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Abstract

In recent years, high-profile Silicon Valley firms have engineered billion-dollar IPOs through developing online and app-based platforms that connect service providers and sellers with customers and process their payments (the "online platform economy"). Today, millions of Americans earn income using platforms developed by Uber, Etsy, and Airbnb; and research has identified the limitations of existing federal tax rules to facilitate tax compliance of these workers and considered the consequences of their failure to pay self-employment taxes. However, questions remain as to the changing demographics and motivations of online platform economy workers and their retirement income security. Titled, Shoring Up Shortfalls: Women, Retirement and the Growing Gig Economy, we propose to identify and analyze: (i) the existing demographic data on this workforce; (ii) their economic motivations and retirement income needs; and (iii) the federal tax, retirement policy, and financial literacy proposals that would enable the gig economy workforce to support itself in retirement.

Keywords: Women, gig work, financial literacy, retirement

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I. Introduction

Gig work—the selling or renting of labor, effort, skills, and time outside of traditional employment—is a long-standing feature of the U.S. economy. Commonly understood to be informal, contingent work arrangements, some types of gig work have become more automated and accessible alongside the widespread adoption of internet-enabled smart phones in the early 21st century (Bruckner, 2016, pp. 1, 2). Today, millions of people sell goods and services, or rent rooms, houses, and other assets using platforms ("online gig workers") like Uber, Lyft, Rover, DoorDash, Ebay, Etsy, VRBO, and Airbnb to connect with customers. Indeed, several high-profile Silicon Valley firms have engineered billion-dollar IPOs of companies that develop online and app-based platforms to: (1) connect gig workers selling goods and services to customers; and (2) process customer payments ("online platforms") (ibid.). Still millions more continue to run errands, walk dogs, rent rooms, care for children and the elderly, sell goods at outdoor markets and roadside stands, and do housework, yardwork and other occasional jobs without using an online platform to connect with customers ("offline gig workers").

Although working outside of traditional employment (i.e., a full-time job with employee benefits and tax withholding) has always occurred, the rise of online platforms has generated a new emphasis on online gig work with researchers looking at tax compliance, worker protection, and benefits policy questions. Unlike traditional employees, most online and offline gig workers are classified as self-employed or independent contractors for tax and labor law purposes with respect to their gig work (see, e.g., U.S. Government Accountability Office, 2020c; Collins et al., 2019, p. 3; Bernhardt & Thomason, 2017). However, most gig workers do gig work as a supplemental or secondary source of income (see, e.g., Farrell et al., 2018), and many maintain traditional jobs (see, e.g., Collins et al., 2019).

Recent research on gig workers has tended to focus on the workers that dominate the ridesharing platforms (mostly men), which constitute the majority of online gig workers and transactions (see, e.g., Farrell et al., 2018, pp. 9-11). For example, in its first foray into researching the tax and benefits coverage implications of gig work, the U.S. Treasury Department's Office of Tax Analysis published a

study in 2017 that found the "vast majority" (85%) of online gig workers were male (Jackson et al., 2017, p. 18). However, that same study also found that the majority of self-employed workers with less than $5,000 of business expenses were "predominantly" women (ibid.) raising new questions about whether more women than men do offline gig work as a supplemental source of income and what it means for retirement financing.

Although some important work has focused on the retirement income implications for gig workers (see, e.g., Bruckner & Hungerford, 2019; Hegewisch et al., 2019; Secunda, 2018; Jackson et al., 2017, Brown, 2017), there is a notable absence of work dedicated to understanding how women engage in gig work and the impact it has on their retirement. Moreover, in 2020, the COVID-19 pandemic accelerated the need for more comprehensive research on gig work generally as Congress scrambled together policy responses for impacted workers, especially women (see, e.g., Karageorge, 2020; Hassan, 2020).

Accordingly, this paper focuses on women engaged in gig work—both as offline gig workers and online gig workers—in terms of what it means for their retirement. By focusing our research on gig workers that engage in online or offline gig work as a supplemental, rather than as a primary or sole source of income (referred to hereinafter as "GigSupp Workers"), we are able to provide new insights as to the gender and retirement financing implications from existing data and research.

In particular, this paper answers the following research questions: (1) what do existing measures of GigSupp Work show about its growth and whether there are any data gaps; (2) what are the challenges and anticipated needs of GigSupp Workers in saving for retirement (including the extraordinary circumstances presented by the COVID-19 pandemic); and (3) what are specific federal tax, retirement, and financial literacy policy proposals that might help GigSupp Workers better finance their retirement? Ultimately, this paper finds that:

(1) GigSupp work has grown significantly and is continuing to grow, but existing tax data have failed to fully capture the population of GigSupp Workers in large part because tax reporting rules enable extensive underreporting of self-employment income.

(2) Comparative review of multiple administrative and survey data sources suggests that more women than men engage in GigSupp Work and that women are driving GigSupp Work growth.

(3) The policy response to the COVID-19 pandemic reflects the systemic failure of government research to measure the GigSupp Workforce reliably. Moreover, the COVID-19 pandemic has led to even more GigSupp Work growth as employers shed traditional jobs and employees.

(4) GigSupp Work triggers a retirement financing gap that disproportionately impacts women, and notably, women of color, who have greater challenges saving for retirement than men.

(5) Absent change, the existing tax and retirement financing rules will continue to underserve and frustrate the ability of GigSupp Workers to save for retirement in the short-term and, consequently, result in inadequate retirement incomes when they do ultimately retire.

To answer the foregoing research questions, Section II of this paper starts by summarizing approaches for measuring the gig workforce from relevant government surveys and research on administrative tax data as well as findings from private-sector research, with a focus on gender and earnings. Section II also discusses the overall trends and data gaps with measuring the GigSupp Workforce.

Section III reviews the retirement savings challenges GigSupp Workers face with a focus on (A) the applicable tax rules and corresponding tax compliance rates; (B) their limited income and access to retirement plans; and (C) existing challenges women have saving for retirement. Section III also includes discussion of the impact of the COVID-19 pandemic. Section IV then sets forth some policy options targeted to help GigSupp Workers shore up their retirement income shortfalls. More specifically, Section IV discusses options that could help: (1) facilitate tax compliance of GigSupp Workers and ensure that they meet their tax obligations and earn full Social Security benefits; (2) improve Social Security benefits for women; (3) promote financial literacy for women; and (4) comprehensively measure the GigSupp Workforce.

II. Existing Measures of Who Works in the Gig Economy

Estimates of how many gig workers are working in today's economy vary widely depending on how gig work is defined or what research tools are used (e.g., surveys or administrative data) (Abraham & Houseman, 2019; Abraham et al., 2018; Schultz, 2020; Aspen Institute & Cornell University, 2020). In general, estimates of contingent workers vary considerably even though non-traditional and informal paid work activity "have historically been present across all types of occupations, geographies, and industries, [and] not just among low-and moderate income or lower-skilled populations" (Robles & McGee, 2016, p. 7). Among labor experts, there appears to be "no clear consensus" on how to define contingent work, what or who should be included, and "reevaluation of methods and research approaches may be required" (ibid., pp. 7−8).

A. Approaches for Measuring Gig Work

In addition, approaches for measuring the gig workforce are complicated by various criteria used by the U.S. Department of Labor, the Internal Revenue Service and state labor agencies on how to classify workers as traditional employees as opposed to independent contractors or gig workers (Reder, et al., 2019, p. 11). This is particularly relevant for researching populations and benefits as employees are (i) covered by federal and state labor laws; (ii) subject to employer withholding of wages for income and payroll taxes (i.e., Medicare and Social Security tax); and (iii) entitled to receive an IRS Form W-2 for tax purposes (ibid.). These rules create a trove of administrative data on employees. In contrast, "[n]on-employee work may not be fully captured in existing data sources" (Abraham et al., 2018, p. 2). At the same time, some experts have observed that there is "rampant misclassification" of workers (Oei & Ring, 2020, p. 695). In that regard, the U.S. Department of Treasury, Inspector General for Tax Administration (2013) has noted that millions of workers are misclassified, and Bernhardt and Thomason (2017, p. 10) suggest that "perhaps 1 to 2 percent of the workforce is misclassified" (see also, Posner, 2020; Secunda, 2020, p. 219). Notwithstanding these challenges, there are multiple measures of the gig workforce.

U.S. Department of Labor Bureau of Labor Statistics

The Bureau of Labor Statistics has only intermittently measured the millions of workers in nontraditional work arrangements (a/k/a alternative or nonstandard work arrangements) including part-time workers, temporary workers, and contract workers (i.e., self-employed workers) (U.S. Department of Labor, Bureau of Labor Statistics, 2018a; National Academies of Sciences, Engineering, and Medicine, 2020, p. 3). Most recently, in May 2017, the Bureau of Labor Statistics fielded the Contingent Worker Supplement (CWS) survey to measure contingent and alternative work, and included new questions to measure online gig workers (U.S. Department of Labor, Bureau of Labor Statistics, 2018a, table 5). The results included data on the total number of U.S. workers in 2017 (153.3 million), full-time traditional workers (125.2 million) and part-time workers (28.1 million), the CWS broadly grouped alternative and contingent workers into three overlapping categories:

(1) *contingent workers* (5.9 million), which included wage and salary workers who do not expect their job to last and self-employed workers and independent contractors that have been self-employed for 1 year or less or do not expect to be self-employed for another year or more;

(2) *alternative workers*, which included both full-time and part-time independent contractors (10.6 million), on-call (2.6 million), temporary and contract agency workers (2.3 million); and

(3) *electronically-mediated workers* (1.6 million) who use apps and websites that connect workers to customers and also arrange for payment (i.e., online gig workers) (ibid).

The CWS estimated that more men (81.5 million) than women (71.8 million) were in the work force; and found more men (6.8 million) than women (3.8 million) working as independent contractors as their main source of income (ibid.). Of the estimated 1% (1.6 million) online gig workers, approximately 54% (870,000) were men and 46% (739,000) were women; 1.2 million were White, 276,000 were Black, 93,000 were Asian, and 265,000 were Hispanic (U.S. Department of Labor, Bureau of Labor Statistics, 2018b, table 3). Also, 63% were wage-earners (ibid.). Surprisingly, the 2017 CWS showed an overall

decline in the number of independent contractors (from 7.4% in 2005 to 6.9% in 2017) and contingent workers (from 4.1% in 2005 to 3.8% in 2017) (U.S. Government Accountability Office, 2019, pp. 11, 3).

