Wage theft, Reneging and Liquidity Constraints in Informal labor markets

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  - ▶ Agreements are oral, and firms and workers perpetually concerned that the other side will renege.

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This has significant implications for economic welfare and labor market efficiency in LMICs.

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How can high unemployment, unmet labor demand, and widespread reneging coexist in the same labor market?

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In answering these questions, the paper seeks to explain the simultaneous existence of unemployment, unmet labor demand, and high reneging rates in informal labor markets.

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- **Matching Experiment:** Firms and workers who accept contracts in the first two experiments are matched and observed in real hiring interactions.

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  - ▶ Workers work **longer hours** under back-loaded contracts.
  - ▶ Workers renege due to excessive work hours, family or health emergencies, and outside opportunities.
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- Firms and workers engage through **oral short-term agreements**, typically lasting from a day to a month. We focuses on preferences over short-term contracts.

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Survey Data

Three contracts
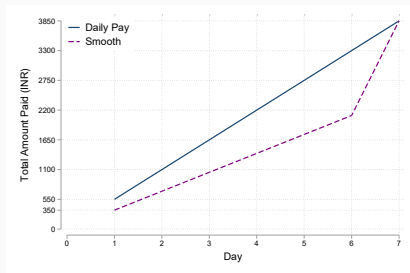
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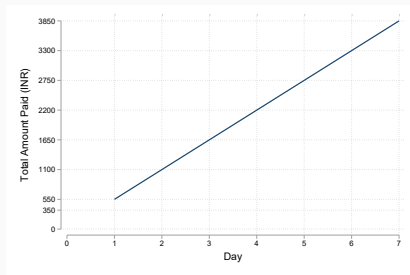
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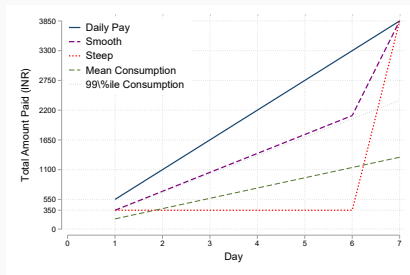
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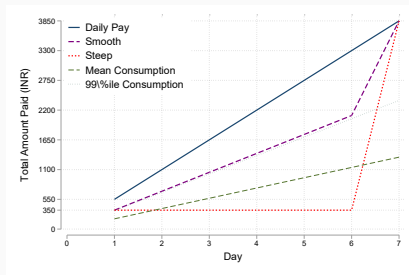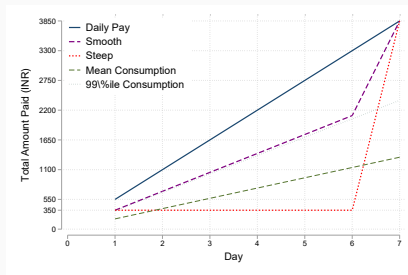
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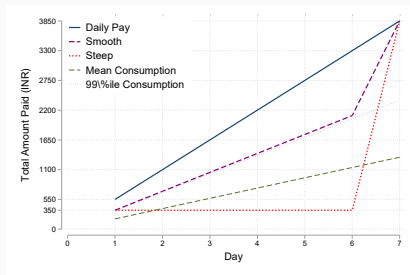
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Job offers to workers

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| Job offers to workers |

$\Downarrow$

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Firm Experiment

| Job offers to workers | Hiring offers to firms |

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Experiment summary

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⇓

Firm Experiment

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⇓

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| Random matching within treatment cell |

⇓

Outcomes:
1. Contract completion
2. Number of hours worked
3. Work quality
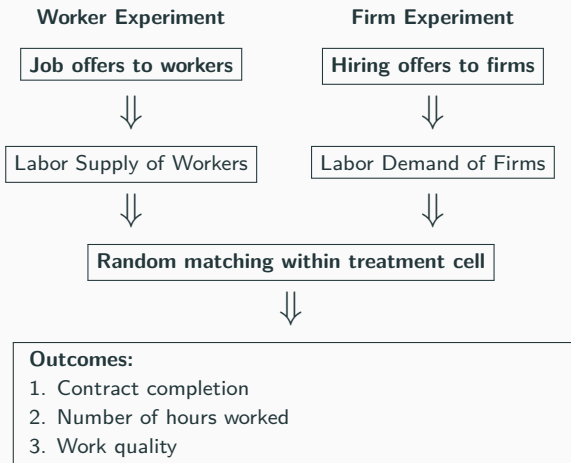
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1. **Payment Structure:**
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Final sample has 1360 workers. Sample Size Balance

