

SUPPLEMENT TO “INFORMAL REDISTRIBUTION THROUGH WORK”

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A. MODEL AND BENCHMARKS

We introduce a simple model to derive a set of benchmarks for the redistribution behavior of employers and workers in the experiment: payoff maximization, generosity or altruism, and inequality aversion. See Online Appendix Figure G.7 and Figure G.8, for a graphical illustration of all resulting decision rules h_i^* .

A.1. Model Setup

There are two individuals, indexed by $i \in \{A, B\}$, where A denotes the employer and B the worker. Each person begins with an endowment:

$$l_A = 15,000, \quad l_B = 1,000.$$

If $h_i(w, t) = 1$ (work redistribution), the employer pays wage w and receives value v_A , which we assume to be equal to the market wage for a 30-minute task; the worker receives the wage and receives (incurs) value v_B , which we assume equals the opportunity cost of their time. Thus:

$$v_A = 3,000, \quad v_B = -3,000.$$

If $h_i(w, t) = 0$ (cash redistribution), the worker receives transfer t . The choice function is:

$$h_i(w, t) = \begin{cases} 1 & \text{if respondent } i \text{ chooses work,} \\ 0 & \text{if respondent } i \text{ chooses cash.} \end{cases}$$

A.1.0.1. Payoffs. Let $h \in \{0, 1\}$ denote the implemented redistribution choice, where $h = 1$ corresponds to redistribution through work and $h = 0$ corresponds to redistribution through cash. Employer payoffs are

$$p_A(h; w, t) = \begin{cases} l_A + v_A - w & \text{if } h = 1, \\ l_A - t & \text{if } h = 0. \end{cases}$$

Worker payoffs are

$$p_B(h; w, t) = \begin{cases} l_B + v_B + w & \text{if } h = 1, \\ l_B + t & \text{if } h = 0. \end{cases}$$

Choice set. The double multiple-price list design yields the following choice set:

$$\mathcal{C} = \{(w, \bar{t}) : w \in [500, 10,000]\} \cup \{(\bar{w}, t) : t \in [500, 6,500]\},$$

where $\bar{w} = \bar{t} = 3,000$ are the fixed wage or transfer outside options.

A.2. Benchmark 1: Payoff Maximization

We consider the case where respondents are payoff maximizing. Respondent i chooses:

$$h_i^*(w, t) = \arg \max_{h \in \{0,1\}} p_i(h; w, t).$$

Employers. When $t = \bar{t} = 3,000$, employers weakly prefer to give work when:

$$15,000 + 3,000 - w \geq 12,000 \iff w \leq 6,000.$$

When $w = \bar{w} = 3,000$, employers weakly prefer to give work when:

$$15,000 \geq 15,000 - t, \iff t \geq 0.$$

Thus:

$$h_A^*(w, t) = \begin{cases} 1 & (w \leq 6,000 \text{ and } t = \bar{t}) \text{ or } w = \bar{w}, \\ 0 & \text{otherwise.} \end{cases}$$

Workers. When $t = \bar{t} = 3,000$, workers weakly prefer to work when:

$$w - 2,000 \geq 4,000 \iff w \geq 6,000.$$

When $w = \bar{w} = 3,000$, workers weakly prefer work when:

$$1,000 \geq 1,000 + t, \iff t \leq 0.$$

Thus:

$$h_B^*(w, t) = \begin{cases} 1 & w \geq 6,000 \text{ and } t = \bar{t}, \\ 0 & \text{otherwise.} \end{cases}$$

A.3. Benchmark 2: Altruism / Generosity

We consider the case where respondents are altruistic or generous, defined as maximizing the other player's payoff.

Formally, given the previously defined payoff functions, an altruistic respondent chooses:

$$h_i^*(w, t) = \arg \max_{h \in \{0,1\}} p_j(h; w, t), \quad j \neq i \in \{A, B\}.$$

Employers. When $t = \bar{t} = 3,000$, an altruistic employer, weakly prefers to hire when:

$$w - 2,000 \geq 4,000 \iff w \geq 6,000.$$

When $w = \bar{w} = 3,000$, an altruistic employer weakly prefers to hire when:

$$1,000 \geq 1,000 + t \iff t \leq 0.$$

Thus:

$$h_A^*(w, t) = \begin{cases} 1 & w \geq 6,000 \text{ and } t = \bar{t}, \\ 0 & \text{otherwise.} \end{cases}$$

