Dependence and Heterogeneity in the Platform Labor Force

September 2021

A policy brief by
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Governing Work in the Digital Age
is a research project directed by Prof. Anke Hassel and kindly supported by the German Federal Ministry for Labour and Social Affairs
www.digitalage.berlin

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Introduction

The emergence of platform-based gig work has generated enormous attention from scholars (Schüßler et al. 2021), even out of proportion to its relatively small prevalence in the labor force (Collins et al. 2019). One reason is likely the early rapid growth of this type of work, especially in driving and delivery, as well as the opportunity that platform-based arrangements offer to employers to convert standard employment into what is essentially a piece rate model (Dubal 2020). To date, discussions of labor conditions in the platform economy have had a strong normative dimension. Proponents hail flexibility and the "end of employment" (Sundararajan 2016) as well as the enhanced opportunities for self-employment that matching and search algorithms and crowdsourced reputational data provide (Einav, Farronato, and Levin 2016). Critics focus on the risk shift onto workers (Ravenelle 2019; Vallas 2019), management control via technology (Rosenblat and Stark 2016), and threats to stable employment (V. B. Dubal 2017). In this paper, I shift attention to key analytic dimensions of this type of work and their implications for worker experiences. More specifically, I argue that the combination of the technological structure of gig work (nearly automatic, open-access employment, algorithm-driven work process) plus workers' ability to choose schedules and hours yields an unusually heterogeneous labor force on a range of dimensions, especially patterns of work in other jobs and portfolios of household incomes. As a result, worker experiences are also more heterogeneous than in conventional workplaces. One implication is that the nexus of management control cannot be reduced to algorithmic control, as some accounts have it, but rests in significant part on the role that market discipline plays. For workers who are highly dependent on platform earnings, the fear of job loss (Bowles 1985; Schor and Bowles 1987), is an important disciplinary device that enhances technological control. By contrast, for those workers who have other jobs, pensions, and family incomes, algorithmic control and fear of de-activation are less powerful. They are able to carve out more autonomy and satisfaction in platform work. This helps to distinguish platform-based gig labor from other forms of labor relations, and clarify its novelty.

These conclusions are based on findings from two multi-year, multi-platform research projects which have included in-depth interviews with earners. The first, which ran from 2011–2017, studied 9 platforms, nearly all of which offered in-person services, such as rides, accommodation, car rentals, errands and food delivery. The final platform studied was a cooperative of photographers who sold "stock photos." Details on this project can be found in Schor et al. (2020). The second project, which began in 2019 and is ongoing, has added grocery shopping and delivery and childcare work, and also includes ride-hail and package and food delivery and includes a roughly similar number of interviews. Analysis of this data is not yet complete. Altogether, the two projects have completed more than 200 interviews with earners on nearly different 20 platforms.

This evidentiary diversity is analytically important. First, it allows us to avoid what we may call "Uber-centricity." As the largest and most visible of the labor-based platforms, Uber has dominated the scholarly literature and in some ways the scholarly imagination. "Uberization" became the catchword for the sector as a whole (Davis 2016). However, Uber is one of the most predatory platforms, and has presided over a steep erosion of driver earnings (Farrell, Greig, and Hamoudi 2018).

It is a leader in gamification, experimentation, and asymmetric structuring of information in ways that undermine workers' power and decision-making abilities (Calo and Rosenblat 2017). In the United States, as conditions of work for ride-hail drivers have deteriorated, the workforce also appears to have become more immigrant, less white, and less well-off socio-economically, although this is a conclusion from individual city studies (Parrott and Reich 2018; Wells, Attoh, and Cullen 2019). In any case, while Uber is certainly a major player, it is important to take the full diversity of this sector into account, especially for analytic purposes. Second, studying a range of platforms allows researchers to see different algorithmic designs, matching protocols, rating practices and business models. This helps to understand the full range of worker experiences, as well as what is common across all platforms.

Approaches to Platform Labor

Before turning to our findings, it may be useful to comment on some of the common approaches in the literature. In previous work (Vallas and Schor 2020) we identified distinct approaches to platform labor. The first is mainly from economics and management and focuses on the efficiencies, reduced transaction costs and entrepreneurial opportunities afforded by the digital technologies used by platforms (Einav et al. 2016; Sundararajan 2016; Horton and Zeckhauser 2016). While these insights are important, these scholars tend to ignore asymmetries of power between workers and platforms and have neglected the substantial negative impacts of platforms. These include, for example, increased emissions, congestion, traffic fatalities (for ride-hail); rising rents, housing shortages, and declining quality of neighborhoods (for accommodations). Other impacts scholars have identified include absence of protections for discrimination, primarily by race and disability; and increases in income inequality.

