not typically do On-Platform work for their sole-source of income and that most participants "are active in just a few months out of the year."[93]

87 JPMCI 2018 Study, *supra* note 2, at 2.

88 *Id.*

89 BLS ACW 2017 Survey, *supra* note 72, at 1.

90 MBO 2019 Report, *supra* note 4, at 8.

91 FIA 2019 Report, *supra* note 5.

92 JPMCI 2018 Study, *supra* note 2, at 7.

93 *Id.* at 6.

Average monthly earnings for On-Platform Workers ranged from $608 (selling goods) to $1,736 (leasing assets), with the majority of these workers earning monthly income averaging $783 (providing transportation services).[94] This cycling in and out of the On-Platform work or "churn" means that income from this work varies wildly every month. As a result, annualizing the monthly earnings on On-Platform Workers is not an accurate measure of these workers' annual earnings.

B. *SIPP Estimates of Independent Contractor and On-Demand Worker Earnings*

SIPP provides additional insight into the collective earnings of Independent Contractors and On-Demand Workers, which, in turn, can provide further insight as to the Social Security implications for these populations. Using data from SIPP, we found that individuals who were Independent Contractors reported that they collectively earned approximately $204.1 billion in income in 2014 from these employment relationships. On-Demand Workers collectively earned approximately $35.97 billion in income from these employment relationships in 2014.[95] Although our population estimates of On-Demand Workers may be over inclusive, our estimates of their earnings are certainly conservative and likely an underestimate of the collective earnings of On-Demand Workers. That noted, these estimates, while not an approximation for taxable income, can be used to gauge the underpayment of SE tax and Social Security contributions of these populations.

IV. ESTIMATES OF UNDERREPORTED SELF-EMPLOYMENT TAX SHOULD HAVE BEEN COLLECTED FROM INDEPENDENT CONTRACTORS & ON-DEMAND WORKERS

Our ability to extrapolate from SIPP the number and earnings of Independent Contractors and On-Demand Workers is foundational to our estimate of the corresponding SE tax underpayment by these taxpayers and our ability to translate those amounts to Social Security contributions. By utilizing underreporting estimates derived from government research and tax gap analysis, prior work on tax compliance specific to SE taxes, and likely misreporting of income due to current information reporting rules, we are able to approximate an estimate of the amount of underreported SE tax on the earnings of the Independent Contractors and On-Demand Worker populations we identified using SIPP data.

In addition, we can translate our estimate to the amount of Social Security contributions that should have been paid on these workers' earnings. For purposes of this analysis, we assume all unreported earnings would be subject to SE taxes and that all workers earned less than $137,700. The background on the tax gap and existing work on SE tax compliance below provides additional context for

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94 *Id.* at 14.

95 *See* 2015 SIPP PRODUCTION, *supra* note 15 (calculating the sum of income reported by independent contractors and on-demand workers by tabulating applicable TJB1_GAMT1 through TJB7_GAMT variables); *see also supra* notes 20–21 discussion and accompanying text.

understanding our methodology in making these estimates. Our estimates are not intended to be comparable to estimates developed by Congressional estimators or other government projections.

A. The Tax Gap and Underreported Self-Employment Taxes

The IRS performs a regular study that estimates the gross tax gap—the difference between the amount of tax that taxpayers should pay for a given year and the amount that is paid.[96] The tax gap is measured in terms of non-filing, underreporting of income, and underpayment of taxes: "Of these three categories, taxpayer underreporting makes up the vast majority of the tax collection shortfall."[97] In 2016, the IRS published data for the tax years 2008 to 2010 and found a total underreporting tax gap of sixty-five billion dollars of SE tax, an underpayment tax gap of six billion dollars of employment tax, and an annual non-filing tax gap of four billion dollars from SE taxes.[98] Additionally, the IRS estimates that non-reporting of self-employment tax constitutes approximately one percent of the non-filing gap, and underreporting of self-employment tax constitutes fourteen percent of the total share of the gross total tax gap.[99]

Importantly, the IRS has found that misreporting of income that is subject to withholding and information reporting is one percent, but where there is no withholding and there is little or no information reporting, instances of misreporting jump to sixty-three percent.[100] As Congressional revenue estimators have noted, noncompliance is greatest for self-employment income "for which third-party information is not separately reported to the IRS and is very difficult to obtain."[101] Essentially, there is more compliance when income is "visible" to the IRS and taxpayers through withholding and information reporting.[102]

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[96] Janet Holtzblatt & Jamie McGuire, *Factors Affecting Revenue Estimates of Tax Compliance Proposals, Joint Working Paper of the Congressional Budget Office and the Staff of the Joint Committee on Taxation* 1 (Cong. Budget Office, Working Paper No. JCX-90-16, 2016), https://www.jct.gov/publications.html?func=startdown&id=4964.

[97] Manoj Viswanathan, *Tax Compliance in a Decentralizing Economy*, 34 GA. ST. U. L. REV. 283, 287 (2017).

[98] INTERNAL REVENUE SERV., TAX GAP ESTIMATES FOR TAX YEARS 2008-2010 4 tbl.2 (2016), https://www.irs.gov/pub/newsroom/tax%20gap%20estimates%20for%202008%20through%202010.pdf [hereinafter *IRS 2008-2010 Tax Gap Data*]. In September 2019, the IRS issued new tax gap data that found that tax compliance rates had remained "essentially unchanged" from prior years. Press Release, Internal Revenue Serv., IRS Releases New Tax Game Estimates; Compliance Rates Remain Substantially Unchanged from Prior Study (Sept. 26, 2019), https://www.irs.gov/newsroom/irs-releases-new-tax-gap-estimates-compliance-rates-remain-substantially-unchanged-from-prior-study.

[99] INTERNAL REVENUE SERV., *supra* note 98, at 4.

[100] *Id.* at 2.

[101] Holtzblatt & McGuire, *supra* note 96, at 2.

[102] INTERNAL REVENUE SERV., *supra* note 98, at 2.

B. Treasury's Prior Work on Underpayment of Self-Employed Income Tax

In prior years, the U.S. Treasury considered strategies for addressing the tax gap through increased auditing and new processes to "accurately identify the taxpayers and income that are subject to self-employment taxes."[103] In fact, a 2007 memorandum to the Deputy Commissioner for Services and Enforcement from the U.S. Treasury Deputy Inspector General for Audit ("Treasury IG") reflected the results of an audit of these strategies to determine how to improve identification of unreported self-employment taxes ("2007 TIGTA Audit").[104] As part of the 2007 TIGTA Audit, the Treasury IG reviewed a statistically valid sample of 138 tax-year returns from 2003 with incomes of $2,000 or more on a Form 1040 Profit or Loss from Business Schedule C, Profit or Loss from Farming Schedule F, and/or line twenty-one that contained other income, but that did not include a Schedule SE reporting SE taxes.[105]

Of the 138 returns the Treasury IG reviewed, 52 were selected for audit, 50 audits were completed, 5 were closed with no change, and 12 had been "closed with little or no examination of the returns."[106] For the remaining 33 returns (23.91%), however, the examination averaged an additional SE tax liability of $1,818 per return.[107] Of the 86 returns that had not been selected for audit, 28 appeared to have SE tax liabilities (20.29%), averaging an additional SE tax liability of $1,217 per return.[108]

C. Estimates for Underreporting of Independent Contractors and On-Demand Workers Using SIPP

For purposes of developing our estimates on the underpayment of SE tax by Independent Contractors, we relied on the data developed in the 2007 TIGTA Audit. Notably, our estimates only approximate the average amount of underpayment of SE tax on average income for the Independent Contractors we identified using SIPP. To develop an average underpayment amount we could apply to the earnings and populations of Independent Contractors, we calculated an average using the data from the 2007 TIGTA Audit by adding the 33 audited returns with additional SE tax liability of $1,818 and the 28 returns that appeared to have an estimated $1,217 underpayment of SE tax liability. This totaled 61 out of 138 returns or 44.2% of returns that had an underpayment of SE tax.[109] Additionally, we averaged the 33

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[103] TREASURY INSPECTOR GEN. FOR TAX ADMIN., IDENTIFICATION OF UNREPORTED SELF-EMPLOYMENT TAXES CAN BE IMPROVED 2 (2007).