A key explanation for the decline is that the Bureau of Labor Statistics designed the CWS to capture data on nontraditional work that is a worker's main or sole source of income rather than a supplemental source of income (Bruckner & Hungerford 2019; Abraham & Houseman, 2019). Moreover, the survey only asked respondents to identify work done in the prior week, which "may fail to capture seasonal workers or workers that supplement their income" (U.S. Government Accountability Office, 2019, p. 3). As a result, the CWS data showing no growth (and an actual decline) in independent and contingent workers in recent years is at odds with more recent tax data that suggests significant growth in "nonemployee work" (Abraham & Houseman, 2019, p. 112). In fact, tax research by the U.S. Department of Treasury and the IRS generally shows a large and growing number of self-employed taxpayers.

U.S. Department of Treasury and Internal Revenue Service Research

For example, a 2017 study by the U.S. Treasury Department's Office of Tax Analysis showed that the number of sole proprietors (i.e., taxpayers that filed a Schedule SE or Schedule C with their IRS Form 1040) grew substantially from 2001 to 2014 (Jackson et al., 2017, p. 3). Specifically, in 2014, 24.9 million individuals filed returns with sole proprietorships, and "16.8 million earned a profit (and paid self-employment tax) from those activities, representing a 34% and 32% increase, respectively, from their levels in 2001" (ibid., p. 3). Essentially all of the growth was attributable to "increases in sole proprietors who have little or no business-related deductions, and who, therefore, appear to almost exclusively provide labor services" (ibid., p. 4).

Jackson et al. (2017) also measured online gig workers that received an information return (i.e., an IRS Form 1099-MISC or an IRS Form 1099-K) in 2014 from an online platform and identified a surprisingly small group (109,700 individuals), who were 85% male and earned an average of about $24,000 (ibid., pp. 15-16, 19). The majority of income for these workers ($17,500) came from wages, and they reported a profit of $5,700 from gig work earnings (ibid., p. 19). Online gig work was the

primary source of earnings for approximately one-third of these workers and "a large share" (39%) were primarily wage earners with another 19% reporting a mix of wages and self-employment income (ibid., p.16).

Building on Jackson et al. (2017), the IRS Joint Statistical Research Program initiated a major project to analyze tax returns filed from 2000 through 2016 and to consider whether gig economy work was replacing traditional employment (Collins et al., 2019). Collins et al. determined that from 2000 to 2016, the share of workers who received IRS Forms 1099 (i.e., the "1099 workforce"), increased by 1.9 percentage points from 9.9% of the workforce in 2000 to 11.8% in 2016 (2019, p. 3). 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 (ibid. p. 3). Importantly, the authors did not include tax data from: (1) income from selling goods (e.g., Ebay or Etsy sellers) or renting assets (e.g., Airbnb hosts); (2) "informal" or "occasional" work; or (3) household or consumer-facing activities (i.e., selling goods at a farmer's market or caregiving) (ibid., p. 7), and thus did not include findings on offline gig work. Instead, the focus was on "firm-facing" or "firm-mediated" non-employee work (ibid., p. 5). Collins et al. found that the online gig workers reflected in tax data were more than 70% male, in contrast to traditional wage-only workers that were more evenly split between male (50.5%) and female (49.5%) (ibid., p. 15). However, participation in the "1099 economy" overall grew more significantly among women than men from 2000−2016 (ibid., p. 17). Notably, Collins et al. found that "the *only* growth in 1099 work since 2007 has been individuals supplementing a primary wage job" (ibid., p. 13). At the same time, the growth is "driven by very small amounts—most less than $2,500 before taking out expenses" (ibid.).

Lim et al. (2019) also used tax return data to identify a population of "independent contractors" earning labor income during the 2001−2016 tax years. Specifically, these authors developed a sample of taxpayers with non-employee compensation reported to the IRS on IRS Forms 1099-MISC or 1099-K, and the authors were able to link those earnings to the taxpayers' individual income tax returns (i.e., IRS

Forms 1040 and Forms 1040 Schedule C) and with the firms that hired them (ibid., pp. 2, 7−14). Using this sample, the authors found a 22% growth in the number of workers with independent contractor earnings from 2001−2016, (as compared to a 1.5 decrease in workers with only IRS Form W-2 earnings during the same period) (ibid., p. 14). The majority of growth (almost 70%) occurred before 2011, prior to the widespread adoption of online platforms by online gig workers (ibid.).

Importantly, Lim et al. found that the growth in aggregate independent-contractor labor was disproportionately driven by an increase in women independent contractors: more than half of the growth (55%) from 2001−2016 was attributable to an increase in women doing independent contract work (ibid., p. 19). Overall, the share of women doing independent contract work rose from 5.4% of the female workforce to 7.5% from 2001 to 2016 and the share of the male independent contract workforce remained "constant" (ibid., pp. 19−20). Also, the majority of these workers, like independent contractors generally, had independent contractor earnings that were supplemental to wage earnings (ibid.). In terms of implicated sectors, Lim et al. noted that health care, social assistance and educational services were the fastest growing sectors of independent contract work over this period (ibid.).

Federal Reserve System Surveys

Other government agencies have been working on developing reliable measures of gig work using annual surveys. In 2015, the Board of Governors of the Federal Reserve fielded the Enterprising and Informal Work Activities (EIWA) survey to: (1) more clearly understand how workers engage in informal paid work both online and offline; (2) probe workers' motivations for participating in informal work; and (3) identify data gaps (Robles & McGee, 2016). That exploratory online survey estimated that around 36% of Americans age 18 and older engaged in some kind of informal paid work activities in the six months prior to the 2015 survey (ibid., p. 4).

The EIWA survey found that the most common informal work activities were (i) house cleaning, painting, yardwork or other household maintenance (27%); (ii) babysitting or child-care services (17%); and (iii) providing personal services to individuals, such as picking up their dry cleaning, helping people

move, dog walking, running errands, and booking travel (ibid., p. 14). The EIWA survey found that the most common online activity was selling new or used goods (32%), and 11% reported renting out property (ibid., p. 16). Notably, the EIWA survey found that workers engaged in informal work as a supplemental source of income and that more women (56%) than men (44%) participated in informal work activities (ibid., p.12).

The EIWA survey served as a precursor to the Board of Governors of the Federal Reserve's ultimate inclusion of specific gig work questions into The Survey of Household Economics and Decisionmaking (SHED) in 2017 and since then (Board of Governors of the Federal Reserve System, 2018, pp. 18−20). The SHED is an annual online survey that measures the economic well-being of U.S. households and identifies potential risks to their finances (see, e.g., Board of Governors of the Federal Reserve System, 2020). SHED reports provide significant insights on the demographic trends of gig workers (see, e.g., Board of Governors of the Federal Reserve System, 2020, pp. 17−19). In recent years, the SHED has focused on gig work, which includes "childcare, house cleaning, ride sharing, selling goods, and renting out property" (ibid., p. 17). The 2019 and 2018 SHEDs showed that around 3 out of 10 adults engaged in some form of gig work in the month before the survey (ibid., p. 18; Board of Governors of the Federal Reserve System, 2019, p. 18).

While there are a variety of reasons for engaging in gig work, in 2019, 51% of SHED gig workers reported that earning "additional income" was their main reason for doing gig work, and 11% reported gig work as their main source of income (Board of Governors of the Federal Reserve System, 2020, Appendix B, Q&A GE11). Just 3% of adults in the 2019 SHED relied on gig work as a primary source of income—despite the fact that nearly one in three adults overall earned money from gig work (ibid., pp. 18−19). Notably, when adults engaged in gig work, they did so sporadically: of the adults that engaged in gig work in the month before the 2019 SHED, two-thirds (67%) spent less than 20 hours in the past month doing gig work (Board of Governors of the Federal Reserve System, 2020, Appendix B, Q&A GE20A).

Importantly, in both 2019 and 2018, only a small minority of gig workers found customers using a website or online app, indicating that the vast majority of gig work captured by the SHED is done offline. Specifically, in 2019, only 13% of gig workers responded that they had found customers with a company's website or app and received payment through the company (Board of Governors of the Federal Reserve System, 2020, Appendix B, Q&A GE5). In 2018, 10% of gig workers reported that they used a website or mobile app like Uber or Lyft to connect with customers (Board of Governors of the Federal Reserve System, 2019a, Appendix B, Q&A GE5).

The more recent 2019 SHED data found slightly more women (52%) than men (48%) spending at least 20 hours doing gig work (Board of Governors of the Federal Reserve System, 2020, with additional insight provided by Kimberly Kreiss and Cassandra Duchan, analysts with the Board of Governors of the Federal Reserve System, Division of Consumer and Community Affairs, May 22, 2020). Analysis of earlier SHED surveys (2017 and 2016) found that while, the "incidence of informal work varies little by gender," slightly more women than men engaged in informal work (Abraham & Houseman, 2019, p. 117 table 1). In terms of the kinds of gig work that women engage in, Table 1 provides insight as to the categories of SHED gig work that significantly more women than men engage in: paid caregiving (72%); dog walking, pet care and house sitting (61%); selling goods at flea markets or garage sales (56%), consignment shops or thrift stores (70%) and at planned events (73%). *[Insert Table 1 here].*

U.S. Census Bureau

Other government agencies also measure work, including the U.S. Census Bureau which administers the Survey of Income and Program Participation (SIPP). The SIPP is a nationally-representative panel survey that collects information on a range of topics relevant for assessing government program benefits distribution and collects detailed information about respondents' employment (U.S. Census Bureau, 2020).

In addition to analyzing multiple jobholding trends, SIPP data has been used to estimate populations of independent contractors and on-demand workers. For example, Bruckner and Hungerford (2019) used

2014 SIPP data to estimate that approximately 7.1 million U.S. workers in 2014 identified themselves as self-employed workers or business owners working outside of traditional employment relationships (i.e., independent contractors) (ibid., pp. 15, 20, 21 table 1) and another 3.1 million workers doing work for "an employer" or in an "other work arrangement with no employees" in specified jobs including: caregiving; house work or maintenance; yard work; and other personal services work, such as running errands (i.e., on-demand workers) (ibid., pp. 15−16, 36).

Beckhusen (2019) analyzed SIPP 2013 data to determine, inter alia, what proportion of men and women held multiple jobs in a year and what types of jobs were held simultaneously (ibid.). The overwhelming number of the 158.1 million workers (91.7%) that year were single job holders; however, of the remaining (8.3%) workers that held multiple jobs, women had a higher rate of holding multiple jobs (8.8%) than men (8.0%) (ibid., pp. 2−3, 2 table 1). The education services/health care/social assistance industry was the home to largest percentage of both women and men who were multiple job holders: it attracted 40.7% of the women with multiple jobs and 16.7% of the men with multiple jobs (ibid., p. 6 figure 4). Other researchers who looked at SIPP data calculated that, in 2016, more women (19%) than men (11%) worked part-time and that, overall, 64% of all part-time workers were women (Bond et al., 2020, p. 4).

