WORKING IN THE ON-DEMAND ECONOMY;
AN ANALYSIS OF UBER DRIVER-PARTNERS IN FRANCE

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ABSTRACT

The development of Uber and platforms like it that connect buyers and sellers of services has led to a debate in France about the new forms of work induced by the digital, on-demand economy. Using a combination of government statistics, surveys, and aggregated, anonymised data from Uber, this study documents for the first time the key defining features of Uber's driver-partners in France. First, we find that the key feature of the French Uber driver-partner population is their young age, which makes them particularly exposed to unemployment risk: 25% of drivers on uberX were unemployed prior to starting using the platform. Uber driver-partners are also more educated than the general active population (and *a fortiori* than the established taxi driver population). Second, rather than using the platform sporadically to complement their earnings, we find that nearly 50% of uberX driver-partners in France work more than 30 hours a week and 71% earn most of their income from work on the Uber platform. Furthermore a large fraction of uberX drivers expect to continue this type of work for several years. Third, we find that the Uber platform gives drivers more room to experiment than a traditional taxi license: Uber driver-partners display a wide range of productivity. As time goes by, the best-performing drivers stay in business while others exit. This is consistent with the idea that self-employment contains a dimension of experimentation, and that online platforms can help people achieve that goal by lowering barriers to entry.

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1. INTRODUCTION

1.1. *Uber's growth in France*

Uber has experienced significant growth since its launch in France in 2012 (see Figure 1). The main cause of this growth has been the very large, unmet demand for taxi rides in most French cities prior to the arrival of Uber, as well as the convenience offered by the platform itself. The scarcity of taxis before the entry of Uber is a well-documented fact in French policy literature. For instance, the well-known "Attali report" mentions that the density of taxis per inhabitant is 1/360 in Paris, and even lower in provincial towns (compared to 1/72 in countries like Ireland, where the taxi business has been opened to competition). The number of taxi licences in Paris in 2008 was fixed at 15,900 - only a 14 percent increase from the 14,000 licences available in the 1930s, despite significant population, tourism, and economic growth since then. The Attali commission estimated that to keep up with population growth and the increasing number of visitors since the early 1980s, at least 8,000 additional licences should have been created. The report calculated that a full opening of the taxi market would lead to an equilibrium in the number of taxis of between 50,000 and 60,000 in greater Paris, implying a net gain of 35,000 to 45,000 jobs (compared to 16,000 taxis in operation at the time of its publication in 2008).[5] A more recent report estimates the potential size of an open Parisian transportation market at 70,000 taxis and VTC.[6]

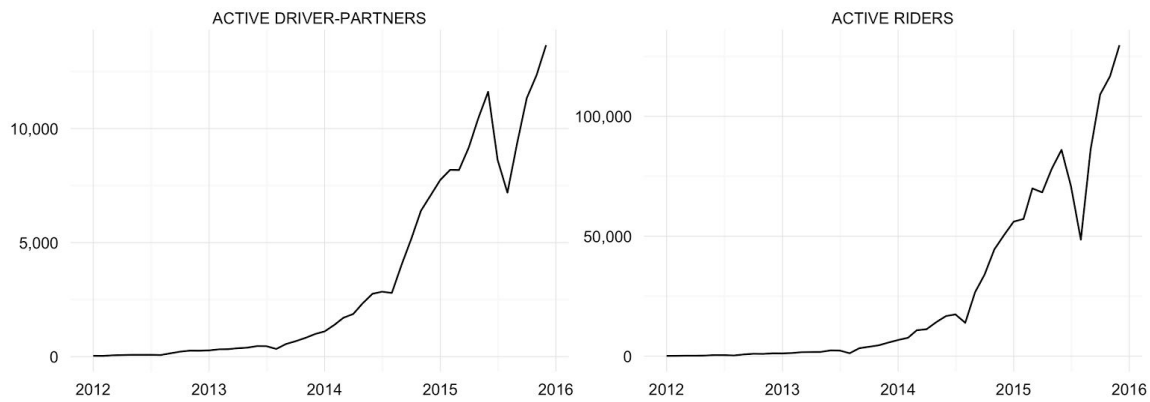

Figure 1: the growth of Uber in France.

Following the 2008 Attali report, the number of taxi licences did not significantly increase, but conditions to operate minicab companies were somewhat loosened. These minicabs, or "voitures de tourisme avec chauffeur" (VTC) are prohibited from street hailing, occupying taxi stands or using bus lanes. According to the French competition regulator, the number of VTC companies grew from 102 in 2010 (and zero in 2009) to 10,135 in 2014 (Autorité de la

[5] "Rapport de la commission pour la libération de la croissance Française", dirigé par Jacques Attali, 2008. http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/084000041.pdf
[6] "Un taxi pour l'avenir des emplois pour la France", dirigé par Thomas Thévenoud, 2014. http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/144000239.pdf

concurrence, 2014). Thus, since 2009 the personal transportation sector in France has experienced a huge wave of new entrants and has been growing more competitive.

1.2. *Limiting factors of growth*

French labour regulations are favorable to the type of independent work in the on-demand economy. Since the early 2000s, the French government has made it easier for individuals to become self-employed. In 2002, unemployed people who wanted to become self-employed remained eligible for unemployment benefits. In 2008, the "autoentrepreneur" status was introduced; becoming self-employed became easier, and tax filing was made more simple. These two policies led to a marked increase in monthly firm creation from 16,000 to about 46,000 (see Figure 2).

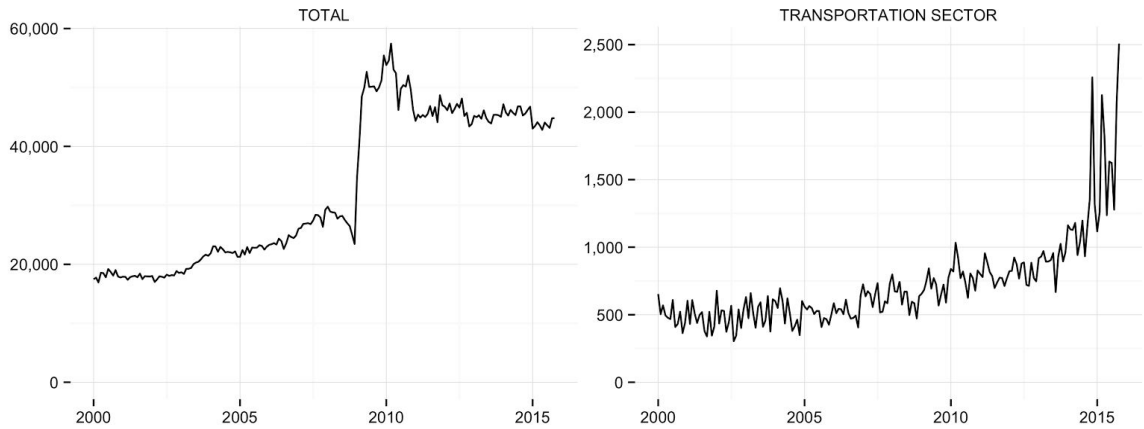

Figure 2: Number of new firms: total and transportation sector. Source: INSEE[7].

