

Workers' Preferences over Payment Schedules



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Research questions

- ▶ How much do workers care about the **timing** of their payment?
- ▶ What explains individual heterogeneity in this respect?

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Research design

- ▶ Large-scale **survey experiment** with ridesharing drivers from a digital platform in Brazil.
- ▶ Outcome: choice between hypothetical contracts that **differ only in time to payment**.

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Main results

- ▶ Median driver willing to **forego 1/3 of earnings** in exchange for same-day (vs. 30-days) payment.
- ▶ Evidence that remuneration urgency is linked to a lack of alternative liquidity sources.

Background

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Research hypothesis: relatively fast payment in the digital economy may contribute to its appeal.

Implication: if true, workers in this sector would express a **high valuation** for this job feature.

Outcome measurement strategy

Valuable features of a job can be measured in terms of forgone earnings.

- ▶ Fringe benefits (Eriksson and Kristensen 2014)
- ▶ Stability (Wiswall and Zafar 2018)
- ▶ Work flexibility (Mas and Pallais 2017; Chen et al. 2020)
- ▶ Less commute time (Le Barbanchon et al. 2021)
- ▶ Identity alignment (Oh 2023)
- ▶ Time to payment

Empirical challenge

Payment schedule is rarely subject to independent variation in real labour markets.

- ▶ Remuneration rules are job-specific, tied to regulations and social norms.

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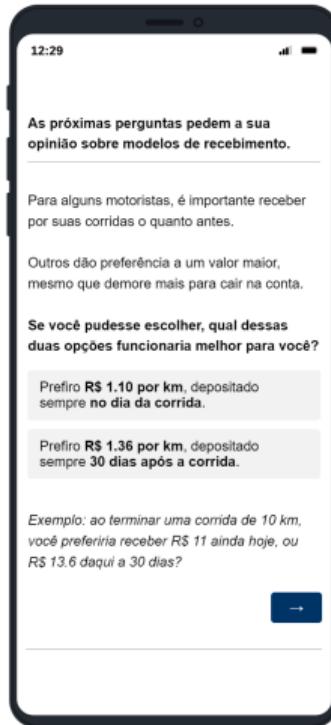
- ▶ Remuneration rules are job-specific, tied to regulations and social norms.

Platform work offers an appropriate context for our research question.

- ▶ Well-defined, homogeneous task;
- ▶ Salient link between work and earnings;
- ▶ Time to payment defined at the platform's discretion.

Research implementation

- ▶ Partnership with a ridesharing platform active in all States of Brazil.
- ▶ Survey distributed to the drivers' mobile phones (Jan. 2023).
- ▶ **Sample size:** over 14 000 drivers.



1. Who are the ridesharing drivers in Brazil?

Ridesharing drivers reflect the diversity of the Brazilian workforce...

- ▶ **Mixed-race or black** (63% *among drivers* vs. 54% *among the adult urban workforce*)
- ▶ **18 to 37 years old** (52% vs. 50%)
- ▶ **High school or less** (63% vs. 66%)
- ▶ **Adults in the household** (2.4 vs. 2.5)
- ▶ **Kids in the household** (1.0 vs. 0.8)

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... except that drivers are predominantly male.

- ▶ **Men** (93% vs. 55%)

Earnings

- ▶ About 3/4 of drivers report that the app is their primary source of work earnings;
- ▶ For reference, the national minimum wage was 560 USD per month (1 USD \approx 2.5 BRL adj. for PPP).