Workers. When $t = \bar{t} = 3,000$, an altruistic worker weakly prefers to work when:

$$18,000 - w \geq 12,000 \iff w \leq 6,000.$$

When $w = \bar{w} = 3,000$, an altruistic worker weakly prefers to work:

$$15,000 \geq 15,000 - t \iff t \geq 0.$$

Thus:

$$h_B^*(w, t) = \begin{cases} 1 & (w \leq 6,000 \text{ and } t = \bar{t}) \text{ or } w = \bar{w}, \\ 0 & \text{otherwise.} \end{cases}$$

A.4. Benchmark 3: Target Split

Finally, we consider the case where respondents choose redistribution to target a given split of total payoffs between Person A and Person B. We define the benchmark in terms of Person A's share of total payoffs. A target-split respondent chooses the option that brings Person A's share as close as possible to a target proportion $\alpha \in (0, 1)$:

$$h^*(w, t) = \arg \min_{h \in \{0, 1\}} \left| \frac{p_A(h; w, t)}{P(h; w, t)} - \alpha \right|,$$

where $P(h; w, t) = p_A(h; w, t) + p_B(h; w, t)$ denotes total payoffs.

Given the payoffs defined above, total payoffs are constant at $P(h; w, t) = 16,000$ for all h , w , and t . A respondent weakly prefers work over cash when:

$$\left| \frac{18,000 - w}{16,000} - \alpha \right| \leq \left| \frac{15,000 - t}{16,000} - \alpha \right|.$$

When $t = \bar{t} = 3,000$, the cash option gives Person A a share of $12,000/16,000 = 0.75$. A target-split respondent weakly prefers work when:

$$\left| \frac{18,000 - w}{16,000} - \alpha \right| \leq |0.75 - \alpha|.$$

When $w = \bar{w} = 3,000$, the work option gives Person A a share of $15,000/16,000 = 0.9375$. A target-split respondent weakly prefers work when:

$$|0.9375 - \alpha| \leq \left| \frac{15,000 - t}{16,000} - \alpha \right|.$$

For the values of α considered below, this condition is never satisfied on the experimental transfer grid. Thus, the target-split benchmark predicts no work choices in the transfer-varying branch.

A.4.1. *Inequality Aversion* ($\alpha = 0.5$)

A natural benchmark is $\alpha = 0.5$, corresponding to an equal split of total payoffs. Under this benchmark, respondents weakly prefer work when it brings Person A's share at least as close to one half as the cash option does.

When $t = \bar{t} = 3,000$, respondents weakly prefer work when:

$$\left| \frac{18,000 - w}{16,000} - 0.5 \right| \leq |0.75 - 0.5| = 0.25.$$

This implies:

$$0.25 \leq \frac{18,000 - w}{16,000} \leq 0.75 \iff 6,000 \leq w \leq 14,000.$$

Given the experimental grid, the decision rule is:

$$h^*(w, t) = \begin{cases} 1 & \text{if } w \geq 6,000 \text{ and } t = \bar{t}, \\ 0 & \text{otherwise.} \end{cases}$$

A.4.2. *Common Target Split* ($\alpha = 0.65$)

Respondents may target a distribution that deviates from an equal split. In an unincentivized dictator game, respondents state that the most common amount Person A would give is about UGX 4,500, close to a 65–35 split of total payoffs, as shown in Online Appendix Figure G.9, Panel B. We therefore set $\alpha = 0.65$, meaning that Person A retains 65 percent of total payoffs and Person B receives 35 percent. This role-based definition matters for asymmetric splits: the benchmark targets Person A's share, not the respondent's own payoff share.

When $t = \bar{t} = 3,000$, respondents weakly prefer work when:

$$\left| \frac{18,000 - w}{16,000} - 0.65 \right| \leq |0.75 - 0.65| = 0.10.$$

This implies:

$$0.55 \leq \frac{18,000 - w}{16,000} \leq 0.75 \iff 6,000 \leq w \leq 9,200.$$

Given the experimental grid, the decision rule is:

$$h^*(w, t) = \begin{cases} 1 & \text{if } 6,000 \leq w \leq 9,000 \text{ and } t = \bar{t}, \\ 0 & \text{otherwise.} \end{cases}$$

B. WORK-VERSUS-CASH EXPERIMENT SCRIPTS

This section presents the scripts for the July 2022 work-versus-cash experiment. All scripts were translated into Luganda, and the experiment was conducted in either English or Luganda, depending on the respondent's preference.