JP Morgan Chase Institute 2018 Online Platform Economy Study

The private sector has also actively contributed to the general understanding of how many workers are doing gig work. Most notably, the JP Morgan Chase Institute's 2018 study of online gig workers (JPMCI 2018 study) includes industry, earnings and gender data from a sample of 39 million "unique, de-identified" Chase checking accounts on which the primary account holder is at least 18 years old (Farrell et al., 2018, p. 2). The sample tracked payments from 128 online platforms to 2.3 million families between October 2012 and March 2018 and found that as of March 2018, 4.5% of families had participated in online gig work at some point over the prior year, and that families cycle in and out of online gig work over the course of the year (ibid., pp. 3,18). Ultimately, the 2018 JPMCI Study estimated

that approximately 2 million households had online gig work earning in a given month, and that approximately 5.5. million households had online gig work earnings during the year (ibid., p. 23). With respect to earnings from online gig work, the 2018 JPMCI Study found that earnings from online gig work remained consistently a secondary source of income for the majority of online gig workers in the months they performed online gig work (ibid., p. 24).

The 2018 JPMCI Study is an important tool for measuring the overall growth of online gig work because it tracks actual payments flowing into gig worker 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 (Bruckner & Hungerford, 2019, p. 15). In addition, the 2018 JPMCI Study established a framework for grouping online gig workers into four distinct sectors: (1) transportation (e.g., driving goods or people); (2) non-transport work (e.g., dog walking, home care, home repair, telemedicine); (3) selling goods through an online marketplace; and (4) leasing (e.g., renting homes, rooms, parking spaces and other assets) (Farrell et al., 2018). Notably, the data with respect to the online gig transportation sector consistently shows that since 2013, ride-sharing drivers have comprised the majority of online platform workers and are in large part responsible for its extraordinary growth in recent years in terms of participation (63%) and transaction volume (58%) (ibid., p. 23).

At the same time, however, average earnings for online platform drivers have decreased markedly in recent years—by 53% from 2013 to 2018, while earnings in the property-leasing sector increased by 69% during the same period (ibid., p. 13). In fact, in 2017, the average monthly earnings of leasing-sector, online gig workers ($1,736) was more than double the average monthly earnings of each of the remaining online gig sectors: transportation ($783); non-transportation services ($741); and selling online ($608) (ibid.).

While the JPMCI 2018 Study found a majority of the online gig workforce consisted of drivers for ride-sharing platforms and that most of those workers were men, gender differences in online gig work

were restricted to the transportation sector, and women were actually more likely than men to participate in the other three sectors (ibid., p. 22; see also Hegewisch, et al, 2019, pp.58-59).

MBO Partners

Another private sector measure of the independent U.S. workforce over the past ten years is the annual "State of Independents" report prepared by MBO Partners, a private firm that provides back office services for high-wage independent contractors (see, e.g., MBO Partners, 2020). Using an online survey method, MBO Partners estimated that more than 38.2 million U.S. workers worked as "independents" in 2020—a definition that includes consultants, freelancers, contractors, solopreneurs, and temporary or on-call workers (ibid., p. 2). The MBO Partners report categorizes these independents based on hours spent doing independent work and found that 13.6 million adult Americans worked as full-time independents then (more than 15 hours per week)—down 11% from the previous year due to the "biting impact" of COVID-19 on work overall (ibid., pp. 3-4). However, another 15.8 million worked as occasional independents (doing independent work irregularly or sporadically at least once a month), up from 15 million in 2019 (ibid., pp. 3, 12). In addition, the "close-to-parity" gender participation MBO Partners had observed in prior years noticeably declined in 2020 (ibid., p. 6).

More broadly, the 2020 MBO Partners report points out that the changing demographics of the U.S. population has implications for independent workers overall: baby boomers are aging out of more traditional jobs and transitioning into independent work, and millennials are more often using independent work to break into the labor market (ibid., p. 3). Notwithstanding the impact of COVID-19, the 2020 MBO Partners report also projected that by 2025, the total number of independents would increase to 45.6 million—more than two and a half times the overall employment growth rate projected by the Bureau of Labor Statistics (ibid., p. 16).

B. Identifiable Trends & Data Gaps from Measuring Gig Work

While definitions of gig work can run the gamut making a consistent measure of overall populations of gig workers difficult, it is possible to identify some common trends with respect to the foregoing measures of gig workers.

1. Measures of online gig work tend to find more men than women engaging in online gig work. Online gig workers are often a more readily identifiable population as they work with online platforms that are subject to a variety of federal and state reporting requirements. Researchers focused exclusively on online gig work have fairly consistently found that women are less likely than men to do gig work (Hunt & Samman, 2019, p. 12; *see also* Abraham et al., 2020, pp. 23−24). For example, research done by the Overseas Development Institute on gender and online labor platforms around the world concluded: (1) women earn less than men doing online labor gig work; (2) fewer women than men participated in online labor gig work and were more likely to exit; and (3) overall, women were "much less likely" to do online gig work regularly (Hunt & Samman, 2019, p. 12).

2. There are more offline than online gig workers. While more challenging to measure, the survey and tax data that includes offline gig workers suggests that there are many more offline than online gig workers, and that there are more women than men doing offline gig work (see, e.g., Board of Governors of the Federal Reserve System, 2020, Appendix B, Q&A GE5, Lim et al. 2019, Robles & McGee, 2016).

3. Most gig workers are GigSupp Workers. Tax filings research, survey, and banking deposit data on gig worker earnings find that many individuals participate in the gig economy sporadically, often as a way to smooth out their income (Collins, et al., 2019; Abraham & Houseman, 2019; Farrell et al., 2018). Notwithstanding which industry or sector gig workers operate in, research seems to consistently find that the reason that most individuals engage in gig work is to supplement their incomes—rather than as a primary source of income (see., e.g., Board of Governors of the Federal Reserve System, 2020, Appendix B, Q&A GE11; Lim et al., 2019; Farrell et al, 2018). Hence, most gig workers are GigSupp Workers.

4. GigSupp Work is Not Reliably Measured in Existing Data

In general, self-employment is "counter-cyclical": when the labor market is weak, relatively more workers do independent contractor work (Abraham et al., 2020, p. 3; MBO Partners, 2020, pp. 3-4). Conflicting survey and administrative data sources for measuring the gig economy work reflect the need to have a regular, comprehensive measures of gig economy workers and their income (see, e.g., Abraham et al., 2020; Bernhardt & Thomason, 2017, pp. 18−19). Basically, the "government does not understand the gig economy and currently does not have the capacity to document relevant data" (Risher, 2020; see also Abraham et al., 2018). More immediately, the GigSupp Workforce is likely to continue growing (see, e.g., MBO Partners, 2020).

III. Challenges & Anticipated Needs of GigSupp Workers Saving for Retirement

Notwithstanding their projected continued growth, GigSupp Workers face a range of challenges in saving for retirement and struggle to shore up each of three main pillars of the U.S. retirement system (i.e., Social Security, employer-sponsored pensions or retirement savings plans, and individual savings). Gig workers have lower tax compliance rates, limited cash flow and fewer opportunities to participate in employer-sponsored retirement plans. These challenges are acutely problematic for women engaged in GigSupp Work as they exacerbate an existing gender retirement wealth gap.

A. Self-Employment Tax Compliance

Research on gig workers shows that current tax rules impact how (and whether) gig workers properly report their income, which has implications for workers' Social Security contributions (see, e.g., Bruckner & Hungerford, 2019). Different tax rules apply depending on how gig workers earn their income (see, e.g., Internal Revenue Service, 2020c). In addition, how gig workers are classified (i.e., either as employees or independent contractors) matters for tax administration purposes (Thomas, 2018). Workers performing services outside of traditional employment relationships (e.g., independent contractors and most gig workers) are self-employed for federal tax purposes (U.S. Government Accountability Office, 2020c; Bruckner & Hungerford, 2019; Collins, et al., 2019; U.S. Department of Treasury, Inspector General for Tax Administration, 2019). Unlike traditional employment where employers are required to

withhold income and Social Security taxes from the wages they pay their employees, there is no required withholding of payroll or income tax on amounts paid to self-employed workers. Instead, payor businesses only report to the IRS on IRS Form 1099s—and only when required to do so.

As illustrated in Figure 1, different tax rules can apply to individuals performing the same services depending on whether the worker is classified as an employee or an independent contractor and also on whether the worker participates in an online platform. (U.S. Government Accountability Office, 2020c, p. 8 figure 2).

[insert Figure 1 here]

Further complicating matters is the fact that entirely different sets of tax rules apply to gig workers performing services than gig workers selling goods or renting assets. In terms of retirement financing, the rules regarding self-employment tax and information reporting seem most often to trip up gig workers with respect to tax compliance (Bruckner, 2016).

1. Implicated Tax Rules

Businesses that hire self-employed workers to perform services are generally not required to withhold income taxes or pay the employer portions of payroll taxes (i.e., Social Security and Medicare taxes) on these workers earnings, and, instead, self-employed workers are required to remit the equivalent 15.3% of payroll taxes for Social Security and Medicare taxes on their net self-employment earnings of $400 or more on a IRS Form 1040 Schedule SE pursuant to the Self-Employment Contributions Act (SECA, Public Law No. 83-591, 68A Statutes at Large, 353). These workers are allowed to deduct the employer-equivalent portion of self-employment tax for income tax purposes (Internal Revenue Service, 2020e).

Self-employed workers with service income typically use an IRS Form 1040 Schedule C (Profit or Loss from a Business, https://www.irs.gov/pub/irs-pdf/f1040sc.pdf) to report their self-employment income and income tax. Similar to gig workers who sell services, some sellers and renters of personal property are engaged in a service business for profit and are required to report their earnings as self-

employed workers (e.g., using IRS Form 1040 Schedules C and SE). On the other hand, the renters of real property usually must report their income for income tax purposes on IRS Form 1040 Schedule E (Supplemental Income and Loss, https://www.irs.gov/pub/irs-pdf/f1040se.pdf) (Internal Revenue Service, 2020d); but they may not be subject to self-employment tax unless they provide services (*see e.g.*, Airbnb, 2016, p. 17). In addition, complex rules govern the rentals of personal residences (e.g., personal homes and vacation homes) (see, e.g., Internal Revenue Service, 2020d; Oei & Ring, 2019, pp. 348−349).