	driver as primary job	driver as secondary job	own-account workers (adult, urban)	wage employees (adult, urban)
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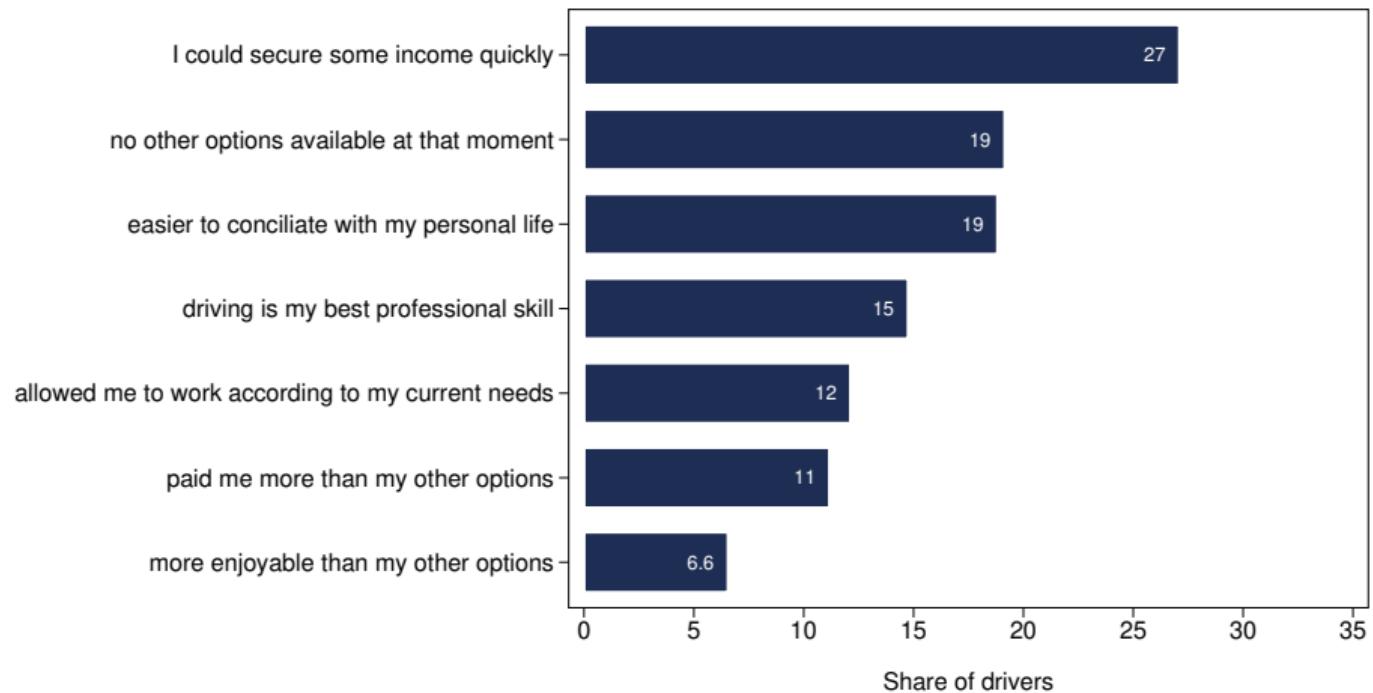
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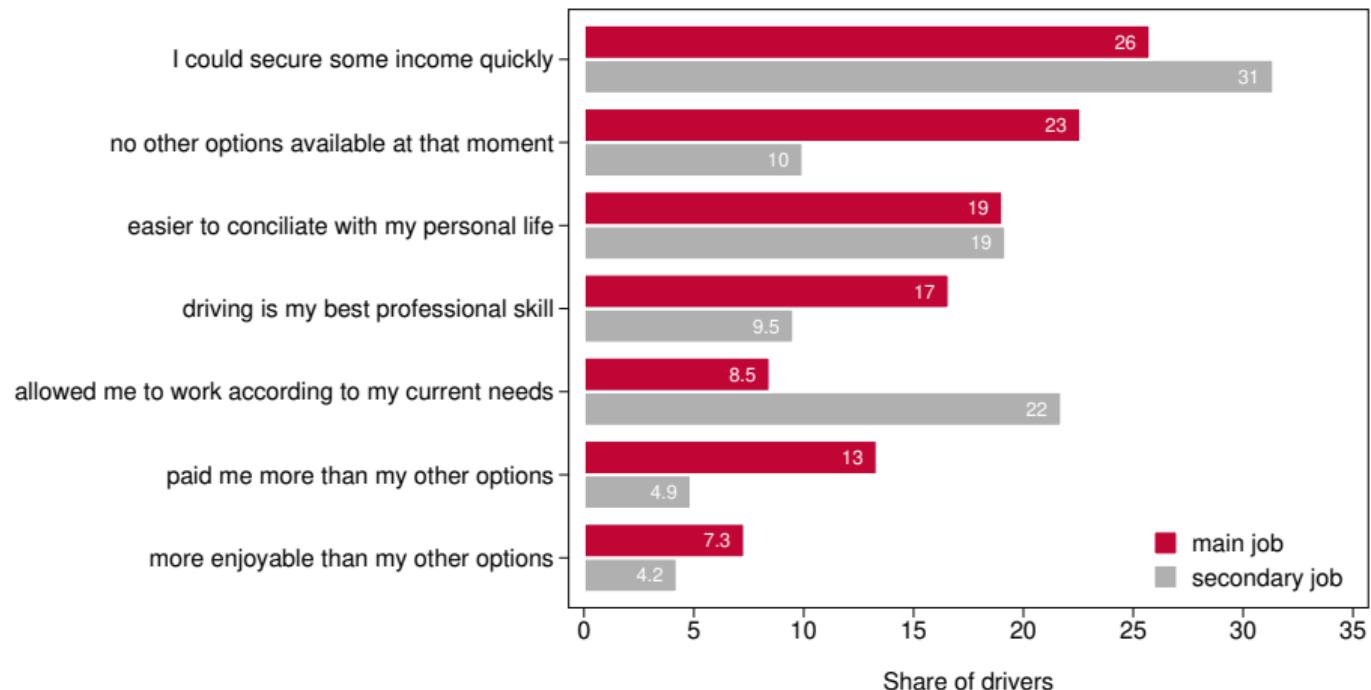
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Enrolled in a pension plan	31%	76%	33%	80%

