Research Proposal for NBER Grant on Economics of Working Longer and an Aging Workforce

The Impact of the Gig Economy on Retirement Decisions and Social Security Claiming

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Overview

Although individuals near or past the normal retirement age are one of the fastest growing age groups participating in the gig economy (JPMorgan Chase Institute, 2016a), there has been little research on how gig job availability has impacted older workers' labor supply decisions. The goal of this project is to examine the effect of the gig economy on older workers' labor market participation and Social Security claiming behavior.

Older individuals around the normal retirement age have strong willingness to work (Ameriks et al., 2020). While many are still willing and healthy enough to work longer, job opportunities in the traditional labor market for older workers are limited. The growing online and informal gig economy has been providing new job opportunities for older individuals mostly in the form of part-time jobs or contract work (National Academies of Sciences, 2020). Furthermore, work responsibilities on the gig platforms may require less mental or physical demand than traditional jobs; for instance, renting out a home or driving customers to the airport likely requires less mental intensity or new training than many tasks in the formal sector. Recent studies have shown that since the expansion of the online gig economy, older individuals have continued to work longer (Cook, Diamond, and Oyer, 2019; Jackson, 2021). More broadly, contract work and self-employment are more prevalent at older ages (Abraham, Hershbein, and Houseman, 2019; Collins et al., 2019) and can serve as a bridge job to retirement (Ramnath, Shoven, and Slavov, 2017).

Although older workers have been working longer, it is unclear how their labor market participation in the gig economy affects their retirement and Social Security claiming behavior. Previous studies find that delaying initial Social Security claiming to the full retirement age can be financially advantageous (Goda et al., 2018) and working longer can boost financial security (Bronshtein, et al., 2018). We will investigate whether supplemental income from gig work encourages individuals to delay claiming Social Security. Additionally, we will use the Current Population Survey (CPS) and Health and Retirement Survey (HRS) data to examine the share of Social Security beneficiaries who continue to work part time in the formal and the gig workforce.

Our research will complement previous work by developing a comprehensive measure of the availability of various gig platforms by geography. We will use novel identification techniques and recent data to estimate the extent to which gig economy penetration impacts older individuals' labor market decisions. Specifically, Uber and Lyft entered different cities at different times between 2012 and 2018, providing a series of natural experiments to compare geographies with and without transportation platform availability. In the case of AirBnB, although the overall roll-out is smooth, certain cities such as New Orleans, LA and Santa Monica, CA have put strict limits on who qualifies to list on AirBnB, providing a reversal in penetration. In both examples, we will interact our measure of online platform penetrance with local age structure. This strategy would allow us to estimate differential impacts of these platforms' presence by age on labor force and Social Security claiming behavior.

Data

We intend to analyze monthly Social Security application data (SSA) for all Social Security beneficiaries from 2010 – 2020, as most online platforms entered between this time period (JPMorgan Chase Institute, 2016b). We have submitted a research proposal to the Social Security Administration to request for data access. Based on our regression specifications described in the next section, we

requested for geographical- and age-level aggregate data on Social Security applications. The geography unit needs to be no broader than census tract, zip code, or county. The age bracket should be fine enough to differentiate early versus normal retirement age (NRA) claiming (e.g., 62-65, 65-NRA, > NRA). An example would be longitudinal statistics on the number of Social Security beneficiaries each month between age 62-65 living in zip code 94110, in San Francisco.

Additionally, we will also use survey data from the Current Population Survey (CPS) and the Health and Retirement Survey (HRS), with restricted geographic identifiers, to provide supplementary evidence of the impact of gig economy penetration on labor force participation at later ages, conditional on demographics such as race, ethnicity, and socio-economic status. Using both the Social Security administrative records and the survey data allows us to examine concurrent Social Security claiming and labor supply.

Methods

We will conduct the following tasks to complete the project. First, we will build upon UberX entry data from Hall, Palsson and Price (2018) by appending additional measures of other gig platform availability and market penetration by geography. Gig platforms can be broken down into three types: capital platforms in which people rent out assets (such as AirBnB and VRBO), transportation in which people provide transportation services (Uber, Lyft, other ridesharing platforms), and labor in which people performs tasks, freelance work, or run errands for customers (TaskRabbit, Instacart, etc.). We borrow these categories from the JP Morgan Chase Institute's delineations (2018). This index will allow us exploit geographic variation in the availability and intensity of online platform work, $(Gig\ Avail)_{mt}$, by geography-time period, and for three subindices relating to each platform type p, $(Gig\ Avail^{p})_{mt}$.

