GIG WORKERS' FINANCIAL CONFIDENCE AND BEHAVIOR

Jordan Mitchell, University of Houston Clear Lake.
Xiao Li, The University of Texas Health Science Center at Houston.
Phillip Decker, University of Houston Clear Lake

ABSTRACT

This paper offers critical perspectives on the relationship of financial confidence of non-traditional workers and their financial and work behavior. Understanding the socioeconomic characteristics of gig workers could empower their standard of living, affect how they impact gig workers' healthcare, and illustrate a more complete economic picture of gig workers. The gig economy is changing the work and lifestyle of many people and has captured worldwide public attention. Supplemental income and flexible working style increasingly attract people to the gig economy, but there are both positive and negative consequences for the workers and society. We show that the majority of gig workers have higher debt loads, engage in predatory lending, and suffer from cost-prohibitive healthcare utilization. However, we also find that gig workers have relatively high financial confidence. These findings have implications for the motivation to do gig work and to survive in difficult times.

INTRODUCTION

The rapid expansion of the gig economy has attracted increasing attention from the academic field and industry. There are a variety of terminologies to describe the phenomenon of the gig economy. Kalleberg and Dunn (2016, p.11) argued that the gig economy represents "a digital version of the offline atypical, casual, freelance, or contingent work arrangements;" thus essentially it is not new. Todolí-Signes (2017) emphasized the "sharing" and "collaborative" characteristics. Fleming (2017) examined the gig economy from the perspective of Human Capital Theory (Becker, 2009). Pichault and McKowen (2019) categorized the gig economy by the level of autonomy, and scholars further defined gig work as being shaped by the algorithmic control of the specific platforms (Jarrahi & Sutherland, 2019). Block and Hennessy (2017) highlighted the feature of "on-demand." All these definitions and perspectives present different ongoing aspects of the gig economy.

Approximately 16.5 million people worked in the gig economy in 2018 (Bureau of Labor Statistics, 2018). Holtz-Eakin, Gitis, & Rinehart (2017) estimated that gig economy workers increased between 9.4 percent and 15.0 percent, depending on the definition of gig workers, while the total employment increased by 7.5 percent from 2002 to 2014. Moreover, many universities are starting to integrate the study and practice of the gig economy into their curriculum or career services in order to steer students to prepare well for the gig economy (Cheng, 2019; Mulcahy, 2019).

The purview of "gig worker" includes freelancers, contractors, consultants, and those on-demand working on a temporary basis (Chang, 2017). According to a study from the Manpower Group (2017), a high percentage of Americans were willing to join the freelancing or

independent contracting market. In 2018, Upwork (2018) identified that Americans spent 1.07 billion hours per week working as gig workers in 2018 which is roughly 72 million hours per week more than in 2015.

Gig workers are not only engaging passionately in the gig economy, but they generally regard gig work as beneficial for the whole society (Hollowell, Rowland, Kliestik, Kliestikova, & Dengov, 2019), and support the notion that gig work provides beneficial opportunities for workers to earn supplemental income through the flexible job platforms (Healy, Pekarek, & Vromen, 2020). Fountain (2019) indicated that most millennials (born between 1981 and 1996), Gen Xers (born between 1965 to 1980), and baby boomers (born between 1946 to 1964) recognize the positive effect of the gig economy. Generation Z workers (born between 1996 and 2015) have the most positive attitudes.

Despite the exploratory discussions of the significance of the gig economy, few studies have examined the personal socioeconomic factors and their related association or impact on participation in gig work. This study selected variables based on the Serido et al (2013) financial capability development model and use multivariate logistic regression analyses to explore the relationship between personal socioeconomic factors and related financial confidence of gig workers. This study aims to assess gig worker's socioeconomic factors and financial confidence and suggest directions for future research.

LITERATURE REVIEW

Although the definition of gig workers is not well-understood (Donovan, Bradley, & Shimabukuru, 2016), studies have found common demographics of gig workers: a) the majority of gig workers are White (Codagnone, Biagi, & Abadie, 2016), although a few studies indicated that gig workers are more likely to be Hispanic or African-Americans (Edison Research, 2018); b) gig workers mainly live in urban areas because most gig jobs are in cities (Balaram, Warden, & Wallace-Stephen, 2017); and) they are more likely to be male than female (Manyika et al., 2016).

Generally, these features match the analysis of Uber drivers by Hall and Krueger (2015). Of the 162,037 active Uber drivers they surveyed in 2014, males accounted for 86.2 percent, the majority were 30-49 with almost half having at least a college degree, 31 percent had full-time employment, and 30 percent had part-time employment, apart from the Uber job.

Motivation to Participate in Gig Work

There is a consensus that the main reason for workers to participate in the gig economy is to earn supplemental money (Allon, Cohen, & Sinchaisri, 2018; Bajwa et al.,2018; Bernhardt & Thomason, 2017). However, job flexibility, being in control, working from home, pursuing more meaningful work and developing employability (Barnes, Green, & Maria, 2015; McCafferty ,2017; Nemkova, Demirel, & Linda Baines, 2019) are also incentives for gig work. Sinchaisri, Allon, & Cohen (2019) found that financial incentives had a significant positive influence on the decision of gig workers to work and on the number of hours worked. They also found that gig workers exhibit income targeting so that they work less when they get close to their income goals or work more when their earning is far from their targets. These researchers discuss their findings in the context of labor elasticity.

Doucette and Bradford (2019) indicate that while men are driven to spend more time on gig jobs to increase their income, women were more motivated by insecurity in their main job

and also earned less in their gig job. They also found that higher risk aversion reduced income from gig work for men, it did not for women. Rosenblat (2016) showed that turnover is high in platform workers and more than half of participants quit within a year

Employment Status

The literature defines two types of gig workers: those fully working in gig work and those having a full-time job with gig work as a part-time job to earn extra income (Allon et al., 2018; Kalleberg & Dunn, 2018) and for job security (Douchette & Bradford, 2019). Most reports indicate that less than half of the workers rely on gig work full-time (Bajwa et al., 2018; Fos, Hamdi, Kalda, & Nickerson, 2019; EdisonResearch, 2018).

Education Background

Prior surveys and reports have pointed out that the gig workers as a whole are slightly more educated than the overall workforce, with just a small portion of gig workers without a high school diploma (Codagnone et al., 2016; Schor, 2017). About half of all gig economy workers have a college education (Bureau of Labor Statistics, 2018). This educational attainment varies in different countries: there were 66.1 percent of American gig workers with at least a college education (Bernhardt & Thomason (2017, p.11), while 44 percent of British (Balaram et al., 2017, p.18) and 64 percent of Canadian (Block & Hennessy, 2017, p. 6) gig workers have the equivalent education. In addition, different education levels were observed in different work types. For example, freelancers are more likely to have a postgraduate degree, compared to traditional workers while temp-agency and on-call workers noticeably have a lower education level, such as a high school diploma (Upwork, 2017).

Married Status & Age

Younger generations are leading the gig market because of the flexibility and the potential higher income offered by the gig economy (Lepanjuuri, Wishart, & Cornick, 2018). Millennials and Generation X dominate gig work (Balaram et al., 2017;), and 18.73 percent of the Generation Z freelancers have engaged in gig jobs (Fountain, 2019). This can partly explain why the highest percentage of gig workers are child-free or single (Holtz-Eakin et al., 2017; Johal & Thirgood et al., 2016). However, Dmitrieva (2018) cites US Labor Department reports that indicate a significant uptick of baby boomers joining the gig economy because these jobs supplement income and are easier to get. Cook et. al. (2019) show that Uber earnings are essentially flat from age 20 to 40 and steadily declining with age thereafter. Their results suggest that the gig compensation-based-on-productivity character can pose a challenge for older workers.

