Policies Affecting App-Based Transportation Platforms: Effects on Drivers, Firms, and Passengers

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Minimum Wage and Monopsony Conference ("Michael Reich Fest!")

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Overview

- Platform gig work now >3% of workforce, mostly transportation (e.g. Uber, Lyft), and delivery (Garin, Jackson, Koustas 2025)
  - Accounts for nearly all growth in "alternative work"
- Policy concern about pay/working conditions/precarity
  - Gig workers are not employees
  - $\Longrightarrow$ Min wage, unemployment insurance, etc. do not apply to gig workers
- Today: Briefly discuss two ongoing analyses using admin + survey data from NYC's app-based transportation market
  1. Policy evaluation of "minimum pay standard"
  2. Willingess-to-Pay (WTP) for flexibility and employee status

Roadmap

1. Policy evaluation of "minimum pay standard"

2. Willingess-to-Pay (WTP) for flexibility and employee status

NYC App-Based Transportation Market

- Rapid growth since 2012, from 0 to ∼700,000 rideshare trips per day by 2019
  - v. 250,000 taxi trips
  - Public transit alternative available for most routes
- ∼100,000 drivers active at some point in 2019
  - Unlike other markets, most NYC drivers are full-time
- Not required to have taxi medallions, but still subject to regulatory authority of NYC's Taxi and Limousine Commission (TLC)
  - Licensing requirements (TLC plates $625), 24-hour course, fingerprint background check, drug-test
  - Starting Feb 2019, NYC Taxi and Limousine Commission (TLC) mandated min piece rates (pay per trip) with intent of increasing driver pay
  - Other regulation: moratorium on new entry (since 7/18); congestion charge on core Manhattan routes (2/1/19; 1/5/2025)

1. Policy evaluation of first "minimum pay standard"

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  - First policy of its type, Seattle & Minneapolis now have similar policies

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- For trip i, minimum pay must be:

$$\begin{aligned}\underline{pay_i} = &\$1.088 \text{in town miles}_i + \$1.262 \text{out of town miles}_i \\ &+ \$0.495 \text{in town min}_i + \$0.574 \text{out of town min}_i\end{aligned}$$

- Additional increases over time (2020, 2022, 2023)
- Multipliers intended to set average net wage = NYC min wage. See Parrott and Reich (2018). For purposes of this paper, taken as exogenous.

1. Policy evaluation of first "minimum pay standard"

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  - First policy of its type, Seattle & Minneapolis now have similar policies
- Floor on pay *per trip*, different from a taxi fare schedule, min wage, or weekly earnings "guarantee" under CA's Prop 22
- Increase in *hourly* wage an empirical question that depends on market structure, supply and demand responses
- Research questions
  1. Broad question: What are the equilibrium effects of mandating min pay per trip in transportation spot markets?
  2. Policy evaluation of NYC
     - Outcomes: driver pay, labor supply, prices, commissions, demand response
  3. Estimate parameters (passthrough, demand elasticity)

Data: Admin Data from NYC TLC

- Anonymized trip-level data on ≈1 billion rides, collected under the regulatory authority of the Taxi and Limousine Commission (TLC)
- Data include pay/fares, driver IDs, pickup/dropoff geography; app log in/logoffs
- Aug. 2017-Dec. 2024

– only rides with pickups in NYC's 5 Boroughs

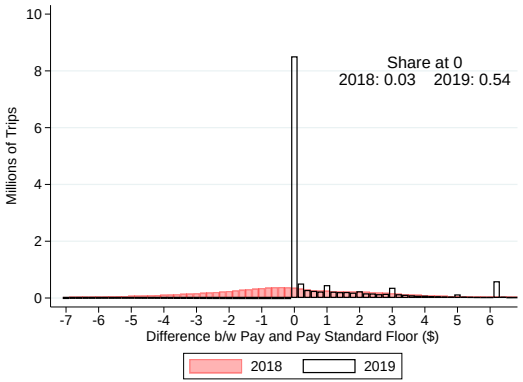
– missing fare/pay outcomes July 2018-Jan 2019 (7 months pre policy)

\+ Driver activity across 4 platforms

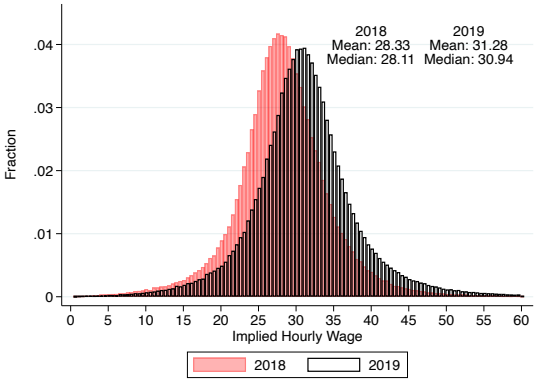
  - 2018 market shares: Uber (70%); Lyft (18%); Juno (7%); Via (5%)