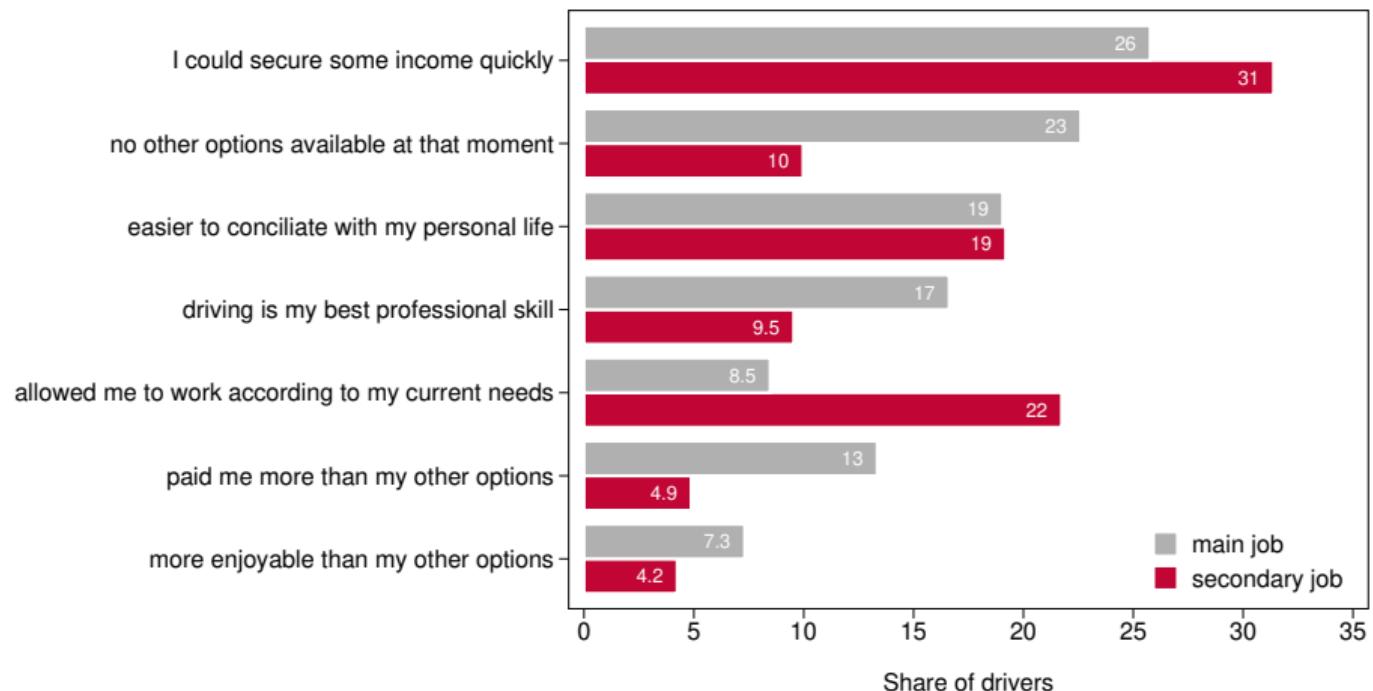
Taking into account the other activities I could do, I decided to be a driver because...



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2. How much do drivers value a quick payment?

Elicitation of preferences

If you could choose, which of these two options would work best for you?

I prefer R\$ **1.00** per km, always deposited **on the day of the ride**.

I prefer R\$ **1.48** per km, always deposited **30 days after the ride**.

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If you could choose, which of these two options would work best for you?

I prefer R\$ 1.00 per km, always deposited on the day of the ride.

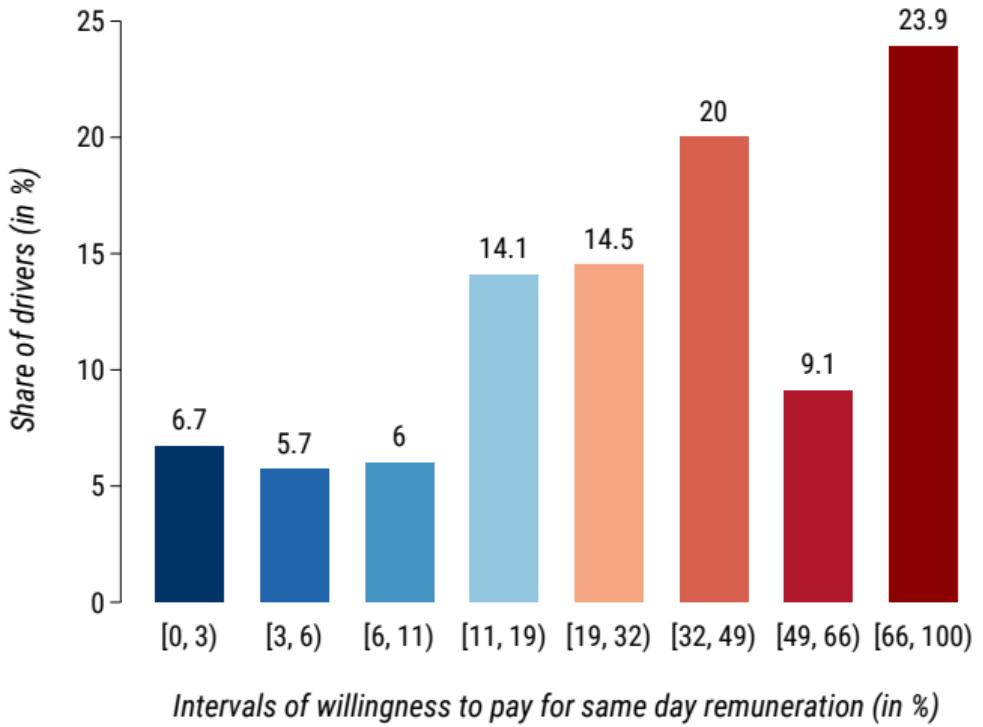
I prefer R\$ 1.48 per km, always deposited 30 days after the ride.