Importantly, if a taxpayer has self-employment earnings and will owe at least $1,000 in income tax and/or self-employment tax on amounts not subject to withholding, IRS rules require advance quarterly payments of estimated tax (i.e., on April 15, June 15, Sept. 15 and Jan. 15) (Internal Revenue Service, 2020f, pp. 8). Failure to remit these quarterly-estimated payments can create audit and penalty exposure for self-employed taxpayers (see, e.g., Bruckner & Hungerford 2019, p. 3; Oei & Ring, 2019, pp. 351−352).

Businesses that make payments to independent contractors of $600 or more for services (per year) that constitute non-employee compensation are generally required to report those payments to the IRS and to the self-employed workers on the recently created IRS Form 1099-NEC (Nonemployee Compensation, https://www.irs.gov/pub/irs-prior/f1099nec--2020.pdf) (Internal Revenue Service, 2020a). Prior to 2020 (and by mistake thereafter), payments for $600 or more in nonemployee compensation, as well as payments for at least $600 in rents and at least $5,000 in sales (other than to retail establishments) were reported on IRS Form 1099-MISC (a/k/a "the IRS Form 1099-NEC [previously MISC] threshold" (Miscellaneous Income, https://www.irs.gov/pub/irs-pdf/f1099msc.pdf; see also IRC § 6041). However, if the customer is not a business and makes a personal payment to a gig worker directly for services (e.g., when a homeowner pays a lawn care service or a roofer), there is generally no reporting required (U.S. Government Accountability Office, 2020c, p. 8).

A different IRS Form 1099 is required when an online platform (e.g., Uber, Lyft, Ebay, Airbnb) facilitates and processes electronic payments for transactions between customers and service providers or

sellers. In those instances, the IRS treats the online platform as a third-party settlement organization (TPSO), and requires the payor to report the payments on an IRS Form 1099-K (Payment Card and Third Party Network Transactions, https://www.irs.gov/pub/irs-pdf/f1099k.pdf; see IRC § 6050W; Bruckner & Nellen, 2019, p. 486). However, in an effort to reduce unnecessary and duplicative filings for companies that facilitate online sales (e.g., eBay) or processed electronic payments (e.g., PayPal), Treasury and IRS issued regulations and guidance that do not require most online platforms to provide an IRS Form 1099-K *until* the seller or service provider has at least 200 transactions that total $20,000 each year ("the 200/$20K IRS Form 1099-K threshold") (U.S. Government Accountability Office, 2020c, p. 23).

Notably, the U.S. Department of Treasury and IRS have concluded that the 200/$20K IRS Form 1099-K threshold and not the $600 IRS Form 1099-NEC [previously MISC]threshold is exclusively required for electronic payments processed by online platforms that are TPSOs (i.e., the "Tie-Breaker Rule") (U.S. Department of Treasury, Inspector General for Tax Administration, 2019, pp. 31−35). Consequently, online gig workers who earn less than $20,000 or have fewer than 200 transactions in a calendar year typically do not receive either a Form 1099-NEC [or MISC] or a Form 1099-K from the online platforms that they use to connect with their customers (Bruckner & Hungerford, 2019; Bruckner & Nellen, 2019; Bruckner 2018; Bruckner, 2016). In other words, online gig workers (and the IRS) only receive IRS information reporting forms from online platforms when sellers and service providers have both $20,000 of payments *and* 200 transactions. This has consequences for gig worker tax compliance.

2. Tax Compliance and Gig Workers

To be sure, independent contractors are: (1) required to keep track of and report their income—whether it shows up on an IRS Form 1099 or not; (2) they are required to then calculate and remit any income and/or self-employment tax owed; and (3) if they owe at least $1,000 of tax, they must make quarterly-estimated payments (see, e.g., Internal Revenue Service, 2020f). When there is no information reporting compliance falls to 37% (U.S. Department of Treasury, Inspector General for Tax Administration, 2019, p. 3). In short, noncompliance is greatest among self-employed workers "for which third-party information

reporting is not separately reported to the IRS and is very difficult to obtain" (Holzblatt & McGuire, 2016, p. 2). In contrast, tax compliance is high (93%) when amounts are subject to information reporting and even higher (99%) when subject to withholding (e.g., wages) (U.S. Department of Treasury, Inspector General for Tax Administration, 2019, p. 3).

In fact, there is an extensive literature on the tax compliance of self-employed taxpayers that shows self-employed taxpayers "consistently and substantially" underreport their income for tax purposes (Hurst et al., 2010, p. 2; Internal Revenue Service, 2019). Essentially, when income is "visible" to the IRS through information reporting or withholding, taxpayers are far more likely to properly report their income and pay taxes owed (see, e.g., Internal Revenue Service, 2019, p. 3). In other words, "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" (Viswanathan, 2018, p. 7).

With respect to gig workers, most online platforms, including Uber, Lyft, Airbnb, Etsy, use the 200/$20K IRS Form 1099-K threshold for furnishing IRS Form 1099-Ks to their online gig workers, which is consistent with IRS tax rules (Bruckner & Hungerford, 2019; Bruckner 2018). Because the majority of online gig workers have annual earnings below $20,000, research has consistently found that the earnings of the vast majority of online gig workers are not subject to information reporting (see, e.g., U.S. Government Accountability Office, 2020c; Bruckner & Hungerford 2019; U.S. Department of Treasury, Inspector General for Tax Administration, 2019; Bruckner; 2018; Bruckner, 2016). For example, a 2020 U.S. Government Accountability Office study on tax compliance of online gig workers concluded that most online gig workers did not receive information returns (e.g., IRS Forms 1099) from the platforms they work with, which constrained the IRS's ability to verify tax compliance and also resulted in many workers being unaware that their online platform earnings are taxable (U.S. Government Accountability Office, 2020c, p. 14). In fact, in 2019, the U.S. Department of Treasury's Inspector

General released a report finding that potentially 134,089 online gig workers owing approximately $481 million in self-employment taxes could have been potentially assessed by IRS but weren't (U.S. Department of Treasury, Inspector General 2020, p. 2).

Compounding these compliance challenges is the reality that gig workers, even those who are experienced self-employed taxpayers, are not always familiar with their tax filing obligations. A 2016 survey of online gig workers who were members of the National Association of the Self-Employed found that:

- only 32% of online gig workers surveyed received an IRS Form 1099 for their platform earnings;
- 34% did not know whether they were required to file quarterly-estimated-tax payments with the IRS on their on-demand platform income;
- 36% did not understand what kind of records they needed for tax purposes for business income and expenses;
- 43% were unaware as to how much they would owe in taxes and did not set aside money for taxes on their gig income; and
- almost half did not know about any tax deductions, expenses, or credits related to their on-demand platform income (Bruckner, 2016, pp. 10−12).

Poor tax compliance is not limited to online gig workers that do not receive IRS Form 1099-Ks. For example, Lim et al. (2019, p. 9) found that while 85% of independent contractors that received an IRS Form 1099-MISC or an IRS Form 1099-K for the 2016 tax year could be matched to an IRS Form 1040 for that year, the remaining 15% could not (ibid., p. 10). All in all, government research suggests that a significant percentage of self-employed workers are not properly reporting all of their taxable income—even those that are receiving IRS Forms 1099 (see, e.g., Internal Revenue Service, 2019; U.S. Government Accountability Office, 2020c; U.S. Department of Treasury, Inspector General for Tax Administration, 2019).

The misreporting of self-employment income by workers adds up. The most recent IRS estimates available identified a $441 billion gross annual tax gap for the 2011−2013 tax years (i.e., the difference between the amount of tax that is owed and the amount ultimately paid) and found that of the total $352 billion underreporting tax gap, some $110 billion was attributable to individuals failing to report all of their business income, and another $45 billion was attributable to failing to correctly report their self-employment taxes (Internal Revenue Service, 2019, p. 8 figure 1). For example, Collins et al. (2019, p. 9) found that of those gig workers that received an IRS Form 1099-K, 43% did not file any IRS Form 1040 Schedule C or Schedule SE with respect to their online gig earnings.

Recent research has measured the Social Security implications of populations of gig workers failing to contribute payment of self-employment taxes and reporting income on an IRS Form 1040 Schedule SE and estimated that underreporting of self-employment tax by populations of independent contractors and on-demand workers resulted in approximately $6.84 billion in unpaid self-employment taxes in 2014 (ibid., pp. 20−21). While most of these gig workers would likely not prioritize shoring-up the solvency of the Social Security trust fund with their earnings, as described below, these workers do not always have access to other retirement savings strategies; they will most likely have to rely on Social Security as their primary income in retirement; and their Social Security benefits would be larger if they made the full amount of their required self-employment tax contributions.

3. Implications for Social Security

Social Security is the most common source of retirement income for households aged 65 or older, with almost nine out of ten individuals age 65 and older receiving benefits (National Academy of Social Insurance, 2020, p. 7). Social Security benefits are primarily financed (89%) by worker and employer Social Security contributions made via the payroll tax and the self-employment tax; and the remainder comes from interest on the Treasury bonds held by the Social Security Trust Fund (7.6%) and from taxes on Social Security benefits (3.4%) (ibid., p. 20). A worker's earning history and age at retirement are used to calculate their monthly Social Security benefits (Social Security, 2020a). A worker is eligible for

Social Security after he or she works in a Social Security-covered employment for 10 or more years (i.e., 40 earnings credits or 4 credits/year for ten years) (Bruckner & Hungerford, 2019, p. 30). As of December 2019 there were 64 million Social Security beneficiaries, of which, 48.2 million beneficiaries (75%) were retired workers and their dependents (Social Security Administration, 2020b, p. 15).

In 2014, less than half (43.8%) of households received retirement benefits from sources *other than* Social Security, and only 61.8% received income from other assets (Social Security Administration, 2016, p. 8). Social Security benefits play a critical role in reducing poverty among the elderly. In 2017, 14.1% of the Americans over age 65 were poor, but without Social Security, 48.7% would have been poor (an increase of more than 34%) (Congressional Research Service, 2019a, pp. 16−18). Moreover, Social Security benefits are especially important for people of color. Table 2 shows that, across racial and ethnic categories in 2016, the majority of households aged 65 and older relied on Social Security benefits for at least 50% of their income and that the greatest reliance occurred in Black (69%) and Hispanic (73%) households (National Academy of Social Insurance, 2020, p. 8).

[insert Table 2 here]

Women tend to rely more heavily on Social Security than men; the majority (55%) of adult Social Security beneficiaries are women in 2019 (Social Security Administration, 2020b, p. 19). On average, however, the monthly Social Security benefits that women receive are just 80% of what men receive (Enda & Gale, 2020). "The reality is that for many women, Social Security is their main or only source of retirement income" (Women's Institute for a Secure Retirement (WISER), 2020a, p. 2).