[104] *Id.* at 2–3.

[105] *Id.* at 2.

[106] *Id.* (footnote omitted).

[107] *Id.*

[108] *Id.* at 3. An additional 6 returns appeared to have SE tax liabilities exceeding $2,000. *Id.*

[109] Experts we consulted, including James R. White, former U.S. Government Accountability Office (GAO) director of tax research on strategic issues, suggested that a rate of 44.2% of returns with underpayment of

returns averaging $1,818 of additional liability per return with the 28 returns averaging $1,217 per return to approximate an average underpayment of SE tax liability of $1,542.

i. Independent Contractors

To calculate the number of Independent Contractors underreporting SE tax liability, we started with the collective earnings of this population for 2014, $204.1 billion (based on SIPP), and calculated that the average earnings of these 7.1 million workers were $28,746.48. Further, we calculated that the SE tax owed on $28,746.48 was $4,398.21, but given that the average underreporting of SE tax using the 2007 TIGTA report was $1,542, we assumed that where underreporting of SE tax had occurred, it would be approximately 35.1% of the amount actually owed.

Using the 2007 TIGTA Audit, we derived that an estimated 44.2% of taxpayers with self-employment income underreported their self-employment income on their Form 1040; we estimated that 3.1 million Independent Contractors underreported their SE tax. We then calculated that these 3.1 million Independent Contractors had average earnings of $28,746.48, translating to collective earnings of $90.21 billion. The amount of SE tax owed on $90.21 billion was $13.80 billion. However, given that there is a 35.1% average underreporting of income, we then estimated that $4.84 billion of SE tax was underreported by Independent Contractors in 2014 and that approximately $3.92 billion of this amount constituted underreported Social Security contributions. Table 1 summarizes our estimates.

SE tax was, in fact, too conservative. For example, in 2007, GAO issued a report finding "at least 61% of sole proprietors underreported their net income by $93.6 billion in 2001." JAMES R. WHITE, U.S. GOV'T ACCOUNTABILITY OFFICE, TAX GAP: A STRATEGY FOR REDUCING THE GAP SHOULD INCLUDE OPTIONS FOR ADDRESSING SOLE PROPRIETOR NONCOMPLIANCE 3 (2007).

Table 1: Estimate of Underpayment of Social Security Contributions for Independent Contractors Using Treasury Estimates

Total Earnings of Independent Contractors in 2014	$204.1 Billion
Estimated number of Independent Contractors from SIPP & Average Earnings	7.1 Million/$28,746.48 Avg. Earnings
2007 TIGTA Audit % of Returns with Underpayment	44.2%
2007 TIGTA Audit Average SE Tax Underpayment	$1,542
Average Rate of Underpayment ($1,542/$4,398)	35.1%
Estimated number of Independent Contractors with Additional SE Tax Liabilities	3.1 million (7.1 million x 44.2%)
Total Earnings of Underreporting Independent Contractors	$90.21 Billion (3.1 million x $28.746.48)
SE Tax Owed on Earnings of Underreporting Independent Contractors	$13.80 Billion ($90.21 x 15.3%)
Estimated amount Underreported SE Tax for Independent Contractors	$4.84 Billion ($13.80 Billion x 35.1%)
Estimated amount of Underpayment of Social Security	$3.92 Billion ($4.8 Billion x 81.05%)[110]

ii. On-Demand Workers

Even though Independent Contractors are often considered major contributors to the tax gap because they primarily deal in cash, many On-Demand Workers—particularly those doing On-Platform work—deal extensively in electronic payment.[111] Often, it depends on how an On-Demand Worker is paid—electronically, by cash, or by check—and whether they are an On-Platform or Off-Platform Worker that dictates whether (and if) a worker will receive either Form 1099-MISC or Form 1099-K.[112] As previously noted, research and anecdotal evidence finds that most On-Demand Platforms have adopted the 200/$20K Form 1099-K Filing Threshold for reporting income of On-Platform Workers to the IRS.[113]

As a result, many of the largest On-Demand Platforms (for example, Uber, Etsy, or Airbnb) do not (and are not required to) provide their On-Platform Workers

110 Social Security comprises 12.4% of the 15.3% self-employment tax contribution, or 81.05% of self-employment tax. SOC. SEC. ADMIN., SOCIAL SECURITY & MEDICARE TAX, https://www.ssa.gov/oact/progdata/taxRates.html (last visited Oct. 17, 2020).

111 *See supra* Section I.C.

112 *See* BRUCKNER, *supra* note 1, at 9–10.

113 *See July 2018 Senate Testimony*, *supra* note 9.

with any Form 1099-K because earnings for On-Demand Platform work, on average, are below the twenty-thousand dollar annual threshold or On-Platform workers fail to meet the aggregate 200-transaction test.[114] Academic research has (conservatively) estimated that, for Airbnb alone, "there is approximately $20 billion of revenue paid to hosts, the bulk of whom likely do not receive a Form 1099-K."[115]

In fact, one survey of On-Platform Workers found that in 2015, only 32% of On-Demand Workers received a Form 1099-K or Form 1099-MISC from their On-Demand Platform.[116] More recently, the California Tax Analysis found that in 2016, only 12% of the top 100 On-Demand Platforms issued a Form 1099-K to service providers.[117] This lack of issuance results in, at best, On-Demand Workers underreporting their income when filing their taxes, and, at worst, failure to file altogether.[118]

While the research on On-Platform Work shows that these workers are less likely to get a Form 1099 and more likely to misreport their income, taxpayer industry survey data from 2018 indicates that, generally, self-employed workers either underreport (32%) or fail to report (36%) their income altogether.[119] Moreover, when there is underreporting of income on U.S household surveys by self-employed respondents, they underreport by about 30%.[120] These findings are instructive to building a model to estimate the underpayment and nonpayment of SE tax by the population of On-Demand Workers we identified using SIPP.

