PLATFORM CAPITAL AND PROFIT IN DIGITAL LABOR PLATFORMS

Ali Alper Alemdar

St. Francis College

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Introduction

- Overview:
  - Digital labor platforms are reshaping labor and economic relations globally.
  - This research investigates profitability through the lens of platform capital.

- Key Focus:
  - The role of platform-specific technology and workers in profit generation.
  - Examining Uber as a case study for broader insights.

What is Platform Capital?

- A blend of digital technologies (AI, algorithms, data infrastructure) and precarious labor.

- Enables dual production: surplus value from labor and data extraction.

- Data as a "free gift" from workers and users.

- Algorithmic management controlling labor processes.

Mode of Production

- Digital Taylorism
  - Algorithmic control over workers mirrors traditional factory discipline (Kenney and Zysman 2015; Kellogg et al. 2020; Lee 2018; Gandini 2019)
  - Tasks are standardized, monitored, and adjusted in real-time via digital tools.

- Put-Out System Under Digital Taylorism:
  - Workers provide their own tools (e.g., vehicles, smartphones).
  - Platforms reduce fixed costs by outsourcing production risks to workers.

The Profit Equation

- Number of platform workers and tasks.

- Efficiency of data-driven operations.

- Take rates from workers and merchants.

- The competition among workers and participating industries (restaurants, groceries, etc.,)

The Profit Equation

$$S = TN - W \qquad\qquad (1)$$

- S = the surplus value

- T = number of completed tasks depending on factors (t, n, e), along with the demand

- t = average working hours of platform worker, represents increasing function with T

- n = number of platform workers, which represents increasing function with T

- e = efficiency of platform workers during working hours, which represents an increasing function with T;

- N = average value transformed from each completed task

- W = Piece Wage = v= variable capital = (1-x) where x represents the take-rate of a platform from each task and 0<x<1.
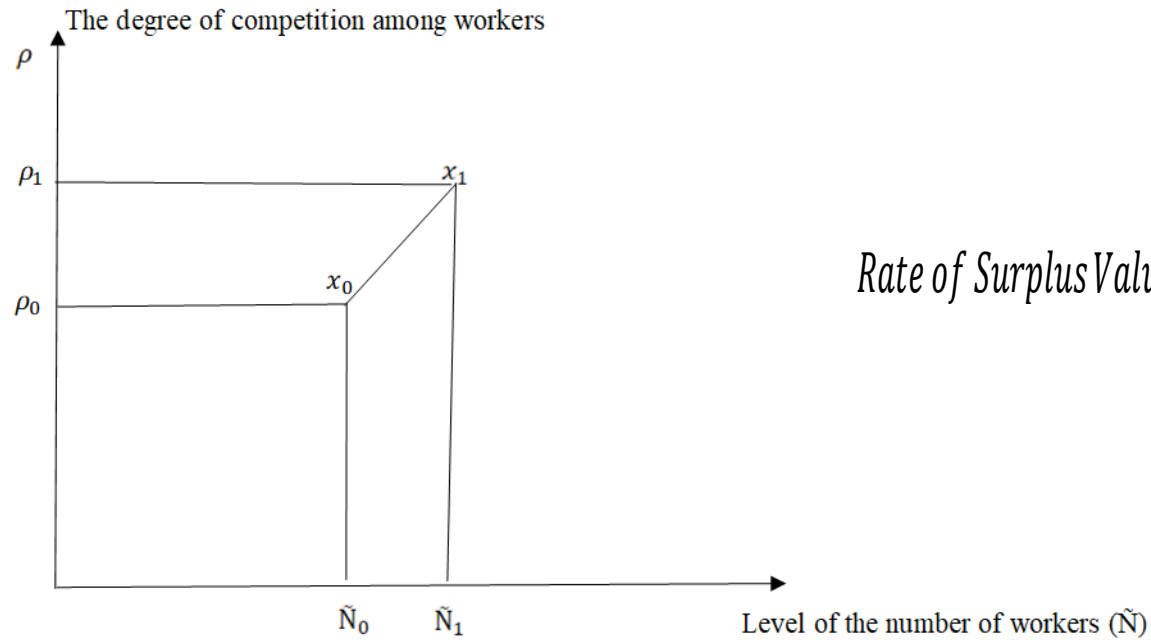
The Profit Equation