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- Workers could accept or reject the job offer.
    - ▶ If accepted, 25% random draw decided whether they get the job.
    - ▶ The offer would materialize that day or sometime within two weeks.
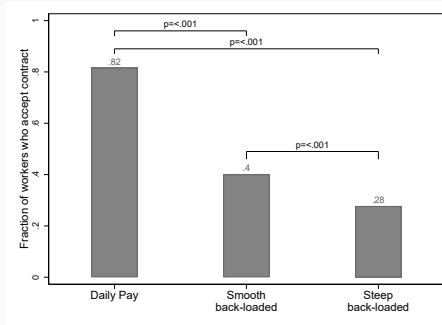
Worker Preferences for Different Contracts

Take-up of uninsured contracts
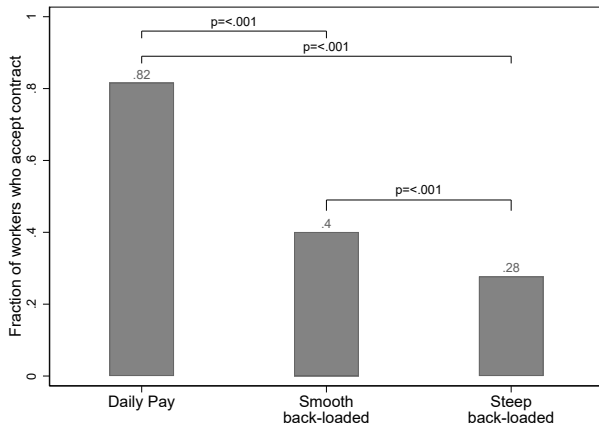
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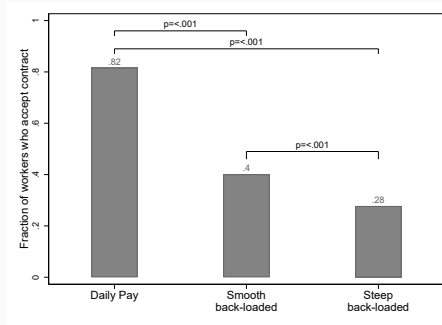## Worker Preferences for Different Contracts

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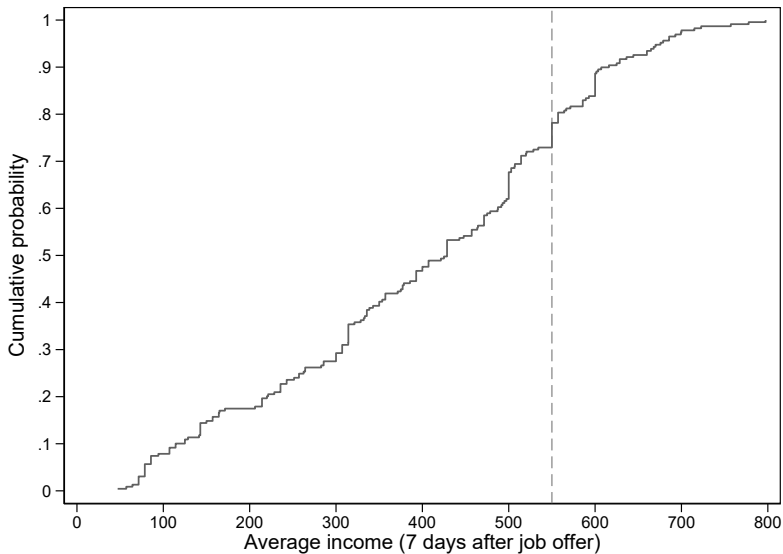
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- On average, workers were employed for 63% of the preceding four days.