Distribution of Pay Per Trip, and Hourly Wage, Pre/Post Policy

$\underline{pay_i} - pay$

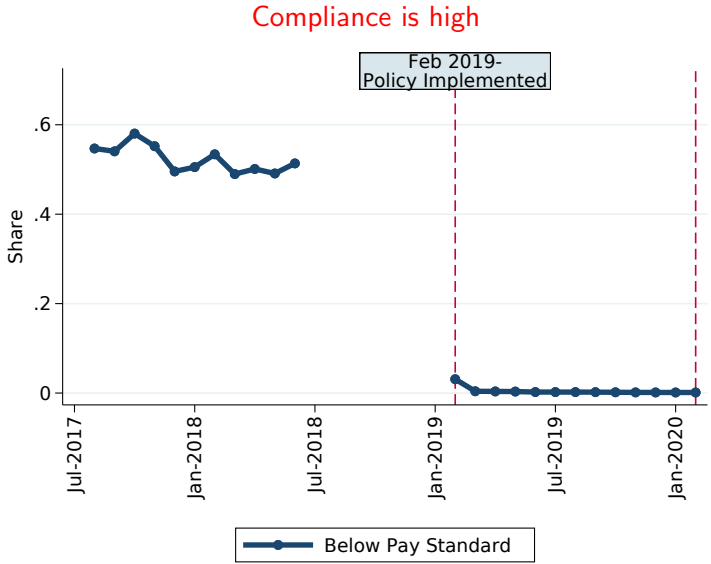


Hourly Wage



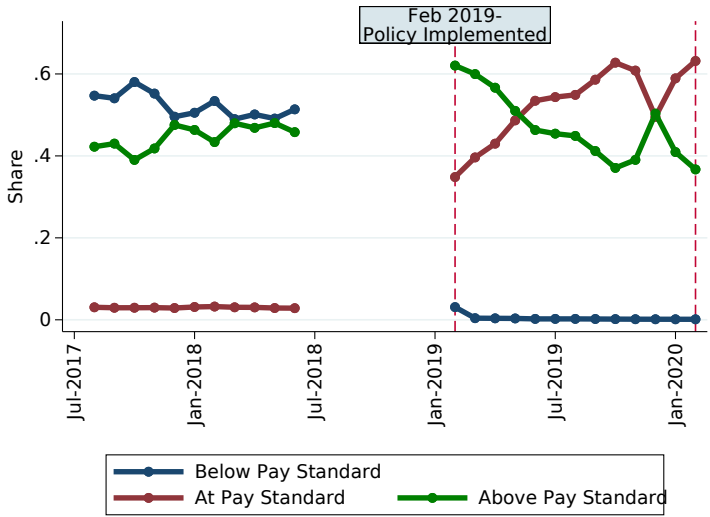
Note: Hourly wage = weekly earnings / weekly hours active on any app

Share of Trips Paid Below, At or Above Pay Standard Over Time



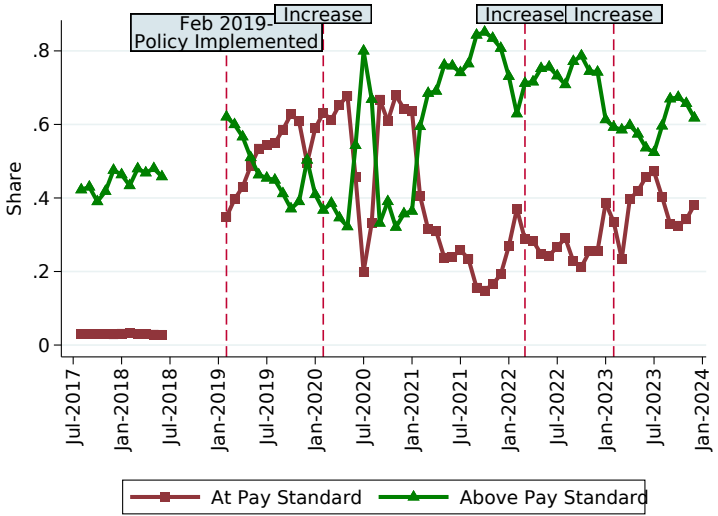
Share of Trips Paid Below, At or Above Pay Standard Over Time