On the critical side, scholars tend to focus on platform power. One school identifies growing the monopoly power of the large tech platforms and sees entities such as Uber and Airbnb as smaller, but related cousins (Kenney and Zysman, 2016:62). Some analysts point to the role of patient finance capital in creating monopolized markets (Srnicek 2016). While these scholars tend not to focus specifically on labor, the monopoly positions of some of these firms can at times also lead to monopsonistic power (Dube et al. 2018). A related power-based perspective focuses on algorithmic control via informational asymmetries between an all-knowing digital Pantopticon which tracks and controls workers at all time, and "blinded" earners who are only shown partial information, have little knowledge of how the algorithms work, and are subject to its whims (Rosenblat and Stark 2016; Robinson 2017; Lee et al. 2015; Griesbach et al. 2019). These scholars argue that the apps have the ability to manipulate workers through gamification, constant changes in bonuses and incentives, and experimentation (van Doorn and Chen 2021).

The third critical approach emphasizes the precarity of gig labor. Scholars have documented an ongoing erosion of the post-WWII regime of employment security and a shift of responsibility and risk from employers and the state onto workers (Hacker 2008; Kalleberg 2013; Standing 2011; Weil 2014). This trend reaches its apogee in the platform economy, via the (mis)use of independent contractor status, which has received considerable scholarly attention (V. Dubal 2017; V. B. Dubal 2017; Cherry 2016; Kennedy 2017). In contrast to employees, platform workers bear

risks of bodily injury, customer malfeasance, and inadequate demand. (van Doorn 2018; Ravenelle 2015; Robinson 2017; Rosenblat 2018).

While platforms in the gig labor sector have undoubtedly amassed considerable power, these approaches run the risk of overstating it. In contrast to Facebook, Google, or Amazon, most gig labor platforms offer in-person, local services for which network externalities are limited, thereby reducing a potent source of monopolistic power. Furthermore, many of them have not yet been capable of earning profits, which may limit their future reach. With respect to algorithmic control, a growing literature reveals the ways in which earners can learn to resist and "outsmart" algorithms . And as we note below, our research finds that the ability of algorithms and ratings to discipline and control workers varies considerably, both within and across platforms. With respect to the precarity approach, it downplays the technological innovations associated with platform work. It also tends not to recognize the ways in which gig earnings that supplement other sources reduce workers' overall financial precarity, rather than increase it.

The limits of platform power over labor are also evident in other ways. Platforms are embedded in larger labor markets whose dynamics affect the supply and compensation of workers. In the U.S., Farrell and Greig (2017) have reported that changes in the size of the gig labor sector are driven by conditions in general labor markets. Their analysis of bank data also shows that most earners are active on platforms for only a part of a year, and their earnings are low (Farrell 2018). The fraction of workers who are active 10–12 months for year varies from 9–10% in non-transport and rental work to 12.5% in transportation. (Of course, numerous studies have shown that these more attached workers do a disproportionate amount of the total number of jobs.) More than half of all platform earners in all categories are active only 1–3 months per year. This is a flexible labor force with frequent movement on and off apps. Furthermore, our new research finds growing familiarity with multiple apps. Another piece of evidence of the limits of platform control is the difficulty Uber and Lyft have had getting drivers back after they abandoned the platform during the COVID period.

Dependence and Heterogeneity

Our research suggests that platforms should be understood as a new type of labor arrangement. A key dimension is that the firm "retreats" from controlling hours, scheduling, and the labor process, a ceding of management direction made possible by technology (and likely partly motivated by the legal characteristics of independent contracting). This approach takes an opposite view to that of algorithmic control theorists, as we focus on what the firm does not control. One obvious area that platforms do not control is working for competitors. App-based gig laborers are free to earn on competitors' apps, and many do. Another dimension of worker choice is hours of work. Conventional employers typically set hours and schedules, and variation in hours is mainly present across job categories, rather than within them (Altonji and Paxson 1988; Schor 1992). By contrast, among platform workers, there has been high hours variation within jobs because they are free to work as much or little as they choose. Hall and Krueger found that 51% of Uber drivers work 1–15 hours per week, 30% work 16–34 hours, 12% work 35–49 hours and 7% work more than fifty hours (Hall and Krueger, 2018), a rough distribution which is common on many platforms. In our research, we

find that few earners work more than full-time. European survey research finds a similar pattern with a majority of earners reporting low hours and a small number with high hours (Manyika et al. 2016; Huws et al. 2017; Berg and Rani 2018; Forde, Stuart, and Joyce 2017). However, a 2020 San Francisco study of drivers and delivery workers based on earner recall found considerably higher hours and less variation, which likely reflects a shift toward longer hours as wages declined in these services, plus some city-specific pressures (Benner 2020). Recall may also be subject to upward bias.