Introduction: “Part of your earnings from the survey are determined by a lottery. All individuals who participate in the survey are paired together with another person from Kampala, and each pair enters a lottery, which selects some pairs. If a pair is selected by the lottery: one person, let us call him/her Person A, earns UGX 15,000 and the other person, Person B, earns UGX 1,000.

Before payoffs are delivered, either one person in the pair or a third-party person has the chance to redistribute part of the money from Person A to Person B. In the following questions, we ask you how you want to split the payoffs.

You are going to make two sets of decisions. In one set of decisions, you are going to be the third-party person or spectator who decides how to split the lottery payoffs for another pair; [EMPLOYERS: in another set of decisions, you are going to decide how to split the payoffs in your own pair as if you are the lottery winner. That is, you are going to decide how much and how you will give to Person B.] [WORKERS: in another set of decisions, you are going to decide how to split the payoffs in your own pair as if you are the lottery loser. That is, you are going to decide how much and how you will receive from Person A.]

At the end of the survey, the lottery will select 20 pairs. For each pair, we will select one decision maker and one choice. We will deliver the money to the people in the pair according to the decision maker's or spectator's choices. If the outcome implies Person B performing a task at Person A's firm, we will pay for transport. If you are selected as the decision maker or the spectator, we will implement one of your choices.”

B.1. Employers

- *Role introduction:* “Now we want you to think about own lottery pair, made of yourself and another person. You are Person A. If your pair is selected in the lottery: you will receive UGX 15,000 while the other person will receive UGX 1,000. We want you to choose how much to redistribute to Person B and how. Person B will know that the other person in the pair had the task to determine their payoff, but will not know your identity. At the end of the survey, if your pair wins the lottery and you are selected as the decision maker, we will implement one of your choices.”
- *Task introduction:* “Now consider that there are two ways in which redistribution from you to Person B can happen: charity or giving work. You can donate money to the other person, or you can use the money to hire and pay Person B to [task description].”
- *Task reminder:* “For each of the following options, please tell us what you prefer to do between donating money or hiring the other person. Remember, the job for the hiring task is: [task description].”
- “What is your choice between hiring for UGX [] or giving a UGX [] donation.”

B.2. Workers

- *Role introduction:* “Now we want you to think about own lottery pair, made of yourself and another person. You are Person B. If your pair is selected in the lottery: you will receive UGX 1,000 while the other person will receive UGX 15,000. We want you to choose how much Person A should share with you and how. Person A will know that the other person in the pair had the task to determine their payoff, but will not know your identity. At the

end of the survey, if your pair wins the lottery and you are selected as the decision maker, we will implement one of your choices.”

- *Task introduction*: “Now consider that there are two ways in which redistribution from Person A to you can happen: charity or giving work. Either Person A can donate money to you, or Person A can use the money to hire and pay you to [task description].”
- *Task reminder*: “For each of the following options, please tell us what you prefer to do between Person A donating money to you or Person A hiring you for a task. Remember, the job for the hiring task is: [task description].”

C. SUPPLEMENTARY EXPERIMENTS

C.1. *Spectator Version*

Design In September 2022, participants completed two versions of the work-versus-cash experiment: the main (stake) version (see [Work-Versus-Cash Experiment Scripts](#)) and the spectator version. In the spectator version, respondents made sharing decisions on behalf of another pair, acting as third-party decision makers or “spectators.” Both the stake and spectator versions were incentive-compatible. At the end of the experiment, for each pair that won the lottery, we randomly selected one version, either stake or spectator, and one decision maker, either employer or worker. We then implemented the selected choice at the UGX 3,000 wage-transfer decision.