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114 *Id.*; *see also Understanding Your Tax Documents*, UBER, https://www.uber.com/us/en/drive/tax-information/tax-documents/ (last visited Oct. 17, 2020) (notifying partners that they will only receive 1099-Ks when they meet the 200/$20K Form 1099-K Threshold); *Making Sense of Your Tax Form*, ETSY (Feb. 21, 2018), https://www.etsy.com/seller-handbook/article/making-sense-of-your-tax-forms/22660467494 (notifying sellers that they will only receive 1099-Ks when they meet the 200/$20K Form 1099-K Threshold); *Should I Expect to Receive a Tax Form from Airbnb?*, AIRBNB, https://www.airbnb.com/help/article/414/should-i-expect-to-receive-a-tax-form-from-airbnb (last visited Oct. 17, 2020) (notifying hosts that they will only receive 1099-Ks when they meet the 200/$20K Form 1099-K Threshold); JPMCI 2018 STUDY, *supra* note 2, at 14 (detailing the average monthly earnings for the four major sectors of the On-Demand Platform economy, which range from a low of $608 (*e.g.*, selling on Etsy) to a high of $1,736 (*e.g.*, renting a home on Airbnb)). Even if an On-Platform Worker were to work every month in a year, which is not reflective of what most research indicates On-Platform Workers do, average income from that On-Platform Work still only ranges from $7,296 to $20,832. But even in those cases where leasing a room or renting a house would result in $20,832, the requirement of more than 200 transactions has to be satisfied. In addition, Airbnb's own research has found that "[t]he average American Airbnb host over the age of 65 earns $8,350 in supplemental income annually for a single listing." AIRBNB, HOME SHARING: A POWERFUL OPTION TO HELP OLDER AMERICANS STAY IN THEIR HOMES 3 (2016), https://www.aarp.org/content/dam/aarp/livable-communities/livable-documents/documents-2016/Airbnb-HomeSharing-OlderAmericans-Report-11-2016.pdf.

115 Viswanathan, *supra* note 97, at 317.

116 BRUCKNER, *supra* note 1, at 10. The specific survey question asked respondents whether they had received a Form 1099-MISC or Form 1099-K from the On-Demand Platform they worked with in 2015. *Id.* Approximately 32% of respondents reported receiving a Form 1099; 61% reported not receiving a Form 1099 and 6% did not know whether they received a Form 1099. *Id.*

117 CAL. FRANCHISE TAX BD., *supra* note 53, at 14.

118 *See The Sharing Economy: A Taxing Experience for New Entrepreneurs Part I: Hearing Before the H. Comm. on Small Bus.*, 114th Cong. 4 (2016) (statement of Caroline Bruckner).

119 *See supra* note 28 discussion and accompanying text.

120 Hurst et al., *supra* note 27, at 3.

Specifically, we began with the $35.97 billion of earnings of the On-Demand Worker population we estimated using SIPP data.[121] Using the taxpayer industry survey findings discussed in Part I—that only 32% of self-employed workers properly report their income while 32% underreport and 36% failed to report any income altogether[122]—we assumed that 32% of these earnings were properly reported for SE tax purposes. This assumption left an approximate gap of $24.46 billion potentially underreported or not reported by On-Demand Workers in 2014. We then segregated the $24.46 billion into $11.51 billion (or 32%) of underreported earnings and $12.95 billion (or 36%) of earnings not reported altogether.

From there, we assumed, consistent with research on underreporting rates by self-employed workers on household surveys, that On-Demand Workers underreported their earnings by thirty percent.[123] We calculated that this underreporting would result in an underreporting of $528 million (15.3% SE tax multiplied by $3.45 billion) and $428 million of Social Security contributions. To calculate the amount On-Demand Workers failed to contribute altogether, we multiplied $12.95 billion by the SE tax rate (15.3%) and determined $1.98 billion of SE tax and $1.61 billion of Social Security contributions went unpaid.[124] Collectively, we estimated that On-Demand Workers failed to contribute $2.51 billion in SE tax and $2.03 billion in Social Security in 2014.

[121] As noted earlier, some of the workers we included in the population of On-Demand Workers are Off-Platform Workers, and others may have been employees subject to withholding. This reflects some of the limitations of using SIPP data to estimate SE tax of On-Platform Workers. To provide context for our SIPP data estimates, we developed alternative estimates using the 2017 BLS ACW Survey data on Independent Contractors, as well as the 2017 ACW Gig Economy Supplement and the JPMCI 2018 Data to contextualize our estimates. *See infra* Table 3 and accompanying text.

[122] *See supra* note 28 discussion and accompanying text.

[123] Hurst et al., *supra* note 27, at 3.

[124] *See supra* text accompanying note 98.

Table 2: Estimate of Under- and Nonpayment of Social Security Contributions for On-Demand Workers Using 2014 SIPP Data

Estimated income from On-Demand Workers (ODW)	$35.97 Billion ODW Earnings
Estimate of the Amount of ODW Earnings Underreported (32%) and Not Reported (36%)	$11.51 Billion (32% Underreported) $12.95 Billion (36% Not Reported)
Rate of Underreporting of Earnings	$3.45 Billion ($11.51 Billion x 30%)
Underreporting of SE tax	$528 Million ($3.45 Billion x 15.3%)
Underreporting of Social Security Contributions	$428 Million ($528 Million x 81.05%)
Estimated amount of SE Tax Not Paid by ODW	$2.51 Billion ($1.98 Billion + $528 Million)
Estimated amount of Social Security contributions Not Paid	$2.03 Billion

iii. Alternative Estimates

To provide context for our SIPP data estimates, we also estimated how much SE tax went underreported by the 10.6 million Independent Contractors identified in the 2017 BLS ACW Survey.[125] As set forth in Table 3 below, we estimated how much SE tax went underreported by the 2.3 million On-Platform Workers identified in the 2017 ACW Gig Economy Supplement as well as the JPMCI 2018 Study and the 2019 TIGTA Audit. To calculate the Independent Contractor underreporting of SE tax estimates from the 2017 BLS ACW Survey, we used the 44.2% underreporting rate of SE tax we derived from the 2007 TIGTA Audit. For the On-Platform Workers counted in the 2017 ACW Gig Economy Supplement and JPMCI 2018 Study, we assumed that 68% of the workers counted in these estimates did not receive any Form 1099; then we applied a 63% likelihood of underreporting to our results.[126] To determine the total number of workers that underreported SE tax liabilities from the 2019 TIGTA Audit, we used the 25% rate of underreporting identified in approximately 3.8 million individuals who received a Form 1099-K that did not report income on a Schedule C or Form 1040 line 21.[127] We then used the

[125] BLS ACW 2017 SURVEY, *supra* note 72, at 6.

[126] We believe 68% to be a reasonable assumption because it is consistent with prior survey data specifically asking respondents working with On-Demand Platforms whether they received any Form 1099 for their On-Platform work. An alternative is to rely on the data from the California Tax Analysis that found that only 12% of the Top 100 Platforms in 2016 issued 1099-Ks; however, the California Tax Analysis does not consider whether Form 1099-MISCs were issued instead of Form 1099-K. *See supra* text accompanying note 53.

[127] *See supra* text accompanying notes 59–60.

average underreporting amount of $1,542 we derived from the 2007 TIGTA Audit to estimate a collective amount of unreported SE tax liabilities.

Similar to using SIPP data to derive estimates of SE tax underpayment for Independent Contractors and On-Demand Workers, there are limitations with using alternative measures of independent workers or On-Platform Workers. For example, the number of On-Platform Workers included in the JPMCI 2018 Study includes workers who earned income from rental activities not likely subject to SE tax.[128] Additionally, we did not have the collective earnings of these populations, so we used an alternative methodology to illustrate underreporting. This alternative methodology did not consider how much income these workers failed to contribute to SE tax altogether. If we included non-reported amounts of income, then the estimates would likely be significantly higher, but we erred on the side of caution and assumed that the workers who misreported their income merely underreported their SE tax by $1,542 rather than failed to contribute altogether. These results are set forth in Table 3.

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[128] *See supra* note 34 discussion.