Income Level

Interestingly, many studies stated that more than half of gig workers report their annual household income as relatively high - more than $60,000 (Block & Hennessy, 2017; Lepanjuuri, 2018). This is similar to the U.S. national median household income of $61,937 in 2018 (Guzman, 2019). However, some reports argued that most gig workers are in the lower and mid-level income brackets (Tran & Sokas, 2017). This discrepancy between different studies may be due to the different sampled populations. and/or incomplete sampling. For instance, Frederico (2019) showed that women who joined multi-level marketing companies with low start-up costs earned about 20 percent of those who joined companies with high expenses. Regardless, one third of their respondents left their organizations due to unmet income expectations. These

findings highlight not only the discrepancies possible in the different populations studied but the financial vulnerabilities of individuals in the gig economy.

Koustas (2019) shows that households entered the gig economy after facing declines in income and a significant running down of assets. He suggests that such income decline can come from gearing up for gig work or facing outside shocks, such as unemployment or wage cuts. This latter explanation has potentially important implications for the validity of previous studies focusing on gig economy activity only and debt. Implications of financial distress from outside the gig economy have largely been ignored in the recent literature on the gig economy, but are likely to matter given the economic stresses today.

Financial Mindfulness

Gig workers are more likely to be financially precarious than those working in traditional employment (Petriglieri, Ashford, & Wrzesniewski, 2019). Over 50 percent of those taking gig jobs as a primary income source have an Anxiety Index score higher than 50, whereas only 24 percent of those who have another full-time job have an Anxiety Score over 50 (EdisonResearch, 2018). In addition, 85 percent of gig workers with a gig job as the primary income source worry about the potential impact of economic recession in the U.S. T.RowePrice (2018) found that 78 percent of gig workers in the U.S. stated that they are more involved in personal finances since their participation in gig jobs, and 39 percent of gig workers claimed that they check their accounts more frequently. Some scholars found that gig workers economize their spending habits since joining the gig markets (Madonia, 2017). However, Newcomer (2018) argues that gig workers often do not calculate their costs well.

Health Challenges & Medical Debts

Gig employment shares some common dimensions with precarious employment, such as temporality, social vulnerability, inadequate benefits, and low levels of income (Bajwa et al., 2018; Benach & Muntaner, 2007). Due to these characteristics, especially the financial uncertainty and job insecurity, gig workers are quite vulnerable to mental health tension that includes the anxiety of identity and emotional vacillation (Ashford, Caza, & Reid, 2018; Petriglieri, et al., 2019). In addition, gig employment or precarious employment poses relatively high perceived risks because of the nontraditional working condition and unregulated job issues, such as working overtime and inadequate protection, which further affect the overall health of these workers (Benach el at, 2014; Christie & Ward, 2019; Tran & Sokas, 2017).

Prudential (2017) revealed that only 40 percent of gig workers who take gig jobs as the primary income source have access to employer-sponsored medical insurance. Hill (2019) reports that respondents without a traditional job did not have health insurance because they could not afford it, and that many of these workers deferred healthcare due to the cost. Gig workers are among the most vulnerable workers because they are not eligible for sick leave or employer insurance (Bond, 2020, Liss-Riordan, 2020, Tran and Sokas, 2017). With the exacerbating of the COVID-19 pandemic, on March 14th, 2020, the House of Representatives in the United States has passed legislation that mandated 2 weeks of paid leave for workers who were affected by the crisis, but excludes gig workers (Liss-Riordan, 2020). However, so far, no studies have precisely examined the relationship between the medical hardship and medical debts of gig workers.

Other Debt

Individuals often enter the gig economy in order to cope with some financial challenges or difficulties (Koustas, 2019). The incomes from gig jobs are usually lower than their full-time traditional jobs. Hence, gig workers have more difficulties in managing their finances (Prudential, 2017; Manyika et al., 2016). Eighty percent of gig workers who earn most of their income from their gig work expressed that they have difficulty in paying an unforeseen expense of $1,000 (EdisonResearch, 2018), while 58 percent of full-time gig workers said that they cannot afford a $400 emergency bill, compared to 30 percent of non-gig workers. Meanwhile, Aegon (2016) identified that 44 percent of gig workers have zero savings for retirement and only 22 percent occasionally save for retirement. In addition, for low-income millennials gig workers, the student loan is an important driver for their participation in gig jobs (Wylie, 2018).

Financial Confidence

The concept of financial confidence is composed of three aspects: (1) financial awareness of how to use money as a tool to achieve goals, (2) financial literacy (Sabri & Juen, 2014), and (3) financial advice availability (Zalis, 2018; Chatterjee & Salter, 2011). Financial confidence is a perpetual cycle among these three factors (Palameta, Nguyen, Hui, & Gyarmati, 2016). Financial confidence affects financial decision-making and financial behavior (Arifin, Kevin, & Siswanto, 2017; Assad, 2015; Milam, 2019), such as saving, spending behavior, and retirement planning People who have high financial confidence with actual low financial knowledge were more likely to engage in risky financial behavior. (Tokar, 2015). When measuring routine financial and debt management outcomes, financial confidence is a more effective predictor than financial knowledge. Financial confidence is a more effective determinant for self-control in one's financial behavior (Palameta et al., 2016). Moreover, financial confidence is associated with economic locus of control (Sakalaki, Richardson, & Bastounis, 2005). Although many studies discussed the concept of financial confidence, gig workers have up to this point remained absent from such studies.

RESEARCH QUESTIONS

Although the characteristics of gig workers vary among different countries, different industries, and different generations, there are still some common characteristics. While previous studies emphasized the economic trend and social impact of the gig economy, this study focused on the individual financial characteristics of gig workers and will address the following research questions:

1. What are the personal-finance characteristics of gig workers?
2. Is there a correlation between the people who engage in gig work and their financial confidence?

METHOD

Data Source

Analyses were conducted using data from the 2018 FINRA National Financial Capability Study ("Financial Capability Study," n.d.). The study was funded by the FINRA Investor

Education Foundation and conducted by Applied Research and Consulting. The objectives of the study were to benchmark key indicators of financial capability and how they vary with demographic, behavioral, attitudinal, and financial literacy factors. The survey was conducted online from June through October 2018, among a national sample of 27,091 American Adults. Prior to 2018, the National Financial Capability Study was conducted in 2009, 2012, and 2015. Weights are calculated by Census distributions according to the American Community Survey. The entries are weighted to be representative of each state by age, gender, ethnicity, and education, and Census Division.

Dependent Variables

Dependent variables used in this analysis were questions from the 2018 NFCS related to gig work and financial confidence. Initial models used two separate dependent variables: Additional work for pay in the last 12 months [1:Yes (28.0%); 2:No (70.5%)] and "In the Past 12 months, how often have you taken on a work assignment through a website or mobile app, such as Uber, Task Rabbit, Care.com, etc? [1: Frequently (4.9%); 2: Sometimes (10.8%); 3: Never (81.7%)]. We constructed models to describe the personal and financial characteristics that were associated with workers who responded "Yes" to "Additional work for pay in the last 12 months", "frequently engage in technology-driven gig work", and "sometimes engage in technology-driven gig work".

Secondary analysis examined financial confidence by using the following survey question as a dependent variable: "If you were to set a financial goal for yourself today, how confident are you in your ability to achieve it? [1: Not at all confident (6.7%); 2: No very confident (15.2%) 3: Somewhat confident (41.5%); 4: Very confident (31.6%)]. We combined "Not Very" with "Not at all" and "Somewhat" with "Very" to create a dichotomous dependent variable. We then ran a logistic regression, modeling the personal and financial characteristics that describe individuals that responded "Somewhat / Very" confident.

Our variable selection was guided by the Serido et al (2013) financial capability development model. The work of Ranta and Salmela-Aro (2017) used a similar model to study subjective financial situations and financial capability. In Serido et al.'s model, changes in Financial Knowledge are initiated by changes in Self-Beliefs, which then improve changes in financial behavior, which then finally promote changes in financial well-being. The present study examines the relationship between self-beliefs (financial confidence), behavior (participation in gig work and additional work for pay), and well-being (financial well-being markers) in successive models. We first describe the financial and personal characteristics of people who engage in additional work for pay and gig work. We then measure the relationship between additional work / gig work participants and their financial confidence. In this final model, certain control variables measure aspects of financial well-being (income & debt loads).