Script Follows before or after [Employers](#) (Section B.1) or [Workers](#) (Section B.2)]

- “Now, you have to redistribute earnings from Person A, who earned UGX 15,000 from the lottery, to Person B, who earned UGX 1,000. Person A and Person B will know that a third person (spectator) had the task to determine their payoff, but will not know that you took the decisions nor what you decided. At the end of the survey, if one of your decisions is selected, we will implement it.”
- *Task introduction*: “Consider that there are two ways in which redistribution from Person A to Person B can happen: charity or giving work. Either Person A donates some of the money to Person B, or Person A can hire and pay Person B to [task description].”
- *Task reminder*: “For each of the following questions, please tell us what should Person A do between transferring Person B money as a donation or hiring Person B to do a task for a given wage. Remember, the job for the hiring task is: [task description]”
- *Choices*: Same as [Employers](#) (Section B.1)

Empirical Strategy To test for differences in work redistribution choices across the stake and spectator version of the experiment, we estimate the following regression model on all decisions, pooled:

$$Y_{ij} = \beta_1 \log(\text{Wage}_j) + \beta_2 \log(\text{Transfer}_j) + \beta_3 \mathbf{1}\{\text{SpectatorVersion}_j\} + \lambda_i + \varepsilon_{ij}, \quad (1)$$

where Y_{ij} is the outcome (work choice) for respondent i in decision j . *SpectatorVersion* is a binary indicator taking value one if choice j is made in the spectator version of the experiment. λ_i are respondent fixed effects, and standard errors are clustered at the respondent level.

Results The results indicate that employers are not less likely to choose work redistribution when they make decisions for another pair, suggesting that employers’ and workers’ behavior is not driven by personal or firm-related stakes. Employers are slightly more likely to choose work redistribution without personal stakes involved—an increase of 1.3 percentage points (p -value 0.064). Workers show no significant difference between the two versions (p -value 0.411). The results are illustrated in Online Appendix Figure G.10 and Online Appendix Table H.4.

C.2. Food-Versus-Cash Version

This version of the experiment was implemented only with a subset of employers in the March 2023 phone survey. The results are summarized descriptively in Online Appendix Figure G.4. The figure compares the share of employers choosing to give a UGX 3,000 unconditional cash transfer when the alternative is a meal or snack (March 2023, red line) with the corresponding share when the alternative is hiring in the main experiment (September 2022, gray line).

Script The script is as follows:

- *Introduction*: Same as [Employers](#) (Section B.1), except: “Now consider that there are two ways in which redistribution from you to Person B can happen: charity or giving food. You can donate money to the other person, or you can use the money to buy Person B a meal or a snack.”
- *Choice*: “Now please tell us what is your choice between giving B a meal or snack worth UGX [] or a UGX [] donation?”

C.3. Multi-Scenario Replication

This section presents the scripts for the July 2024 multi-scenario replication of the work-versus-cash experiment. The replication includes a baseline scenario with an expanded wage and transfer grid, as well as additional scenarios designed to test robustness to alternative explanations and explore potential drivers of preferences for redistribution through work. Respondents made choices across all scenarios before outcomes were revealed. For lottery winners, one respondent and one scenario was selected at random. Then, one choice was randomly implemented. All scripts were translated into Luganda, and the experiment was conducted in either English or Luganda, depending on the respondent’s preference.

C.3.1. Scenarios: Employers

- *Baseline*: Same script as [Employers](#) (Section B.1).
- *No Rule of Thumb* scenario adds: “For privacy, if you choose to give cash, we will not reveal your name and will say the money comes from our study. This way, no one will know it is from you, and people cannot come back to ask for more. If you choose work, we will provide transport for Person B to your firm. We will ensure the payment is made either way.”
- *Cash in Person* scenario adds: “In this case, you will meet Person B at your firm regardless of your choice. If you choose to donate money, you will meet Person B, and we will deliver the cash at your firm. If you choose to give via work, you will also meet Person B, and they will do the task at your firm and we will pay the wage. This means you will meet Person B whether you give work or cash, and we will ensure the payment is made either way. We will provide transport for Person B to meet you at the firm.”

- *Work Unobservable* scenario adds: “In this case, we ask the worker to mend 5 sacks. If you choose to donate cash, we will deliver the cash to Person B. If you choose to give work, the work will be performed at Person B’s place, and we will deliver the mended sacks to your firm. We will ensure the payment is made either way.”
- *Wants to Work* scenario adds: “In this case, the person you can share money with, Person B is part of a group of participants that has been pre-screened. In a similar situation, Person B chose to work for money rather than accept a handout. If you choose cash, we will deliver the cash to Person B. If you choose work, we will provide transport for Person B to your firm to perform the task. We will ensure the payment is made either way.”
- *Reciprocity* scenario adds: “If you choose to give cash, we will deliver the cash to Person B, and they can send you back some of it as a token of appreciation for your gesture. If you choose work, we will provide transport for Person B to your firm where they will perform the task. We will ensure the payment is made either way.”
- *Verifiable Shocks* scenario adds: “In this case, the person you can share money with, Person B is part of a group of participants that has been pre-screened. Person B is in real need of financial help due to unexpected hardships, such as medical emergencies for a relative or funeral costs. Person B is able to work. If you choose work, we will provide transport for Person B to your firm, where they will perform the task. If you choose cash, we will deliver the cash to Person B. We will ensure the payment is made either way.”