Workers Who Reject Contracts earn less than job offers

Earnings of workers who rejected offer

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Decomposing the 54 p.p. gap in labor supply between uninsured daily pay and uninsured steep back-loaded contracts

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   ▶ 27 p.p. for all contracts.

Demand for flexibility to renege

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Survey responses from workers suggest:

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- **Opportunity costs or family emergencies:** 18%

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We will present incentive-compatible evidence for these mechanisms from the matching experiment.

Firm Experiment

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- **Three base contracts:**
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Each contract was offered for both **3-day** and **7-day** durations.

Firm Recruitment Strategy

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Step 1: Constructing the firm sample

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- Firms affiliated with contractor unions

- Direct visits to active construction sites

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Step 2: Final sample selection
From this pool, we selected firms that **planned to hire within four weeks** of the survey.

The final sample consists of 349 firms.

Experiment Implementation

Two enumerators visited either the firm's office or a construction site where the firm's head was present.

- Firms were offered multiple contracts and asked if they would hire a worker under each.
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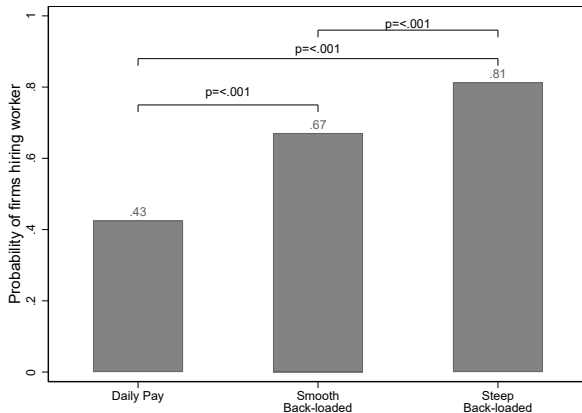 *The order of contracts was randomized.*

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Firms were informed of this procedure in advance. The design is **incentive-compatible** (Oh [2023]).
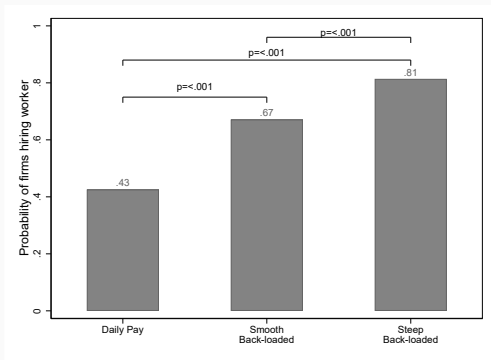
Result 1: Firm Preferences for Different Contracts

Notes: N= 349. Controls include owner's education, number of active sites, firm size, and fixed effects for question order, prior masonry experience, and contract length. Standard errors clustered at the firm level.

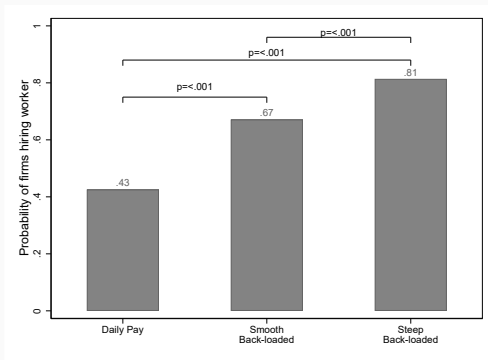# Result 1: Firm Preferences for Different Contracts

Interpretation:

Difference between **Daily Pay** and **Smooth**

Risk of reneging

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Interpretation:

Difference between **Daily Pay** and **Smooth**

Risk of reneging

Difference between **Smooth** and **Steep**

Liquidity constraint

Result 2: Guarantor Contracts

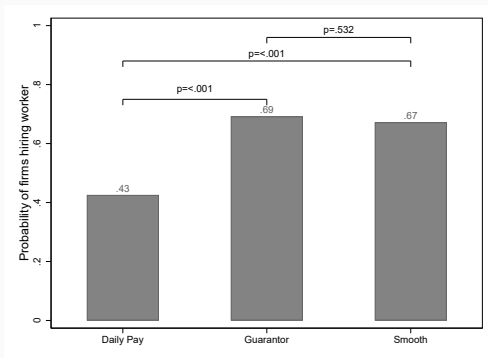**Guarantor contract:** Firms receive **INR 200 compensation** ($\sim$ 40% of daily wage) if a worker reneges.