Willingness to forgo income as a measure of remuneration urgency

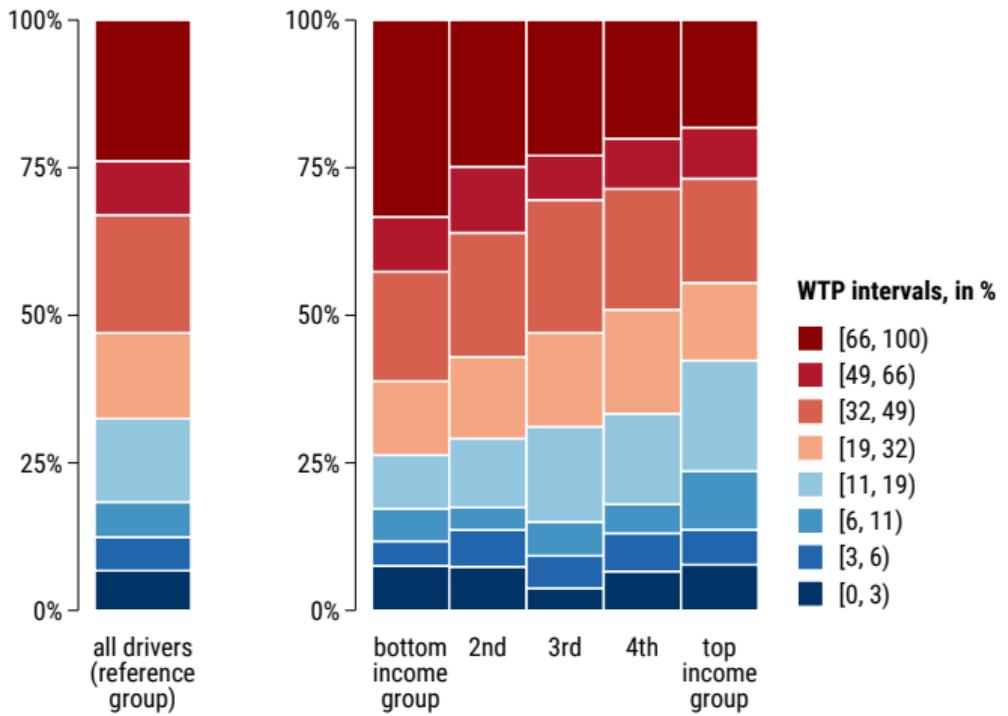
If one takes the first option, they are willing to forgo (at least) 0.48 out of every 1.48 of potential earnings (1/3) in exchange for the benefit of being paid on the day they work.

1st question	choice	2nd question	choice	3rd question	choice	willingness to pay
{ b × 1.24 } in 30 days or { b } the same day	same day	{ b × 1.96 } in 30 days or { b } the same day	same day	{ b × 2.92 } in 30 days or { b } the same day	same day	above 66%
			in 30 days		in 30 days	48% to 66%
in 30 days		{ b × 1.06 } in 30 days or { b } the same day	same day	{ b × 1.48 } in 30 days or { b } the same day	same day	32% to 48%
			in 30 days		in 30 days	19% to 32%
				{ b × 1.12 } in 30 days or { b } the same day	same day	11% to 19%
					in 30 days	6% to 11%
				{ b × 1.03 } in 30 days or { b } the same day	same day	3% to 6%
					in 30 days	under 3%

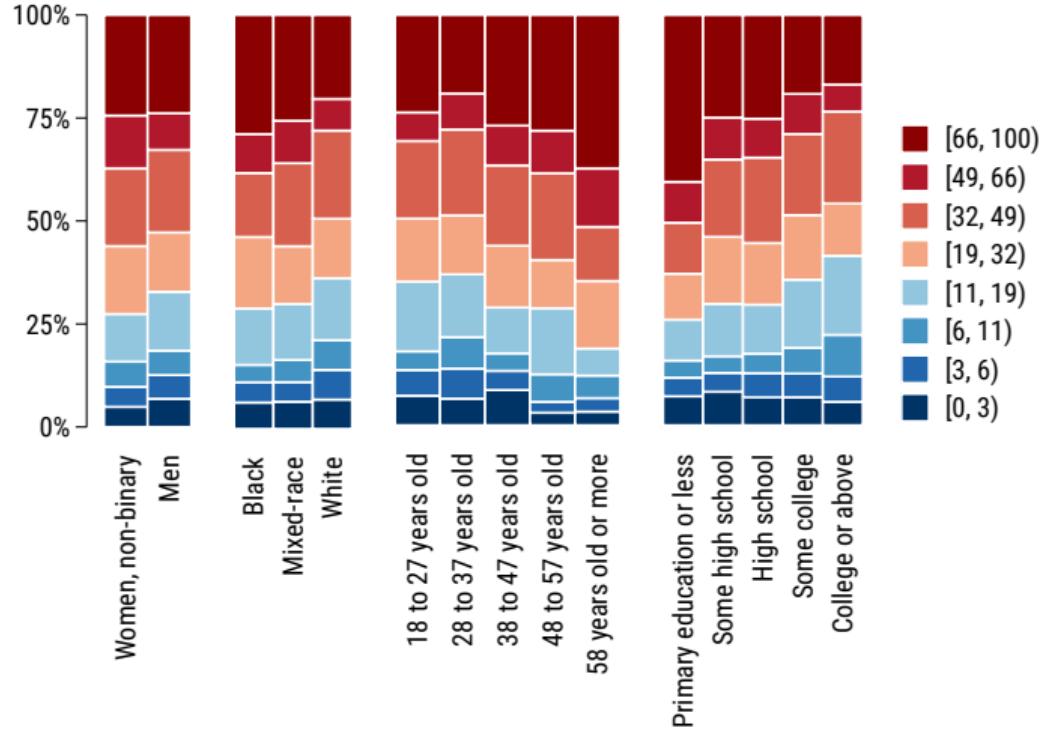
Distribution of drivers over the indifference ranges