Statistical Analyses

Initial analysis described the study sample across certain personal finance variables (as mentioned above). Multivariate logistic regression analyses (PROC SURVEYLOGISTIC) were performed to determine individual and financial characteristics of workers that take on additional work for pay, individuals that frequently use technology for gig work, and individuals that sometimes use technology for gig work. Secondary analysis (multivariate logistic regression) was carried out to determine level of confidence in achieving a financial goal due to gig work

status and other control financial and individual characteristics. Bivariate differences were tested using Wald Chi Square Tests.

All analyses were conducted with SAS (SAS Institute Inc., Cary, North Carolina). Weights were provided by the National Financial Capability Study and were applied based on the probabilistic factors affecting the selection of the survey. PROC SURVEYLOGISTIC allows for the use of weights to account for the data's complex survey design. The weights incorporated: gender, age, ethnicity, and education.

RESULTS

A description of study participants is represented in Table 1. Out of the 27,091 participants , 48.57% had an emergency fund of 3 to 6 months of expenses, 18.83% spent more than their income, 46.48% carried a credit card balance, 33.82% had an auto loan, 18.45% had a student loan, 22.77% had unpaid medical debt, 27.37% self-reported having "too much debt" (6 or 7 out of a Likert scale of 1-7), and 19.88% reported having a drop in income during the past year. Groups that reported higher rates of having an emergency fund were: being older than 55, White Ethnicity, having a Bachelor's or Post-Graduate Degree, having an income of $50k or more, and either working full time for an employer, being self-employed, or retired.

Individual characteristics that represented higher rates of spending more than income included: female, younger than 45, Non-White Ethnicity, not having a high school degree or having a high school GED, being single or separated, an income of $50,000 or less, and not being retired. Individual characteristics that represented higher rates of carrying a credit card balance included: being between 25 and 54 years of age, Non-White Ethnicity, not graduating high school, high school GED, some college, or an Associate Degree, being single, separated, or divorced, earning between $15,000 and $75,000, and being self-employed, working full time for an employer, homemaker, sick, disabled, or unable to work, and unemployed.

Individual characteristics that represented higher rates of auto loans included: males, between 25 and 54 years of age, White Ethnicity, some college education or higher, being married, earning $35,000 or more, and working full time for an employer or being a homemaker. Individual characteristics that represented higher rates of student loans included: female, between 18 and 44 years of age, Non-White Ethnicity, having some college education or higher, earning <$15,000-$50,000 or $75,000-$100,000, being self-employed, working full or part time for an employer, being a full-time student, or being unemployed. Individual characteristics that represented higher rates of unpaid medical debt included: being female, between 25 and 54 years of age, Non-White Ethnicity, earning an Associate's degree or lower education, earning an income of less than $100,000, having any type of employment other than full time student or retired. Individual characteristics that represented higher rates of self-reported too much debt included: being female, between 25 and 54 years of age, Non-White Ethnicity, earning a High School GED, Some College, or an Associate's Degree, earning an income of less than $50,000, and having an employment status of anything except full-time student or retired. Individual characteristics that represented higher rates of experiencing an income drop in the past year included: being 44 years of age or younger, Non-White Ethnicity, having Some College education or less, and earning an income of less than $50,000.

Table 1. Description of Study Participants Across Multiple Financial Characteristics

		Emergency Fund	Spend More than Income	CC Balance	Auto Loan	Student Loan	HC Unpaid	Too much debt	Income Drop
Overall (n=27,091)		48.57%	18.83%	46.48%	33.82%	18.45%	22.77%	27.37%	19.88%
Sex	Male (n=13,253)	54.00%	18.50%	43.79%	34.77%	17.70%	20.38%	25.83%	19.11%
	Female (n=13,837)	43.37%	19.15%	49.26%	32.91%	19.17%	25.07%	28.83%	20.62%
Age	18-24 (n=3,086)	35.24%	22.21%	36.07%	20.58%	35.19%	22.86%	22.75%	25.99%
	25-34 (n=5,037)	43.40%	26.70%	54.27%	41.51%	37.74%	33.54%	40.87%	30.44%
	35-44 (n=4,337)	39.90%	22.28%	56.59%	41.82%	27.09%	30.99%	36.76%	24.66%
	45-54 (n=4,460)	41.81%	17.82%	56.30%	38.06%	11.90%	25.49%	30.80%	19.70%
	55-64 (n=4,852)	55.31%	13.89%	44.14%	32.13%	4.67%	17.86%	20.51%	14.82%
	65+ (n=5,315)	67.82%	11.94%	32.25%	25.66%	1.48%	8.03%	12.96%	7.19%
Ethnicity	White (n=19,281)	50.72%	17.05%	44.81%	34.41%	15.07%	20.93%	26.12%	17.26%
	Non-White (n=7,809)	43.26%	23.23%	50.97%	32.35%	26.81%	27.34%	30.47%	26.34%
Education	No HS (n=747)	17.76%	25.09%	48.28%	15.84%	3.89%	32.39%	27.43%	29.12%
	HS Grad – Regular (n=5,277)	42.00%	17.43%	45.86%	30.32%	7.00%	24.63%	24.24%	20.46%
	HS Grad – GED (n=2,073)	35.21%	19.69%	48.33%	28.52%	7.94%	28.73%	28.05%	23.27%
	Some College (n=7,947)	43.90%	21.05%	54.32%	35.98%	23.60%	28.38%	32.40%	23.76%
	Associate's Degree (n=3,137)	47.72%	19.43%	52.99%	37.47%	23.30%	23.19%	28.85%	19.05%
	Bachelor's Degree (n=4,947)	61.51%	16.92%	40.41%	35.52%	23.01%	14.49%	23.68%	14.61%
	Post-Grad Degree (n=2,960)	69.24%	15.71%	32.84%	35.81%	23.34%	11.21%	23.51%	13.39%
Martial Status	Married (n=14,100)	56.97%	16.79%	44.49%	43.27%	13.46%	21.55%	25.23%	17.18%
	Single (n=8,443)	38.83%	22.54%	47.18%	23.10%	30.50%	23.90%	30.67%	25.02%
	Separated (n=401)	23.95%	25.33%	60.62%	28.07%	19.37%	39.03%	38.64%	30.95%
	Divorced (n=2,975)	39.52%	18.10%	55.41%	25.36%	13.09%	24.50%	29.54%	18.41%
	Widowed (n=1,170)	49.11%	16.21%	43.58%	20.74%	4.97%	19.47%	19.95%	15.23%
Income	< $15,000 (n=3,248)	19.47%	23.75%	45.25%	9.92%	22.79%	27.47%	30.23%	29.38%
	$15k-$25k (n=2,901)	27.03%	24.68%	55.31%	17.29%	19.24%	31.74%	33.12%	28.12%
	$25k-35k (n=3,006)	35.07%	22.75%	51.80%	27.40%	20.11%	28.61%	30.94%	22.25%
	$35k-$50k (n=3,983)	45.54%	19.82%	49.50%	34.58%	18.76%	25.38%	29.43%	20.85%
	$50k-$75k (n=5,256)	54.44%	16.87%	48.19%	39.37%	17.66%	21.16%	25.99%	16.01%
	$75k-$100k (n=3,783)	64.71%	17.99%	47.98%	48.27%	20.22%	23.18%	28.82%	19.23%
	$100k-$150k (n=3,255)	69.44%	13.16%	39.49%	47.53%	14.97%	12.20%	21.10%	12.55%
	>$150k (n=1,656)	78.69%	8.69%	29.68%	41.88%	10.10%	6.00%	13.61%	8.33%
Employment	Self-Employed (n=2,024)	53.52%	19.62%	48.46%	30.85%	19.51%	26.10%	30.62%	30.02%
	Full-time for employer (n=10,825)	50.50%	19.61%	52.79%	46.08%	25.13%	25.10%	32.57%	19.57%
	Part Time for employer (n=2,406)	40.74%	22.60%	45.24%	29.66%	20.60%	24.73%	28.08%	26.89%
	Homemaker (n=2,037)	35.69%	19.88%	51.31%	35.19%	15.71%	30.97%	29.97%	22.68%
	Full time student (n=1,020)	35.77%	21.82%	34.38%	15.92%	49.20%	17.28%	20.94%	23.50%
	Sick, disabled, unable (n=1,486)	16.86%	25.77%	67.51%	19.76%	12.44%	39.59%	40.30%	21.95%
	Unemployed (n=1,332)	21.97%	22.80%	51.30%	13.41%	20.70%	28.64%	31.50%	38.83%
	Retired (n=5,957)	67.02%	12.12%	31.71%	24.90%	1.76%	9.26%	12.57%	7.84%

Adjusted odds ratios and their 95% confidence intervals for taking on additional work, frequently using technology for gig work, and sometimes using technology for gig work are represented in Table 2. Table 2 shows six successive logistic models; Models 1-3 examine

healthcare utilization and financial characteristics and their association with the 3 dependent variables (taking on additional work for pay, frequent technology- driven gig work, and sometimes technology-driven gig work). Models 4-6 include the previous independent variables using in Models 1-3, but add individual characteristics (age, sex, education, and marital status).

