



Nudging Gig Economy Workers

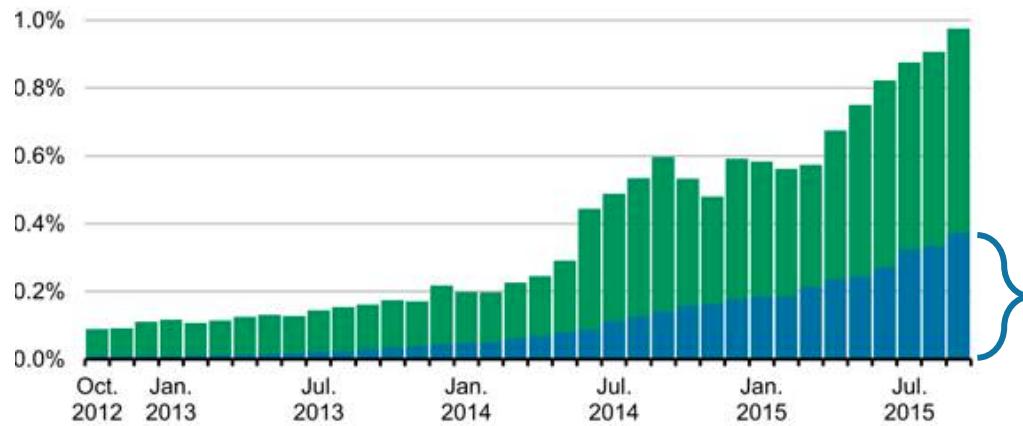
BEPP 904 Spring 2019



Park Sinchaisri (OIDD)

Gig Economy

Share of US adults earning income in a given month via online platforms

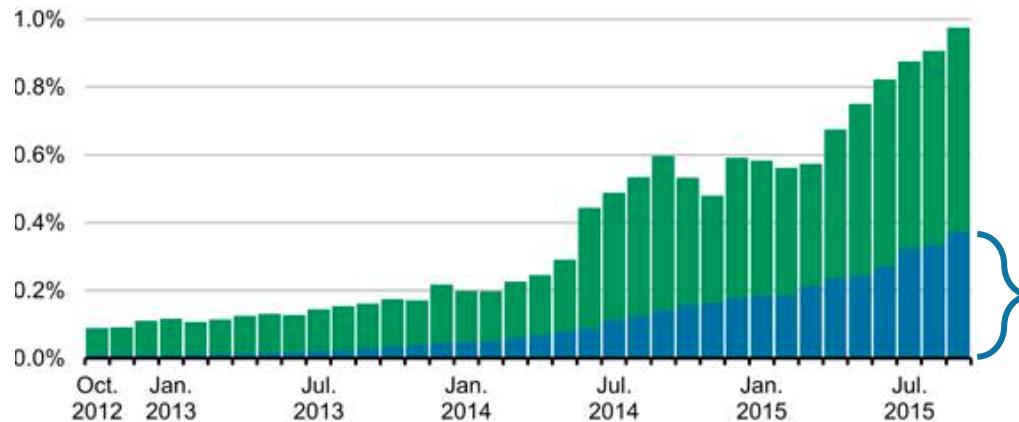


2015

44M people
in the US took on gig work (34%)

Gig Economy

Share of US adults earning income in a given month via online platforms



2015
44M people
in the US took on gig work (34%)



Who are Gig Workers?

70% by choice

44% primary income

~50% millennials

Who are Gig Workers?

70% by choice

44% primary income

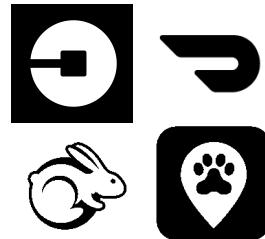
~50% millennials



when to work?



how long?



which platforms?

Who are Gig Workers?

70% by choice



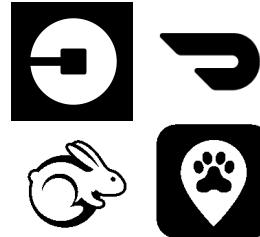
when to work?

44% primary income



how long?

~50% millennials



which platforms?

Workers decide work schedules

Research Questions

How do gig economy workers
make labor decisions?

Research Questions

How do gig economy workers
make labor decisions?

How can the platform influence
their decisions?

Research Questions

Econometrics

How do gig economy workers
make labor decisions?