"At the same time, at least 65% of the caregivers in the United States are women and, on average, women take 9 years out of the paid workforce for family caregiving" (ibid.).   This corresponds to lower earnings over time and, ultimately to lower Social Security benefits. Motherhood, specifically, seems to play a significant role in reducing women's Social Security benefits, in that it lowers lifetime earnings, which translates to lower Social Security benefits. (Rutledge et al., 2017, pp. i, 7−12). "[W]omen with one child receive 16% less in benefits than non-mothers, and each additional child reduces benefits by

another 2 percent" (ibid., p. i). Although negligible among women receiving spousal benefits, this "Social Security motherhood penalty" can be particularly harsh for mothers whose Social Security benefits depend only on their own earnings histories (ibid., p. i). In addition to caring for children, women provide the majority (two-thirds) of elder care, which can lead to "lost benefits and promotions if work interruptions occur, in addition to out-of-pocket costs" (Merrill Lynch Wealth Management & Age Wave, 2019, p. 14).

However, unpaid caregiving by women is only half the story as women also have earnings and retirement savings challenges when they are paid as caregivers. Women comprise the vast majority of the low-paid, adult-care workforce. In 2017, 88% of paid adult care workers doing in-home care were women, and 85% of paid adult care workers in institutional settings were women (ibid., p. 4 figure 1). Notably, while Black women comprise just 13% of working women, they are "overrepresented" as paid caregivers as are Hispanic women. (ibid., pp. 5, 6 table 1). Current Social Security benefits do not account for any lost or reduced earnings attributable to unpaid caregiving responsibilities (see, e.g., Women's Institute for a Secure Retirement [WISER], 2020b), and these problems will only continue to grow along with the projected need for additional paid and unpaid caregiving in the coming years (Hegewisch, et al., 2019, pp. 61-63).

B. Limited Earnings and Retirement Plans

However, Social Security was not designed to be the only source of income for retired Americans (U.S. Government Accountability Office, 2020b, p. 4), and some GigSupp Workers have retirement savings in employer-sponsored retirement plans from their full-time employment (see, Jackson, et al., 2017), however, this type of retirement income is less common. To be sure, virtually all workers can save for retirement with Individual Retirement Accounts (IRAs), but relatively few Americans have IRAs, and even fewer make annual contributions (Holden & Schrass, 2019). Further, the rates of individual savings in the U.S. has generally declined over the last forty years (Federal Reserve Bank of St. Louis, 2021).

1. GigSupp Workers Struggle with Cash Flow

Recent survey data on freelancers shows that the most common barrier to retirement savings for these workers is inadequate earnings, followed by the inability to save due to the unpredictability of gig work (Small Business Majority, 2017, p. 6).

[insert Figure 2 here]

The inability to set aside money for retirement means that many gig workers do not contribute to retirement savings, other than by making their Social Security contributions through the self-employment tax. For example, in a 2017 survey of freelancers, Small Business Majority found that 40% of freelancers did not have a retirement plan (ibid., pp. 3, 6 figure 3; see also Brown, 2017, p. 14). In fact, other private sector survey data finds that lack of retirement savings is one reason gig workers are motivated to work. For example, almost one-third of workers that supplement their traditional full-time employment income with gig earnings do so because of a lack of retirement savings (Betterment, 2018, p. 3), and that number increased as workers approached retirement age.

Federal tax data from the IRS can offer some insights as to the retirement contributions of the majority of gig workers who engage in both gig work and traditional employment. For example, in 2014, 41.9% of wage-only earners made contributions to a pension or IRA, but only 21.3% of workers with some wages and some self-employment income made such contributions—either to an employer-sponsored plan or to an IRA (Jackson et al., 2017, p. 37 table 9). Absent traditional employment, even fewer gig workers made contributions to retirement savings: only 18.8% of online platform workers and 7.8% of sole proprietors made contributions (ibid.). For all categories of workers, contribution rates increased as income increased (ibid., p. 38 table 10). While adequate cash flow is the most obvious challenge to gig workers' ability to save for retirement, other retirement savings challenges stem primarily from the classification of gig workers as independent contractors for tax and labor law purposes.

2. GigSupp Workers Often Don't Have Access to Employer-Retirement Plans

Workers in alternative and nontraditional work arrangements are typically ineligible for employer-provided retirement or health care benefits (U.S. Government Accountability Office, 2015; Rutledge, 2020; Rutledge & Wettstein, 2020; Applebaum et al., 2019, p. 21). More specifically, independent contractors are not permitted to participate in employer-sponsored plans that provide health care and pension coverage, and businesses rarely want to provide those fringe benefits to their part-time and temporary workers (see, e.g., Rutledge, 2020; Rutledge & Wettstein, 2020; Oranburg, 2018). Overall, contingent and self-employed workers are less likely to have a pension than traditional workers (PEW Charitable Trust, 2019a; PEW Charitable Trust, 2019b). For example, according to the Bureau of Labor Statistics, just 18.4% of contingent workers participated in an employer-sponsored pension in 2017, compared to 43.4% of traditional workers (U.S. Department of Labor, Bureau of Labor Statistics, 2018a, p. 20, table 9).

Interestingly, research has found that working women were actually more likely to work for employers that offered pension plans, which could be attributable to the industries and sectors in which women tend to participate (e.g., health and education, government, and non-profit sectors), but that working for those employers does not guarantee eligibility for pension benefits (Bond et al., 2020). Collinson et al. (2020, pp. 16, 50) found that while 72% of the men in a recent Transamerica Center for Retirement Studies survey were offered the opportunity to participate in a 401(k) or similar plan, just 64% of the women were participating. Similarly, Bond et al. (2020, pp. 4, 4 table 1) in reviewing 2014 SIPP data found that while the percentage of women workers offered a pension plan increased by around 10% from 2012 to 2014, plan eligibility and participation rates remained about the same.

Even if an employer has an employer-sponsored retirement plan, part-time workers, the majority of whom are women, will often find it difficult to satisfy the plan's eligibility requirements in order to earn any pension benefits (see, e.g., Bond et al., 2020, p. 5).

C. The Gender and Racial Retirement Wealth Gaps Impact Anticipated Needs of GigSupp Workers

There is no question that tax compliance, cash flow struggles and access to employer-sponsored retirement plans operate to create retirement financing issues specific to GigSupp Workers, the majority of which are women. What is more, women have greater difficulty in achieving retirement income security than men (see, e.g., U.S. Government Accountability Office, 2020b, pp. 8−9). “Women face unique challenges saving [for retirement] largely stemming from a gender pay gap that persists into a retirement wealth gap” (Bond, et al., 2020, p. 1). Of particular concern, women aged 65 or older have less retirement income than men, and they are more likely to be living in poverty (see, e.g., U.S. Government Accountability Office, 2017, pp. 58−59). Women are also less likely to work full-time and be covered by an employer-sponsored pension plan than men, and they tend to have less retirement savings (see, e.g., VanDerhei, 2019). Moreover, research consistently finds women’s retirement wealth gap is exacerbated by additional factors including longer lifespans, higher health care costs, caregiving responsibilities, and lower financial literacy (see, e.g., U.S. Government Accountability Office, 2020b, pp. 8−9; Enda & Gale, 2020; Garnick, 2016; Collinson et al., 2020). Women also have less retirement planning and investing confidence (Copeland, 2020; Merrill Lynch Wealth Management & Age Wave, 2019; U.S. Government Accountability Office, 2020b, pp. 25−35). At the same time, the fact that more women than men pursue higher education degrees has resulted in women owing almost two-thirds, or approximately $929 billion, of the outstanding student loan debt in the United States (AAUW, 2020). Student loan debt coupled with the gender pay gap are major factors that contribute to the greater challenges women face with respect to their retirement income security (ibid.).

In addition to lower earnings and less work, some research shows that while women may have confidence in paying bills or budgeting, there is a significant confidence drop when it comes to managing financial investments (Merrill Lynch Wealth Management & Age Wave, 2019). In fact, working women in general have relatively low financial literacy, and many have trouble making ends meet and saving for emergencies and for retirement (Lusardi & de Bassa Scheresberg, 2017; see also Lusardi & Mitchell,

2014; Collinson et al., 2019; U.S. Government Accountability Office, 2020a, pp. 17−19). Financial literacy is a key driver for retirement planning (Lusardi & Mitchell, 2014) and debt management (Lusardi et al., 2020).

The gender retirement wealth gap is more pronounced for women of color, who, on average, have less savings for retirement than their White counterparts (see, e.g., Hassani, 2018). For example, a recent analysis of data from the Survey of Consumer Finances, found that as recently as 2016, "the average White woman had $43,000 more in retirement savings than the average Black woman" (ibid.). This racial retirement wealth gap is reflected in the poverty rates of older women of color: for all Black and Hispanic 65 years old and older, the poverty rates are 20% and 22%, respectively (as opposed to 10.5% for White women and 5.8% for White men) (Women's Institute for a Secure Retirement, 2020a, p. ii).

There are significant and long-standing disparities in the wealth and retirement savings of families of different races and ethnicities. However, Social Security plays a critical role in addressing some of the systemic inequities. Research focused on the racial retirement wealth gap has found that there is no question that "Social Security is the most equal and most important form of retirement wealth for most minority households" (Hou & Sanzenbacher, 2020, p.11). Compared to Social Security, "Black households had just 14 percent the non-Social Security wealth of White households and Hispanic households just 20 percent (in 2016), but 74 percent and 75 percent the Social Security wealth" (ibid.).

All in all, women do not save as much as men for retirement (Garnick, 2016; VanDerhei, 2019; Collinson et al., 2020, pp. 16, 52; Scholl, 2020; U.S. Government Accountability Office, 2020b, pp. 8−9), and women generally have less total wealth than men during their working years and at retirement (Bond, et al., 2020; Kapadia, 2018). The gender retirement wealth gap is even more pronounced for women of color (see, e.g., Hassani, 2018).

D. The Impact of COVID-19

By March 2020, it was apparent to policymakers that gig workers appeared to be particularly vulnerable to the economic consequences of COVID-19 (see, e.g., Long et al., 2020). More broadly, the

COVID-19 pandemic forced policymakers to address the structural and institutional barriers that had precluded self-employed workers from claiming unemployment, paid-leave, and sick-leave benefits more readily available to traditional employees. In mid-March of 2020, Congress passed the Families First Coronavirus Response Act of 2020 (FFCRA), which included refundable income tax credits to offset self-employment tax for self-employed workers in need of paid family or sick leave (Public Law No. 116-127, 134 Statutes at Large 177, §§ 7001−7004). For a self-employed worker, the qualified sick and family leave refundable income tax credits together could total $12,000 (Chiang et al., 2020, p. 1574).