More trips paid at pay standard over time, with fewer trips paid above



Share of Trips Paid Below, At or Above Pay Standard Over Time

Post COVID recovery, pay floor less binding

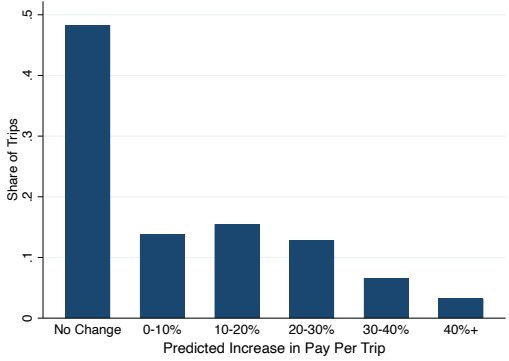


Predicted Impacts of the Pay Standard Policy

$$\underline{pay_i} = \$1.088 \text{in town miles}_i + \$1.262 \text{out of town miles}_i + \$0.495 \text{in town min}_i + \$0.574 \text{out of town min}_i$$

- Counterfactual expected increase (in log points):

$$\widehat{\ln \text{pay}}\text{inc} = \left(\ln\left(\underline{pay_i}\right) - \ln\left(pay_i\right)\right) \times \mathbb{I}\{pay_i < \underline{pay_i}\}$$



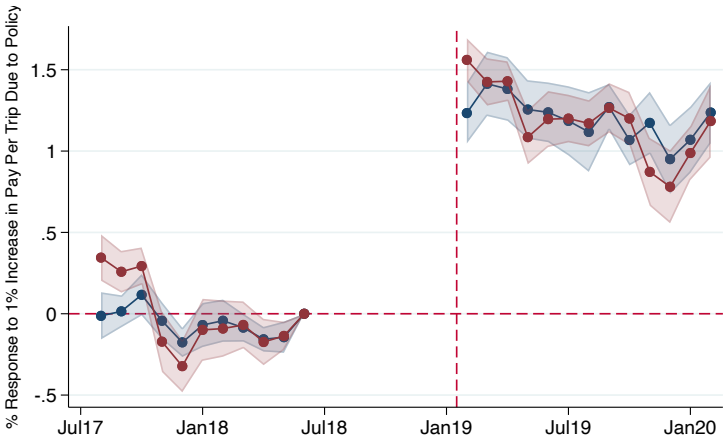
Dose-Response Design

- Event-study exploiting "route"-level variation:

$$Y_{r,m} = \sum_{\substack{t \in T \\ t \neq \text{Jan 2019}}} \left[\mathbb{1}\{m = t\} \times \left(\beta_t \times ln\hat{pay}inc_r + \delta_t \times Core_r \right) \right] + \gamma_r + \gamma_m + e_{r,m}$$

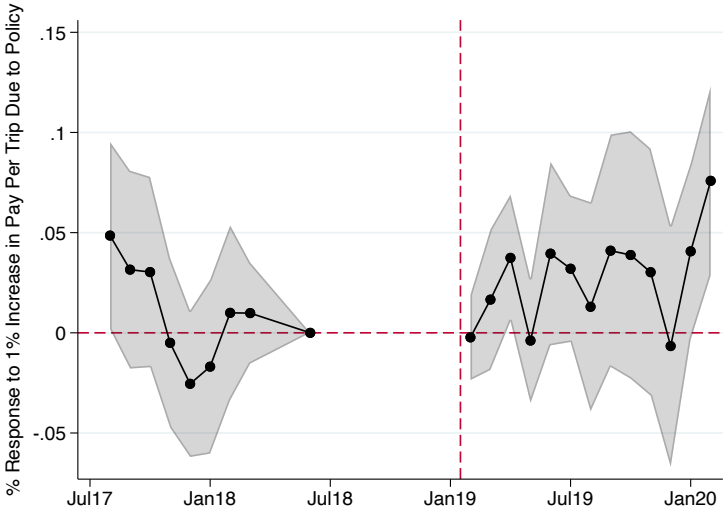
- Aggregate data to month year $\times$ month, m, by route, r:
  - 5 time blocks (weekday rush hour, weekday afternoon, peak nights, weekend offpeak, all other) X 11 major pickup zones X 12 major dropoff zones = 660 "routes"
- $Core_r$ - share of trips on route passing through congestion zone (in pre-period)
- Interpretation of β is relative diff across routes (incl. spillovers)
- Dynamic effects capture changes over time