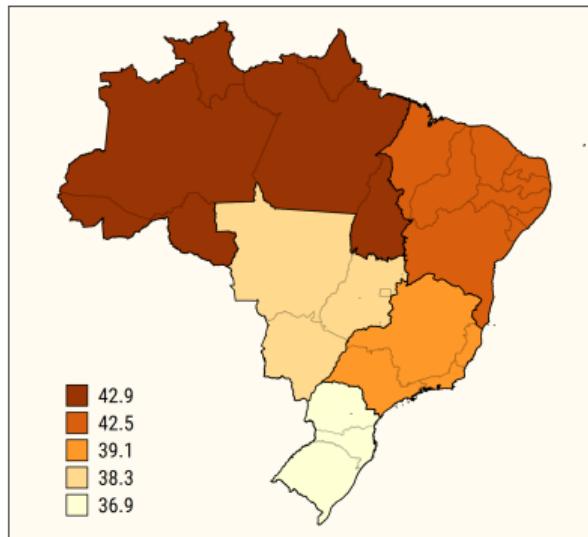
Remuneration urgency by total income per capita



Remuneration urgency by demographics

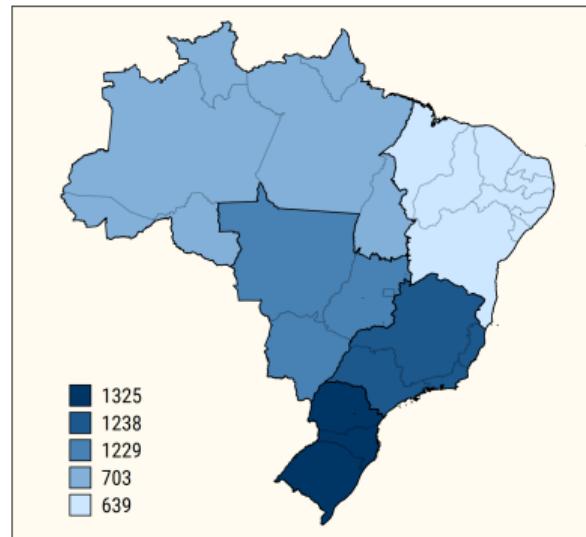


Remuneration urgency by region



Avg. willingness to pay for same-day remuneration

Source: Brazil Drivers Survey.



Median household income per capita

Source: National Household Survey.

3. How is the preference for quick payment affected by how people think about their domestic budget?

Remuneration urgency could be affected by

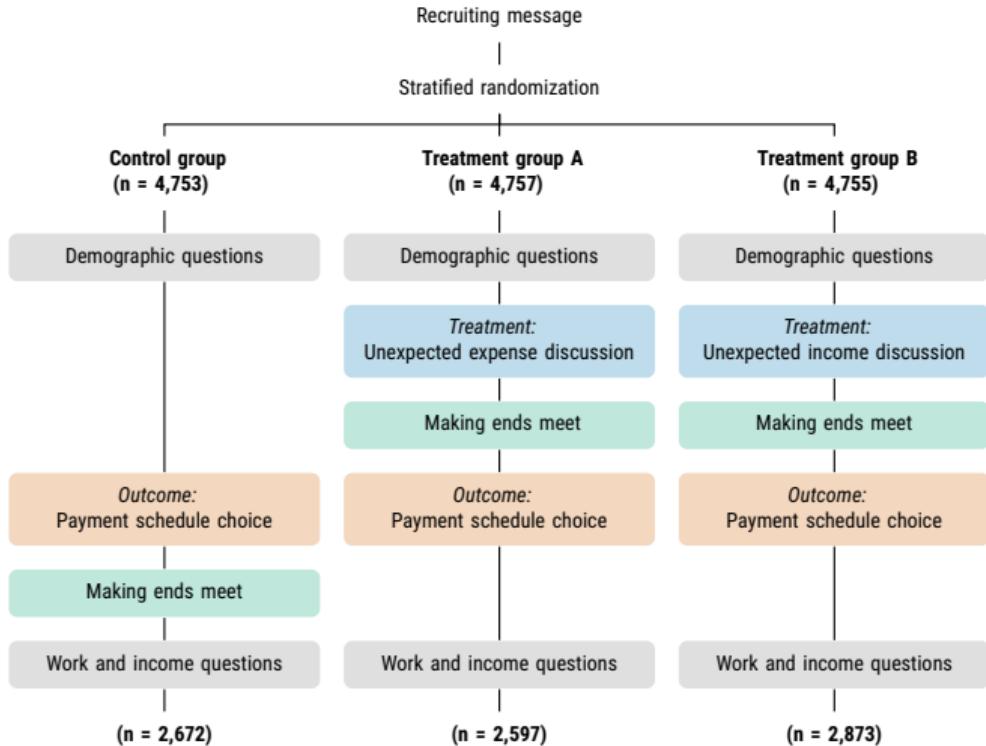
- ▶ **Structural features:** pure time preferences, structural access to liquidity;
- ▶ **Contingent features:** current balance of needs and resources, immediate financial concerns.