In Model 1, significant positive associations to taking on addition work for pay included: having unpaid medical debt, not going to the doctor due to cost, not filling a prescription due to cost, strongly agreeing with "I have too much debt", being a full-time student or unemployed, having an auto loan, student loan, or using predatory loans. Significant negative associations to taking on additional work for pay include: being self-employed, being a homemaker, being permanently sick or disabled, being retired, and spending the same as income. In Model 2, significant positive associations to frequently using technology-driven means for gig work included: having unpaid medical debt, not going to the doctor due to cost, not filling a prescription due to cost, not having health insurance, having an auto loan or student loan, and using predatory loans. Significant negative association to frequently using technology-driven means for gig work included: moderate (between 4-6 on 1-7 Likert Scale) self-reported debt loads, earning between $25,000 - $74,999, working part time for an employer, being a homemaker, being permanently sick or disabled, or being retired. In Model 3, significant positive associations to sometimes using technology-driven means for gig work included: not filling a prescription due to cost, not having health insurance, being a full-time student, spending more than income, having student loans, and using predatory loans. Significant negative association to sometimes using technology-driven means for gig work included: either earning between $25,000-$34,999 or $50,000 - $74,999, being a homemaker, being permanently sick or disabled, being retired, and not carrying a credit card balance. In Model 4, significant positive associations to taking on additional work for pay included: having unpaid medical debt, not going to the doctor due to cost, not filling a prescription due to cost, strongly agreeing with "I have too much debt", being a full time student, being unemployed, having an auto loan, having a student loan, using predatory loans, being male, and having a High School diploma or higher. Significant negative association to taking on additional work for pay included: being self-employed, being a homemaker, being permanently sick or disabled, being retired, spending equal to income, older than 25 years of age, and being married. In Model 5, significant positive associations to frequently using technology-driven methods for gig work included: having unpaid medical debt, not going to the doctor due to cost, not filling a prescription due to cost, not having health insurance, having an auto loan, having a student loan, using predatory loans, being male, and being of Non-White Ethnicity. Significant negative associations to frequently using technology-driven methods for gig work included: having moderate amounts of self-reported debt, being permanently sick or disabled, being retired, being between older than 35 years of age, and being married. In Model 6, significant positive associations to sometimes using technology-driven methods for gig work included: having unpaid medical debt, not going to the doctor due to cost, not filling a prescription due to cost, not having health insurance, having an auto loan, having student loans, using predatory loans, being male, and being of Non-White Ethnicity. Significant negative association to sometimes using technology-driven methods for gig work included: moderate amounts of self-reported "Too much debt", being permanently sick or disabled, being retired, older than 35 years of age, and being married.

Table 2. Adjusted Odds of Additional Work for Pay and Gig Work							
		Financial and Health Measures			Financial, Health, and SES Measures		
		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
		Additional Work for Pay	Technology-Additional Work (frequently)	Technology-Additional Work (sometimes)	Additional Work for Pay	Technology-Driven Additional Work (Frequently)	Technology-Driven Additional Work (Sometimes)
Unpaid Medical Loans	Yes	**1.452 (1.262 - 1.670)**	**2.040 (1.594 - 2.611)**	1.198 (0.981 - 1.463)	**1.488 (1.287 - 1.719)**	**2.056 (1.585 - 2.668)**	1.217 (0.989 - 1.497)
Not Going to the Doctor	Due to Cost	**1.395 (1.216 - 1.601)**	**1.762 (1.380 - 2.248)**	1.191 (0.978 - 1.452)	**1.318 (1.147 - 1.516)**	**1.625 (1.264 - 2.090)**	1119 (0.915 - 1.370)
Not Filling a Prescription	Due to Cost	**1.359 (1.170 - 1.578)**	**2.187 (1.703 - 2.807)**	**1.593 (1.290 - 1.966)**	**1.357 (1.166 - 1.580)**	**2.115 (1.627 - 2.749)**	**1.634 (1.318 - 2.026)**
Health Insurance	No	1.010 (0.787 - 1.296)	**2.087 (1.349 - 3.227)**	**1.595 (1.166 - 2.182)**	0.904 (0.700 - 1.168)	**1.692 (1.102 - 2.598)**	1.306 (0.941 - 1.812)
"I have too much debt" Ref: 1 - Strongly Disagree	2	1.023 (0.872 - 1.200)	0.533 (0.331 - 0.860)	0.941 (0.725 - 1.222)	0.980 (0.832 - 1.156)	**0.528 (0.320 - 0.870)**	0.926 (0.706 - 1.215)
	3	1.013 (0.828 - 1.238)	0.888 (0.546 - 1.442)	1.100 (0.825 - 1.467)	0.945 (0.770 - 1.160)	0.828 (0.506 - 1.354)	1.007 (0.750 - 1.354)
	4 – Neutral	0.985 (0.838 - 1.158)	**0.497 (0.322 - 0.768)**	1.071 (0.837 - 1.371)	0.957 (0.812 - 1.129)	**0.500 (0.317 - 0.790)**	1.044 (0.810 - 1.346)
	5	1.088 (0.910 - 1.3010	**0.372 (0.214 - 0.647)**	0.956 (0.729 - 1.254)	1.023 (0.851 - 1.231)	**0.391 (0.223 - 0.685)**	0.886 (0.673 - 1.167)
	6	1.008 (0.824 - 1.233)	**0.523 (0.333 - 0.820)**	1.187 (0.889 - 1.585)	0.946 (0.769 - 1.163)	**0.523 (0.331 - 0.827)**	1.137 (0.847 - 1.528)
	7 – Strongly Agree	**1.330 (1.119 - 1.581)**	0.981 (0.676 - 1.423)	0.896 (0.685 - 1.173)	**1.270 (1.062 - 1.519)**	0.943 (0.641 - 1.388)	0.864 (0.657 - 1.135)
Household Income Ref: <$15,000	$15,000-$24,999	1.236 (0.799 - 1.910)	1.059 (0.485 - 2.314)	0.868 (0.496 - 1.520)	1.388 (0.892 - 2.160)	1.133 (0.527 - 2.432)	0.965 (0.537 - 1.732)
	$25,000 - $34,999	0.929 (0.612 - 1.410)	**0.471 (0.223 - 0.997)**	**0.555 (0.327 - 0.942)**	1.092 (0.717 - 1.666)	0.628 (0.295 - 1.338)	0.715 (0.411 - 1.243)
	$35,000 - $49,999	1.002 (0.672 - 1.490)	**0.474 (0.234 - 0.960)**	0.704 (0.430 - 1.154)	1.137 (0.763 - 1.695)	0.614 (0.303 - 1.245)	0.843 (0.504 - 1.412)
	$50,000 - $74,999	0.932 (0.630 - 1.379)	**0.457 (0.234 - 0.892)**	**0.609 (0.376 - 0.988)**	1.061 (0.714 - 1.577)	0.650 (0.332 - 1.272)	0.738 (0.444 - 1.228)
	$75,000 - $99,999	1.028 (0.695 - 1.520)	1.016 (0.531 - 1.941)	0.699 (0.431 - 1.132)	1.133 (0.761 - 1.686)	1.307 (0.676 - 2.523)	0.799 (0.478 - 1.335)
	$100,000 - $149,999	1.029 (0.695 - 1.524)	0.709 (0.364 - 1.379)	0.656 (0.404 - 1.066)	1.127 (0.754 - 1.685)	1.060 (0.537 - 2.095)	0.771 (0.458 - 1.299)
	$150,000 +	1.012 (0.676 - 1.515)	1.061 (0.522 - 2.159)	0.852 (0.517 - 1.405)	1.084 (0.715 - 1.642)	1.780 (0.859 - 3.691)	0.975 (0.568 - 1.673)
Employment Ref: Full-time for employer	Self employed	**0.580 (0.495 - 0.681)**	0.739 (0.529 - 1.034)	1.192 (0.912 - 1.557)	**0.515 (0.435 - 0.609)**	0.686 (0.468 - 1.006)	0.972 (0.731 - 1.294)
	Part time for employer	0.840 (0.677 - 1.044)	**0.605 (0.369 - 0.990)**	1.054 (0.749 - 1.482)	0.909 (0.722 - 1.145)	0.786 (0.453 - 1.366)	1.227 (0.850 - 1.769)
	Homemaker	**0.530 (0.414 - 0.680)**	**0.494 (0.267 - 0.911)**	**0.642 (0.427 - 0.966)**	**0.615 (0.474 - 0.797)**	0.872 (0.452 - 1.682)	0.731 (0.473 - 1.130)
	Full time student	**2.927 (1.839 - 4.660)**	1.342 (0.699 - 2.578)	**1.962 (1.146 - 3.360)**	**1.821 (1.155 - 2.905)**	0.835 (0.426 - 1.637)	1.181 (0.684 - 2.039)
	Permanently sick disabled	**0.231 (0.143 - 0.374)**	**0.089 (0.026 - 0.308)**	**0.216 (0.086 - 0.544)**	**0.272 (0.167 - 0.443)**	**0.177 (0.046 - 0.672)**	**0.337 (0.128 - 0.886)**
	Unemployed	**2.153 (1.497 - 3.098)**	0.381 (0.159 - 0.914)	0.605 (0.324 - 1.130)	**2.568 (1.762 - 3.744)**	0.574 (0.238 - 1.383)	0.745 (0.387 - 1.437)
	retired	**0.461 (0.385 - 0.550)**	**0.120 (0.065 - 0.221)**	**0.193 (0.135 - 0.277)**	**0.714 (0.580 - 0.878)**	**0.392 (.0169 - 0.909)**	**0.467 (0.302 - 0.721)**
Spending and	Spending > income	1.088 (0.951 - 1.246)	1.113 (0.849 - 1.459)	**1.364 (1.111 - 1.673)**	1.055 (0.920 - 1.211)	1.045 (0.791 - 1.382)	**1.305 (1.061 - 1.606)**