Scenarios: Workers

- *Baseline*: Follows the script from the [Workers](#) (Section B.2).
- *No Rule of Thumb* scenario adds: “For privacy, if you choose to receive cash, we will not reveal your name and ensure that Person A is an employer outside your cluster. This way, no one will know you received the cash, and Person A cannot trace you to ask for more work in the future. If you choose work, we will provide transport for you to Person A’s firm. We will ensure the payment is made either way.”
- *Cash in Person* scenario adds: “In this case, you will meet Person A at their firm regardless of your choice. If you choose to receive money, you will meet Person A, and we will deliver the cash to you at the firm. If you choose to work, you will also meet Person A at the firm, and they will instruct you to do the task and we will pay you the wage after you completed the task. This means you will meet Person A whether you choose to work or to get cash. We will provide transport for you to Person A’s firm and we will ensure the payment is made either way.”
- *Excuse for Cash* scenario adds: “If you choose to receive cash, it will be kept confidential. You can think of it as payment for work you did for us. We will confirm if anyone asks. If you choose work, we will provide transport for you to Person A’s firm. We will ensure the payment is made either way.”
- *Reciprocity* scenario adds: “In this case, if you choose to receive a donation from Person A, you can send back some of it as a token of appreciation for their gesture. If you choose work, we will provide transport for you to Person A’s firm to perform the task. We will ensure the payment is made either way, as well as deliver the token of appreciation if you choose to give any.”

D. MANAGEMENT SCORE

We construct a Management Score following [McKenzie and Woodruff \(2017\)](#), [de Mel et al. \(2019\)](#). The score aggregates 15 yes/no items on marketing and financial planning practices; each “yes” is coded as 1, except for the question on reviewing financial performance, which is

scored 0-3 (0 = never; 1 = once a year; 2 = two or three times a year; 3 = monthly or more often). The maximum score is 17 in both survey waves (September 2022 and July 2024). In both survey waves, the score is based on marketing and financial-planning practices: 13 core items asked in both waves, plus two wave-specific questions, namely costing and most-profitable-product in September 2022, and special-offer marketing and the presence of an income/expenditure sheet in July 2024 (see exact questions below). In September 2022, the average score was 12.7 (median: 13, minimum: 2) under the full 2022 instrument. For the firms surveyed in both waves, the score on the (shorter) July 2024 instrument is 9.7 (median: 10, minimum: 0), as reported in Table I. In the full July 2024 sample, the mean score was 9.9 (median: 10, minimum: 0).

Management Score Questionnaire. Marketing Practices Questions:

1. In the past 3 months, has the owner/manager visited at least one of the competitors of this business to see what prices they are charging?
2. In the past 3 months, has the owner/manager visited at least one of the competitors of this business to see what products they have available for sale?
3. In the past 3 months, has the owner/manager ever asked existing customers whether there are any other products they would like your firm to sell or produce?
4. In the past 3 months, has the owner/manager ever asked one of your former customers why he/she has stopped buying from your business?
5. In the past 3 months, has the owner/manager ever asked one of your suppliers which products are selling well in this sector?
6. In the past 3 months, has the owner/manager ever attracted new customers by giving them special offers? (*Only asked in July 2024*)
7. In the past 6 months, has your firm spent any money in marketing/advertising of your products?

Financial Planning Practices Questions:

1. How often does the owner/manager review the financial performance of your business to analyze where there are areas for improvement? Read answer options (Never, Once a year or less, Two or three times per year, Monthly or more often).
2. Does the owner/manager have a target for your sales?
3. Has the owner/manager set a target for your sales over the next year?
4. Does your firm have a budget of the likely costs your business will have to face over the next year?
5. Does your firm have an annual profit and loss statement?
6. Does your firm have an annual statement of cash flow?
7. Does your firm have an annual balance sheet?
8. Does your firm have an annual income/expenditure sheet? (*Only asked in July 2024*)

Additional Questions:

1. Does the owner/manager normally calculate the cost to the business of each sack of \$main_product your firm sells? (*Only asked in September 2022*)
2. Does the owner/manager know which product makes the most profit per item/kg selling? Please consider the profit per unit sold. (*Only asked in September 2022*)

E. ROSTER-BASED ESTIMATES

This section uses worker rosters from the July 2024 employer survey to construct alternative estimates of total and symbolic work hours, as well as effective productivity.