Despite the increasing ease of self-employment, the growth of VTC firms like Uber has been impaired by regulatory barriers to entry into the French personal transportation sector. To become a professional driver, three routes are possible:

- Registering as an independent driver ("VTC" licence), which, unless the driver can document 12 months of past salaried work as a driver, requires 250 hours of formal training (costing between €3000 and €5000). Training centres currently don't have the capacity to keep up with demand, as a result of which the entire process can take up to half a year to complete.
- Creating one's own transportation company ("DRE" licence). This requires 140 hours of formal training followed by an exam, at a cost of between €1000 and €1500. The process is administratively quite heavy and typically takes more than three months.
- Alternatively, drivers can be employees of a transportation company which holds a "DRE" license.

Thus, in order to get started as an independent professional driver, a large amount of time and money must be invested up-front. This presents a significant hurdle for aspiring drivers,

[7] http://www.insee.fr/

many of whom have neither the required financial resources nor the spare time to go through the licensing process. In addition, legal uncertainty has been fueled by conflict with the incumbent taxi industry, which has lobbied to limit the rise of any perceived competition. Although Uber has grown in France, its growth has been limited by these barriers to entry, as becomes clear when compared with cities of comparable size, such as New York, London or San Francisco (see Figure 3). The regulatory barriers faced by potential drivers looking for work in all three of these cities are significantly lower than in Paris.

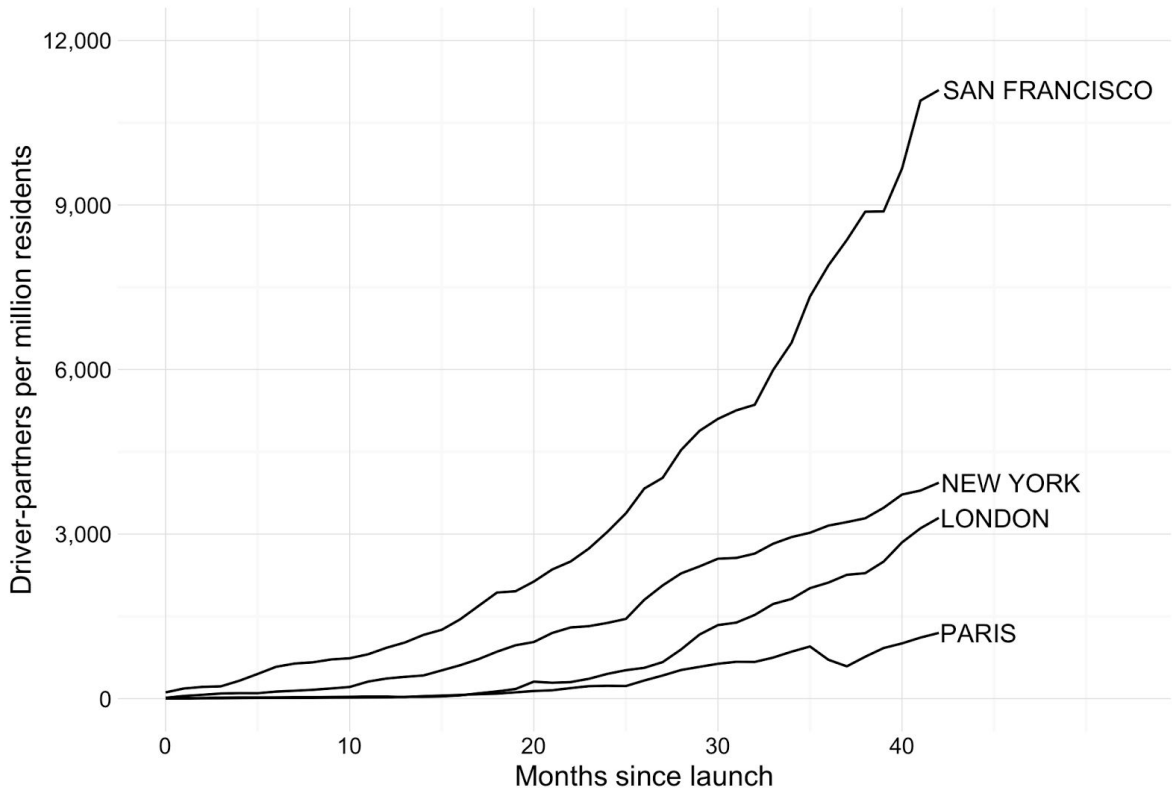

Figure 3: The growth of Uber in Paris compared to other major cities. Driver numbers have been scaled by the city population within Uber's coverage region.

2. UBER'S DRIVER-PARTNERS IN FRANCE

In this Section we describe the demographic characteristics of Uber driver-partners, based on results from a survey carried out in October 2015 by the Institut Français d'Opinion Publique (IFOP) at the request of Uber. This survey targeted a sample of 6,300 randomly chosen Uber driver-partners, who were sent a self-administered online questionnaire. The response rate was 11.2%, resulting in a final sample of 705 drivers. Our demographic analysis is complemented, for comparison purposes, with information on the general population taken from the French Labour Force Survey (Enquête Emploi).[8] In all of our analysis using this ancillary data, we restrict ourselves to the male population (more than 98% of Uber

[8] Enquête Emploi, INSEE. http://www.insee.fr/fr/themes/document.asp?ref_id=irsoceec13

driver-partners are male) and the active population. We also use sample weights to compute averages.