Income Ref: Spending < income	Spending = income	**0.882 (0.795 - 0.978)**	0.977 (0.759 - 1.257)	1.122 (0.953 - 1.321)	**0.881 (0.792 - 0.979)**	1.022 (0.788 - 1.326)	1.132 (0.956 - 1.340)
Income Drop (Ref: No)	Yes	1.000 (0.994 - 1.006)	1.003 (0.993 - 1.012)	1.006 (0.998 - 1.013)	1.000 (0.995 - 1.006)	1.001 (0.991 - 1.012)	1.004 (0.997 - 1.012)
Credit Card Balance (Ref: Yes)	Not carrying a CC balance	1.044 (0.934 - 1.167)	0.983 (0.765 - 1.262)	**0.683 (0.575 - 0.813)**	1.119 (0.998 - 1.255)	1.152 (0.891 - 1.490)	**0.795 (0.665 - 0.950)**
Auto Loan (Ref: No)	Yes	**1.161 (1.054 - 1.279)**	**1.406 (1.112 - 1.779)**	0.922 (0.794 - 1.072)	**1.196 (1.081 - 1.322)**	**1.403 (1.094 - 1.800)**	0.918 (0.785 - 1.074)
Student Loans	Yes	**1.886 (1.659 - 2.143)**	**2.776 (2.209 - 3.490)**	**2.776 (2.209 - 3.490)**	**1.432 (1.246 - 1.646)**	**1.761 (1.372 - 2.261)**	**1.261 (1.042 - 1.526)**
Predatory Loans	Yes	**2.231 (1.943 - 2.561)**	**8.013 (6.401 - 10.031)**	**6.022 (5.079 - 7.142)**	**1.994 (1.723 - 2.307)**	**5.988 (4.680 - 7.661)**	**4.995 (4.188 - 5.958)**
Sex	Male				**1.299 (1.182 - 1.427)**	**2.270 (1.802 - 2.859)**	**1.785 (1.537 - 2.073)**
Age Ref: 18-24)	25-34				**0.582 (0.452 - 0.749)**	1.036 (0.702 - 1.529)	0.831 (0.620 - 1.114)
	35-44				**0.426 (0.330 - 0.550)**	**0.444 (0.293 - 0.673)**	**0.507 (0.375 - 0.686)**
	45-54				**0.346 (0.266 - 0.450)**	**0.225 (0.138 - 0.367)**	**0.315 (0.229 - 0.435)**
	55-64				**0.353 (0.272 - 0.460)**	**0.207 (0.123 - 0.349)**	**0.201 (0.142 - 0.285)**
	65+				**0.229 (0.171 - 0.307)**	**0.093 (0.037 - 0.238)**	**0.131 (0.083 - 0.209)**
Ethnicity (Ref: White)	Non-White				1.055 (0.943 - 1.179)	**1.488 (1.192 - 1.857)**	**1.574 (1.347 - 1.840)**
Education	HS Grad – Regular				**2.335 (1.065 - 5.117)**	1.627 (0.523 - 5.069)	1.098 (0.439 - 2.744)
Ref: Did not complete HS)	HS Grad – GED				**3.334 (1.494 - 7.438)**	1.275 (0.385 - 4.218)	1.109 (0.424 - 2.900)
	Some College				**3.252 (1.492 - 7.090)**	1.659 (0.536 - 5.133)	1.117 (0.451 - 2.763)
	Associate's Degree				**3.560 (1.623 - 7.807)**	1.227 (0.380 - 3.969)	1.298 (0.519 - 3.246)
	Bachelor's Degree				**3.477 (1.594 - 7.585)**	1.685 (0.538 - 5.277)	1.564 (0.634 - 3.858)
	Post-Grad Degree				**4.426 (2.024 - 9.681)**	1.917 (0.607 - 6.054)	1.799 (0.723 - 4.474)
Marital Status Ref: Single	Married				**0.875 (0.773 - 0.990)**	**0.696 (0.546 - 0.888)**	1.186 (0.988 - 1.424)
	Separated				0.910 (0.511 - 1.619)	0.408 (0.108 - 1.545)	0.711 (0.319 - 1.588)
	Divorced				0.916 (0.759 - 1.106)	1.085 (0.660 - 1.784)	1.035 (0.750 - 1.430)
	Widowed				0.780 (0.575 - 1.057)	1.420 (0.490 - 4.118)	1.107 (0.560 - 2.187)

Table 3 represents a bivariate analysis of financial confidence and taking of additional work/technology-driven gig work. Significant differences were measured with Wald Chi Square statistics. Workers that took on additional work for pay were significantly more likely to report higher levels of being "somewhat" and "very" confident they would achieve a financial goal if they set one. Moreover, they were less likely to report that they were "not at all" or "not very" confident in their financial goal achievement. Similarly, respondents that did not use technology-driven methods for gig work reported lower financial confidence. Respondents that sometimes use technology-driven methods for gig work reported higher rates of "Somewhat"

confident, and respondents that frequently use technology-driven methods for gig work reported higher amounts of "Very" confident.