Table 3: Comparison of Estimates of Underpayment of SE Tax and Social Security Contributions BLS 2017 ACW Survey Data

Summary of Data Sets and Estimates of Underreporting	**Independent Contractors BLS 2017 ACW Survey**	**On-Platform Workers 2017 ACW Gig Economy Supplement**	**JPMCI 2018 Study of On-Platform Workers**	**2019 TIGTA Report on Gig Economy**
Total # of Workers	10,600,000	1,600,000	2,300,000	3,779,329 (Includes Forms for TY 2012-2016)
Total # of Workers Underreporting SE Tax Liabilities	4,685,200 (10.6M x 44.2%)	685,400 (1.6M x 68% x 63%)	1,564,000 (2.3M x 68% x 63%)	812,018 (25% of gig workers who received 1099-K and didn't report on Schedule C or Line 21)
Total Amount of SE Tax Underreported ($1,542)	$7.22 Billion	$1.05 Billion	$1.5 Billion	$1.25B
Total Amount of Underreported Social Security Contribution	$5.85 Billion	$856 Million	$1.2 Billion	$1 Billion

V. Demographics of the SIPP Data Independent Contractor and On-Demand Workforce, and the Effects of Underpayment on Social Security Benefits

As noted earlier, this Article seeks not only to quantify the impact of Independent Contractors' and On-Demand Workers' likely underpayment of SE tax and Social Security contributions but also to consider the implications of these underpayments in terms of what it means for these workers' Social Security benefits. Important groundwork has already been completed and some research has already considered the economic security of U.S. On-Demand Workers and what this work means for these workers' retirement.[129]

For example, a 2015 International Labour Office survey of Amazon Mechanical Turk and Crowdflower workers in the United States and India found that most of the U.S. workers on those platforms, who use platform work as their main source of income, "lack [S]ocial [S]ecurity coverage . . . a mere 8.1% of main job crowdworkers, in the [United States], report making regular contributions to a private retirement account and only 9.4% contribute to [S]ocial [S]ecurity, raising concerns about the financial situation of these workers when they reach retirement age."[130] Moreover, other critical research on the retirement issues facing On-Demand Workers has confirmed the reality that since most On-Demand Platforms classify their workers as Independent Contractors, those workers "are approximately two-thirds less likely than standard employees to have access to an employer-provided retirement plan."[131]

SIPP-collected demographic information provides a unique opportunity to consider the impact of the failure to contribute to Social Security and other retirement security issues of Independent Contractors and On-Demand Workers beyond their earnings. Estimates on the demographics of these workforces range—again depending on how these workers are defined.

For example, in a 2015 report, GAO found that Independent Contractors—including On-Demand Workers—more often appear to be younger and Hispanic than any other age, race, or ethnicity.[132] However, MBO Partners, in its 2019 report, described the average Independent Contractor as more likely to be male than female.[133] The JPMCI 2018 Study confirmed a number of these findings—particularly with respect to those On-Platform Workers earning income in the transportation sector, which is by far the largest sector of the On-Demand Economy, when it concluded that the majority of On-Platform Workers were men working as rideshare drivers.[134] However, this same study found that there were more women than men in each of the other sectors (*i.e.*, non-transport work, selling, and leasing), but relative to transportation, those other sectors were a small portion of the On-Demand Economy.[135]

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129 *See generally* Berg, *supra* note 13, at 563–69 (discussing an international comparison to the underreported income that was not taxed towards social security and the detrimental effects it can have on workers).

130 *Id.* at 563. Crowdwork is a kind of work performed remotely on an online platform where workers perform "micro-tasks" and are paid for singular tasks in response to business' posts via platforms. *Id.* at 545. Typical categories of tasks include researching information on the internet, verifying tweets, completing academic surveys, and gaining content access. *Id.*

131 Secunda, *supra* note 13, at 436. Secunda's article is the first to argue that On-Demand Workers be treated as common-law employees for retirement purposes to qualify for ERISA purposes. *Id.* at 437.

132 U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 65, at 5.

133 MBO 2019 REPORT, *supra* note 4, at 7.

134 JPMCI 2018 STUDY, *supra* note 2, at 22.

135 *Id.* Going forward, it will be interesting to see what happens with the transportation sector of the On-Demand Economy with the advent of driverless cars, which may be years away. *See generally* Hyperdrive, *The State of the Self-Driving Car Race 2020*, BLOOMBERG (May 15, 2020, 5:00 AM),

A. *SIPP Demographic Data on Independent Contractors and On-Demand Workers*

Using SIPP, as displayed in **Figure 1**, we estimated that Baby Boomers or individuals aged 55 and over (50.68%) in 2014 were more often Independent Contractors, followed by Generation X or individuals aged 34 to 54 (26.06%) and Millennials aged 18 to 33 (23.36%) in 2014. We found that Independent Contractors were more likely to be women (55.88%) than men (44.12%), as displayed in **Figure 2**. And we found that Independent Contractors were most often white (67.47%), then Hispanic/Latinx (14.57%), black (12.39%), and Asian (5.65%) as shown in **Figure 3.**

Figure 1: SIPP Independent Contractors in 2014

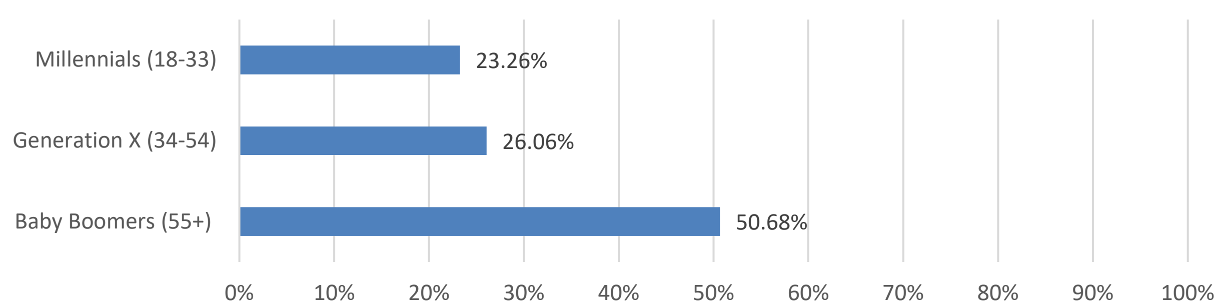
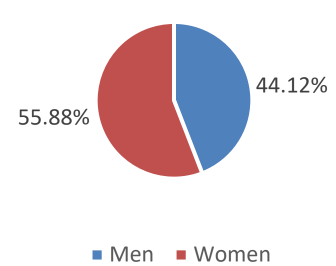
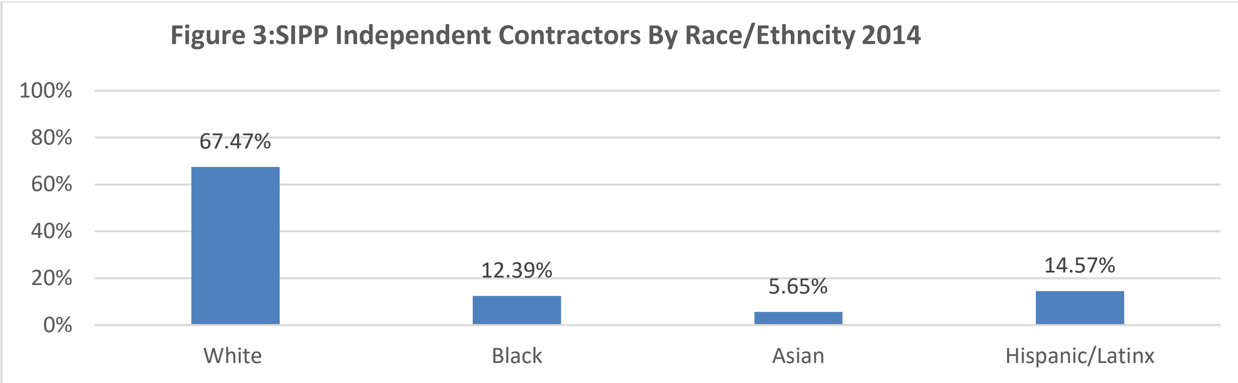