2.1. *Sociodemographics*

The age and education distributions of Uber's driver-partners are summarized in Tables 1 and 2. We report there information about the distribution of ages and education in the population of Uber drivers, as well as information from the Labour Force Survey, focusing on the last available year (2014). Uber's driver-partners are predominantly male (98% on uberX). On average, they are both younger and better educated than the general active population. They are much younger than taxi drivers; about 30% of Uber's driver-partners are younger than 30, while only 4% of self-employed taxi drivers and 12% of salaried taxi drivers are younger than 30. This difference persists when we look at "older" drivers: the fraction of Uber driver-partners younger than 40 is roughly 70%, compared to only 20% to 30% for taxi drivers.

Age	Uber driver-partners	Taxi (self-employed)	Taxi (salaried)	Active population
18 - 29	34%	4.3%	12.0%	17.7%
30 - 39	38%	16.7%	20.1%	23.4%
40 - 49	18%	34.7%	23.9%	29.4%
50+	10%	44.3%	44.0%	29.6%

Table 1: Age distribution of Uber driver-partners, taxi drivers, and the active population. Source: IFOP survey for Uber and INSEE (Enquête Emploi) for taxi and active population.

61% of Uber's driver-partners have attained the BAC or higher. This education level is a few percentage points higher than that of the French working population, and much higher than that of other taxi drivers (both self-employed and salaried workers). About 55% of the general active population have BAC or more, but only 46% of self-employed taxi drivers and just 36% of salaried taxi drivers do. This difference is not driven by a difference in college attendance: Uber driver-partners are not more likely than the rest of the population to have some college education, but are more likely to be high school graduates.

Education level	Uber driver-partners	Taxi (self-employed)	Taxi (salaried)	Active population
College graduate	12%	10.3%	5.5%	19.1%
Some college	20%	2.9%	16.4%	13.4%
High school graduate	29%	33.0%	15.4%	23.1%
High school dropout	39%	57.8%	62.6%	44.3%

Table 2: Education level of Uber driver-partners, taxi drivers, and the active population. Source: IFOP survey for Uber and INSEE (Enquête Emploi) for taxi and active population.

Uber driver-partners are more educated mostly because they are younger on average. Table 3 shows that younger generations, both at Uber and in Enquête Emploi, are more likely to hold at least a high-school degree. This phenomenon is more pronounced in France than in other OECD countries (Catherine et al., 2015), and explains the education gap. This is somewhat counterbalanced by the fact that Uber driver-partners between 30 and 39 years old tend to be less educated than the active population within that age range (see Table 3).

Age level	Uber driver-partners with high-school degree	Active population with high-school degree
18-29	68%	68%
30-39	57%	67%
40-49	59%	48%
50+	59%	41%

Table 3: Share (in percent) of high school graduates per age bracket: Uber driver-partners versus the rest of the population. Source: IFOP survey for Uber and INSEE (Enquête Emploi) for taxi and active population.

2.2. *Uber driver-partners: professionals versus casual drivers*

Flexibility in the timing of work is mentioned by most Uber driver-partners as an important motivation for choosing to work with Uber. 87% of Uber driver-partners report that a major reason to join the Uber platform was "to have more flexibility to set their own schedule". 79% of Uber driver-partners report an improvement in their control of their own schedule since beginning to work with Uber. This does not mean, however, that Uber driver-partners are all looking for a small activity to supplement their main income. As it turns out, many Uber driver-partners are driving to earn a living.

First, we note that the majority of uberX drivers have some degree of experience in the transportation sector: 47% reported they had worked in transportation immediately before joining Uber, while 68% reported working in the industry at some point in the past. In the United States, where the equivalent of uberPOP is Uber's most popular product, driving on the Uber platform typically complements income from another job[9]. This is not the case for uberX drivers in France: 81% of these drivers have no professional activity other than driving with Uber. 71% report driving with Uber as generating either their "biggest source of income" or their "only source of income". The majority of surveyed uberX drivers expect that they will be doing this work for more than two years, confirming that the occupation is perceived as stable; 64% of uberX drivers declare they were motivated to partner with Uber "to start a new long-term career". Only 19% of uberX drivers expect that they won't be driving for Uber in two years.

[9] See, e.g., "An Analysis of the Labor Market for Uber's Driver-Partners in the United States", Hall & Krueger, 2015.
https://s3.amazonaws.com/uber-static/comms/PDF/Uber_Driver-Partners_Hall_Kreuger_2015.pdf

Consistent with the idea that uberX is a primary activity for many drivers, the majority of uberX drivers work more than 30 hours a week on the platform. We explore this by analysing Uber's internal data. We focus on all drivers who reported at least some activity during 2015 in the Paris region. As shown in the Table below, about 70% of uberX driver-partners work more than 20 hours per week on the platform, and 44% work more than 30 hours per week. Approximately 70% of the total number of uberX trips are served by drivers who work over 30 hours per week - driving a car is not a small gig for these people.

Weekly hours worked	Percentage of uberX driver-partners
0 - 9	8.6%
10 - 19	20.2%
20 - 29	27.5%
30 - 39	23.5%
40+	20.2%

Table 4: Weekly hours worked for uberX driver-partners. Source: internal Uber data.

To further describe this differentiation, we split the sample into drivers whose average number of hours per week is above 30 ("professional drivers") and drivers who work fewer than 30 hours per week ("casual drivers").

	Casual drivers	Professional drivers
Mean hourly payouts (Euro)	21.4	21.3
Mean standard deviation of hourly payouts	5.8	4.2
Mean exit weekly rate	0.1	0.03
Observations	3962	3158

Table 5: Casual drivers versus professional drivers (uberX). Source: internal Uber data.

Table 5 is consistent with the idea that professional drivers have less volatile hourly productivity. They are also significantly less likely to exit at any given point in time, and, consistent with this, their mean lifetime on the platform is longer. Additional analysis shows that professional drivers are more likely than casual drivers to exit if their hourly earnings are lower. Lastly, we see in Figure 4 that the number of hours professional drivers work per week is substantially less volatile than for casual drivers. This is consistent with the fact that professional drivers use the platform as a major source of revenues, while casual drivers are more likely to use the platform when their other activities leave them free time, and thus have more irregular schedules.