[insert Table 3 here]

In a quick follow-up to that legislation, Congress then passed the Coronavirus Aid, Relief, and Economic Security Act (CARES Act), which included more than $1.7 trillion in emergency funding for a range of COVID-19-related programs including: economic stimulus payments for taxpayers, employee retention tax credits, emergency small business loans, payroll tax deferrals, and extended unemployment benefits (Congressional Budget Office, 2020). The CARES Act also specifically allowed self-employed workers to qualify for emergency loans and provided Pandemic Unemployment Assistance (PUA) benefits to self-employed workers and certain other workers not otherwise eligible for regular unemployment benefits (i.e., gig workers) (see, e.g., Table 3; Chiang et al., 2020, p. 1574).

Notwithstanding the willingness of Congress to provide emergency benefits to millions of gig workers impacted by COVID-19, existing data and research proved to be wildly insufficient for calibrating an effective response. For example, in April of 2020, the Congressional Budget Office estimated that 5 million individuals (and wage and salary workers without sufficient work history to qualify for regular unemployment benefits) would claim around $35 billion in PUA benefits in 2020 and 2021 (Sapirie 2020; Congressional Budget Office, 2020, pp. 9−10). As it turned out, however, some 14.5 million claims were filed PUA benefit claims by the end of August of 2020 (U.S. Department of Labor, 2020, p. 4).

In addition, the CARES Act also authorized certain coronavirus-related distributions (CRDs) from pensions and IRAs of up to $100,000 in 2020 and increased the defined contribution plan loan limits to the greater of $100,000 or 100% of the vested account balance (Internal Revenue Service, 2020b; VanDerhei, 2020a). As a result of these legislative changes, the COVID-19 pandemic is likely to have an adverse impact on the retirement savings of many workers (see, e.g., Mitchell, 2020; VanDerhei, 2020b). Moreover, many employers and employees are likely to reduce their contributions, and many employees and retirees may spend down some of their current retirement savings (VanDerhei, 2020b). Of course, much depends on how long the COVID-19 pandemic lasts. One early study estimated that the combined impact of the 2020 market crisis and reasonable assumptions with respect to future employee and employer behavior would only reduce retirement savings shortfalls by around 4.5% with intermediate assumptions and by 11.2% with pessimistic assumptions (ibid.). To be sure, a more recent study suggests that workers who take large coronavirus-related distributions or loans from their retirement plans (as permitted by the CARES Act) and who do not fully repay them could face significant reductions in their retirement account balances (VanDerhei, 2020a). In addition, increases in unemployment are sure to have an adverse impact on retirement savings and retirement preparedness (see, e.g., Munnell et al., 2020; U.S. Government Accountability Office, 2020b).

Also, unlike earlier recessions, the early effects of this recession had a disproportionate impact on workers over age 65 (see, e.g., Bui et al., 2020) as well as women (see, e.g., Carrazana, 2020). Another analysis found that 2.9% older workers (aged 55−70) left the labor force from March through June of 2020, and that analysis projected that as many as 4 million older workers will eventually be pushed out of the workforce by the COVID-19 pandemic and are at risk of involuntary retirement before they are ready (Papadopoulos et al., 2020, pp. 1−3; see also Davis et al., 2020). Moreover, even if these older workers do find new jobs, they can expect to have lower earnings and benefits than before (Papadopoulos et al., 2020, p. 3). Women and older minority workers were hit particularly hard by

pandemic job losses; in particular, older, minority women were hit the hardest: 19.5% lost their jobs from March through June of 2020 (ibid., p. 4).

The impact of the COVID-19 pandemic on women is particularly notable in that as of December 2019, women briefly outnumbered men in the paid workforce for just the second time, but those gains were virtually eliminated as COVID-19 swept the nation as women were overrepresented in some of the "hardest-hit industries such as leisure and hospitality, health care and education" (Schmidt, 2020). The economic fallout has not been confined to those industries, however, as "40% of all working women are employed in government and in health and education services compared with just 20% of working men" (Karageorge, 2020, p. 1). In addition to the job losses triggered by the pandemic, the related school and daycare shutdowns have also had a huge impact on the working women who "provide the majority of childcare" and now have children at home in the absence of full-time school and daycare (ibid.). Congress has already heard from experts on women in retirement that the "pandemic's economic consequences have fallen heavily on women of color…[and that] the pandemic will likely have negative long-term effects on women's lifetime incomes, wealth, and overall economic security" (see, e.g., Matsui, 2020, pp. 3−4). When women take time out of the paid workforce, it can exacerbate the existing gender retirement wealth gap.

IV. Policy Options

Given the tax noncompliance and retirement financing gap that GigSupp Work triggers for millions of workers as well as its implications for the retirement wealth gap women face, policymakers may want to consider policy changes to improve the retirement income security of the growing number of Gig Supp Workers, most of whom are women.

A. Facilitate GigSupp Worker Tax Compliance

As part of shoring-up Social Security benefits for gig workers, Congress could consider changes to information reporting rules for gig workers to increase self-employment tax compliance. This matters because 89% of the funding for Social Security benefits is from payroll and self-employment tax imposed

on employers and workers, and most Americans rely on Social Security for a significant portion of their retirement income. When workers fail to make their Social Security tax contributions, the finances of the Social Security system suffer, and the workers' own retirement income security is endangered (Bruckner & Hungerford, 2019).

1. Revise the Tie-Breaker Rule

Revising the "tie-breaker rule" is the most immediate means to address low rates of self-employment tax compliance, and could immediately facilitate tax compliance of online gig workers, most of whom "are likely not receiving an information return" (U.S. Government Accountability Office, 2020d, p. 12). As Figure 3 shows, the U.S. Government Accountability Office found that toughening the "tie-breaker rule" would result in: (1) more reporting on IRS Form 1099-NECs [previously MISCs] rather than on IRS Form 1099-K; and (2) TPSOs that only process payment would "generally not be affected by a change to the tie-breaker rule" (Ibid., p. 24).

[insert Figure 3 here].

Notably, amending the IRS "tie-breaker rule" would include additional information reporting for rental activities (i.e., income generated via online platforms such as Airbnb or VRBO).

2. Amend the IRS Form 1099 Filing Thresholds

Congress could also consider aligning the $600 IRS Form 1099-NEC [previously MISC] and the 200/$20K IRS Form 1099-K filing thresholds. In its report on online gig worker tax compliance, the U.S. Government Accountability Office (2020c, p. 27) found that "[a]ligning reporting thresholds with today's economy would support tax administration for IRS . . . and help reduce compliance burned on workers, since they would have clear information on their earnings."

3. Allow for Expanded Withholding on Payments to Self-employed Workers

In addition, it could make sense to impose mandatory withholding for quarterly estimate payments or at least permit companies to offer voluntary withholding (see, e.g., National Taxpayer Advocate, 2018, pp. 103−104). For example, the IRS might allow independent contractors and online platforms to enter into

voluntary withholding agreements without them facing any risk that the IRS would use those agreements to challenge their worker classification determinations (ibid.). Under current law, the IRS could issue rules allowing for voluntary withholding if the Secretary of Treasury "finds that withholding would be appropriate and would improve tax administration, and if the company and independent contractor agree to such withholding" (U.S. Government Accountability Office, 2020c, p. 28). In terms of impact, research indicates that voluntary withholding facilitates tax compliance of all kinds of independent contractors, and allowing voluntary withholding by online platforms could specifically address online gig worker tax compliance challenges (ibid).

B. Social Security and Supplement Security Income (SSI) Reforms

In recognition of the retirement wealth gap facing women and the reality that so many women engage in GigSupp Work where their earnings are not subject to withholding or information reporting to shore-up income shortfalls, policymakers could make changes to the Social Security programs that help alleviate poverty rates of older women.

1. Update the Supplemental Security Income Program

To directly impact the finances of older women, Congress could consider making long-overdue updates to the Supplemental Security Income (SSI) program (Forman, 2016). Eligibility for the means-tested program is limited to individuals 65 or older and those who are blind or disabled (Social Security Administration, 2020c). Under current rules women are two-thirds of the older Americans that claim SSI benefits (Justice in Aging, 2019a). Congress has not updated the asset limits for SSI program ($2,000 for an individual, $3,000 for a couple) for more than 30 years, and that limit makes it "virtually impossible for an SSI recipient to save for retirement" (Entemacher and Matsui, 2013, pp. 762−763; Justice in Aging, 2019b).

2. Improve Social Security Benefits for Women

There are a variety of ways to increase Social Security benefits for women. For example, some have suggested: (1) increasing the minimum benefits available under Social Security (Li, 2020; National

Academy of Social Insurance, 2020, p. 34); (2) increasing benefits for widowed spouses in low earning couples (Li, 2020); (3) reducing the marriage duration required for divorced spousal benefits from 10 years to, say, 5 or 7 years (Congressional Research Service, 2019b, p. 18−19); or (4) providing caregiver credits (ibid., pp. 22−23). Current Social Security benefits do not account for any lost or reduced earnings attributable to unpaid caregiving responsibilities, and many women take time out of the paid workforce for caregiving responsibilities and Social Security benefits could be reformed to reflect unpaid caregiving so that caregivers could qualify for larger Social Security benefits (see, e.g., Congressional Research Service, 2019b, pp. 22−23; Entmacher & Matsui, 2013, pp. 756−757; National Academy of Social Insurance, 2020, p. 34; Enda & Gale, 2020).

C. Focus on Financial Literacy

Congress and researchers have become increasingly aware of the critical role that financial literacy plays in the retirement security of women (U.S. Government Accountability Office, 2020b; Lusardi & Mitchell, 2014). A September 2020 hearing of the U.S. Senate Special Committee on Aging reviewed the findings of a U.S. Government Accountability Office report commissioned by Congress to study the financial security of older women and members discussed the importance of personal financial education as the report's authors noted "how a lack of personal finance education hindered [women's] retirement security" (U.S. Government Accountability Office, 2020b, p. 17). Targeted ideas on how to improve personal financial education for women include: incorporating personal finance learning into school curriculums; creating online tools; providing older women estate planning guides; and encouraging employers to "provide financial planning sessions for their employees (not just those nearing retirement), and/or access to financial advisors" (ibid., p. 18).

D. Address Gig Worker Data Gaps in Tax Data

The COVID-19 pandemic has demonstrated the critical need for a greater understanding of GigSupp Work for tax and benefits policy purposes. Going forward, however, the CARES Act tax credits and unemployment insurance programs will provide some new data for developing more comprehensive

estimates about the number and demographics of self-employed workers, in general, and gig workers, in particular; but the new data will take years to develop.