- The equation can be rewritten as follows;

$$S = TN - TN(1 - x) \qquad\qquad (2)$$

- After the simplification of the equation, we see that

$$S = TN(x) \qquad\qquad (3)$$

The Profit Equation

The degree of competition among workers

ρ

ρ_1 .... x_1

ρ_0 .... x_0

$\tilde{N}_0$ $\tilde{N}_1$

Level of the number of workers ($\tilde{N}$)

$$Rate\ of\ Surplus\ Value = s = S/v = (T.N - T.N.(1-x))/(T.N.(1-x)) = x/(1-x)$$

The Profit Equation

- Revenue sources: worker fees, merchant fees (restaurants, grocery stores, retailers).

- Additional streams: subscriptions, targeted ads, big data services.

- We denote non-labor-related fees as δ and take the rate from merchants as α, where $0<\alpha<1$

- $Total\ Revenue = \ TN(x)\ + \ \delta + TN(\alpha) + $ i

- Where i is the net financial earnings (which could be negative if a company's net financial position is lost) from financial operations.

The Profit Equation

- $Profit = TN(x) + \delta + TN(\alpha) + i - T(\acute{y}) - C$
  - where $T(\acute{y})$ is cost of revenue and $f'(\acute{y}) > 0, f''(\acute{y}) < 0$

- C represents the rest of the costs, including research and development, marketing, depreciation, and other indirect operating costs

- Some digital labor platforms report payments to shareholders at their costs. However, this is simply the distribution of the surplus value to the subsumed classes

The Rates of Profit

Table 1 The Rates of Profit

Excluding Stock-Based Compensation

	Profit Rate From Operations							Profit Rate (Financial Earnings/Losses)							
Lyft	Deliveroo	Doordash	Delivery Hero	JustTake Away	Fiverr	Upwork	Uber	Lyft	Deliveroo	Doordash	Delivery Hero	JustTake Away	Fiverr	Upwork
-26%			-29%			0%	6%	-24%			-13%			-2%
-19%		-35%	-28%		-11%	0%	-12%	-46%		-37%	-19%		-10%	0%
-27%	-26%	-2%	-18%	-1%	0%	1%	-18%	-38%	-27%	-2%	-18%	-1%	0%	1%
-9%	-15%	0%	-27%	-5%	1%	0%	0%	-22%	-13%	0%	-8%	-5%	-1%	0%
-16%	-13%	-2%	-32%	-5%	3%	-2%	-24%	-35%	-12%	-5%	-18%	-45%	3%	-1%
0%	2%	5%		-3%	5%	6%	11%	-7%	5%	5%		-19%	7%	12%

Including Stock-Based Compensation

	Profit Rate From Operations							Profit Rate (Financial Earnings/Losses)							
Lyft	Deliveroo	Doordash	Delivery Hero	JustTake Away	Fiverr	Upwork	Uber	Lyft	Deliveroo	Doordash	Delivery Hero	JustTake Away	Fiverr	Upwork
-26%			-30%			-3%	5%	-24%			-13%			-5%
-47%		-36%	-28%		-15%	-4%	-27%	-46%		-38%	-19%		-14%	-4%
-39%	-34%	-7%	-18%	-1%	-1%	-4%	-20%	-38%	-35%	-7%	-18%	-1%	-2%	-4%
-24%	-19%	-7%	-27%	-5%	-5%	-5%	-3%	-22%	-18%	-7%	-8%	-6%	-7%	-5%
-32%	-18%	-11%	-32%	-7%	-5%	-9%	-29%	-35%	-17%	-14%	-18%	-47%	-8%	-8%
-10%	-4%	-5%		-4%	-1%	-1%	6%	-7%	-1%	-5%		-20%	0%	5%

Take Rate

Take Rate in General	2018	2019	2020	2021	2022	2023
Uber	21%	20%	19%	19%	28%	27%
Lyft					34%	32%
Deliveroo			29%	28%	29%	29%
Doordash	10%	11%	12%	12%	12%	13%
DeliveryHero		15%	17%	20%	18%	20%
JustTakeAway	13%	14%	10%	16%	20%	20%
Fiverr		27%	27%	29%	30%	32%
Upwork	13%	13%	13%	13%	13%	14%