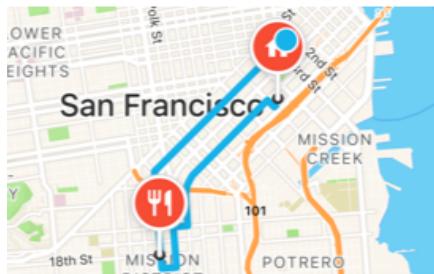
How can the platform influence
their decisions?

Experiment

In Practice

Real-time
“surge pricing”

Deliver by 6:15pm Decline



Mission Chinese Food
\$22.78 subtotal (2 items)

BUSY PAY: +\$1.50

4.1 miles total

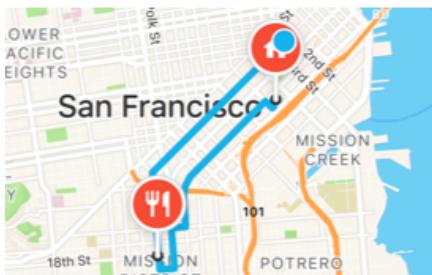
Accept Order



In Practice

Real-time “surge pricing”

Deliver by 6:15pm Decline



4.1 miles total

Accept Order

 DOORDASH

Pre-announced bonus

5:00 PM–6:00 PM

 +10% (5:00pm - 5:30pm)
+30% (5:30pm - 6:00pm)

6:00 PM–7:00 PM

 +30% (6:00pm - 6:30pm)
+40% (6:30pm - 7:00pm)

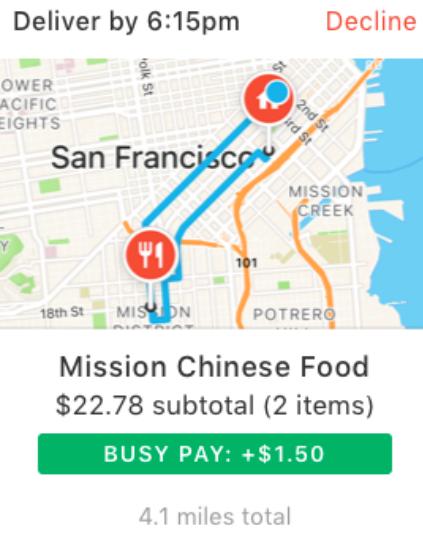
caviar

<https://dasherhelp.doordash.com/busy-pay>

https://courierhelp.trycaviar.com/customer/en/portal/articles/2821000-peak-hour-pay?b_id=9619/

In Practice

Real-time “surge pricing”



DOORDASH

Pre-announced bonus



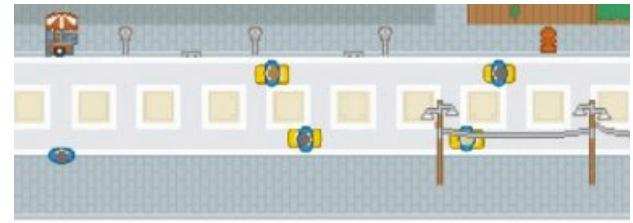
5:00 PM–6:00 PM
+10% (5:00pm - 5:30pm)
+30% (5:30pm - 6:00pm)



6:00 PM–7:00 PM
+30% (6:00pm - 6:30pm)
+40% (6:30pm - 7:00pm)

caviar

“You’re so close to your precious target”



How Uber Uses
Psychological Tricks to
Push Its Drivers’ Buttons

#1 Drivers of Work Decisions

We are interested in three effects

Hourly Wage

Income Target

Time Target

H1: Positive

Carrington (1996), Oettinger (1999),
Stafford (2015)

H2: Negative

Camerer et al (1999),
Farber (2008), Thakral & To (2017)

H3: Negative

Crawford & Meng (2011), Farber (2015),
Collewet & Sauermann (2017)

on two work decisions:

Work or not?

If so, how long?

Data

US ride-hailing firm

Drivers are guaranteed an hourly Base Rate + Promotions



Shift-level financial incentives and driving activity *for all*

5.5M

Observations

358

Days

Oct 2016 – Sep 2017

7,826

Unique drivers

SUV/Sedan/Van

Results Summary

As day/week proceeds...

Neoclassical
Financial Incentive

encourages working

Behavioral
Income Target

discourages working later on

Results Summary

As day/week proceeds...

Neoclassical
Financial Incentive

encourages working

Behavioral
Income Target

discourages working later on

New
Inertia

encourages working

The longer I've been active,
the more likely I'll continue to work

Drivers Work Long Hours

- In NYC, ride-sharing drivers need a specific commercial license.