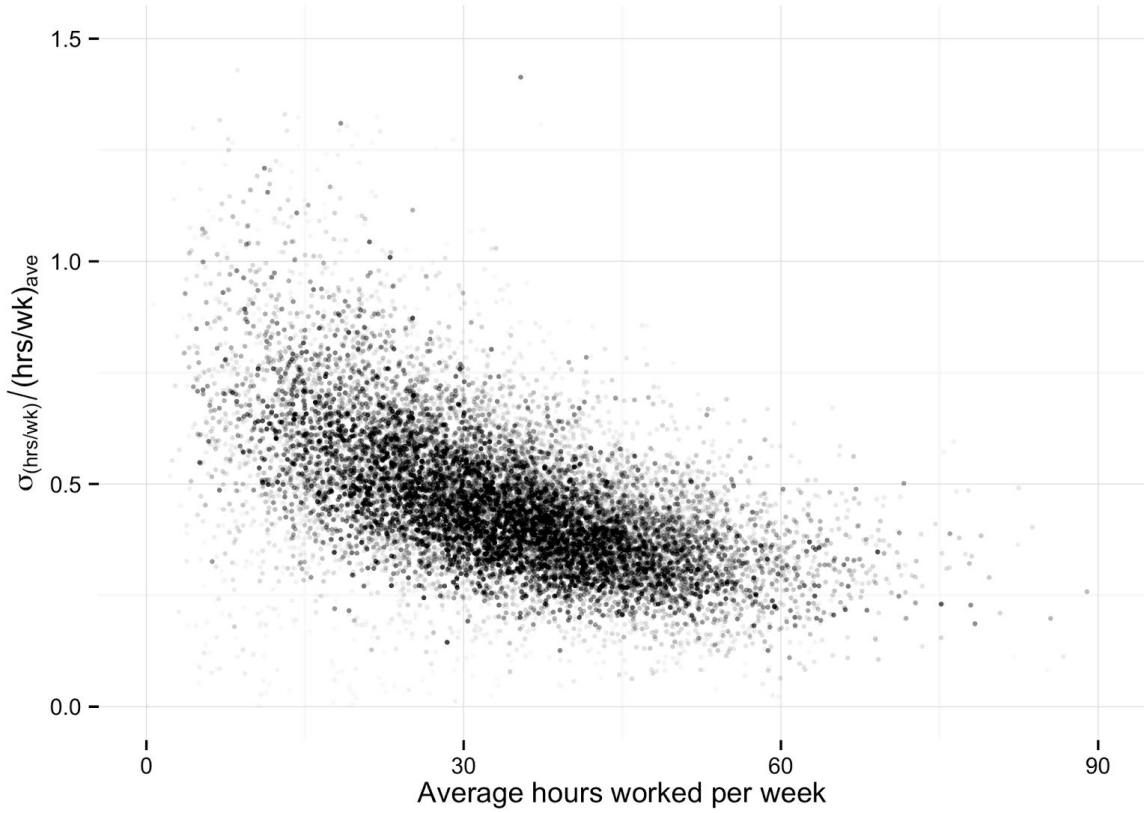

Figure 4: Volatility of weekly hours worked for uberX driver-partners who were active in Paris in December 2015. Source: internal Uber data.

3. UBER AS A WAY TO ESCAPE UNEMPLOYMENT

The idea that driving on the Uber platform can be used as a way to escape unemployment is directly confirmed by the survey results: 25% of uberX drivers were unemployed just before starting using the platform. Of these people, 43% had been unemployed for more than a year when they became Uber drivers.

3.1. *A high exposure to unemployment risk*

In Figure 5 we show the correlation between local labour market conditions in the Communes of Paris and the number of Uber driver-partners who live there per capita. The fraction of the active population working as Uber driver-partners in a given area is strongly correlated both with median household income and the unemployment rate. Thus, Uber driver-partners disproportionately come from areas where good earning opportunities are difficult to find.

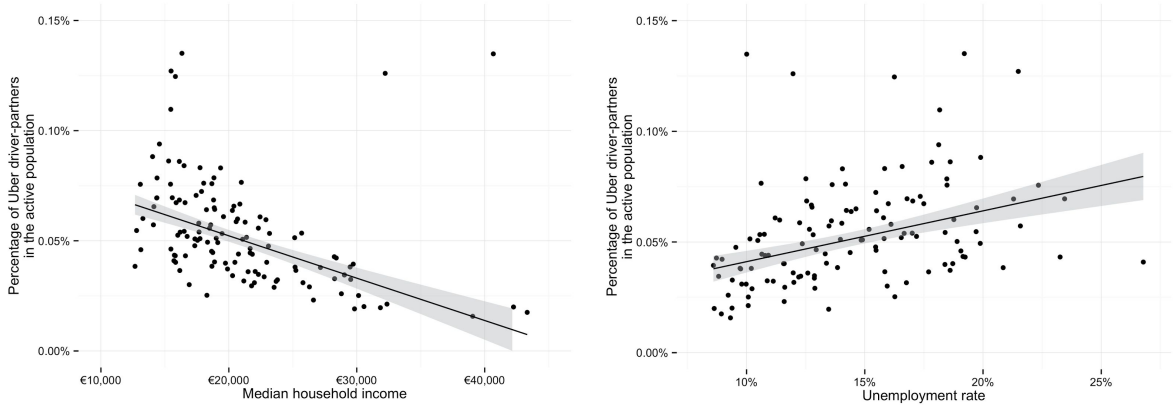

Figure 5: Uber driver-partners per capita as a function of median household income and unemployment rate.

The fact that the population of Uber driver-partners is particularly affected by unemployment directly relates to their relatively young age. Youth unemployment has reached alarmingly high levels in France. Numerous reports have documented this fact, in particular for relatively unskilled youths (Cahuc et al, 2013). In Figure 6 we show the unemployment rate by age group for males (from Enquête Emploi, using the years 2003 - 2014 only). The category below age 24 is difficult to interpret, as students are by definition removed from the active population. For the category 24-30 however, the unemployment rate (including both skilled and unskilled workers) is almost 13%, compared to about 7% for older age groups. Given these numbers, the high fraction of young drivers on the Uber platform is not surprising; Uber is likely seen by many young people as a way to escape unemployment.