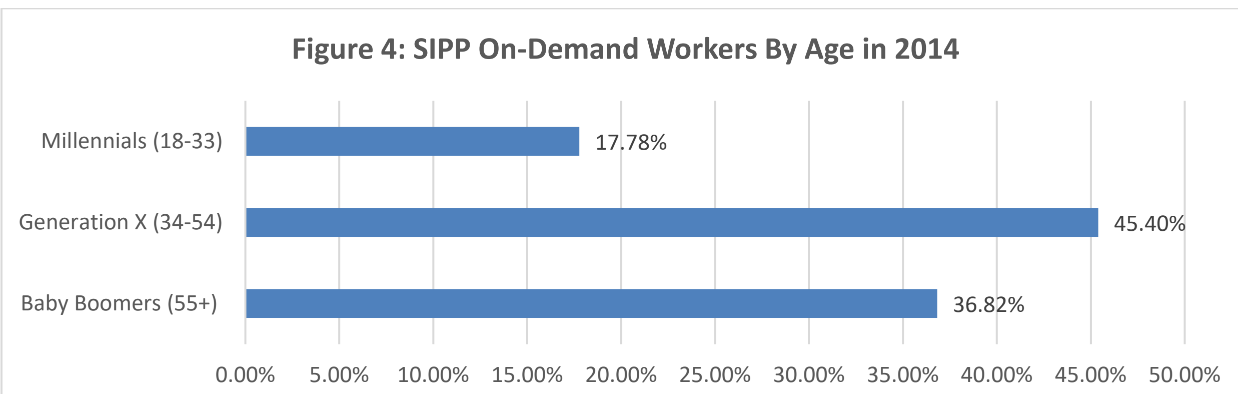
Figure 2: SIPP Independent Contractors By Gender, in 2014

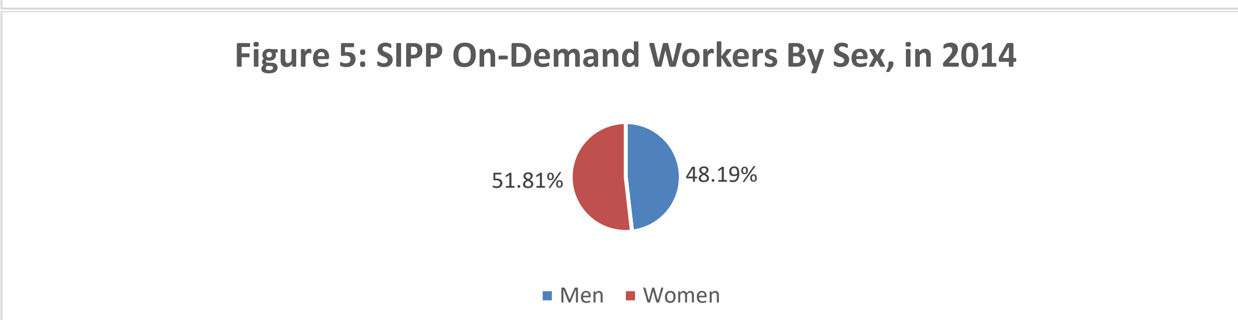


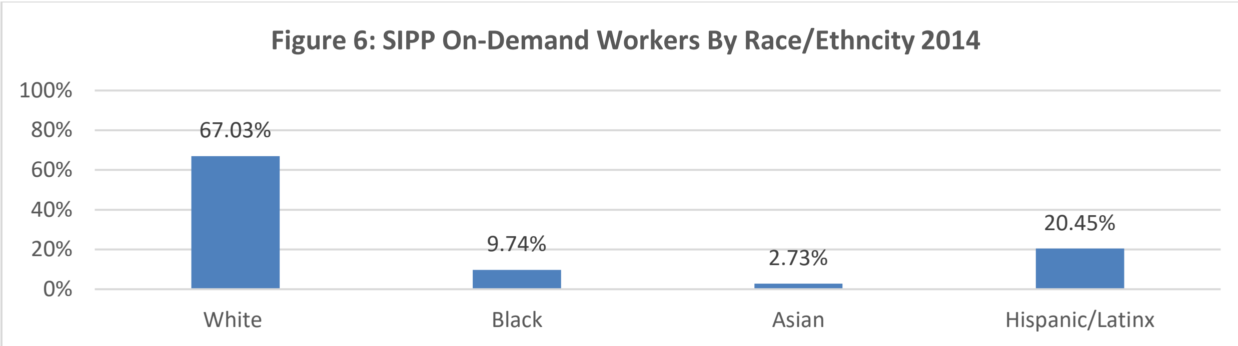
https://www.bloomberg.com/features/2020-self-driving-car-race/ (listing companies that are developing driverless cars and how close those companies are to success).



With respect to the population of On-Demand Workers we identified using SIPP, displayed in **Figure 4,** we found that Generation X (45.40%) was more often engaged as On-Demand Workers than Baby Boomers (36.82%) and Millennials (17.78%). Additionally, we found that On-Demand Workers were slightly more likely to be women (51.81%) than men (48.18%) (**Figure 5)**. Finally, we found that On-Demand Workers were most often white (67.03%), followed by Hispanic/Latinx (20.45%), black (9.74%), and then Asian (2.73%) as shown in **Figure 6.**







These results are somewhat consistent with readily available data from at least one On-Demand Platform—Airbnb. In a March 2016 report detailing Airbnb's growing population of women hosts over sixty years old, Airbnb researchers found that seniors are the best rated and fastest growing demographic of Airbnb hosts in the United States, and the majority of women hosting on Airbnb are "empty nesters looking to make ends meet."[136] More recently, in March 2018, Airbnb touted its success with helping D.C. senior hosts to age in their homes.[137] Our SIPP analysis of On-Demand Workers indicates that they older than most other estimates suggest and are slightly more likely to be women. Apart from rental income, which is generally not subject to SE tax, earnings of On-Demand Workers could have a large impact on their receipt of Social Security benefits.

B. *Implications for Social Security Benefits*

Social Security benefits are based on a worker's earning history and age at retirement and are designed to "replace part of a worker's earnings."[138] A worker is eligible for Social Security after they work in Social Security-covered employment for ten or more years (*i.e.*, forty earnings credits or four credits per year).[139]

In 2020, self-employed individuals earn one credit for every $1,410 of earnings, up to the maximum four work credits for $5,640 in earnings that can be earned in one year.[140] Additionally, a worker's initial monthly benefit is based on their thirty-five highest years of earnings, which are indexed to historical wage growth.[141] The thirty-five highest years of indexed earnings are divided by thirty-five to determine the worker's career-average annual earnings.[142] The resulting amount is divided by twelve to determine the worker's average indexed monthly

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136 AIRBNB, WOMEN HOSTS, *supra* note 7, at 2. However, most rental income is not subject to SE tax and would not be included in calculating Social Security benefits. *See supra* note 34 discussion.