In the meantime, the U.S. Department of Treasury and the IRS could prioritize research projects designed to provide insight on gig workers and their earnings as it relates to retirement. Targeted areas for research could include: (1) tax compliance of offline gig workers; (2) the self-employment tax gap; and (3) overall analysis of self-employment tax data with respect to age, race, and gender. More broadly, the IRS and Congress could do a much better job of collecting and analyzing information about how our tax laws affect women and people of color (see, e.g., Bruckner, 2020; O'Neal & Versprille, 2020).

V. Conclusion

Existing tax and retirement law rules have not worked to facilitate tax compliance, and instead triggered a retirement financing gap for GigSupp Workers, most of whom are likely to primarily rely on Social Security in retirement. This is acutely problematic for women, as they have longer life spans and higher health care costs as they age and face a gender earnings gap while they are working—all of which contribute to a retirement wealth gap when they retire. These challenges are even more consequential for women of color. Motherhood, too, plays a role in lowering women's retirement income. However, it could be that lower earnings during working years and the need for flexibility to accommodate caregiving is what motivates so many women to engage in gig work in the first place. Moreover, for many women, the challenges of financing retirement are compounded by overall lower financial literacy. These problems are not insurmountable—but the solutions do require inclusive data and research on the gender difference in GigSupp Work engagement and retirement security. Moreover, many analysts now believe that our system of workplace-based benefits is obsolete and that more portable benefits are better suited to the modern workplace (Reder et al., 2019; Mitchell, 2020). Critical policy groundwork for portable benefits for gig workers has already been done by the Aspen Institute Future of Work Initiative (Reder et al., 2019). In addition, a potential impact of the COVID-19 pandemic may well be an acceleration of the trend towards more GigSupp Work.

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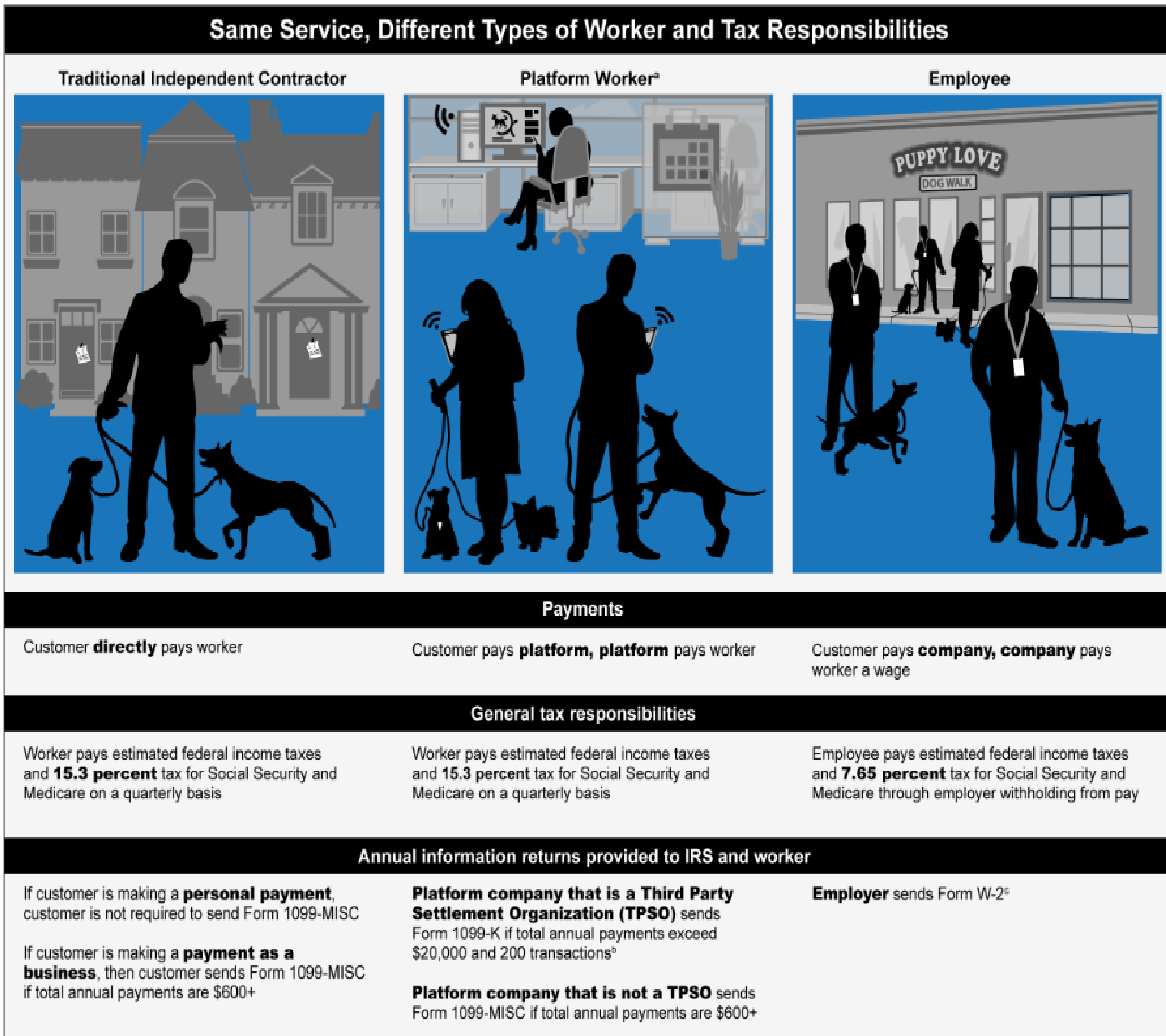
VII. Figures and Tables

Figure 1 **Different Work Arrangements and Their General Tax Responsibilities**

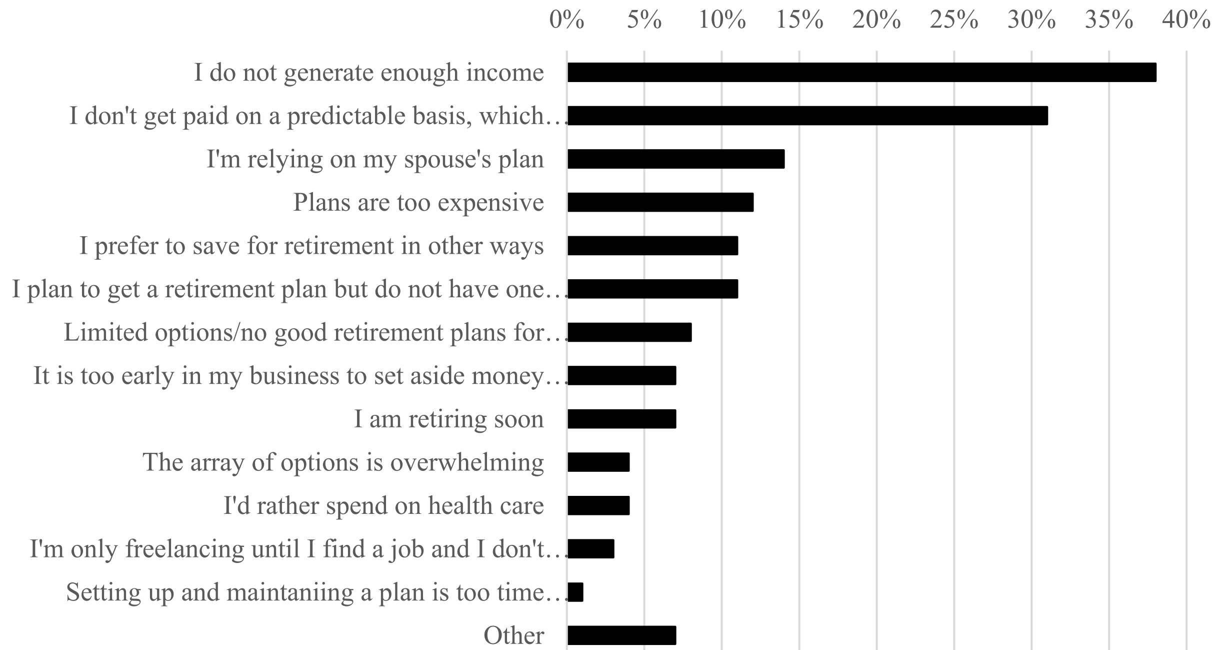


Source: GAO analysis of IRS documents. | GAO-20-366

Source: U.S. Government Accountability Office. 2020c. *Taxpayer Compliance: More Income Reporting Needed for Taxpayers Working Through Online Platforms*. GAO-20-366, Washington, DC: U.S. Government Accountability Office, p. 8 figure 2. https://www.gao.gov/assets/710/707209.pdf.

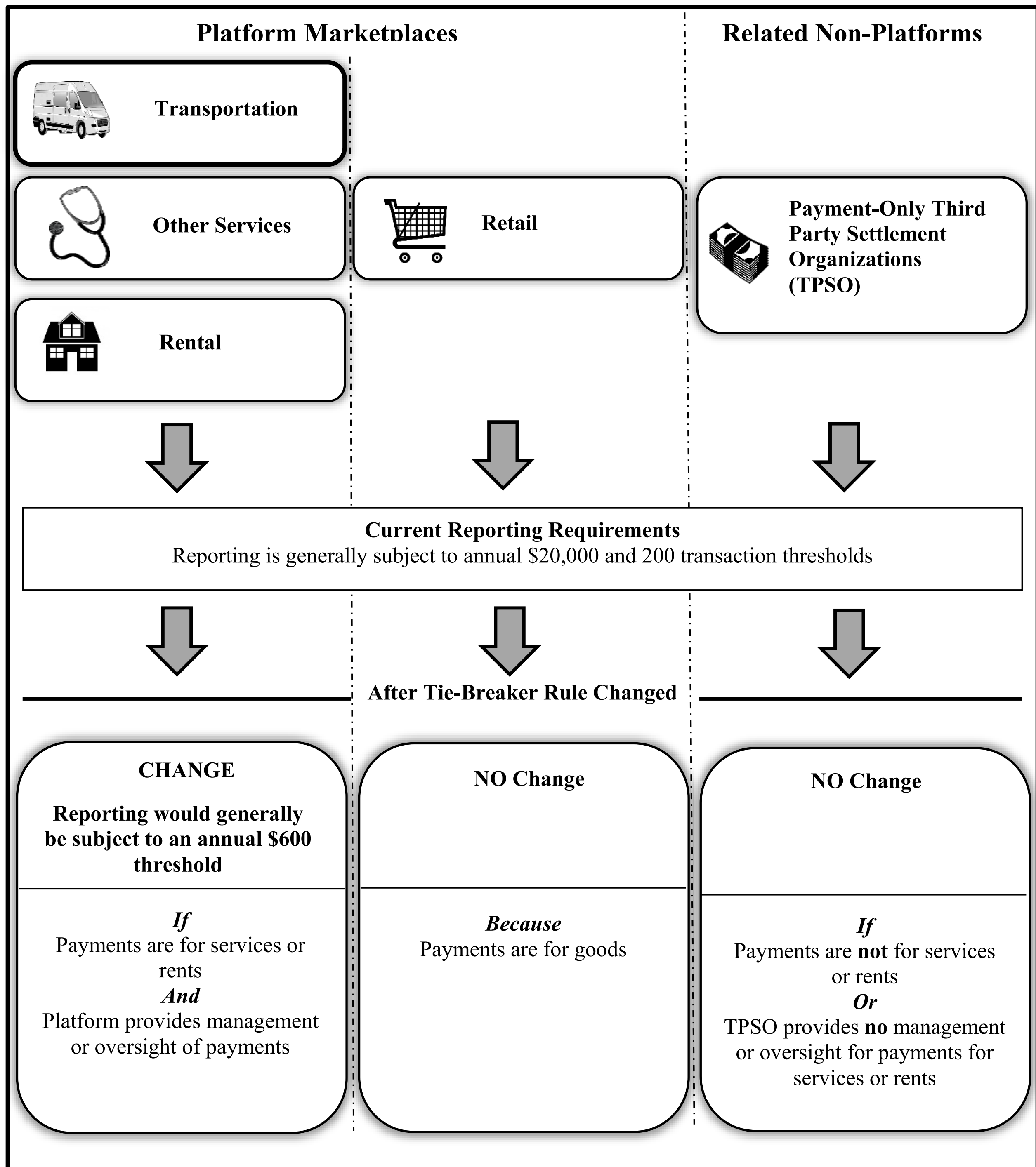
Figure 2. Freelancers Cite Barriers to Saving for Retirement