Source: Companies' Financial Statements and Author's
Calculations

Take Rate

The Relationship Between the Number of Merchants and Take Rate from The Merchants
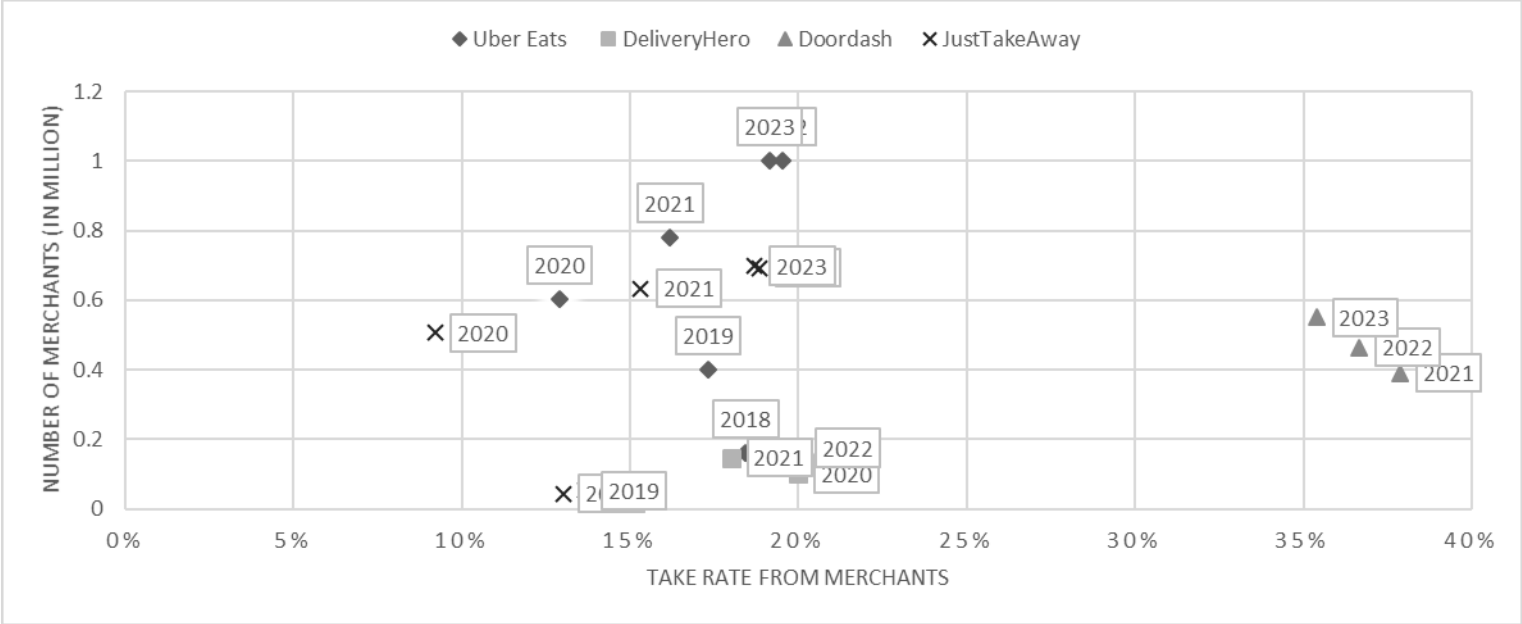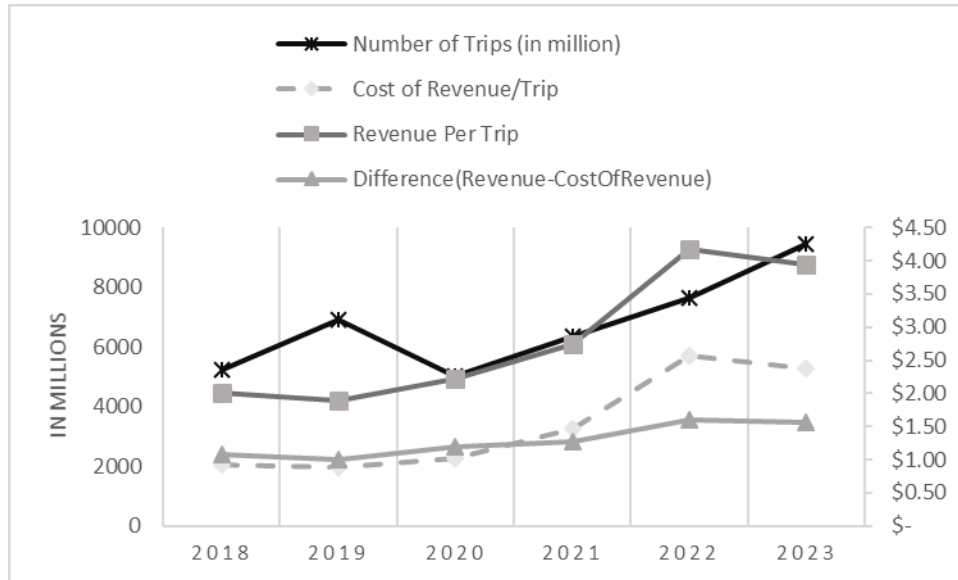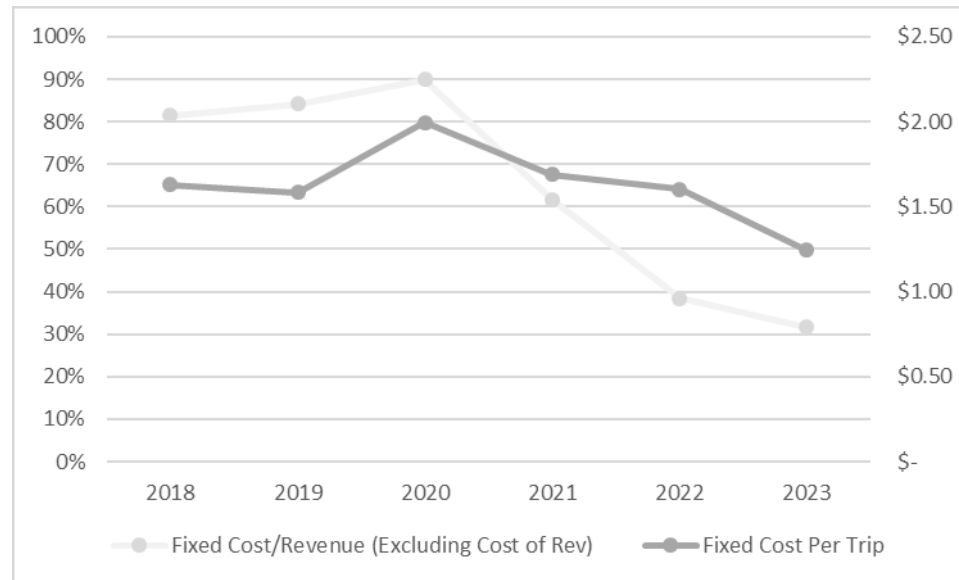