137 *See* AIRBNB, D.C. SENIORS, *supra* note 7, at 2.

138 HUSTON, *supra* note 11, at 7.

139 *Id.* at 8.

140 SOC. SEC. ADMIN., Pub. No. 05-10022, IF YOU ARE SELF-EMPLOYED (2020).

141 *See* SOC. SEC. ADMIN., *Social Security Benefit Amounts*, https://www.ssa.gov/OACT/COLA/Benefits.html (last visited Nov. 30, 2020).

142 *Id.*

earnings (AIME).[143] Workers with fewer than thirty-five years of earnings in covered employment or years of no earnings have zeroes entered in the computation, resulting in a lower AIME and, therefore, a lower monthly benefit.[144]

The Social Security benefit is progressive in that "[i]t provides workers with low lifetime earnings a benefit that represents a higher percentage of their pre-retirement income than higher-income workers. However, benefits are proportional to average lifetime earnings, and for workers with lower lifetime earnings[, such as women], benefits calculated under the regular formula will . . . be . . . low."[145] This exacerbates existing challenges for women: in 2015, the average benefit for women was $14,184, compared to $18,000 for men.[146] Often, women take time out of the workforce to care for family, and as a result, do not earn credits toward their Social Security benefits during that time and have a lower AIME.[147]

At the same time, academic research has resoundingly concluded that women are "more economically vulnerable" than men in retirement because women retire with less retirement savings, assets, and Social Security benefits than men, despite women tending to live longer and having more healthcare costs.[148] In addition, "[f]or all but the highest–income families, Social Security provides the largest source of retirement income."[149] For women in particular, Social Security income, as modest as it may be on average, is the only income keeping nearly half of women sixty-five and older from poverty.[150]

C. Implications for Social Security Solvency

Given Social Security's critical role in helping so many beneficiaries avoid poverty, our estimate of the $5.95 billion in unpaid Social Security contributions—likely a result of Independent Contractors and On-Demand Workers' approximately $7.35 billion in underpaid self-employment taxes in 2014—merits additional analysis. Such additional analysis will focus on how the unpaid contributions impact the solvency of Social Security.

Social Security faces long-term financing difficulties. In its most recent report ("2020 Trustees' Report"), the Social Security Trustees projected the program cost for 2020 "to be less than total income by about $4 billion and exceed non-interest income by about $73 billion."[151] Additionally, the 2020 Trustees' Report estimates

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143 *Id.*

144 HUSTON, *supra* note 11, at 8.

145 Joan Entmacher & Amy Matsui, *Addressing the Challenges Women Face in Retirement: Improving Social Security, Pensions, and SSI*, 46 J. MARSHALL L. REV. 749, 754 (2013).

146 Stan-Hinden, *Women and Social Security Benefits,* AARP (Feb. 2017), https://www.aarp.org/work/social-security/info-2014/women-and-social-security-benefits.html.

147 *Id.*

148 Etmacher & Matsui, *supra* note 145, at 749.

149 *Id.* at 750.

150 *Id.* at 751.

151 THE BD. OF TRUSTEES, THE 2020 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS 2 (2020).

that the trust funds currently have enough in reserves to sufficiently pay program costs over the next ten years.[152] However, the most recent estimates do not reflect the impact of the COVID-19 pandemic. [153]

Using SIPP, we estimated approximately $3.92 billion in underpayment of Social Security contributions from Independent Contractors and $2.03 billion in underpayment and nonpayment from On-Demand Workers in 2014. Historically, government research on sole proprietors has shown high rates of underreporting of their income—even higher than we used in calculating our estimates.[154] And while that research may precede the advent of the On-Demand Economy, the data we used from SIPP might, too. The On-Demand Economy has grown substantially since 2014 and added millions of workers in the last four years, who may not have been captured by our SIPP data.[155] In addition, our estimates for underpayment of SE tax of Independent Contractors are based on averages of underpayment of SE tax and do not account for the likely nonpayment of tax by this population altogether.

As a result, we suspect that our estimates are conservative as to the regular underpayment of SE tax by Independent Contractors and On-Demand Workers, particularly with respect to those On-Platform Workers we included, the majority of whom will not receive any Form 1099 to prompt proper reporting of their income.[156] Moreover, with respect to the Off-Platform Workers we included in our On-Demand Workers estimates, we note that innovations in terms of digitizing payments suggest that more Off-Platform Workers are (and will be) paid in ways not subject to information reporting under current law.[157]

Even the most robust research on the size, scope, and earnings of On-Demand Economy workers concedes that new payment options could involve bypassing a bank account entirely, potentially resulting in undercounting participants in the On-Demand Platform Economy.[158] Even with the foregoing qualifications, we find that there is, at the very least, an annual $7.35 billion in underpayment of SE tax by these workers. This underpayment should be addressed to shore up the overall solvency of Social Security and ensure that workers' AIME is properly calculated.

VI. POLICY RECOMMENDATIONS

As part of its recommendations for shoring up the long-term financing of Social Security, the 2020 Trustees' Report recommends that "lawmakers address

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152 *Id.*

153 *Id.*

154 *See, e.g.*, WHITE, *supra* note 109.

155 *See supra* Part II.

156 *See supra* Section I.C.

157 *See* Ryan Browne, *Digital Payments Expected to Hit 726 Billion by 2020—But Cash Isn't Going Anywhere Yet*, CNBC (Oct. 9, 2017, 6:46 AM), https://www.cnbc.com/2017/10/09/digital-payments-expected-to-hit-726-billion-by-2020-study-finds.html (quoting private sector report finding "non-cash transactions between 2014 and 2015 rose 11.2 percent, the highest growth of the past decade.").

158 JPMCI 2018 STUDY, *supra* note 2, at 9.

the projected trust fund shortfalls in a timely way in order to phase in necessary changes gradually and give workers and beneficiaries time to adjust to them."[159] To facilitate tax administration and compliance, assist independent contractors generally, and aid On-Platform service providers and sellers specifically, Congress needs to take additional action to modernize information reporting requirements, update quarterly-estimated filing due dates, and require IRS developed tax guidance that On-Demand Platforms can provide to service providers and sellers as part of the onboarding process.

A. Align the Form 1099-MISC and 1099-K Reporting Thresholds

Academic research shows that, under certain circumstances, enhanced information reporting can reduce the tax gap.[160] In fact, "the degree to which taxpayers fail to include income on their tax returns, or underreport, is directly related to the extent these income items are subject to information reporting."[161] Given the current practice adopted by the majority of On-Demand Platforms to use the 200/$20K Form 1099-K Reporting Threshold for furnishing Form 1099-Ks to On-Platform Workers:

> Congress should move forward with modernizing the information reporting regime by lowering the filing threshold for Form 1099-K to [$1,000 and limiting the aggregate 200 transaction threshold]. At the same time, Congress should update the Form 1099-MISC threshold by raising it from $600 to [$1,000] to provide some relief for small businesses who are subject to the Form 1099-MISC filing rules [for the independent contractors they hire]. Keep in mind, the Form 1099-MISC filing thresholds have not been fundamentally reviewed or updated since at least 1954. Adjusted for inflation, $600 in 1954 would be more than $5,000 in today's dollars.[162]

By creating a uniform standard for reporting of self-employment income, Congress would limit the "tax opportunism" some On-Demand Platforms have

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[159] THE BD. OF TRUSTEES, *supra* note 151, at 5.