Table 3. Unadjusted Rates of Financial Confidence in Meeting a Goal Across Gig Work Status

	Financial Goal Confidence				p-value
	Not at all	Not very	Somewhat	Very	
Add Work	5.01%	14.66%	42.86%	34.66%	<.0001
No Add Work	7.36%	15.36%	41.60%	30.52%	
Tech Gig Freq	5.24%	10.11%	26.84%	56.35%	<.0001
Tech Gig Sometimes	3.66%	12.61%	46.04%	35.46%	
No Tech Gig Work	7.18%	15.97%	42.60%	29.96%	

Table 4 represents adjusted odds ratios and their 95% confidence intervals of respondents that reported either being "somewhat" or "very" confident in achieving a financial goal. Significant independent variables that had a significant positive association with this outcome were: taking on additional work for pay, frequently using technology-driven methods for gig work, sometimes using technology-driven methods for gig work, earning more than $35,000 income, having an auto loan, having a student loan, using predatory loans, being male, being of Non-White Ethnicity. Significant negative associations to being either "somewhat" or "very" financially confident include: having unpaid medical debt, not going to the doctor due to cost, self-reporting having moderate or high amounts of debt, being self-employed, being permanently sick or disabled, being unemployed, spending more than or equal to income, not carrying a credit card balance, and being either 45-54 or 65+ years of age.

Table 4. Adjusted Odds of Being Somewhat or Very Financially Confident			
			Somewhat or Very Confident
Gig Work	Additional Work	Yes	**1.290 (1.097 - 1.517)**
	Tech Gig Freq	Yes	**4.532 (2.974 - 6.907)**
	Tech Gig Sometimes	Yes	**2.174 (1.637 - 2.888)**
Health Factors	Unpaid Medical Loans	Yes	**0.803 (0.664 - 0.971)**
	Not Going to the Doctor	Due to Cost	**0.557 (0.459 - 0.676)**
	Not Filling a Prescription	Due to Cost	0.860 (0.696 - 1.061)
	Health Insurance	No	1.015 (0.740 - 1.393)
Financial Factors	"I have too much debt" Ref: 1 -Strongly Disagree	2	**0.632 (0.475 - 0.839)**
		3	**0.393 (0.291 - 0.530)**
		4 – Neutral	**0.348 (0.272 - 0.445)**
		5	**0.436 (0.328 - 0.578)**
		6	**0.242 (0.182 - 0.321)**
		7 – Strongly Agree	**0.179 (0.137 - 0.234)**
	Household Income Ref: <$15,000	$15,000-$24,999	1.616 (0.942 - 2.773)
		$25,000 - $34,999	1.582 (0.952 - 2.629)
		$35,000 - $49,999	**1.807 (1.104 - 2.958)**
		$50,000 - $74,999	**2.686 (1.645 - 4.386)**
		$75,000 - $99,999	**3.769 (2.291 - 6.199)**
		$100,000 - $149,999	**4.256 (2.554 - 7.094)**
		$150,000 +	**4.627 (2.664 - 8.038)**
	Employment Ref: Full-time for employer	Self employed	**0.673 (0.509 - 0.890)**
		Part time for employer	1.019 (0.710 - 1.464)
		Homemaker	0.733 (0.481 - 1.116)
		Full time student	0.752 (0.365 - 1.550)
		Permanently sick disabled	**0.554 (0.330 - 0.929)**
		Unemployed	**0.344 (0.210 - 0.562)**
		retired	1.207 (0.877 - 1.660)
	Spending and Income Ref: Spending < income	Spending > income	**0.290 (0.240 - 0.349)**
		Spending = income	**0.482 (0.410 - 0.566)**
	Income Drop (Ref: No)	Yes	**0.597 (0.492 - 0.724)**
	Credit Card Balance (Ref: Yes)	Not carrying a CC balance	**0.760 (0.647 - 0.892)**
	Auto Loan (Ref: No)	Yes	**1.193 (1.031 - 1.380)**
	Student Loans	Yes	**1.240 (1.004 - 1.531)**
	Predatory Loans	Yes	**1.306 (1.019 - 1.674)**
Individual-Level	Sex	Male	**1.158 (1.009 - 1.330)**
	Age (Ref: 18-24)	25-34	1.167 (0.788 - 1.729)
		35-44	0.837 (0.567 - 1.235)
		45-54	**0.636 (0.428 - 0.946)**
		55-64	0.694 (0.463 - 1.042)
		65+	**0.463 (0.301 - 0.712)**
	Ethnicity (Ref: White)	Non-White	**1.236 (1.039 - 1.471)**
	Education Ref: Did not complete HS)	HS Grad – Regular	1.553 (0.774 - 3.115)
		HS Grad – GED	1.804 (0.858 - 3.793)
		Some College	1.740 (0.873 - 3.469)
		Associate's Degree	1.778 (0.880 - 3.595)
		Bachelor's Degree	1.631 (0.815 - 3.263)
		Post-Grad Degree	1.759 (0.869 - 3.560)
	Marital Status Ref: Single	Married	0.889 (0.741 - 1.067)
		Separated	0.667 (0.341- 1.306)
		Divorced	0.853 (0.664 - 1.096)
		Widowed	1.070 (0.739 - 1.548)

DISCUSSION

Gig work is a relatively unexplored research area. By casting a broad definition of gig work (frequently, sometimes, technology-driven, traditional additional work) the present study described the financial and personal characteristics of gig workers. This study also measured the relationship between gig work and financial confidence by adhering to the Serido et al (2013) model of financial capability development.

The results of this study corroborate previous studies and theories related to gig work and gig workers (Ranta and Salmela-Aro, 2017; Serido et al.,2013). The study also extends the work of these studies by measuring the financial characteristics of individuals who engage in gig work and additional work for pay. We found strong associations to participating in the gig economy across multiple health-related, financial, and personal characteristics and behaviors.

The results of this study are illuminating. Multiple healthcare-related variables were associated with participation in the gig economy, namely, having unpaid medical debt, not going to the doctor due to cost, not filling a prescription due to cost, and being uninsured. These relationships highlight some of the adverse consequences of lack of health insurance and not utilizing health services due to cost. Predatory loans, as defined as auto-title or payday loans in the present study, show a particularly strong positive association with additional work for pay and technology-driven gig work. These loans are characterized by triple-digit interest rates and inappropriate collection practices (Johnson, 2002; Martin& Adams, 2012). Users of these loan types have difficulty getting ahead of the large payment (due to interest) and often pay multiple times the value of the original balance.

Self-efficacy (or one's belief that one can achieve a goal) has been shown to be associated with behavior (Ajzen, 2002; Bandura, 1977). The present study used financial confidence in achieving a goal as a proxy for self-efficacy. Specifically, the study explored the relationship between a study respondent being somewhat or very confident in attaining a goal and their behavior in earning extra income via additional traditional work and technology-driven gig work, adjusting for other financial and personal characteristics and behaviors. We found that people who engage in the gig economy are more likely to respond that they are either somewhat or very financially confident, as opposed to not very or not at all confident in achieving a financial goal. Due to data limitations, we could not ascertain which direction this relationship flows, however, this could be a research question for future studies.

Applying the present study to the work of Serdido et al (2013), we see that in Table 2, the financial characteristics of gig workers are less than ideal (high debt, spending more than income, predatory loan use, and healthcare-related financial trouble); however, in Table 4, these gig workers have a higher view of their confidence in achieving a financial goal. Therefore, the relationship between financial self-efficacy and financial behavior remains intact, even though the current financial status of the gig workers may not be financially strong.

One such factor affecting gig workers will be the spread of COVID-19: probably the biggest health crisis since the 1918-19 Flu pandemic in a world with many gig workers without health insurance or sick leave. Gig workers may work closely to clients with the virus prior to symptoms or with no symptoms. They may not quarantine to recover because their jobs are required more than ever and their lack of financial stability. In order to limit the spread of

COVID-19, the information we seek in this study may be critical in the long term for platform companies to understand the public health effects of their hiring policies and committing that economic uncertainty will not be deterrents to their workers following public health guidance.

LIMITATIONS

Our study had several limitations. First, while the 2018 NFCS surveyed over 27,000 people, the questions related to gig work were new to 2018 and the survey was limited to a cross-sectional research design. Therefore, no causal relationships should be inferred from this study. Moreover, while the sampling design attempts to reduce bias, it is possible that the sample may be biased in some unknown way. While causal relationships generally offer more and stronger insights, we believe that the association with this study offers significant preliminary steps to future research related to gig work.