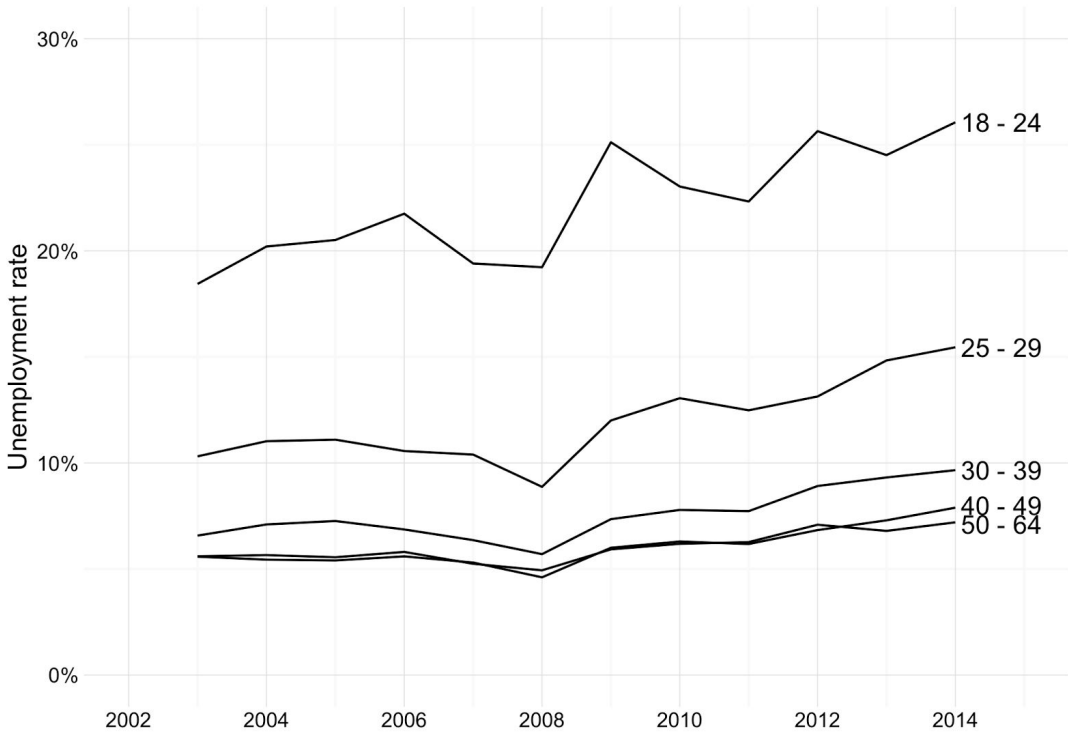

Figure 6: Unemployment rate by age group for males in France.

We use the joint age-education distribution of active Uber driver-partners to compute the precise unemployment rate of the population they represent. To do so, we extract data from Enquête Emploi to compute the unemployment rate in each age-education category. We restrict the analysis to the male population, as Uber driver-partners are overwhelmingly male. Then, we compute an average weighted by the frequency of that category among Uber driver-partners. This gives us the unemployment rate that prevails among the male French active population with similar sociodemographic characteristics as that of the population of Uber drivers. We also compute the average unemployment rate for the overall active male population. This is done yearly, in order to see if the population that drives on the Uber platform has particularly suffered from adverse unemployment changes in recent years.

The results are shown in Figure 7. They confirm that Uber driver-partners belong to segments of the active population that are particularly affected by unemployment, and that this population has been particularly impacted by a surge of unemployment since 2008. The fact that Uber driver-partners belong to populations overwhelmingly exposed to unemployment results from their younger age, not from their level of education (which is higher than that of the French population).

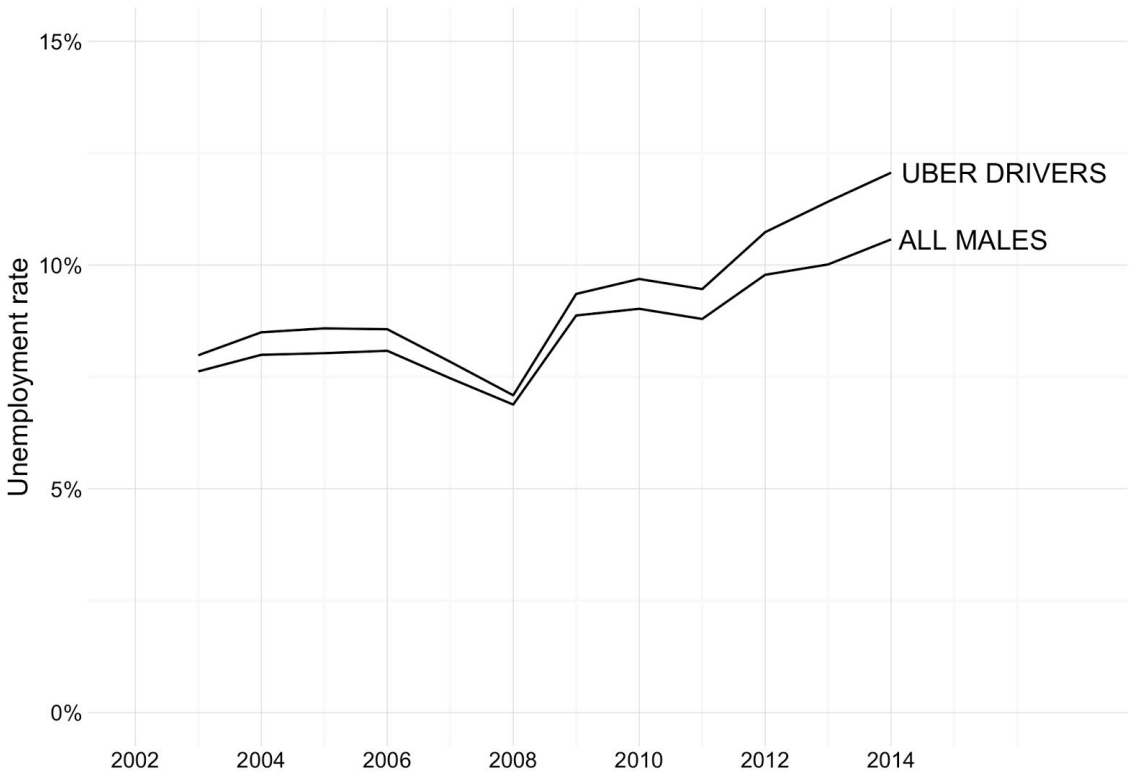

Figure 7: Unemployment rate among all French males and among a population with similar sociodemographic characteristics as Uber driver-partners. Source: IFOP survey and Enquête Emploi.