For each employer who reported having given work in the past month, we elicit how many individuals had received work. For each of these redistribution workers, we elicit all tasks

performed at the firm during that period. For each task and worker, employers report (i) the time the worker actively spent on the task and (ii) whether the task was symbolic (not needed). Total redistribution hours per firm are obtained by summing the reported time across all tasks and all redistribution workers. Total symbolic redistribution hours are defined analogously, but only include tasks identified as symbolic. Total work hours are obtained from the complete worker roster, which records all workers (productive or not) employed at the firm and for each worker, the number of work hours in the past month. The share of total (symbolic) work redistribution is computed as the ratio of total (symbolic) redistribution hours, from the redistribution worker roster, to total firm hours, from the complete worker roster.

We use the roster-based work redistribution shares to construct alternative measures of effective firm size and revenues per effective hour, in the analogous way to our main estimates. Effective firm size is obtained by subtracting redistributed hours from the total hours worked at the firm, and effective revenues per hour are computed by dividing reported revenues by these effective hours. The roster-based estimates are reported in Online Appendix Table H.3, Panel B.

The roster-based estimates are broadly consistent with the main results, and the bounds remain statistically significant under this alternative approach. One downside, however, is that enumerators have an incentive to record fewer workers, which leads to smaller firm sizes on average as well as fewer redistribution workers. In addition, estimates of symbolic-redistribution hours are mechanically smaller because we do not capture paid idle time. For these reasons, we rely on the aggregate measures as our main estimates.

E.1. *Classifying Open-Ended Worker Tasks*

For each worker in the roster, we ask the employer which tasks the worker was assigned and whether each task created value for the firm or was symbolic or idle time. Employers describe the tasks in their own words. We use a large language model, OpenAI gpt-4.1 with temperature set to zero, to classify the open-ended task descriptions. The model assigns each description to one or more categories from the list of common tasks in grain-processing firms: Loading, Milling, Mixing, Weighing, Mending, Sweeping, Drying, Destoning/Cleaning, Sealing, Dehulling, Cob-shelling, Conditioning, and Other. Descriptions that name multiple distinct tasks receive all applicable categories. Synonyms for the same task count once. We use “Other” only for tasks unrelated to grain processing, such as personal errands, buying fuel, bringing food, transport home, deliveries, or security. The full prompt is:

You are an expert at classifying short, open-ended descriptions of manual tasks performed by workers in Ugandan grain-processing firms (maize milling, animal-feed processing, grain trading). Classify each description into one or more categories from this fixed list:

- Loading
- Mixing
- Cob-shelling
- Drying
- Destoning/cleaning
- Conditioning
- Dehulling
- Milling
- Sealing
- Sweeping
- Weighing
- Mending
- Other

Rules:

- Reply with ONLY the category name(s) from the list above, separated by commas, and nothing else.
- If the description lists several DISTINCT tasks, return ALL matching categories, deduplicated. Treat synonyms of the same category as ONE category (e.g. "loading and offloading" is just "Loading").
- If a description mixes a grain-processing task with a non-grain activity, return only the grain-processing category/ies and omit "Other".
- "Loading" covers loading, off-loading, and on-loading of sacks/goods..
- "Destoning/cleaning" covers de-stoning and cleaning/washing/picking debris from the grain or input.
- "Sweeping" covers sweeping, collecting dust, or cleaning the floor of the firm (NOT cleaning the grain - that is "Destoning/cleaning").
- "Dehulling" covers de-hulling, hulling, or removing husks/bran from grain.
- "Cob-shelling" covers shelling, cob-shelling, or removing kernels from maize cobs.
- "Conditioning" covers conditioning the input (adding a little water before milling).
- "Sealing" covers sealing, packing, and packaging of sacks/bags.
- "Mending" covers mending or repairing sacks.
- Use "Other" for anything that does not fit a category above, such as non-grain activities (e.g. running personal errands, buying fuel, bringing food, transport home, delivering, security/guarding).