A second limitation is the lack of data that describes why the individual is participating in gig work - necessity or desire? Motivations for gig work participation are varied and the 2018 NFCS does not provide individual-level gig worker motivation information. If a gig worker has fallen on hard times and gig work is the only option, they may have a lower financial confidence as opposed to the gig worker who works to earn extra income to pay off debt or invest.

CONCLUSION

The purpose of our research was to document the associated characteristics of gig workers and their financial confidence. We found even though the current financial status of gig workers may not be strong, their financial confidence in reaching a goal was significantly higher than non-gig workers. No matter how poor their financial condition becomes, the relationship between self-efficacy (financial confidence for goal attainment) and financial behavior (gig work) still remains true (as illustrated in the Serdido theoretical model). The characteristics of gig workers are fairly poor (high debt, spending more than income, predatory loan use, healthcare issues), BUT those same gig workers have a HIGHER view of their confidence in achieving a financial goal.

REFERENCES

Aegon (2016). Retirement Preparations in a New Age of Self-Employment. Retrieved from https://www.aegon.com/contentassets/96b24267a54849309f492485832cff9f/retirement-self-employed-report.pdf

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. Journal of applied social psychology, 32(4), 665-683.

Allon, G., Cohen, M. C., & Sinchaisri, W. P. (2019). The Impact of Behavioral and Economic Drivers on Gig Economy Workers. In Academy of Management Proceedings (Vol. 2019, No. 1, p. 10216). Briarcliff Manor, NY 10510: Academy of Management

Arifin, A. Z., Kevin, K., & Siswanto, H. P. (2017). The Influence of Financial Knowledge, Financial Confidence, and Income on Financial Behavior Among The Workforce in Jakarta. MIX: Jurnal Ilmiah Manajemen, 7(1), 154883.

Ashford, S. J., Caza, B. B., & Reid, E. M. (2018). From surviving to thriving in the gig economy: A research agenda for individuals in the new world of work. *Research in Organizational Behavior*, *38*, 23-41.

Asaad, C. T. (2015). Financial Literacy and Financial Behaviour: Assessing Knowledge and Confidence. Financial Services Review,24, 101-117.

Bajwa, U., Knorr, L., Ruggiero, E. D., Gastaldo, D., & Zendel, A. (2018). Towards an understanding of workers' experiences in the global gig economy. Global Migration & Health Initiative, Toronto.

Balaram, B., Warden. J., & Wallace-Stephens, F. (2017). Good Gigs: A fairer future for the UK's gig economy. Retrieved from https://www.thersa.org/globalassets/pdfs/reports/rsa_good-gigs-fairer-gig-economy-report.pdf

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. Psychological review, 84(2), 191.

Barnes, S. A., Green, A., & de Hoyos, M. (2015). Crowdsourcing and work: individual factors and circumstances influencing employability. New Technology, Work and Employment, 30(1), 16-31.

Becker, G. S. (2009). Human capital: A theoretical and empirical analysis, with special reference to education. University of Chicago press.

Benach, J., & Muntaner, C. (2007). Precarious employment and health: developing a research agenda. *Journal of Epidemiology & Community Health*, *61*(4), 276-277.

Benach, J., Vives, A., Amable, M., Vanroelen, C., Tarafa, G., & Muntaner, C. (2014). Precarious employment: understanding an emerging social determinant of health. Annual review of public health, 35.

Bernhardt, A., & Thomason, S. (2017). What Do We Know About Gig Work in California. An Analysis of Independent Contracting. Berkeley, CA: UC Berkeley Center for Labor Research and Education. Retrieved from http://laborcenter.berkeley.edu/pdf/2017/What-Do-We-Know-About-Gig-Work-in-California.pdf

Block, S., & Hennessy, T. (2017). "Sharing Economy" Or On-demand Service Economy?. Canadian Centre for Policy Alternatives. 27.

Bond, S. (2020), Gig Workers Would Get Unemployment Safety Net In Rescue Package. Retrieved March 28, 2020, from https://money.cnn.com/2017/08/17/pf/jobs/gig-worker/index.html

Chang,O. (2017). 5 things every gig worker should know. Retrieved from https://money.cnn.com/2017/08/17/pf/jobs/gig-worker/index.html

Chatterjee, S., & Salter, J. R. (2011). Harness,(2011)"Financial Confidence Among Retirees: The Role of Financial Advice and Planning Duration". *Economics Bulletin*, *31*(1), 315-323.

Cheng, M. (2019). How universities are starting to prepare students for the gig economy. Quartz at Work. Retrieved February 21, 2020, Retrieved from https://qz.com/work/1724712/how-universities-are-preparing-students-for-the-gig-economy/

Christie, N., & Ward, H. (2019). The health and safety risks for people who drive for work in the gig economy. *Journal of Transport & Health*, *13*, 115-127.

Codagnone, C., Abadie, F., & Biagi, F. (2016.). The Future of Work in the 'Sharing Economy.' Retrieved from https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101280/jrc101280.pdf

Cook, C., Diamond, R., & Oyer, P. (2019). Older Workers and the Gig Economy. In AEA Papers and Proceedings, 109, 372-376.

Dmitrieva, K. (2018). "Gig Economy' Increasingly Concentrated Among Older U.S. Workers. Retrieved from https://www.bloomberg.com/news/articles/2018-06-07/-gig-economy-increasingly-concentrated-among-older-u-s-workers

Donovan, S. A., Bradley, D. H., & Shimabukuro. (2016). What does the gig economy mean for workers? (CRS Report R44365). Washington, DC: Congressional Research Service. Retrieved from https://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=2512&context=key_workplace

Doucette, M. H., & Bradford, W. D. (2019). Dual job holding and the Gig economy: Allocation of effort across primary and Gig jobs. Southern Economic Journal, 85(4), 1217-1242.

EdisonResearch. (2018). The Gig Economy. Retrieved from http://www.edisonresearch.com/wp-content/uploads/2019/01/Gig-Economy-2018-Marketplace-Edison-Research-Poll-FINAL.pdf

Finra Investor Education Foundation(n.d.). Financial Capability Study. Retrieved from https://www.usfinancialcapability.org/downloads.php

Fleming, P. (2017). The human capital hoax: Work, debt and insecurity in the era of Uberization. Organization Studies, 38(5), 691-709.

Fos, V., Hamdi, N., Kalda, A., & Nickerson, J. (2019). Gig-Labor: Trading Safety Nets for Steering Wheels. SSRN Electronic Journal. Retrieved from https://doi.org/10.2139/ssrn.3414041

Fountain (2019). Gig Economy Statistics. Retrieved February 20, 2020, from https://get.fountain.com/posts/gig-economy-statistics

Frederico, K. (2019). Hustle by the Side Hustle: Women's Explanations for Actual and Anticipated Earnings in Multi-Level Marketing. A paper presented at the meeting of the American Sociological Association, New York, NY.

Holtz-Eakin, D., Gitis, B., & Ronehart, W (2017). The Gig Economy: Research and Policy Implications of Regional, Economic, and Demographic Trends—The Aspen Institute. Retrieved from https://www.aspeninstitute.org/publications/the-gig-economy-research-and-policy-implications/

Guzman, G. (2019). Household Income: 2018 American Community Survey Briefs. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2019/acs/acsbr18-01.pdf

Hall. J., & Krueger, A. (2015). An Analysis of the Labor Market for Uber's Driver-Partners in the United States. Princeton University Working Papers Industrial Relations Section, 587.

Healy, J., Nicholson, D., & Pekarek, A. (2017). Should we take the gig economy seriously?. Labour & Industry: a journal of the social and economic relations of work, 27(3), 232-248.

Healy, J., Pekarek, A., & Vromen, A. (2020). Sceptics or supporters? Consumers' views of work in the gig economy. New Technology, Work and Employment, 35(1), 1-19.

Hill, K. (2019). Flexibility or insecurity: Work and life in the gig economy. Conference papers-American Sociological Association, 1-23.