3.2. *The vulnerability of Uber driver-partners to regulatory changes*

An interesting thought experiment is the following: If driving on Uber (or similar platforms) was suddenly made impossible by new regulations, how quickly would the population of drivers find new jobs? This question is particularly relevant in light of the recent decision of the French government to take severe action against drivers who operate under a so-called LOTI[10] license[11]. Due to the significant barriers to obtaining a VTC license, a significant number of drivers throughout the transportation industry has resorted to the easier to obtain LOTI license instead. As a result, over ten of thousand drivers currently run the risk of losing their livelihood on short notice.

To answer this question, we use data from the most recent three years of Enquête Emploi to compute transitions probabilities in and out of employment for the active male population between 18 and 64 year old, by age-education groups. For instance, the transition probability from unemployment to employment, "*UE*", is estimated for high-school dropouts in the 25-30 age category by isolating who is unemployed among them at quarter end *t* and estimating the fraction among this subgroup who have a job at the end of quarter *t+1*. We average that probability across quarters from the last three years. We separately compute transition probabilities from employment to unemployment for people who have been employed more than a quarter ("*EU*") or less than a quarter ("EU_{st}") : This distinction is useful, as new jobs tend to be unstable at first ("*st*" stands for "short-term").

Using these transition probabilities we can calculate what fraction of driver-partners would still be unemployed after *n* months, assuming that they are forced to stop using the Uber platform at *t=0*. Call w_i the fraction of drivers in age-education group *i*. Consider a population with similar age-education characteristics as that of Uber driver-partners, and assume that at time *0* this population falls into unemployment. We define *U(t)* as their unemployment rate after *t* quarters, and *E(t)* as the fraction employed since more than three months ("stable job").

For each (age-education) cell *i* of the population, we recursively compute the unemployment rate at quarter *t* using the following dynamics:

$$U_i(t) = (1 - UE_i).U_i(t-1) + EU\_st_i.(1 - U_i(t-1) - E_i(t-1)) + EU_i.E_i(t-1)$$
$$E_i(t) = (1 - EU\_st_i).(1 - U_i(t-1)) - (EU_i - EU\_st_i).E_i(t-1)$$

These equations are a simple consequence of assuming a Markovian transition structure among the three different labor market status (unemployed, newly employed, long-term employed), as summarized in Figure 8.

[10] Drivers with a "Loi d'Orientation des Transports Intérieurs" or "Capacitaire" license may transport up to nine passengers, but are required to carry a minimum of two passengers.

[11] http://www.gouvernement.fr/partage/6303-communique-de-presse-de-manuel-valls-premier-ministre- reunion-avec-les-federations-representatives

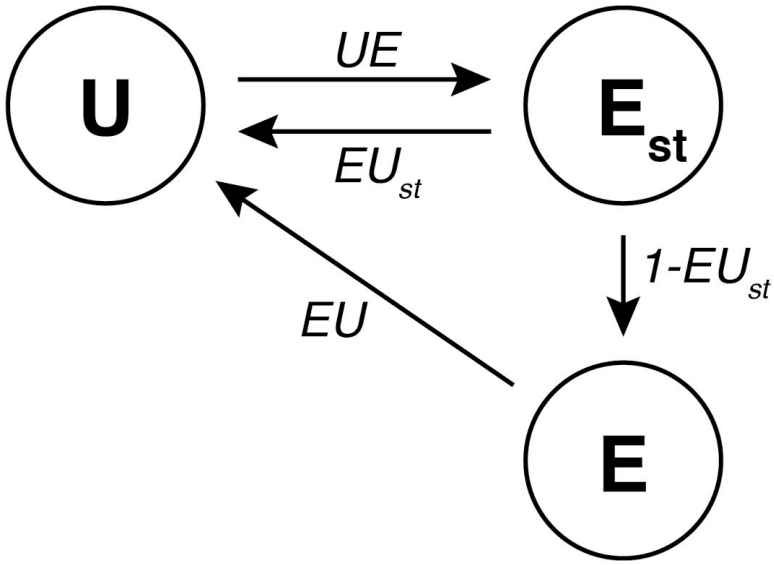

Figure 8: Quarterly transitions between employment categories.

Then, we compute the corresponding unemployment rate *U(t)* at quarter *t* for the whole Uber driver population by weighting across age-education groups:

$$U(t) = \sum_i w_i U_i(t)$$

This counterfactual analysis is summarized in Figure 9, which tells us what fraction of drivers are still unemployed *n* months after the regulatory shock.

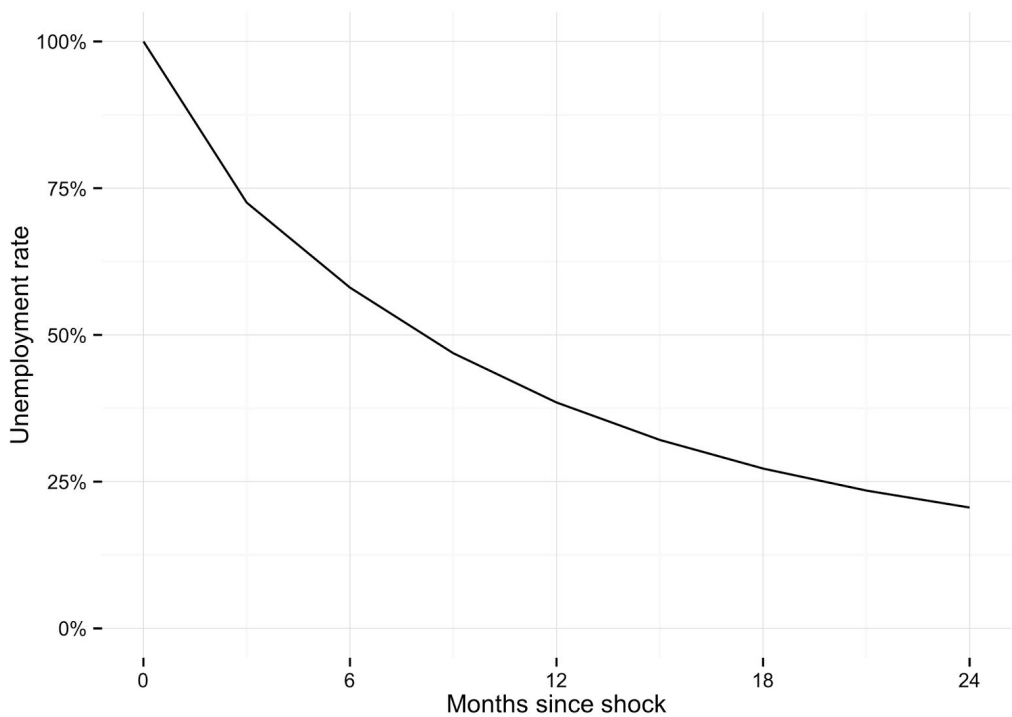

Figure 9: Simulated unemployment rate of Uber driver-partners after shock.