Second, using SSA, HRS, and CPS data and a difference-in-difference technique, we will compare how older individuals living in regions where gig work became available in earlier years adjust

labor supply and Social Security claiming behavior differently than those living in regions with less access to gig work. Specifically, we will exploit the spatial rollout of gig platforms over time to compare changes in claiming behavior. As gig platform entry is assumed to be exogenous to older workers' retirement and social security claiming decisions, we will use the following specification to estimate how older individuals respond to the availability of gig platforms:

$$Y_{igt} = \alpha + \beta * (Gig\ Avail)_{mt} + \gamma_m + \eta_t + X_{igt} + \varepsilon_{igt}, \quad (1)$$

where Y_{igt} is our outcome of interest, a measure of social security claiming, retirement, or labor supply for individual i, in geography g (census tract, zip code, and county), and at time t. We control for time fixed effect η_t and a MSA fixed effects γ_m as well as individual characteristics X_{igt}. Our measure of gig availability will vary at the MSA-time level $(Gig\ Avail)_{mt}$, and will either be an indicator for Uber entry, or an intensive margin measure indicating the availability of multiple gig platforms. We will also consider creating a Bartik style instrument (Bartik, 1991) that leverages national gig penetration and local pre-period weights. By observing decision making at a finer geography than the MSA, we can control for broader local labor market trends, using only within-city variation. In the event that we cannot gain access to individual-level data, our specification changes to:

$$Y_{cgt} = \alpha + \beta * (Gig\ Avail)_{mt} + \gamma_m + \eta_t + X_{cgt} + \varepsilon_{gt}, \quad (2)$$

where Y_{cgt} is a measure of social security claiming, retirement, or labor supply for cohort c, in geography g, and at time t. We would instead use filing rates (number of filings / population) for age cohorts c, in geography g, and at time t, and weight the regression by the number of filings.

Third, we will build upon the regression specification above to incorporate heterogeneity in access to various platforms by race, ethnicity, and socio-economic status, to examine if these lead to differential effects in Social Security claiming and retirement behavior. The diverse capital and labor

requirements for operating in various gig platforms may lead to an important source of participation heterogeneity; namely, different groups are likely to interact with different platforms. For example, leasing out space on AirBnB requires more access to housing capital, and may attract relatively wealthier participants. On the other hand, platforms such as TaskRabbit and Instacart require less capital, and are more labor intensive, and may attract lower-wealth participants. Given the racial and socio-economic differences in access to capital and credit, we also expect to see different rates of participation by these demographics, which may in turn interact differentially with retirement decisions. For instance, access to capital platforms may lead to earlier retirements, while individuals maintain their income flows through renting their properties. Conversely, more labor-intensive platforms may cause individuals to delay retirement as they have more options to work longer or work flexible hours. Precisely, we will expand our difference-in-difference identification strategy above to include a third interaction measuring demographic composition at a zip or census tract level ($Demo_{gt}$) and use CPS and/or HRS survey data, to provide evidence on older individuals' Social Security claiming and labor market participation by race, ethnicity, and socio-economic status:

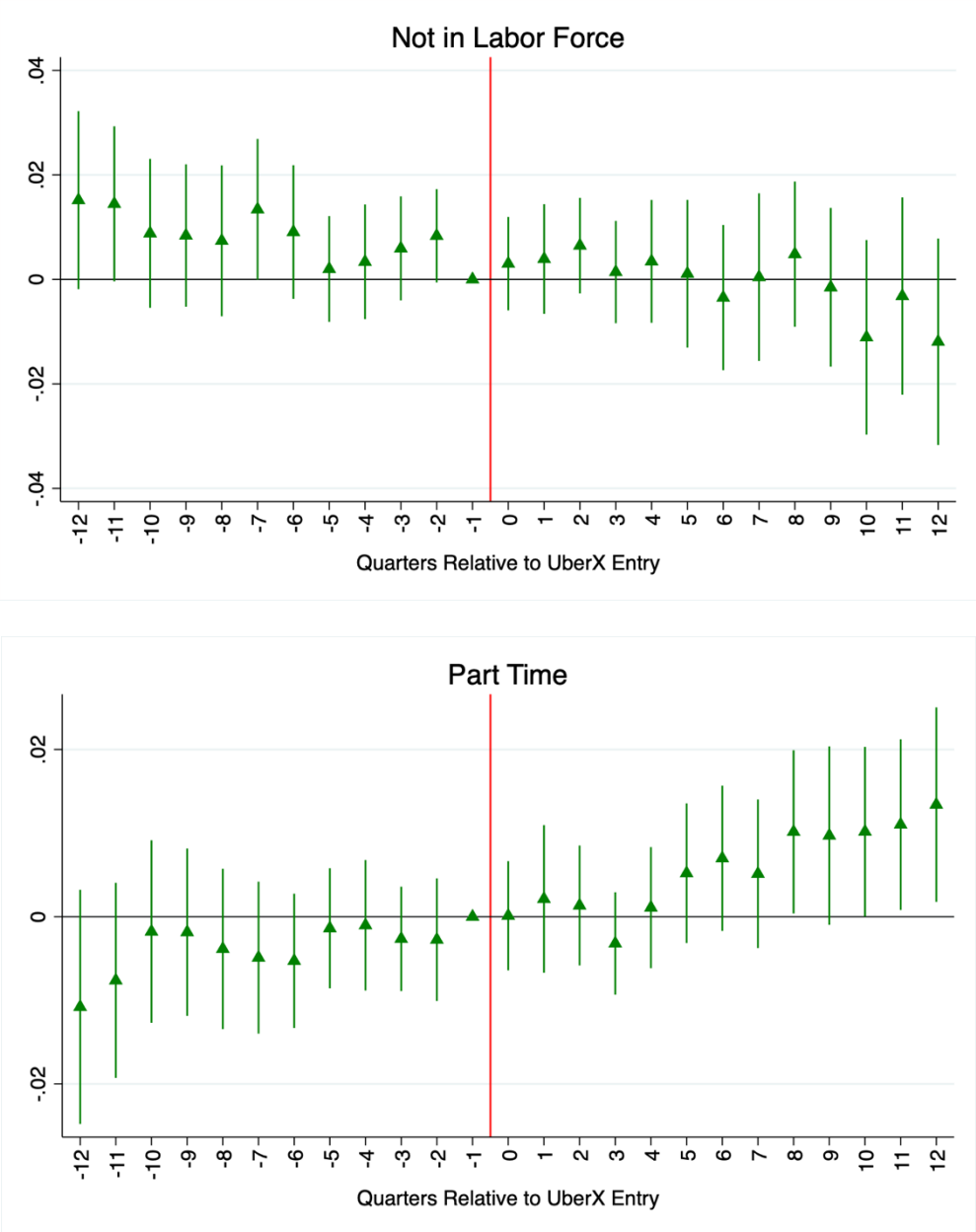
$$Y_{igt} = \alpha + \beta * (Gig\ Avail)_{mt} * Demo_{gt} + \gamma_m + \eta_t + X_{igt} + \varepsilon_{igt}. \quad (3)$$

Preliminary Findings

In our preliminary analysis, we utilize variation in Uber entry dates by CBSA (Hall, Palsson and Price; 2018) as a measure of $(Gig\ Avail)_{mt}$ and estimate Equation 1. We use monthly CPS data for the years 2010-2019 to evaluate how outcomes change for older individuals, age 55-69, after UberX enters their city. Preliminary findings in Figure 1 below indicate that compared to the twelve quarters prior to Uber's entry, fewer older individuals reported that they were not in the labor force in the twelve quarters immediately after the entry of Uber. Additionally, more older individuals reported that they had part-time work in the twelve quarters after Uber entered their cities. Since driving for Uber is commonly

interpreted as part-time jobs for uber drivers, an increase in part-time work along with an increase in labor force participation suggests that the availability of Uber may be leading older individuals to stay connected to the labor force longer.

Figure 1:



Notes: Figures are estimates for Equation 1 using CPS data for the years 2010-2019 among individuals ages 55-69. Controls include age FEs, gender, race, Hispanic, education, month FEs, year FEs, CBSA fixed effects, and CBSA specific time trends.

Estimated Budget

Category	Information	Cost
RA salary	One academic year graduate RA (20 hrs/week) to help analyze the CPS and HRS data	$20,475 – $22,275
RA Tuition	Associated tuition cost of hiring graduate RA	$10,864
RA Fringe	Graduate RA fringe (health)	$3,246
Research Travel	Travel for the team to collaborate and present at conferences	$6,000
Summer Salary	$10,000 for each investigator * 2 investigators	$20,000
Summer Fringe	7.65% of summer salary ($20,000 * 0.0765 = $1,530)	$1,530
Sub-award	56.5% overhead for 25% of summer salary for one investigator ($10,000 * 0.25 * 0.565 = $1,412.5)	$1,412.5
Overhead		$9,000
Total		**$72,527.5 – $74,327.5**

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