Result 2: Guarantor Contracts

Guarantor contract: Firms receive **INR 200 compensation** ($\sim 40\%$ of daily wage) if a worker reneges.

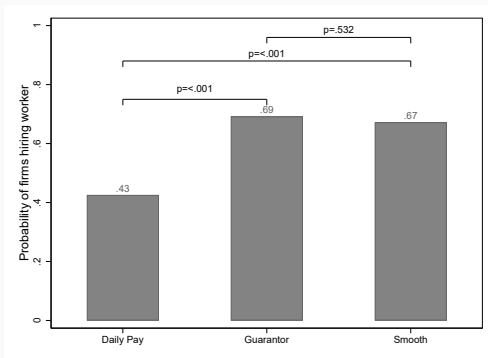## Result 2: Guarantor Contracts

Guarantor contract: Firms receive **INR 200 compensation** ($\sim 40\%$ of daily wage) if a worker reneges.

Key takeaway: Firms' preference for **Smooth** and **Guarantor** contracts is **statistically similar**.

Result 3: Effect of Credit Contracts
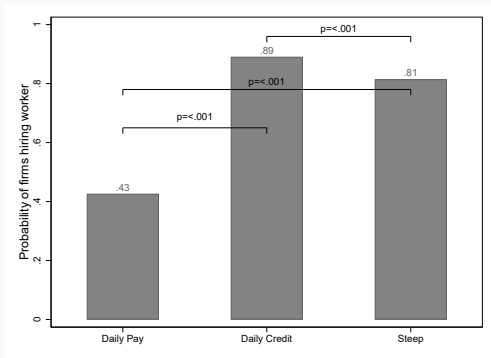
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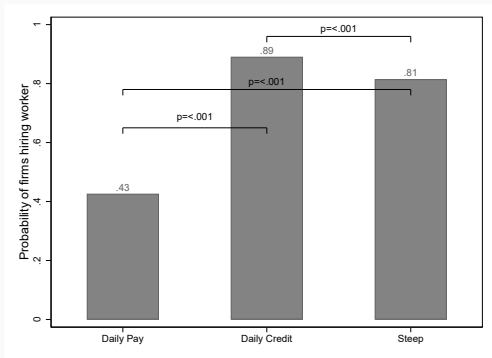
What drives the strong preference for credit contracts?

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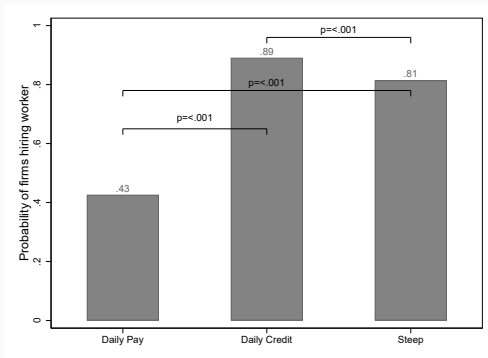
What drives the strong preference for credit contracts?

- Steep back-loaded contracts do not alleviate liquidity constraints for all firms (38% firms were paid at a frequency greater than 7 days).

- Transaction costs (daily payment logistics) are significant.

Matching

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Adjustments due to sample size concerns:

- Workers assigned to **Smooth** contracts were upgraded to **Daily Pay**.

- Firms assigned to **Smooth** contracts were upgraded to **Steep**.

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Reasons

These findings explain the high demand for flexibility to break contracts.

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- Integrating construction work into **urban employment guarantee schemes** could improve contract enforcement and worker security.

Thank You!