Remuneration urgency could be affected by

- ▶ **Structural features:** pure time preferences, structural access to liquidity;
- ▶ **Contingent features:** current balance of needs and resources, immediate financial concerns.

If my current household budget gets more salient...

- ▶ ... does it change my remuneration urgency?



Treatment A: **Discuss potential liquidity sources**

Imagine you received news of a **domestic emergency** (an urgent home repair, or a health treatment that cannot wait).

Because of this **you will have to disburse \$ 560 more than expected this week.**

What is the first word that comes to mind?

In practice, how would you cover this unexpected expense of \$ 560 right now?

Treatment A: Discuss potential liquidity sources

Imagine you received news of a **domestic emergency** (an urgent home repair, or a health treatment that cannot wait).

Because of this **you will have to disburse \$ 560 more than expected this week.**

What is the first word that comes to mind?

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Treatment B: Discuss the use of extra income

Imagine you received news of a **surprise payment** (the result of a lottery or an unexpected refund, for example).

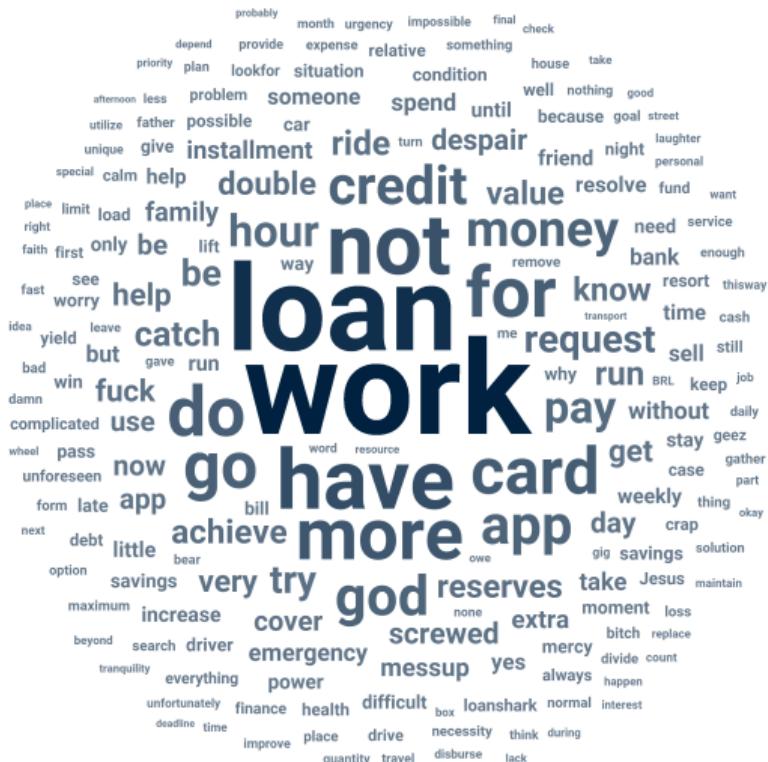
Because of this **you will receive an extra deposit of \$ 560 this week.**

What is the first word that comes to mind?

In practice, what would you do with this unexpected income of \$ 560 right now?

Top 200 terms

How would you cover this unexpected expense?