Route-Level Results: Pay and Fare



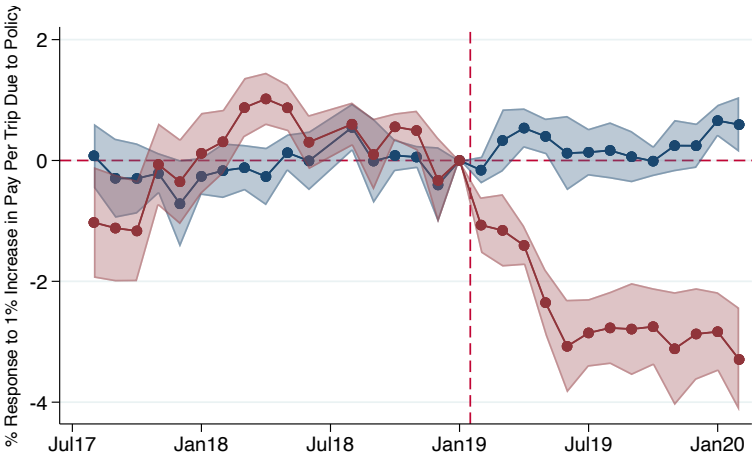
- Increase in relative pay between initial high and low-exposure in pay per trip in line with policy
- Pass through into fares similar in percent terms
- Persistent through Feb 2020

Route-Level Results: Any Tip



- No change in tipping propensity
- Only 10.5% of trips have a tip!

Route-Level Results: Number of Trips



- Reduction in trips driven by shared trips ($\sim$20% of trips pre)
  - substitution from shared to non-shared trips
- Taken together $\implies$ 10% increase in pay per trip $\uparrow$ hourly pay by 3.4%
- Shared trips more elastic?
  - Ongoing work studying responses to later increases in pay standard in post-COVID environment with few shared trips

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Driver Surveys

- Two survey waves
  1. Questions about Unemployment Insurance takeup
     - Feb 2024
     - N= 1,259 (1.0% response rate)
  2. Questions about lockouts and Willingess-to-Pay (WTP) for flexibility and employee status
     - Feb 2025
     - N= 1,620 (1.3% response rate)
- Responses linkable back to admin data

Descriptive Statistics of Respondents

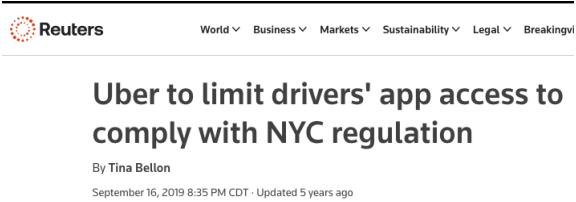
- Respondents broadly representative of population on hours and earnings

	Full Population	2024 Respondents	2025 Respondents
Age	42.07	40.39	40.16
Male	0.945	0.961	0.951
Weeks Active	39.32	42.68	42.23
Weekly Averages, When Active:			
Number of Trips	56.2	49.56	54.2
Days Active	5.07	4.83	5.06
Hours	32.84	29.85	31.51
Base Pay	1,083.31	984.27	1,057.21
Tips	63.29	60.01	62.29
Hourly Pay	32.62	33.62	33.24
N	100,362	701	1,027

Note: Outcomes for 2023. App-based transportation platforms, excluding taxi.

Lockouts Limiting Hours Flexibility

- In 2024, platforms announced limitations on when and where drivers could work, known as “lockouts”
- Platforms reported this was a response to future increases in pay standard being tied to driver utilization


Reuters

World Business Markets Sustainability Legal Breakingvi

Uber to limit drivers' app access to comply with NYC regulation

By Tina Bellon

September 16, 2019 8:35 PM CDT · Updated 5 years ago

Valuing Amenities via Survey Vignettes

- We follow a standard survey approach to evaluate the costs of lockouts to drivers (Wiswall and Zafar QJE 2018; Mas and Pallais AER 2017, Maestas et al. AER 2023)
- Drivers are presented the scheduling scenarios below alongside randomized wage offers (up to $12 difference) and asked to choose which they prefer
  1. You can choose to drive as many hours as you want *only if* the company determines there are enough trips. You may be unable to log on if there are not enough trips.
  2. Work whenever you want, as much as you want.
  3. Schedule set one week in advance. You can work your desired number hours up to 40 hours per week guaranteed. You will only be assigned late nights or weekend hours if you choose.
- We also provided information about 1099 v W-2 Contracts alongside randomized wage offers

Discrete Choice Experiment

If you could only drive for only one of the two platforms below, which would you prefer?