[160] Leandra Lederman, *Reducing Information Gaps to Reduce the Tax Gap: When is Information Reporting Warranted?*, 78 FORDHAM L. REV. 1733, 1733, 1736 (2010) (noting increased information reporting is not a "panacea" and that increased reporting imposes costs); *see also* Viswanathan, *supra* note 97, at 283 (explaining how absent legislative intervention, On-Demand Platforms "pose a critical threat to the reporting system underlying domestic and international tax compliance.").

[161] Viswanathan, *supra* note 97, at 288.

[162] *July 2018 Senate Testimony*, *supra* note 9, at 30 (footnotes omitted).

> H.R. 3717 takes the approach of aligning the Form 1099 threshold filing requirements at $1,500, among other tax changes targeted to small business. Other bills, notably, S. 1549, would align the thresholds at $1,000. S. 1549 goes further and includes other provisions on misclassification and provides for voluntary withholding agreements to be instituted between platforms and their service providers and sellers.

Id. n.19.

engaged in by adopting the 200/$20,000 Form 1099-K Reporting Threshold.[163] Congress is generally aware of the budgetary impact this proposal would have and how it could translate to increased federal revenues. As part of its 2017 tax reform debate work, the Joint Committee on Taxation (JCT) provided a score for a version of this proposal that would align the Form 1099-MISC and Form 1099-K at $1,000 and estimated that it could raise as much as approximately $3.6 billion over a ten-year budget window.[164]

> [In addition,] Congress is likely to enhance compliance by both taxpayers and reporting entities because more taxpayers will receive Form 1099s, which is . . . supported by the existing research on tax compliance and information reporting . . . . Some states have already moved forward with this approach and aligned the 1099-K and 1099-MISC reporting thresholds at the current 1099-MISC level of $600 with positive results.[165]

B. *Update Quarterly Estimated Payment Due Dates*

As noted earlier,

> when self-employed taxpayers are expected to owe at least $1,000 in taxes and are not subject to withholding, advance payments of estimated tax are due to the IRS throughout the year in the form of quarterly-estimated payments. It just doesn't take that much income to trip over these filing requirements.[166]

Moreover, research on the tax compliance of On-Demand Platform workers indicated that more than one-third of respondents did not know whether they were required to file quarterly estimated payments on the income they earned working with a platform.[167]

The former IRS National Taxpayer Advocate repeatedly recommended that anything that can be done "to help taxpayers make their estimated tax payments more easily and lessen the burden of saving to make such payments is likely to increase compliance."[168] In order to facilitate tax compliance and ease taxpayer burden, Congress should update the filing deadlines for second- and third-quarter

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163 *See generally Can Sharing Be Taxed?*, *supra* note 8, at 1032–45.

164 Joint Comm. on Taxation, *Estimated Revenue Effects of the Chairman's Mark of the "Tax Cuts And Jobs Act," Scheduled for Markup by the Committee on Finance on November 13, 2017* (JCX-52-17) (Nov. 9. 2017), https://www.jct.gov/publications.html?func=startdown&id=5033.

165 *July 2018 Senate Testimony*, *supra* note 9, at 30. "In 2017 both Vermont and Massachusetts began to require information reporting for income earned by small business on-demand platform operators and paid electronically at the current 1099-MISC threshold of $600. According to the industry experts, the lower reporting threshold in Massachusetts 'catapulted reporting by over 100%.'" *Id.* n.20.

166 *Id.* at 30 (footnote omitted).

167 *The Sharing Economy: Part I*, *supra* note 8, at 25.

168 *The Sharing Economy: A Taxing Experience for New Entrepreneurs: Hearing Before the H. Comm. on Small Bus.*, 113th Cong. 10 (2016) (statement of Nina Olson, IRS National Taxpayer Advocate).

installment payments set forth in IRC § 6654(c) to be due two weeks after a quarter's end, rather than in the middle of a quarter as is required under current law.[169]

A bipartisan small-business tax bill proposed by the leadership of the U.S. House of Representatives Small Business Committee (H.R. 3717) in 2017 does just that and modernizes the existing filing deadlines to reflect the business reality of the second and third quarters' ends.[170] This change is likely to increase compliance because under current law, "[t]axpayers must remember oddly spaced payment dates . . . [that] do not consistently coincide with calendar quarters, making it difficult to calculate net income and confusing to taxpayers."[171] By simply changing existing due dates to fall after a quarter's end, Congress can ease the burdensome process of estimating income for purposes of remitting quarterly estimated payments because taxpayers will actually know how much they earned the preceding quarter rather than requiring taxpayers to make their best guess.

C. *Require the IRS to Develop and Publish Guidance for On-Demand Platforms to Provide Service Providers and Sellers as Part of the Onboarding Process.*

Survey data of experienced On-Platform Workers show a significant knowledge gap between what taxpayers understand their tax obligations to be, if any, and what they actually are.[172] "[M]any [on-demand] platforms are hesitant to provide tax information to their service providers and sellers due to ongoing concerns and litigation over misclassification issues. To address the knowledge gap, the National Taxpayer Advocate has recommended the IRS develop a checklist for first-time, self-employed on-demand economy workers and sellers."[173] Anecdotal and survey evidence suggest that taxpayers want to do the right thing:

> [They] are unfamiliar with the requirements of quarterly estimated payments. By the time taxpayers learn that they have failed to file quarterly estimated payments on this income, many just walk away and fail to file altogether. By developing accessible content that [On-Demand] platforms can distribute to service providers and sellers as part of the onboarding process, the IRS can make immediate progress in addressing the knowledge gap that even experienced, self-employed small business owners have.[174]

[169] I.R.C. § 6654(c) (2018).

[170] Small Business Owners' Tax Simplification Act of 2017, H.R. 3717, 115th Cong. (2017).

[171] 113th Cong. 10.

[172] *See* BRUCKNER, *supra* note 1, at 12.

[173] *July 2018 Senate Testimony*, *supra* note 9, at 31.

[174] *Id.*

CONCLUSION

This Article intends to shed light on the Social Security implications of the current federal tax rules for self-employed, non-employer workers working outside of a traditional employment relationship, as well as self-employed individuals who work in occupations that occur in the On-Demand Economy. Such implications are ascertained by estimating the population and earnings of these workers using the U.S. Census Bureau's redesigned *Survey of Income and Program Participation* (SIPP). Ultimately, we estimated there were 7.1 million Independent Contractors and 3.1 million On-Demand Workers earning self-employment income in 2014.[175] These workers are likely to have failed to contribute as much as $7.35 billion in SE tax in 2014, which translates to at least $5.95 billion in underpaid Social Security contributions.

The research measuring these workers is dynamic, but there appears to be consensus that On-Demand Workers represent a population that is hard to measure in terms of size, composition, and earnings. However, even with conservative estimates on the underpayment of SE tax, there remains a significant—potentially multi-billion-dollar—probability that millions of the workers we estimated are not paying into Social Security. This a particularly acute problem for women, who tend to have greater dependency on Social Security and lower contributions over the course of their working lives. This problem will continue to grow along with the digitizing of the cash economy. Although Congress has limited options, it can try to modernize information reporting, update quarterly estimated payment requirements, and require distribution of tax guidance to help address these issues and further support the solvency of Social Security.