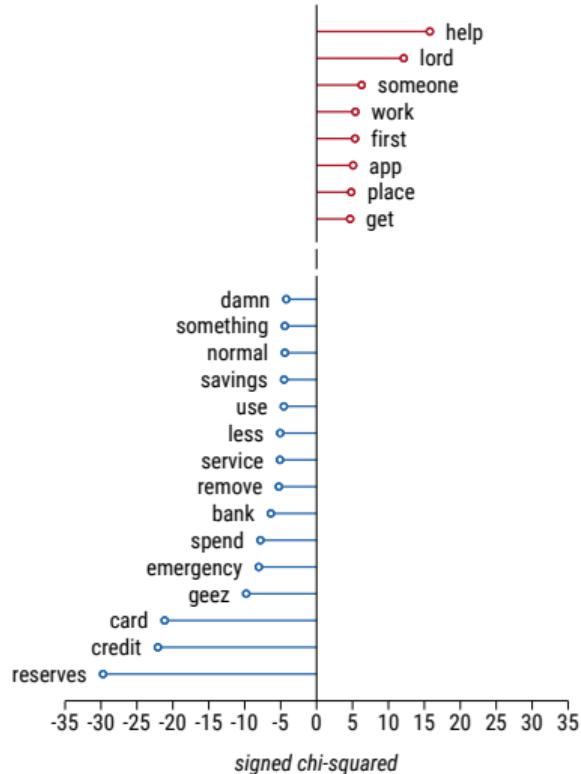
Top 200 terms

**What would you do with
this unexpected income?**

celebration receive extra remedy
driver necessity inside exit provisions anticipate
complete today believe invoice supermarket really course
app reserves return moment light finance spend debit
tranquility also savings market because material card achieve clothing
excellent win know blessing installment food right error
verify return value payoff work invest wonderful miracle gather
enter well place keep be debt but be family truth Jesus
bill improve father month thanks see house thing me amen child
deposit first take get thank car bill buy feed give travel
lookfor lord thanks still difficult part good do pay very have
surprised glory go enough fix stop gift power come tax god for rent
enough fix stop gift power come tax god for rent
figure change day save too new try tire vehicle pending apply
thisway without credit daughter mother leave stay maintenance happiness review
yay weekly arrive alleviate school installment use situation
safe legal remaining advance expense water always monthly
nothing run document recognition laughter walk continue
unforeseen passenger

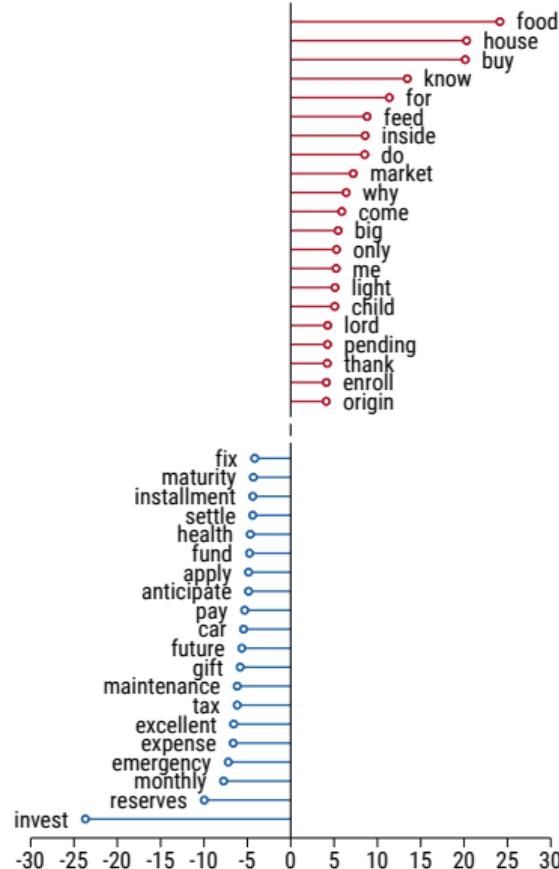
Keywords associated with remuneration urgency

How would you cover this unexpected expense?



Keywords associated with remuneration urgency

What would you do with this unexpected income?



Effects of discussing domestic finances on remuneration urgency

- ▶ Drivers randomly invited to discuss their finances exhibited only a slightly lower remuneration urgency.
- ▶ Similar effect in both treatments.
- ▶ **Contingent salience is not the main reason for the strong urgency we document in this population.**

	outcome: WTP midpoint		outcome: WTP interval
	Difference in Means (1)	OLS (2)	Interval Regression (3)
<i>Treatment A:</i>			
Unexpected expense discussion	-1.3 (0.7)	-1.7 (0.7)	-1.6 (0.7)
<i>Treatment B:</i>			
Unexpected income discussion	-0.7 (0.8)	-1.6 (0.7)	-1.5 (0.6)
<i>Reference level:</i>			
Control group mean	39.9 (0.7)	39.9 (0.7)	37.4 (0.6)
Number of observations	8,142	8,142	8,142

Notes: The standard errors (reported in parentheses under the point estimate) are clustered at the regional level. For the interval regression, the estimation results are bootstrapped over 500 replications. The controls in (2) and (3) include geographical area, gender, race, age, education, household composition, work experience, previous labor market status, number of apps, vehicle ownership, work days per week, work hours per day, extra jobs, looking for another job, work income from driving, total household income, savings, and pension contribution.

Effects throughout the indifference levels

	Linear Probability Model						
	Outcome: WTP > 3%	Outcome: WTP > 6%	Outcome: WTP > 11%	Outcome: WTP > 19%	Outcome: WTP > 32%	Outcome: WTP > 49%	Outcome: WTP > 66%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Treatment A:</i>							
Unexpected expense discussion	-1.9 (0.7)	-1.4 (0.8)	-0.8 (1.0)	-0.8 (1.6)	-2.2 (1.3)	-2.8 (1.0)	-2.5 (0.9)
<i>Treatment B:</i>							
Unexpected income discussion	0.4 (0.6)	0.3 (0.9)	-0.1 (1.2)	-1.5 (1.4)	-2.6 (1.4)	-3.0 (1.0)	-2.2 (1.0)
<i>Reference level:</i>							
Control group mean	93.3 (0.5)	87.6 (0.7)	81.6 (0.9)	67.5 (1.1)	53.0 (1.1)	33.0 (1.0)	23.9 (1.0)

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Treatment effects on decision time

	<i>outcome:</i> Seconds on Q1	<i>outcome:</i> Seconds on Q2	<i>outcome:</i> Seconds on Q3	<i>outcome:</i> Total seconds
	OLS	OLS	OLS	OLS
	(1)	(2)	(3)	(4)
<i>Treatment A:</i>				
Unexpected expense discussion	2.5 (0.9)	1.1 (0.4)	1.1 (0.3)	5.0 (1.5)
<i>Treatment B:</i>				
Unexpected income discussion	0.9 (1.1)	0.8 (0.5)	1.3 (0.3)	3.0 (1.8)
<i>Reference level:</i>				
Control group mean	49.9 (1.0)	22.5 (0.4)	15.8 (0.2)	90.1 (1.5)
Number of observations	8,142	8,142	8,142	8,142