Figure 9 shows that after 24 months, more than 20% of Uber driver-partners would still be unemployed. This reflects the very low hiring rates on the French labor market (finding a stable job is a slow process), and shows that Uber driver-partners are highly vulnerable to regulatory changes. The prohibition of their activity would potentially leave many of them unemployed for a long period.

4. UBER DRIVER-PARTNERS: ENTREPRENEURSHIP AS EXPERIMENTATION

In this Section, we provide evidence consistent with the idea that Uber driver-partners learn about their own skill as time passes (Jovanovic, 1982; Hombert al, 2015). To do this, we analyze internal productivity data from Uber; we document that being a successful driver requires skills, as productivity is highly heterogeneous and persistent. We find that the most productive drivers are the most likely to remain active on the platform for a long time, while the least productive tend to end the activity quickly.

4.1. *Status and tax considerations*

Approximately half of all Uber driver-partners in France are salaried and work for a company that owns a transportation license, while the other half is self-employed. France has several forms of self-employment statuses. Drivers can work as "indépendants", in which case they have to produce annual accounts. For social contributions and income tax, the tax base is the difference between revenue and expenses (such as car depreciation or gasoline). The advantage of this regime is that it makes expenses explicitly tax deductible, but the driver has to have detailed accounts of his activity.

In 2008 a new, simpler regime was introduced: the "autoentrepeneur". Autoentrepreneurs simply declare their total revenue to tax authorities, and pay some 25% of this revenue as a social contribution. Income tax is levied over revenue net of social contributions. This regime is very popular because of its simplicity. In terms of effective social security contributions, a recent report by the French tax inspection authority has shown that the two regimes are broadly similar (see IGF-IGAS 2013, Table 5). The intuition is that the low social contribution rate of the autoentrepreneur is roughly compensated by the fact that it applies to total revenues, not profits.

4.2. *Payout trends*

We estimate driver-partner payouts using Uber's internal data. This dataset covers all uberX drivers who were active in Paris in 2015. For each driver, the dataset contains the total amount paid out to the driver per week (i.e., total fares after deduction of Uber's service fee), as well as the amount of time the driver was transporting passengers or available on the platform during each week. We calculate median payouts for every week over the course of

2015, focusing on drivers reporting more than 30 hours of work. The average is €19.9 per hour, with a standard deviation of €4.0, which corresponds to a volatility of about 20%. This volatility is likely the result of several factors, including the seasonality in taxi activity in Paris, pricing changes and market adjustments, and one-time events such as the riots following the taxi driver demonstrations in June 2015. The complex interaction of these factors warrants further in-depth analysis, which unfortunately falls outside the scope of this study.

4.3. *The diversity of driving skills*

Individual productivity varies considerably from one driver to the next, and has a strongly persistent component. We measure individual productivity as the ratio of weekly payout to weekly hours. To document this, we do the following exercise: each week we construct five quintiles of individual hourly productivity levels. We look at the transition probabilities of drivers across quintiles from one week to the next. In Table 6 we show the resulting transition matrix for drivers who spend more than 30 hours per week on average on the uberX platform:

Week 1/Week 2	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Level 1	47%	22%	14%	9%	8%
Level 2	23%	28%	22%	17%	10%
Level 3	13%	22%	25%	23%	17%
Level 4	9%	16%	23%	27%	25%
Level 5	7%	11%	16%	24%	42%

Table 6: Productivity transition matrix.

Table 6 shows quite clearly that drivers tend to stay at or close to their productivity quintile from one week to the next. If a driver is in the top 20% of the productivity distribution in a given week (level 5), the chances that he will be in the top 40% of productivity in the next week are 24% + 42% = 66%. By contrast, a driver who is at the bottom quintile of productivity has a 47% chance to still be there in the next week. This clearly shows the strong persistence of productivity over time.

To measure the persistent component of individual productivity more directly, we implement the following procedure: We start by regressing hourly payouts on time dummies for all uberX drivers (because drivers in the panel work during different time intervals) and control for number of hours worked. This control allows hourly earnings to potentially vary between professional and casual drivers. The residual of this regression gives us the "abnormal" hourly earnings of the driver's for each week vis-a-vis the average driver. For each driver, we average this residual across all dates, which gives us the "abnormal productivity" of the driver (this can also be defined as a driver "fixed effect").