Hollowell, J. C., Rowland, Z., Kliestik, T., Kliestikova, J., & Dengov, V. V. (2019). Customer loyalty in the sharing economy platforms: How digital personal reputation and feedback systems facilitate interaction and trust between strangers. Journal of Self-Governance and Management Economics, 7(1), 13-18.

Holtz-Eakin, D., Gitis, B., & Rinehart, W. (2017). The gig economy: Research and policy implications of regional, economic, and demographic trends. The American Action Forum and The Aspen Institute. Retrieved from https://www.americanactionforum.org/research/ gig-economy-research-policy-implications-regional-economic-demographic-trends/

Jarrahi, M. H., & Sutherland, W. (2019, March). Algorithmic Management and Algorithmic Competencies: Understanding and Appropriating Algorithms in Gig work. In International Conference on Information (pp. 578-589). Springer, Cham.

Johal, S., &Thirgood, J. (2016). Working Without a Net: Rethinking Canada's Social Policy in the New Age of Work. Retrieved from http://www.deslibris.ca/ID/10065909

Johnson, C. (2002). Payday loans: Shrewd business or predatory lending. Minn. L. Rev., 87, 1.

Kalleberg, A. L., & Dunn, M. (2016). Good jobs, bad jobs in the gig economy. LERA for Libraries, 20(1-2).

Dmitrieva, K. (2018). "Gig Economy" increasingly concentrated among older U.S. workers. Retrieved from https://www.fa-mag.com/news/-gig-economy--increasingly-concentrated-among-older-u-s--workers-39090.html

Koustas, D. K. (2019). What Do Big Data Tell Us about Why People Take Gig Economy Jobs?. In AEA Papers and Proceedings, 109, 367-371.

Lepanjuuri, K., Wishart, R., & Cornick, P. (2018). The characteristics of those in the gig economy. UK Department for Business, Energy and Industrial Strategy. Accessed, 10.

Liss-Riordan, S. (2020). Coronavirus Bill Includes Sick Leave, But Not for Gig Workers. Retrieved from https://www.commondreams.org/views/2020/03/16/coronavirus-bill-includes-sick-leave-not-gig-workers

Madonia, A. (2018). Examining the Future of Workers in the Gig Economy—Women In Retail Leadership Circle. (n.d.). Retrieved February 20, 2020, from https://www.womeninretail.com/examining-the-future-of-workers-in-the-gig-economy/

Manpowergroup (n.d.). GigResponsibly: The Rise of NextGen Work. Retrieved from https://www.manpowergroup.com/wcm/connect/cf010c08-826a-4f00-bd27-70a63144083d/manpowergroup-next-GEN-work.pdf?MOD=AJPERES&CVID=lYcpMqx

Manyika, J., Lund, S., Bughin, J., Robinson, K., Mischke, J., & Mahajan, D. (2016). Independent work: Choice, necessity, and the gig economy. McKinsey Global Institute, 2016, 1-16.

Martin, N., & Adams, O. (2012). Grand theft auto loans: Repossession and demographic realities in title lending. Mo. L. Rev., 77, 41.

McCafferty, D. (2017). How the Gig economy Benefits Business and workers. CIO Insight, Retrieved from https://www.cioinsight.com/it-management/workplace/slideshows/how-the-gig-economy-benefits-business-and-workers.html

Milam, B. (2019). Exploring Financial Literacy of Independent Musicians in the Gig Economy. The University of Southern Mississippi.

Mulcahy, D. (2019). Universities Should Be Preparing Students for the Gig Economy. Harvard Business Review. Retrieved from https://hbr.org/2019/10/universities-should-be-preparing-students-for-the-gig-economy

Nemkova, E., Demirel, P., & Baines, L. (2019). In search of meaningful work on digital freelancing platforms: the case of design professionals. New Technology, Work and Employment, 34(3), 226-243.

Newcomer, E. (2018). Gig Economy Workers Often Don't Realize How Much it Costs Them. Retrieved from https://www.bloomberg.com/news/articles/2018-11-02/gig-economy-workers-often-don-t-realize-how-much-it-costs-them

Palameta, B., Nguyen, C., Hui, T. S. W., & Gyarmati, D. (2016). Link Between Financial Confidence and Financial Outcomes Among Working-Aged Canadians. Social Research and Demonstration Corporation.

Petriglieri, G., Ashford, S. J., & Wrzesniewski, A. (2019). Agony and Ecstasy in the Gig Economy: Cultivating Holding Environments for Precarious and Personalized Work Identities. Administrative Science Quarterly, 64(1), 124–170.

Pichault, F., & McKeown, T. (2019). Autonomy at work in the gig economy: analysing work status, work content and working conditions of independent professionals. New Technology, Work and Employment, 34(1), 59-72.

Prudential Financial (2017). Gig Workers in America – Profiles, Mindsets, and Financial Wellness. Retrieved from https://www.prudential.com/corporate-insights/gig-workers-in-america-profiles-mindsets-and-financial-wellness

Ranta, M., & Salmela-Aro, K. (2018). Subjective financial situation and financial capability of young adults in Finland. International Journal of Behavioral Development, 42(6), 525-534.

Rosenblat, A. (2016). What motivates gig economy workers. Harvard Business Review, 17, 2-5.

Sabri, M. F., & Juen, T. T. (2014). The influence of financial literacy, saving behaviour, and financial management on retirement confidence among women working in the Malaysian public sector. *Asian Social Science*, *10*(14), 40.

Sakalaki, M., Richardson, C., & Bastounis, M. (2005). Association of Economic Internality With Saving Behavior and Motives, Financial Confidence, and Attitudes Toward State Intervention 1. *Journal of Applied Social Psychology*, *35*(2), 430-443.

Schor, J. B. (2017). Does the sharing economy increase inequality within the eighty percent?: Findings from a qualitative study of platform providers. Cambridge Journal of Regions, Economy and Society, 10(2), 263–279.

Serido, J., Shim, S., & Tang, C. (2013). A developmental model of financial capability: A framework for promoting a successful transition to adulthood. International Journal of Behavioral Development, 37(4), 287-297.

Sinchaisri, P., Allon, G., & Cohen, M. (2019). The Impact of Behavioral and Economic Drivers on Gig Economy Workers. In Academy of Management Proceedings (Vol. 2019, No. 1, p. 10216). Briarcliff Manor, NY 10510: Academy of Management.

Todolí-Signes, A. (2017). The End of the Subordinate Worker? Collaborative Economy, On-Demand Economy, Gig Economy, and the Crowdworkers' Need for Protection. *International Journal of Comparative Labour Law and Industrial Relations (IJCLLIR)*, *33*(2), 241–268.

Tokar Asaad, C. (2015). Financial literacy and financial behavior: Assessing knowledge and confidence. *Financial Services Review*, *24*(2), 101-117.

Tran, M., & Sokas, R. K. (2017). The Gig Economy and Contingent Work: An Occupational Health Assessment. Journal of Occupational and Environmental Medicine, 59(4), e63–e66.

T.RowePrice. (2018). Gig Economy Workers Pay More Attention To Their Money. Retrieved February 20, 2020, from https://www.troweprice.com/corporate/en/press/t--rowe-price--gig-economy-workers-pay-more-attention-to-their-m.html

UpWork. (2017). Freelancers predicted to become the U.S. workforce majority within a decade, with nearly 50% of millennial workers already freelancing, annual "Freelancing in America" study finds. Retrieved February 20, 2020, from https://www.upwork.com/press/2017/10/17/freelancing-in-america-2017/

U.S. Bureau of Labor Statistics. (2018). Contingent and Alternative Employment Arrangements Summary. (n.d.-a). Retrieved February 19, 2020, from https://www.bls.gov/news.release/conemp.nr0.htm

Wylie, M. (2017). Debt-ridden millennials drive gig economy. Retrieved from https://www.bizjournals.com/bizwomen/news/latest-news/2018/02/debt-ridden-millennials-drive-gig-economy.html?page=all

Zalis, H. (2018). Steps For Growing Your Financial Confidence. Retrieved from https://www.forbes.com/sites/shelleyzalis/2018/06/16/women-money-8-steps-for-growing-your-financial-confidence/#119a52502468