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Worker - Randomization Balance

	Pairwise differences p-values									
	U D - U SM	U D - U ST	U SM - U ST	I SM - I ST	I SM - UD	I ST - U D	I ST - U SM	I SM - U SM	I SM - U ST	I ST - U ST
Age	0.59	0.48	0.84	0.88	0.84	0.73	0.82	0.71	0.58	0.68
Years of education	0.37	0.55	0.82	0.27	0.14	0.63	0.65	0.50	0.41	0.86
Local worker	0.79	0.44	0.58	0.18	1	0.22	0.29	0.77	0.41	0.68
Backward caste	0.89	0.32	0.23	0.76	0.99	0.78	0.65	0.88	0.29	0.44
Scheduled caste/tribe	0.90	0.29	0.21	0.81	0.69	0.54	0.42	0.58	0.46	0.61
Not paid atleast once (in last month)	0.38	0.55	0.79	0.65	0.86	0.81	0.48	0.26	0.41	0.68
Daily consumption cost	0.74	0.62	0.40	0.80	0.35	0.48	0.70	0.52	0.16	0.23
Total days present	0.82	0.30	0.38	0.53	0.16	0.41	0.52	0.21	0.82	0.75
Total earnings (INR)	0.51	0.76	0.74	0.65	0.84	0.83	0.35	0.62	0.90	0.59
Loan due	0.89	0.67	0.55	0.37	0.79	0.57	0.64	0.66	0.85	0.31
Searching for work	0.38	0.52	0.84	0.33	0.77	0.23	0.03	0.20	0.32	0.06
Time of Survey	0.78	0.53	0.37	0.35	0.74	0.57	0.38	0.96	0.33	0.91
Time to market (hrs)	0.24	0.40	0.78	0.25	0.42	0.05	0.43	0.70	0.93	0.31

|	I D - U D	I D - U SM	I D - U ST	I D - I DM	I D - I ST
Age	0.21	0.44	0.95	0.31	0.44
Years of education	0.21	0.48	0.59	0.85	0.26
Local worker	0.27	0.52	0.09	0.50	0.16
Backward caste	0.50	0.71	0.22	0.50	0.42
Scheduled caste/tribe	0.98	0.65	0.61	0.88	0.87
Not paid atleast once (in last month)	0.75	0.12	0.19	0.52	0.43
Daily consumption cost	0.95	0.52	0.74	0.39	0.48
Total days present	0.20	0.40	0.76	0.88	0.97
Total earnings (INR)	0.31	0.98	0.57	0.61	0.29

Payment structure of contracts offered by firms

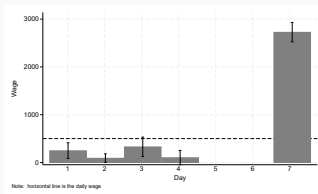14% firms pay all wages on last day; 18% firms pay the full wage daily. Back
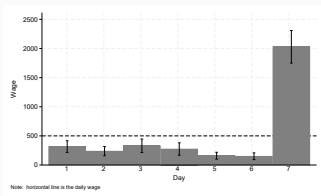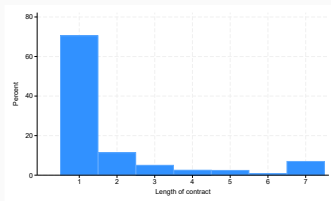
(a) All Firms
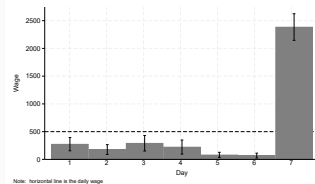
(b) Excluding firms which pay 500 INR daily

(c) Firms which pay on less than 3 days

Figure 2: Length of contracts of workers at the labor stand

(a) All contracts
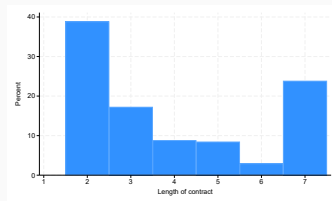
(b) All except 1 day contracts

Note: The figure shows the length of contracts accepted by workers. These contracts were offered by firms at the labor stand. The figure is based on data (collected in August-September 2023) from a 10 day panel of all workers at three labor stands. We pool all contracts of 7 or greater days into a 7 day contract.