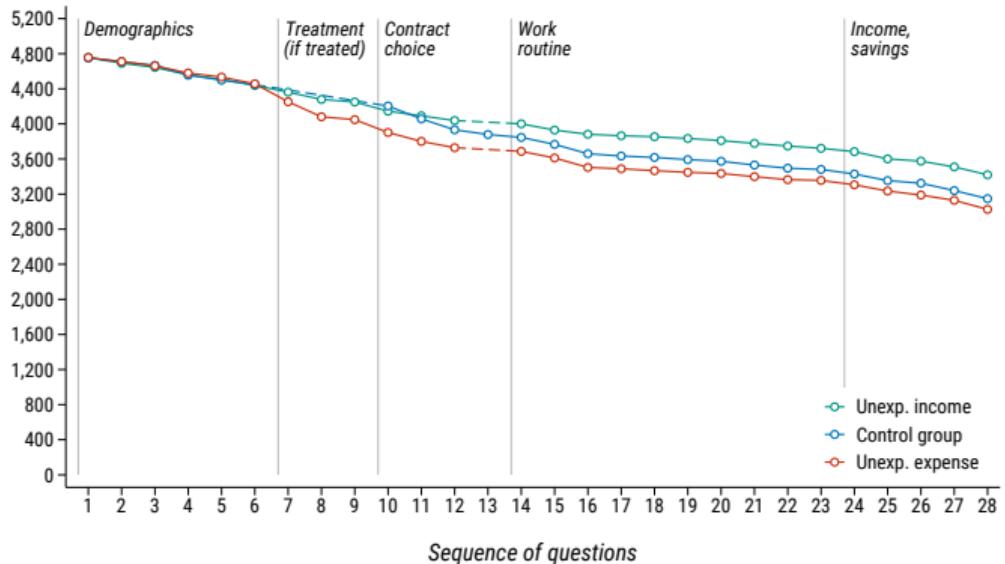
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Robustness analysis for selective attrition

Differential attrition by treatment group

Participants were **more likely** to drop out after a question on **unexpected expenses**; yet, this arm remains balanced on observables.

Participants were **less likely** to drop out after a question on **unexpected income**, especially those at lower income levels.



Doubly robust estimation of treatment effects on remuneration urgency

	outcome: WTP midpoint		outcome: WTP interval
	Difference in Means (1)	Doubly Robust: Covariate Adj. via Regression and IPW (2)	Doubly Robust: Covariate Adj. via Interval Reg. and IPW (3)
<i>Treatment A:</i>			
Unexpected expense discussion	-1.3 (0.7)	-1.5 (0.7)	-1.5 (0.7)
<i>Treatment B:</i>			
Unexpected income discussion	-0.7 (0.7)	-1.5 (0.7)	-1.4 (0.6)
<i>Reference level:</i>			
Control group mean	39.9 (0.7)	40.2 (0.6)	38.9 (0.6)
Number of observations	8,142	8,142	8,142

Notes: The standard errors (in parentheses) are clustered at the regional level. In (2) and (3), the standard errors also account for the estimation of inverse probability weights (IPW): in (2), the errors are calculated analytically and in (3), the two steps are bootstrapped over 500 replications. The covariates used in (2) and (3), both in the regression and the propensity estimation, are the same controls adopted at the baseline.

- ▶ Doubly robust methods use an outcome model (y) with a treatment propensity (p).
- ▶ Results close to baseline.

Limitations intrinsic to the research design

1. Hypothetical choices.

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- 1. Hypothetical choices.**
- 2. Magnitude is probably specific to the study population.**

Discussion

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- ▶ By contradiction, we find that work arrangements can have attributes of financial instruments.
- ▶ In other words, workers are willing to pay for **liquid jobs**.

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Potential poverty trap mechanism.

- ▶ The poorest workers are the most likely to pay for a liquidity premium.

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Not an exotic case study in a weird sector in a distant country.

- ▶ Demand for liquid jobs is a symptom of financial vulnerability, market failures – scope for policy?
- ▶ Financial technology targeting this margin is quickly expanding in the US...

Lyft

Access your earnings instantly

- ✓ Enjoy instant payouts to your Lyft Direct business debit card after every ride. No waiting, no payout fees.

Uber

When and how you get paid

Get your money fast

Your earnings are deposited into your account every week. And with Flex Pay, you can cash out your earnings once a day.

One@Work (Walmart et al.)



Get paid early

Get your money when you need it with Instapay.*

Payactiv (Pizza Hut, Subway et al.)

Own your day

Get what you've already earned¹, right now, to pay bills or buy what you need. It's just your money, in your hands.

DailyPay (Lidl, Hilton et al.)

Access your pay any day

Life happens between paychecks. Get your money whenever you want* and manage spending with the **DailyPay Visa® Prepaid Card** or transfer your earnings to any bank account or card.

Wendy's

We're Hiring!



Get paid after every shift with Instant Pay!