[175] *See supra* notes 16–19 discussion and accompanying text.

METHODOLOGY

For preparing the estimates included in this Article, we extrapolated data from the U.S. Census Bureau's Survey of Income and Program Participation (SIPP) on populations of workers we identified as Independent Contractors and On-Demand Workers, including the overall number of workers in these groups and their collective earnings. We then surveyed academic literature and existing National Bureau of Economy Research, U.S. Department of Treasury, and IRS reports on: (1) the tax gap, (2) underreporting and underpayment of self-employment taxes, and (3) tax compliance surveys of workers using On-Demand Platforms for selling goods and services. We also relied on 2018 tax-preparer industry survey data on the under- and nonreporting of income by self-employed workers.

To develop an average underpayment amount we could apply to the population of Independent Contractors and On-Demand Workers, we analyzed data from the 2007 TIGTA Audit to determine that: (1) 44.2% of returns that TIGTA included in its statistically valid sample reported Schedule C or Schedule F income but did not include a Schedule SE and had an underpayment of SE tax; and (2) the average underpayment of self-employment tax liability was $1,542. The 2007 TIGTA data is relevant because it was (at the time of publication) the only recent methodology available from TIGTA on the underpayment of SE Tax. We adopted this methodology for use in this exercise not to be definitive or exact but rather as an illustrative and fairly representative measure of existing tax audits on the underreporting of SE Tax.

To calculate the number and amount of Independent Contractors underreporting self-employment tax liability, we used the following assumptions: 44.2% of the 7.1 million Independent Contractors we identified using SIPP underreported their SE tax liability on their 2014 Form 1040s, on average, by $1,542. We also assumed the collective earnings of this population of $204.1 billion translated to $28,746.48 of earnings on average, and that the average underpayment of SE tax on these earnings was 35.1%. We calculated this would result in $4.84 billion in additional SE tax that should have been collected on this income in 2014, and that approximately $3.92 billion of this amount is underreported Social Security contributions. To compare our results with more recent data sets, we ran a variation of these calculations using the 10.6 million Independent Contractor population from the 2017 BLS ACW Survey. This calculation assumed that 44.2% of that population underreported their earnings by $1,542.

With respect to our estimates for On-Demand Workers, because our population data was likely over-inclusive and our earnings data was under representative, we calculated our estimates using the total SIPP earnings data of On-Demand Workers, and then assumed that: (1) 32% of those earnings were properly reported, (2) 32% of those earnings were underreported by 30%, and (3) 36% of the collective earnings went unreported altogether.

With respect to the 2.3 million On-Platform Workers identified in the JPMCI 2018 Study and the 1.6 million On-Platform Workers identified in the 2017 ACW Gig Economy Supplement, we assumed that: (1) 68% of On-Demand Workers did not receive a Form 1099-K or Form 1099-MISC for their self-employment income, and (2) 63% of the population of On-Demand Workers that did not receive any Form 1099 misreported their income. For the 2019 TIGTA Audit estimate, we used 812,081 (25%) of the approximately 3.8 million workers who received a Form 1099-K but did not report income on a Schedule C or Line 21. We then multiplied the average SE tax underpayment of $1,542 to those populations to calculate the total underreported SE tax and Social Security Contribution.

Research Question(s):

1) Using SIPP, how many individuals are freelance, independent contractors, and self-employed individuals ("Independent Contractors")?
2) Using SIPP, how many workers are using on-demand, app-based platforms, or are working in occupations that occur in the On-Demand Economy ("On-Demand Workers")?
3) Using SIPP, how much income was earned by Independent Contractors and On-Demand Workers?
4) How much SE tax should have been collected on this income?
5) What was the Social Security underpayment amount from this income?
6) What are the Social Security implications for these workers and the solvency for Social Security?

About the Survey of Income and Program Participation (SIPP)

To prepare the estimates in this Article, we used the U.S. Census Bureau's Survey of Income and Program Participation (SIPP). SIPP is a longitudinal, multi-panel survey of adults in the United States. Each panel features a nationally representative sample interviewed over a multi-year period lasting approximately two and a half to four years. The size of the sample ranges from 14,000 to 52,000 households. In comparison to other nationally representative surveys, SIPP fills the gaps that other surveys such as the Current Population Survey (CPS) leave by providing data that affords a better understanding and analyses of the distribution of income, wealth, and poverty in the United States and of the effects of federal and state programs on the well-being of families and individuals.

The core questions cover demographic characteristics, labor force participation, program participation, and amounts and types of earned and unearned income received including transfer payments and noncash benefits from various programs and asset ownership. Additionally, SIPP is larger than comparable surveys such as the Survey of Consumer Finances (SCF) and provides information on business ownership that is not found in surveys such as the SCF.

With respect to labor and earnings questions, SIPP collects information about an individual's work history from the beginning of the reference year through the interview month. Specifically,

> Topics covered include the weeks of employment, amount and type(s) of earnings, and business characteristics. For respondents with a period time not working, SIPP collects data on the reasons why the respondent did not hold a job, and whether the respondent looked for work. Basic information about the job such as beginning and ending dates, the type of work arrangement, and reason for the job ending (when applicable) are collected first. The next questions are characteristics of the job/business such as industry, occupation, union status, the number of employees, and incorporation status. Next the survey asks about the types of earnings the respondent received (wage/salary, commission, tips, overtime or bonus), the amounts earned, and the number of hours worked per week. Finally, the survey asks respondents to report any time they were away from the job without pay within the reported job spell. For those periods where the respondent was not employed, information is collected about the labor force status of the respondent during that period. This includes information about why they were not working, unpaid work in a family business or farm, time spent on layoff and time spent looking for work. The 2014 Panel allows respondents to report detailed information for up to seven jobs and up to three periods of time away without pay. Respondents may report up to two changes in wage/salary pay rate and hours worked for each job over the reference period.[176]

Variables Used:

EJB1_JBORSE through EJB7_JBORSE:
Description: This variable describes the type of work arrangement, whether work for an employer, self-employed or other.

- Universe Description: Respondents who held a job during the reference month.

TJB1_EMPALL through TJB7_EMPALL:
Description: About how many people are employed by ... at ALL LOCATIONS together?

- Universe Description: Respondents who had a job or a definite work arrangement and their employer operated in more than one location during the reference period.

TJB1_EMPB through TJB7_EMPB:
Description: What is the maximum number of employees, including ..., working for ... at any given time?

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[176] *SIPP Content*, U.S. CENSUS BUREAU, https://www.census.gov/programs-surveys/sipp/about/sipp-content-information.html#par_abstract_7 (last updated Apr. 23, 2019).

- Universe Description: Respondents who were self-employed during the reference period.

TJB1_OCC through TJB7_OCC:
Description: Occupation code Universe

- Description: Respondents who worked for an employer, were self-employed, or had another work arrangement.

Despite its advantages, SIPP has its limitations. As with most survey data, SIPP data is self-reported, which can be problematic for the reporting of self-employment, income received from a particular source, and payment of taxes. In addition, the SIPP data on self-employment does not specifically identify individuals who earn income working with On-Demand Platforms. Instead, we have identified individuals with occupations occurring in the On-Demand Economy as reflected by their SIPP survey responses. To provide additional context for the SIPP data, we also included the most recent data collected in connection with the 2017 BLS ACW Survey as well as the JPMCI 2018 Study.