Drivers Work Long Hours

- In NYC, ride-sharing drivers need a specific commercial license.
- Low earning rate, need to work more.

Some Uber drivers work dangerously long shifts

Diana Kruzman, USA TODAY

Published 9:34 a.m. ET July 10, 2017 | Updated 2:51 p.m. ET July 10, 2017

Drivers Work Long Hours

- In NYC, ride-sharing drivers need a specific commercial license.
- Low earning rate, need to work more.

Some Uber drivers work dangerously long shifts

Diana Kruzman, USA TODAY

Published 9:34 a.m. ET July 10, 2017 | Updated 2:51 p.m. ET July 10, 2017

- Some just enjoy driving...

Posted by u/Dickful 1 year ago 

I actually love driving uber.



r/uberdrivers

Sure it started out for financial reasons but at this point I just Love f :ing driving.

I'm still doing things to make most money possible but its not a bad gig as long as your car costs 2k.

Experiment

How to Nudge Workers to Quit?

Experiment

How to Nudge Workers to Quit?

Why would company want to do that?

- Fatigue / overwork
 - Health/safety
 - NYC has a fatigue prevention regulation

Experiment

How to Nudge Workers to Quit?

Why would company want to do that?

- Fatigue / overwork
 - Health/safety
 - NYC has a fatigue prevention regulation
- Low demand
 - Workers' satisfaction
 - Hourly paid jobs: ride-sharing, delivery, retail

Logging off automatically might create a backlash

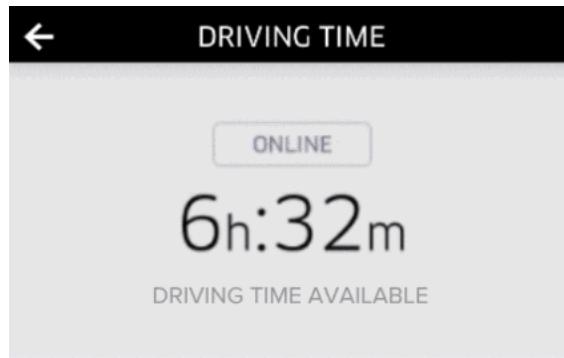
Fatigue

TRANSPORTATION \ UBER \ RIDE-SHARING \

Uber will require drivers in the US to take six-hour breaks between long shifts

The app will use GPS and telematics to track driving time

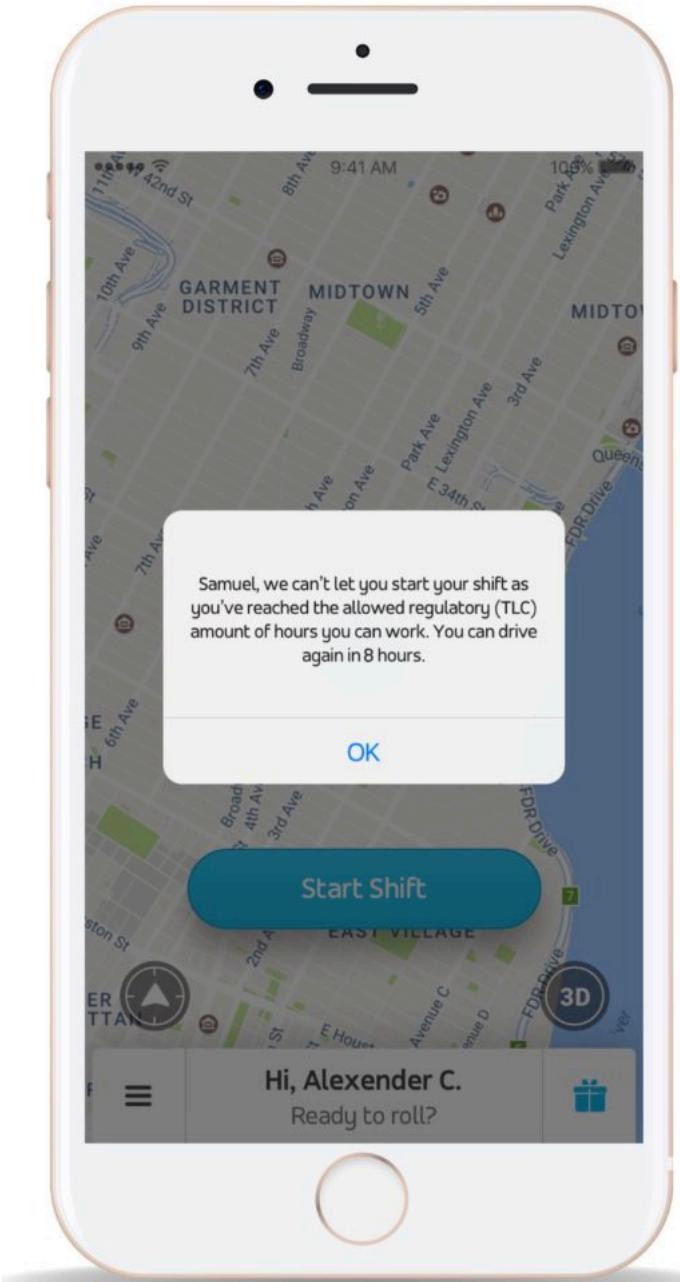
By Andrew J. Hawkins | @andyjayhawk | Feb 12, 2018, 1:32pm EST