This diversity in hours is associated with heterogeneous experiences, which are structured by the degree of worker dependency on the platform to finance basic living expenses. When income is supplemental, satisfaction and hourly wages are higher, autonomy is greater, and conditions are better. By contrast, workers whose livelihoods are dependent on the platform express more dissatisfaction, and experience more precarity. This is the case not just across platforms, but within them.

In the first project, we categorized our 112 respondents into three dependency categories. The first (platform dependency) includes those who are wholly or primarily dependent on the platform/s for their livelihood. (For driving and delivery, most use two apps simultaneously so they depend on two platforms.) This group is roughly equivalent to full-time workers. Partially-dependent includes those who rely to some extent on earnings from their primary type of platform work, but either earn on other types of platforms or have part-time jobs, small businesses or other sources of income. Supplemental earners are those for whom the income is not part of their regular income, is not relied upon for basic expenses, and is considered extra. Many of the providers in this third category have full-time employment or activity (i.e., schooling). We estimate that 22.5% of our sample are dependent on the platform, 43% are partially-dependent, and 33% are supplemental earners. The fraction of dependent earners in our sample is roughly similar to other surveys in the U.S. and Europe (Berg and Rani 2018; Forde et al. 2017; Pesole, Brancati, and Fernandez-Macias 2018; PEW Research Center 2016). As expected, the distribution varies considerably by platform, with only one Airbnb respondent classified as fully dependent, and 70.6% of Lyft and Uber drivers in that category. In the second, ongoing study, we are doing similar categorizations. Analysis is ongoing, but to date, the new data appears to support the main conclusions of the previous one.

For reasons of space, we mainly confine discussion of our findings to one case from the first project—TaskRabbit, a general task and errands platform. We find that Taskers who use the app to earn supplemental income have high satisfaction. They like the flexibility, control and high hourly wages. Many note the appeal of using their time off work "productively," explaining that they are otherwise bored. Members of this group tend to have flexible schedules and low living costs. Gig work can also reduce precarity for supplemental earners. One Tasker, a graduate student in social work, earned roughly $750 per month over his four months on TaskRabbit and regarded his earnings as a "safety net income" that replaced a less desirable catering job. For others, the lack of dependence allowed them to be highly discriminating about what tasks they would accept. A mechanical engineering student varied his hourly rate by the desirability of the task, from a low of $75 to $150 for tasks he does not like, such as standing in line. Taskers who have been on the app for some time have been able to build

up reviews and reputations, which gives them considerable scope for choosing the most desirable tasks. Some describe their ability to increase the hourly wage they demand, making the work even more valuable. Supplemental earners are also more likely to carve out autonomy on the app, completing jobs the way they prefer, disregarding company policies, and paying less attention to ratings. We found this was generally true across the platforms we studied.

By contrast, dependent providers have lower satisfaction, less autonomy and more concern about ratings. They are also less able to choose only the higher-paying tasks. While most of them were generally positive about the app, as we would expect, we also encountered more negativity from these respondents. One heavily dependent earner bemoaned the low pay and lack of amenities, noting even a McDonald's job would be better. A courier realized during the interview that he'd only been earning $6 an hour, a calculation he'd failed to make earlier. Respondents discussed adverse platform dynamics such as "race to the bottom," and the problem of not enough available work. One explained that the earnings were just enough to keep him at the poverty level. On this platform, while hourly wages are reasonably high for low-skill work, total annual earnings could be below poverty. A number of our dependent workers were living with parents because their incomes were not sufficient for independent housing. For workers across the platforms we find that dependency status is a disciplinary, or control mechanism. These workers are more likely to follow company policy, maintain work effort to retain algorithmic priority, worry about their ratings, and defer to customers. For the platforms, dependency is an inexpensive and effective way to ensure a compliant workforce.

Conclusion

In our view, platforms represent a new regime of labor management in which the firm "retreats from control" of hours and scheduling. Platforms also do not attempt to control earners' work for other platforms, including competitors, which is unusual in the conventional economy. This formulation is at odds with the dominant approaches in the literature—precaritization and algorithmic control—because it highlights the dimensions of work which platforms no longer attempt to control. This "retreat from control" is not only notable in itself, but is key to creating high levels of heterogeneity among the platform labor force, particularly with respect to how dependent workers are on their platform earnings. The degree of dependence, we argue, structures workers' experiences. Supplemental workers are more satisfied, use their earnings to reduce precarity, and are more likely to resist algorithmic control. For dependent workers, the reverse is true. While a few dependent workers have good experiences, in general we found that access to alternative sources of income and security are almost a pre-condition for satisfying experiences. Thus, we argue that platforms are free-riding on conventional employers, who provide the security and stability to make platform work desirable. (For retired earners, the free-riding is on the pension provider, in many cases, the state.) In this way, we argue that platforms are parasitic. To be sustainable, they need to provide benefits, better remuneration and access to work.

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