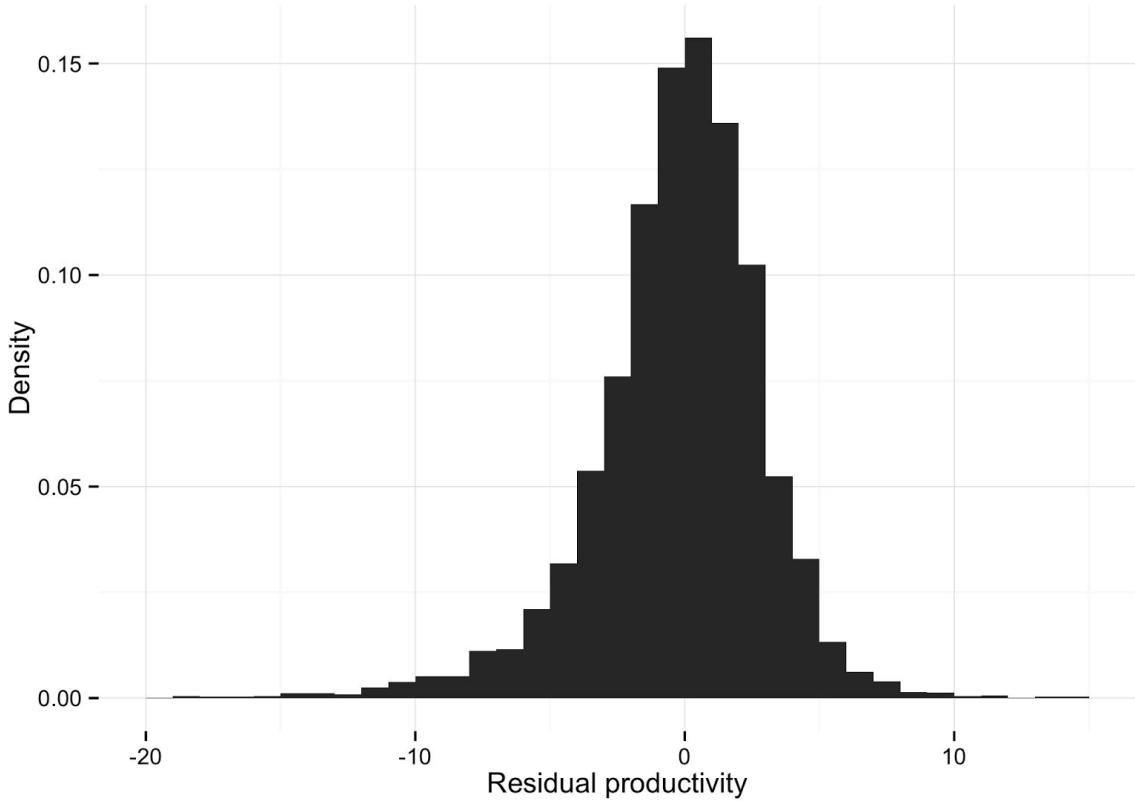

Figure 11: Distribution of individual productivity.

We report the distribution of productivities in Figure 11. We find strong heterogeneity of drivers' individual productivity, suggesting that some drivers are consistently performing better than others. The distribution of our measure of individual hourly productivity has a standard deviation of €3.0. The negative skewness of the distribution (-.64), visible on the histogram, suggests that a mass of drivers are particularly less productive than the average driver. Overall, not all drivers do equally well per hour of work, and consistently so.

The presence of such persistent heterogeneity can have several explanations: skill, or choice. It may reflect the fact that some drivers are more skilled than others at maximizing the time spent driving a passenger than others. Another interpretation is that some drivers spend more time with the app open but without actively accepting requests for a ride. It is ultimately difficult to disentangle these two explanations, but one way of getting at this is to check whether relatively less productive drivers are more likely to exit the platform. If the diversity of productivity is purely the result of choice, then less productive workers should not be more likely to exit the platform.

For each uberX driver, we compute initial productivity (we exclude drivers that are present in the first week of the panel as this might not be their first week driving), and the total number of weeks during which the driver is in the panel. We report the results of the linear regression in Table 7, column 1. We also use average lifetime productivity as an alternative measure (in column 2), and use a dummy variable equal to 1 if the average number of weekly hours is above 30 ("professional"), but this control does not affect the results. To avoid censorship and measurement error, we are careful to focus on drivers who enter the platform

1 month after the beginning of the data, and report their last active week 1 month before the end of the data. There are only 2,680 drivers left after all these screens. There is a very strong correlation between the probability to stop using the platform and the initial productivity of a driver on the platform. This correlation is even stronger when we use, as independent variable, the average productivity of the driver instead. We confirm these results by looking at the probability to exit next week (columns 3 and 4). There the sample is larger because it includes all observations for each driver. The bottom line is that the data seems to support the idea that diversity in persistent productivities stems from heterogeneity in the skills required to operate a successful business.

	Log(Number of weeks on the platform)		**Exit probability**	
	(1)	**(2)**	**(3)**	**(4)**
Productivity at entry	0.012*** (4.1)	-	-0.004*** (5.6)	-
Average productivity	-	0.021*** (4.9)	-	-0.005*** (6.1)
Professional	0.32*** (5.9)	0.32*** (5.9)	-0.08*** (18.6)	-0.07*** (19.3)
Observations	2,680	2,680	23,788	23,788
R2	0.02	0.02	0.02	0.02

Table 7: Explaining survival with productivity.

This behavior is consistent with the idea that uberX drivers learn about their productivity when they start their activity, in line with the model of entrepreneurship as experimentation of Jovanovic (1982). Such a model goes against the traditional view of entrepreneurship based on selection (Lucas, 1978), whereby entrepreneurs know about their ability before entering the business, so that only the most able entrepreneurs do enter. The effect of entry barriers on entrepreneurial skill differs, depending on which view one adopts. In the full selection view, barriers to entry improve the quality of entrepreneurs by selecting out the least able ones. In the experimentation view, barriers to entry, in addition to reducing access to socially valuable occupations, does not improve average quality. Barriers to entry are bad because they reduce entry, but also because they prevent experimentation.

CONCLUSION

The results in this study suggest that the high level of unemployment in France, especially among the young, and the relative scarcity of official taxis, have played a large role in Uber's rapid growth in France. Due to barriers to entry, the use of the platform by non-professional drivers as a way to supplement their earnings is relatively low (contrary to what happens in other countries such as the US, where uberPOP is the main model).

More than 14,000 people currently use Uber as a way to be active in the transportation industry. Uber driver-partners are younger than the average population, and slightly more educated. This difference in education mostly results from the fact that younger generations are on average more educated in France. As a result, given their age and education, Uber driver-partners face a rate of unemployment that is between 1 and 1.5 percentage points higher than the French unemployment rate. This is due to the persistently high level of youth unemployment in France. Uber driver-partners are thus escaping high unemployment.

Nearly 50% of uberX drivers work more than 30 hours a week. A large portion of drivers see this occupation as a full time occupation, and use driving on the Uber platform as their main source of income. We find that payouts per hour are very heterogeneous; some drivers generate consistently more revenue than others, per hour worked. There are strong indications that such diversity arises from heterogeneity in the skills required to operate a successful business, as underperforming drivers are more likely to exit.

Using employment transition probabilities derived from census data, we demonstrate that an unemployment shock would have long-lasting effects on Uber driver-partners. Our model indicates that one year after such a shock only 60% of drivers will have found new work, and even after two years 20% would still be unemployed. This result is particularly worrying given the French government's recently suggested plan to start strict enforcement against a large subset of the professional driver population, putting thousands of people at risk of long-term unemployment.

An interesting lead for future research would be the analysis of how the Uber platform helps correcting shocks to supply and demand for rides. A hypothesis is that the Uber platform improves the match between supply and demand for rides. When prospective passengers become rarer, hourly incomes drop, and the least productive drivers drop out. This restricts supply when demand goes down. Uber's data provide the perfect setting to study how fast and effectively these forces operate.

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