To help keep the roads safe, driving on the Uber App is limited to no more than 12 hours at a time. If you're offline, or stopped for more than 1 minute between trips, the time is not counted toward the 12-hour limit.

6 HOURS OFFLINE

After being offline for 6 hours, you'll be able to go back online to receive new Uber trips.



Nudging Employees

- Paid time-off/vacations

© Academy of Management Journal
1981, Vol. 24, No. 4, 729-741.

Effects of Flexitime on Employee Attendance and Performance: A Field Experiment¹

JAY S. KIM
ANTHONY F. CAMPAGNA
The Ohio State University

The Impact of Flexible Scheduling on Employee Attendance and Turnover

Dan R. Dalton
Indiana University

Debra J. Mesch
Northeastern University

The implementation of an experimental flexible-scheduling program was the basis for a naturally occurring field experiment. A six-year assessment tests the effects of a flexible-scheduling program on absenteeism and turnover for the division implementing the program as well as a comparable control group. Results indicate gross reductions in employee absenteeism after the flexible-scheduling intervention for the experimental group, while no such changes were evident in the control group. The two-year period after the program ended indicates that absenteeism immediately returned to base-rate levels. The rate of employee turnover, however, was unaffected by the intervention. The concluding section discusses the problems encountered in trying to apply flexible scheduling to a large-scale organization.●

Harvard Business Review

What One Company Learned from Forcing Employees to Use Their Vacation Time

by Neil Pasricha and Shashank Nigam

AUGUST 11, 2017

Creativity went up 33%, happiness levels rose 25%, and productivity increased 13%

Nudging Employees

BEHAVIORAL ECONOMICS

**Harvard
Business
Review**

How We Nudged Employees to Embrace Flexible Work

by [Cindy Wiryakusuma](#), [Hui Yih Chai](#), [Alex King](#), and [Graham Pointer](#)

NOVEMBER 03, 2017

1. Allow flexible start and finish times in Outlook Calendar (instead of 9-5)
2. Encourage managers to start adopting flexible schedules and discuss with team members
3. Competition to disrupt habits: teams could win points for arriving or leaving out of peak times

Results

1+2, 3.3 % point increase in off-peak arrivals/departure

3, 2 months after the 9-week competition finished, 7.1% point increase

Study Design

Intervention: 3 x 3

Utilization Forecast

None Low High

None

Monetary Bonus Instant

Future

Study Design

Intervention: 3 x 3

Utilization Forecast

	None	Low	High
--	------	-----	------

Monetary Bonus	None	Instant	Future
----------------	------	---------	--------

- **Control:** “Do you want to take a break?”