Which of the following statements best describes why you do not have a retirement plan?



Source: Small Business Majority. 2017. *Opinion Poll: Freelancers Need Flexible Retirement Options.* Small Business Majority, p. 6 Figure 4. https://smallbusinessmajority.org/sites/default/files/research-reports/032217-Freelancers-Retirement-poll.pdf.

Figure 3. How Amending the Tie-Breaker Rule Would Generally Work for TPSOs



Source: U.S. Government Accountability Office. 2020c. *Taxpayer Compliance: More Income Reporting Needed for Taxpayers Working Through Online Platforms*. GAO-20-366, Washington, DC: U.S. Government Accountability Office, p. 25 figure 6. https://www.gao.gov/assets/710/707209.pdf.

Table 1. Share of Adults Performing Gig Activities, 2019

	Female	Male
Have Been Paid For Activities in the Past Month (services)		
Child or elder care services	72	28
Dog walking, feeding pets or house sitting	61	39
House cleaning, yardwork, or other property maintenance work	46	54
Driving or ridesharing such as Uber or Lyft	50	50
Paid tasks online	51	49
Other personal tasks such as deliveries, running errands, or helping people move	47	53
Have Been Paid For Activities in the Past Month (assets)		
Selling goods yourself at flea markets or garage sales	56	44
Sold goods at consignment shops or thrift stores	70	30
Selling goods online	51	49
Selling goods at a party you plan, such as an Avon party	73	27
Any other paid activities not already mentioned	50	50

Source: Board of Governors of the Federal Reserve System. 2020. Survey of Household Economics and Decisionmaking. https://www.federalreserve.gov/consumerscommunities/shed.htm. Accessed 10-11-2020; additional gender data provided by Kimberly Kreiss and Cassandra Duchan, analysts with the Board of Governors of the Federal Reserve System, Division of Consumer and Community Affairs, May 22, 2020.

Table 2. Reliance on Social Security Benefits by Race: Percent of Beneficiary Households 65 or Older Whose Social Security Benefits Make Up, 2016

Race	*50% or More of Their Income*	*90% or More of Their Income*
White	60%	32%
Black	69%	45%
Asian	62%	41%
Hispanic	73%	53%

Source: National Academy of Social Insurance. 2020. *Social Security Benefits, Finances, and Policy Options: A Primer.* National Academy of Social Insurance, p. 8. https://www.nasi.org/sites/default/files/research/2020%20Social%20Security%20Primer%20Final.pdf.

Table 3. COVID-19 Aid and Relief Measures Available to Self-Employed Individuals

AID/Relief	Self-Employed Eligibility (Who)	Benefits (What)	When and Where to Apply
Self-Employed Sick/Family Leave Tax Credits	An eligible self-employed individual who is unable to work or telework because the individual is quarantined because of COVID-19, experiencing COVID-19 symptoms, or needs to care for a family member for COVID-19-related reasons.	**Sick leave credits** for: (1) Self: up to 10 days of sick pay at average daily rate, maximum $511 per day; (2) Caring for a family member: up to 10 days at two-thirds of the average daily rate, maximum $200 per day. **Family leave credits**: Up to 50 days of income, at two-thirds of the average daily rate, maximum $200 per day.	Claimed on 2020 federal tax return. Self-employed can take into account these credits when estimating quarterly tax payments.
PUA Program	Self-employed workers, independent contractors, and sole proprietors who are traditionally ineligible for unemployment benefits under state and federal law and who are unable to continue working as a result of COVID-19.	**Weekly benefit**: The amount is calculated under state unemployment compensation law but no less than the minimum weekly benefit amount defined in 20 C.F.R. section 625.6. **Federal Pandemic Unemployment Compensation**: $600 per week. This benefit is not available for any week of unemployment ending after July 31.	Apply through state agencies during weeks of unemployment, up to 39 weeks through December 31.

Source: Chiang, Wei-Chih, Yingxu Kuang, and Charlie (Shengsheng) Huang. 2020. “COVID-19 Aid and Relief for the Self-Employed.” *Tax Notes Federal* (Aug. 31), p. 1575 table 1. https://www.taxnotes.com/tax-notes-federal/legislation-and-lawmaking/covid-19-aid-and-relief-self-employed/2020/08/31/2cwjg.

VIII. Appendices - Research Methodology

In the course of conducting this research, the authors reviewed the existing research on gig workers. The authors compared administrative and private sector data sets and surveys, research criteria and findings to identify commonalities and to provide insights as to why estimates of the number of U.S. taxpayers earning income as gig workers are so inconsistent. As part of this research, the authors also interviewed gig economy researchers in academia and in various nonprofit organizations. Overall, the authors conducted more than 100 interviews, meetings, and conference calls with a variety of experts (including executives and economists with platform companies, federal and state government agencies, congressional staff and other gig economy stakeholders). Of particular note, the authors collaborated with the Federal Reserve Board analysts responsible for the Federal Reserve Board’s Survey of Household

Economics and Decisionmaking (SHED) to develop new insights on gig economy work and women's retirement challenges. The authors acknowledge and are grateful for the technical contributions of Kimberly Kreiss and Cassandra Duchan, who provided additional data breakdowns with respect to the 2018 and 2019 SHED data.

IX. About the Authors

Professor Caroline Bruckner is on the faculty of American University's Kogod School of Business (Kogod) and is the managing director of the Kogod Tax Policy Center, which researches tax issues specific to small businesses and entrepreneurs. In this capacity, she has testified before both U.S. House and Senate Congressional committees as well as the IRS. Since joining Kogod, she has done ground-breaking research on the tax compliance challenges of gig workers as well as women business owners. In Oct. 2019, the Ranking Member of the U.S. Senate Committee on Finance, Ron Wyden (D-OR), introduced tax legislation to address challenges women business owners have accessing capital prompted by Bruckner's research. More recently, she developed a Congressional witness dataset that is the first-of-its-kind digital diversity and inclusion legislative research tool to measure the diversity of Congressional witnesses in the federal legislative process. She teaches courses on business law, fundamental principles of federal income tax and business implications of the future of work.

She previously worked for the U.S. Senate Committee on Small Business and Entrepreneurship (SBC) from 2009 through 2014, ultimately as Chief Counsel, where she worked on small business tax legislation and advised the committee and its chair on tax, labor and budget matters. Prior to public service, Professor Bruckner was a senior associate with the international tax services group of PricewaterhouseCoopers, LLP - Washington National Tax Services (PwC-WNTS), where she advised clients on international tax issues. Before joining PwC-WNTS, she served as an associate in the employee benefits group of Paul Hastings.

Professor Bruckner has a Masters in Taxation (LLM) from Georgetown University Law Center and a Juris Doctor from George Mason University School of Law where she won the "Best Memorandum OF

Law Award" for the First-Year Class, and was a Writing Fellow and articles editor for The Civil Rights Law Journal. She has a B.A. in Political Science from Emory University, where she was a member of *Pi Sigma Alpha*, Political Science Honors Society. She is an American College of Tax Counsel Fellow, a member of the National Academy of Social Insurance and member in good standing of the Virginia Bar.

Professor Jonathan Barry Forman is the Kenneth E. McAfee Centennial Chair in Law at the University of Oklahoma, where he teaches courses on tax and pension law. Professor Forman served in Washington, DC, as the Professor in Residence for the Internal Revenue Service Office of Chief Counsel for the 2009–2010 academic year, and he was a member of the Board of Trustees of the Oklahoma Public Employees Retirement System (OPERS) from 2003 through 2011.

Professor Forman is also a co-chair of the Washington-DC-based Retirement Income Institute, the research arm of the Alliance for Lifetime Income. He is also active in the American Bar Association, the American College of Employee Benefits Counsel, the American College of Tax Counsel (a regent since 2017), the Association of American Law Professors, the TIAA Institute, and the National Academy of Social Insurance. Professor Forman has lectured around the world, testified before Congress, and served on numerous federal and state advisory committees.

Professor Forman has more than 300 publications including MAKING AMERICA WORK (Urban Institute Press 2006); *Fully Funded Pensions*, 103(4) MARQUETTE LAW REVIEW 1205−1312 (Summer 2020); *Removing the Legal Impediments to Offering Lifetime Annuities in Pension Plans*, 23(1) CONNECTICUT INSURANCE LAW JOURNAL 31–141 (Fall 2016); and *Tontine Pensions*, 163(3) UNIVERSITY OF PENNSYLVANIA LAW REVIEW 755 (Feb. 2015) (with Michael J. Sabin). Professor Forman earned his law degree from the University of Michigan in 1978, and he has master's degrees in economics and psychology. Also, prior to entering academia, it was his privilege to serve in all three branches of the federal government, including as Tax Counsel to the late Senator Daniel Patrick Moynihan (D-NY).