Option A:

On average, you will make **$34.00 per hour in take-home pay AFTER subtracting taxes and unreimbursed expenses**, as a **W-2 employee**. Schedule set one week in advance, desired number hours up to 40 hours per week guaranteed. (Only assigned late night/weekend hours if you want to be).

Option B:

On average, you will make **$36.00 per hour in take-home pay AFTER subtracting taxes and unreimbursed expenses**, as a **1099 independent contractor**. Work whenever you want, as much as you want.

Option A | Option B

←

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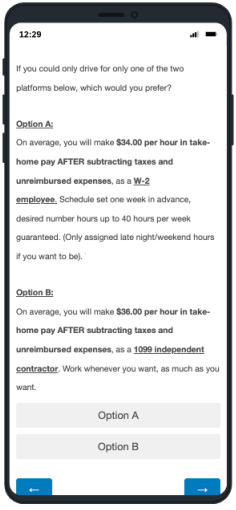


Contract Information Treatment

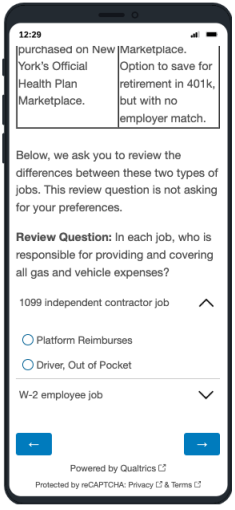
Contract Type:

1099 Contractor	W-2 Employee
You are self-employed and not covered by unemployment insurance, minimum wage, overtime compensation rules or paid time off. You will still be covered by the TLC pay standard rules.	You are covered by unemployment insurance, health and safety laws, overtime compensation and paid sick days, and you have the right to collectively bargain with your employer.
No taxes are withheld, you are responsible for all tax compliance	The platform withholds income and payroll taxes for you
You are responsible for paying all gas and vehicle expenses out of pocket	The platform will reimburse you for gas and vehicle expenses on the job at the federal per-mile rate (70¢ per mile)
No health or retirement benefits offered by platform. Health insurance can be purchased on New York's Official Health Plan Marketplace.	Health insurance offered by firm with premiums similar to New York's Official Health Plan Marketplace. Option to save for retirement in 401k, but with no employer match.

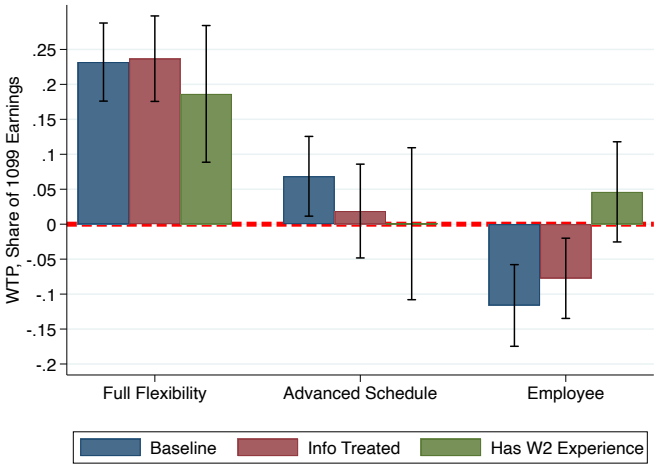
Below, we ask you to review the differences between these two types of jobs. This review question is not asking for your preferences.

Review Question: In each job, who is responsible for providing and covering all gas and vehicle expenses?

	Platform Reimburses	Driver, Out of Pocket
1099 independent contractor job	○	○
W-2 employee job	○	○



Willingess-to-Pay for Flexibility and Employee Status



- Lockouts are costly to drivers: WTP to avoid lockouts of **24%** of earnings
- Drivers do not value advanced schedule as highly
- Drivers do not appear to value employee status
  - Negative value inconsistent with sorting (would expect 0)
  - Suggestive: may be due to uncertainty about the alternative

Conclusions

- NYC on forefront of policies protecting drivers of app-based platforms
- Key findings:

1. NYC increased gig pay by mandating minimum fares (and restricting new entry)
   - Pass-through into prices + estimated demand elasticity $<1 \implies$ largely a transfer from consumers to producers
2. Drivers highly value flexibility, but not advanced schedules or employee status
   - $\implies$ Policies—or firm responses like lockouts—that limit flexibility require compensating drivers
   - Suggestive: Drivers aversion to changes in contract type may be due to uncertainty of how employee status would work