Empirical Specification

$$Y_i = \alpha + \beta_1 * Daily\ Pay + \beta_2 * Smooth + \beta_3 * insurance + \beta_4 * Daily\ Pay \times insurance$$
$$+ \beta_5 * Smooth \times insurance + X_i + \mu_i + \epsilon_i$$

X_i indicate controls — worker age, education, and half hour of survey time—
and μ_i includes fixed effects for the labor stand and length of the contract.

Empirical specification

$$Y_{jk} = \alpha + \Sigma_1^4 \beta_j T_{jk} + X_k + \mu_k + \epsilon_k$$

T_{jk} is an indicator for firm k and treatment j.

μ_k : length of contract, order of the question

X_k : education, number of sites the firm is operating and size of the firm.

Table 1: Reasons for Non-fulfillment of contracts

	(1) Contract not fulfilled	
	b	pct
Don't know	1	0.60
other reason	8	4.76
Stayed at home	14	8.33
Did not want to go	15	8.93
alloted a lot of work	25	14.88
Got work at other place	16	9.52
Fired from work by the Contractor	3	1.79
Site is far away	11	6.55
Family emergency/Unwell	19	11.31
Labor could not be contacted	18	10.71
Contractor was making the labor do illegal work	2	1.19
Contractor asked to come early to work	1	0.60
Contractor asked to stay late for work	17	10.12
The labor ran away in between the work	8	4.76
Contractor didn't pay	2	1.19
Contractor didn't have work	8	4.76
Total	168	100.00

The table shows the break down of reasons for which workers who started working did not fulfill the contract.

Table 2: Outcomes for workers under steep vs daily contracts with p-values adjusted for multiple testing

	Contract completed	Contract completed (excluding firm rejections)	Hr worked	Work extracted (Hr)	Worker Rating
Steep contract	0.235***	0.264***	0.214**	0.142**	-0.576
	(0.087)	(0.090)	(0.094)	(0.066)	(0.356)
Observations	260	233	258	260	250
Control group mean	0.34	0.26	8.21	0.09	6.97
Fixed Effect	Yes	Yes	Yes	Yes	Yes
p-val Bonferroni-Holm	.033		.076	.076	.111

The dependent variable is measured by surveying workers and firms which were matched with each other. We use fixed effects for whether the contract was insured, length of contract, daily wage offered and control for the time it takes the worker to get to the labor stand. Adjusted p-values use the Bonferroni-Holm correction method (Holm [1979]). Standard errors are clustered at the firm level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

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Figure 4: Sample size

Cell	Days			Days	
	3	7		3	7
No insurance, No backloading	9%	6%	Insurance, No backloading	6%	4%
No insurance, smooth backloading	12%	8%	Insurance, smooth backloading	12%	8%
No insurance, steep backloading	9%	6%	Insurance, steep backloading	12%	8%

Notes: The total sample size is 1378. Out of these the first 300 workers were offered just one job for 3 day contracts. The remaining workers were offered two jobs.

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Summary statistics of Matching

Panel A: Workers		
	Number of workers	
Number of workers eligible for a job offer	1,378	
No of workers offered a 3 day job	1,360	
No of workers offered a 7 day job	1060	
No of workers who accepted any job	874	
No of workers chosen randomly for jobs	280	
No of workers contacted for jobs	382	
No of workers allotted who were allotted a job	276	
No of workers who completed at least one day of work	259	
Panel B: Firms		
	Number of Firms	
Number of Firms surveyed	349	
Firms which agree to hire on at least one contract	335	
Firms contacted for hiring	335	
Number of firms which hired at least one worker	75	

Panel C: Summary of contracts for matched workers		
	Steep	Daily Pay
Total workers matched	56	203
Total workers on insurance contracts	24	83

Panel D: Summary of contracts for matched firms		
	Steep	Daily Pay
Credit contracts	0	80
Guarantor contracts	0	39
Daily Pay contracts	56	78