Study Design

Intervention: 3 x 3

Utilization Forecast

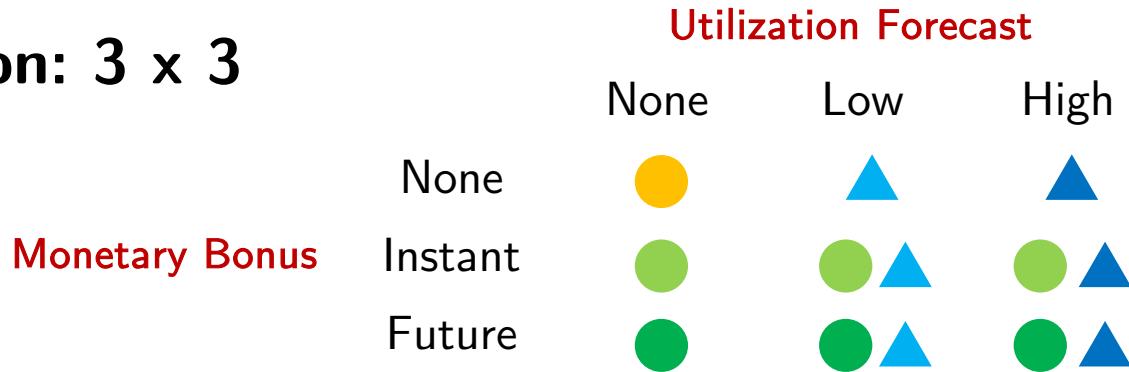
	None	Low	High
--	------	-----	------



- **Control:** “Do you want to take a break?” ●
- **Monetary:**
 - Take a bonus now ●
 - Guarantee a higher rate the next time ●

Study Design

Intervention: 3 x 3



- **Control:** “Do you want to take a break?” ●

- **Monetary:**

- Take a bonus now ●
- Guarantee a higher rate the next time ●

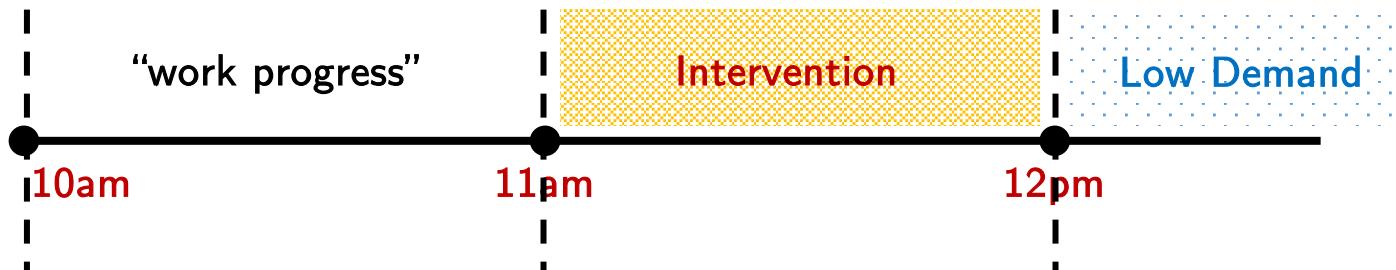
- **Information on Utilization/Demand Forecast:**

- Utilization could be really low ▲
- Utilization could be really high ▲

Study Design

Subject

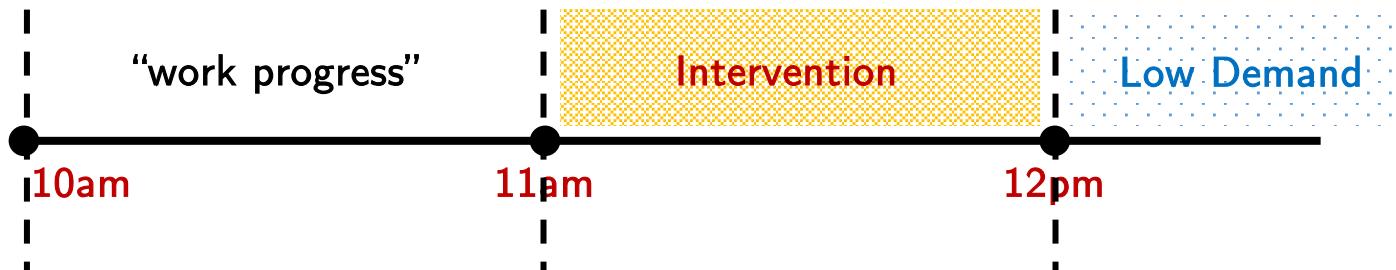
- Drivers currently working right before the expected low-demand period
 - Drivers who are currently not working won't be allowed to join
- Randomly assigned, stratified by work progress



Study Design

Subject

- Drivers currently working right before the expected low-demand period
 - Drivers who are currently not working won't be allowed to join
- Randomly assigned, stratified by work progress



- Sample selection issues?
 - Drivers who chose to drive for hourly pay during low-demand period
 - How much do drivers know about demand forecast?

Proposed Analysis

- Outcomes
 - $P(\text{taking a break})$
 - Subsequent work decisions
 - Turnover
- Other ideas
 - Making the “Exit” button more salient
 - Indicate goals reached/success