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Take Rate and Platform Workers in Uber Mobility
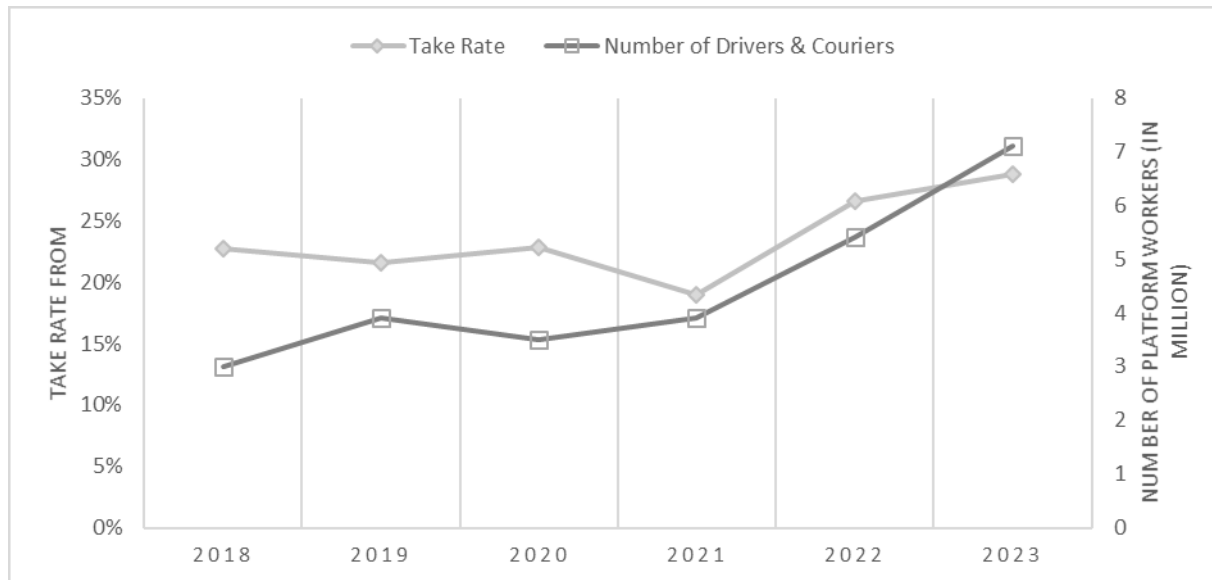
Cost of Revenue as Percentage of Revenue
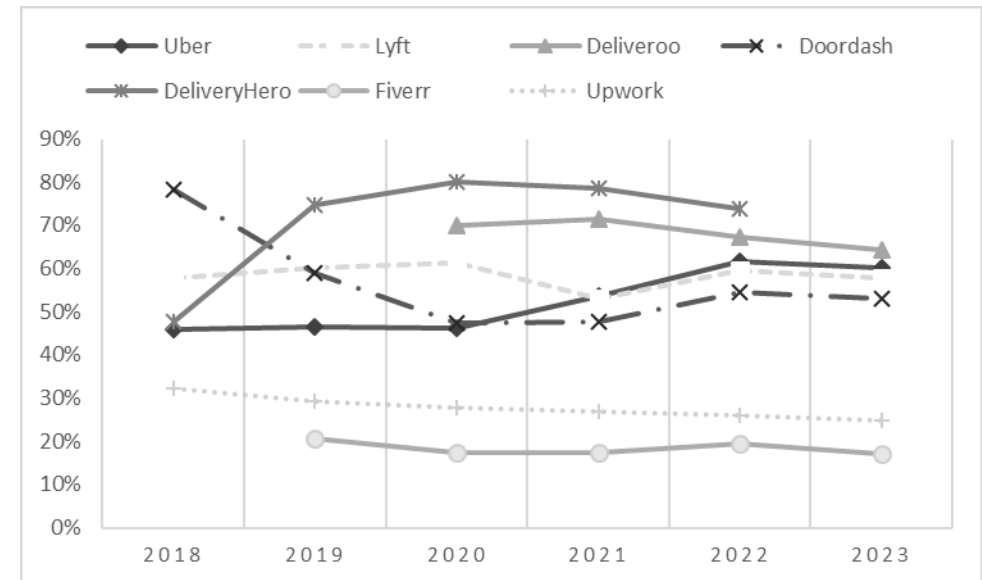
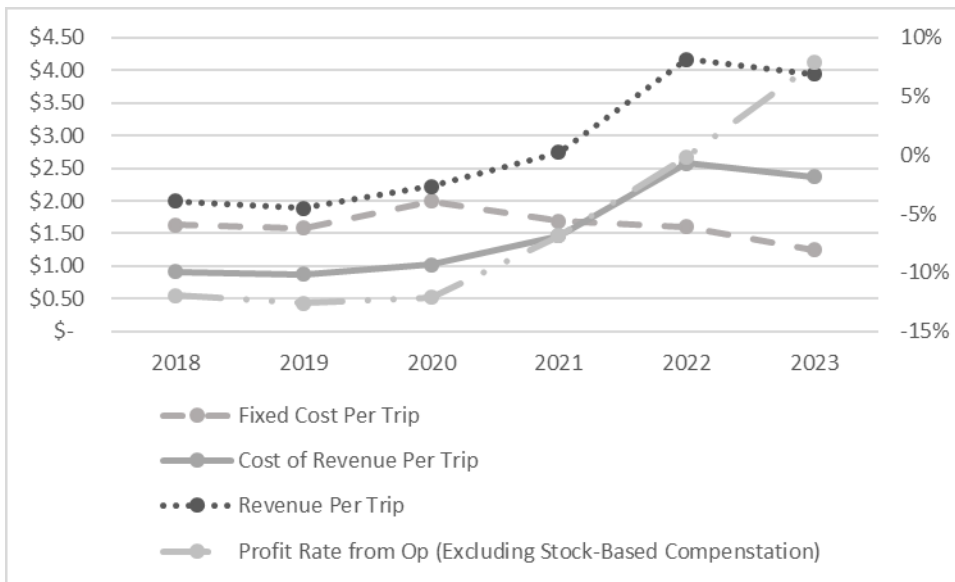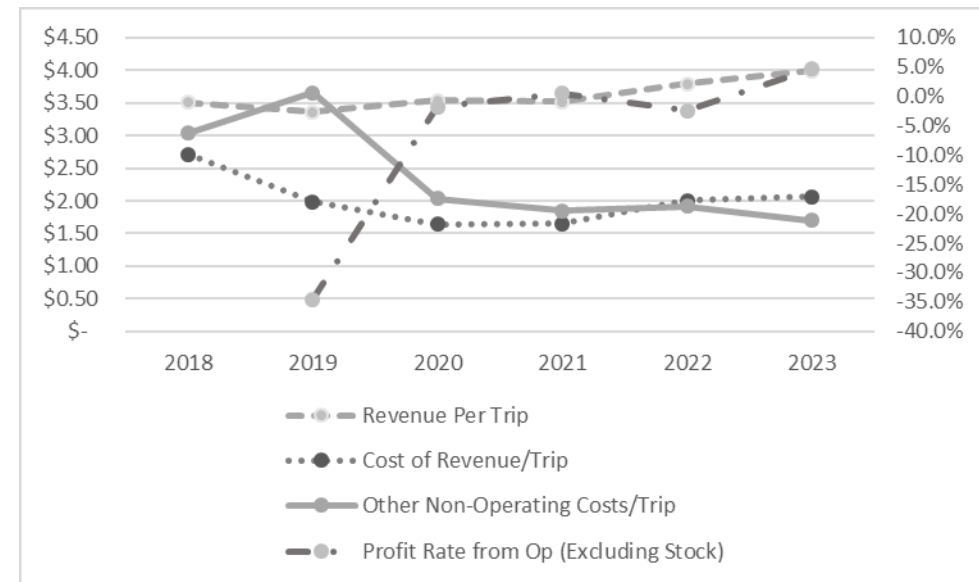# The Efficiency of Platform Capital and Profit-Uber
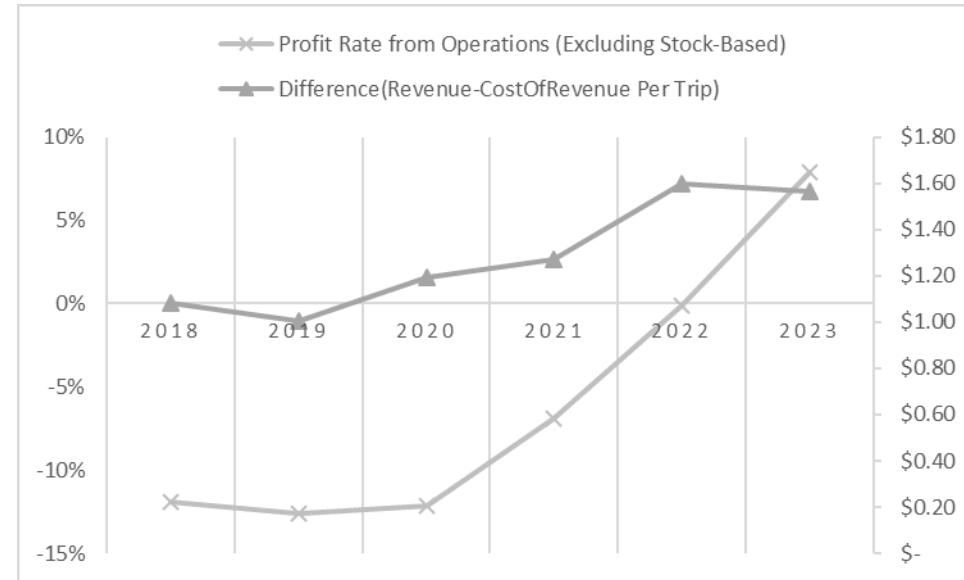
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Profit Dynamics in Uber and Doordash

Uber

Doordash

Conclusion

- Platform capital is the backbone of profitability in digital labor platforms.

- The expansion of data, technology, and precarious labor drives efficiency and profits.

- The finance logic behind platform should be investigated further studies