For Figure 1, Panel C, we compute category shares separately for tasks classified by employers as valuable and tasks classified as symbolic or idle time. The unit of analysis is the task-category pair. When one open-ended response receives multiple categories, it contributes one instance to each assigned category. We display the eight most frequent categories. The omitted categories are Drying, Other, Mending, Cob-shelling, and Conditioning. Their value shares are 1.7%, 1.5%, 1.2%, 0.0%, and 0.0%. Their symbolic shares are 0.7%, 1.0%, 1.0%, 0.0%, and 0.0%, respectively.

F. CONSTRUCTING EFFECTIVE FIRM SIZE AND REVENUE PER WORK HOUR

This appendix describes how we compute the estimates of effective firm size and revenue per work hour in Table H.3. These estimates are based on the July 2024 sample. We exclude one firm for which redistribution hours exceed 90% of total hours, and six data-entry mistakes for which reported redistribution hours exceed total hours.

For each firm i , let H_i denote observed total work hours and let R_i denote redistribution hours. We define effective hours, our measure of effective firm size, as

$$H_i^E = H_i - R_i.$$

For the upper bound, R_i is total reported redistribution-through-work hours. For the lower bound, R_i is symbolic or idle redistribution-through-work hours. Firms that do not redistribute through work are assigned $R_i = 0$.

Given the observed revenue Y_i , effective revenue per work hour is

$$Y_i^E = \frac{Y_i}{H_i^E}.$$

For each outcome X_i , we compare the observed measure X_i to the corresponding effective measure X_i^E . Level effects are means of firm-level differences:

$$\frac{1}{N} \sum_i (X_i^E - X_i).$$

Percentage effects are means of firm-level percentage differences:

$$\frac{1}{N} \sum_i \frac{X_i^E - X_i}{X_i}.$$

We also report the mean firm-level observed-to-effective ratio, “Obs./Eff.”:

$$\frac{1}{N} \sum_i \frac{X_i}{X_i^E}.$$

G. ADDITIONAL FIGURES

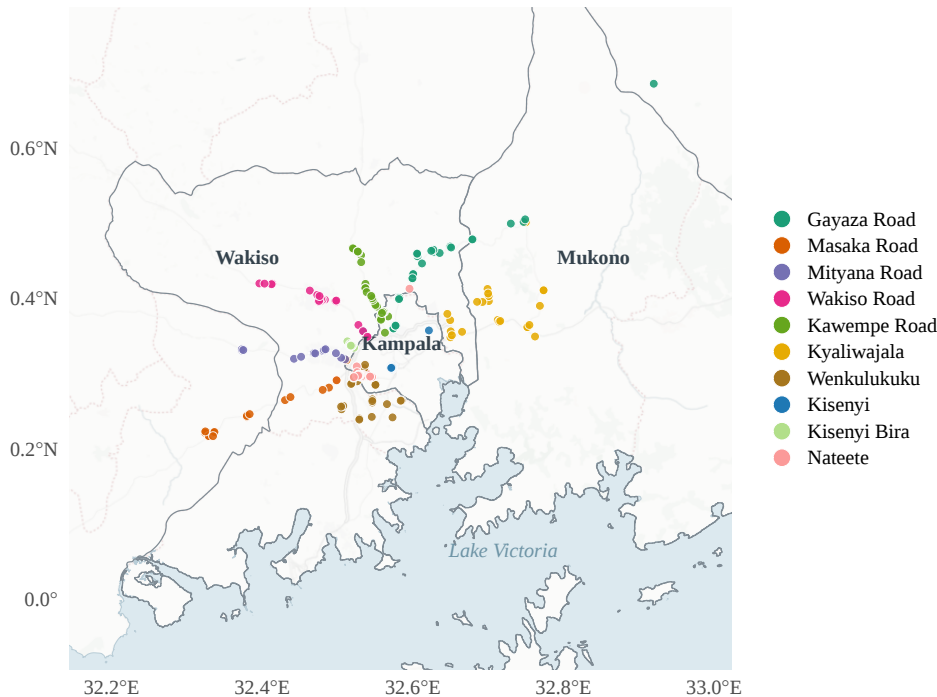


FIGURE G.1.—**Grain-processing firm locations.** *Note:* Data: September 2022 employer survey (N = 399 employers). Colors indicate the area or main road of the firm’s location. For one firm, the recorded GPS coordinates are inaccurate.

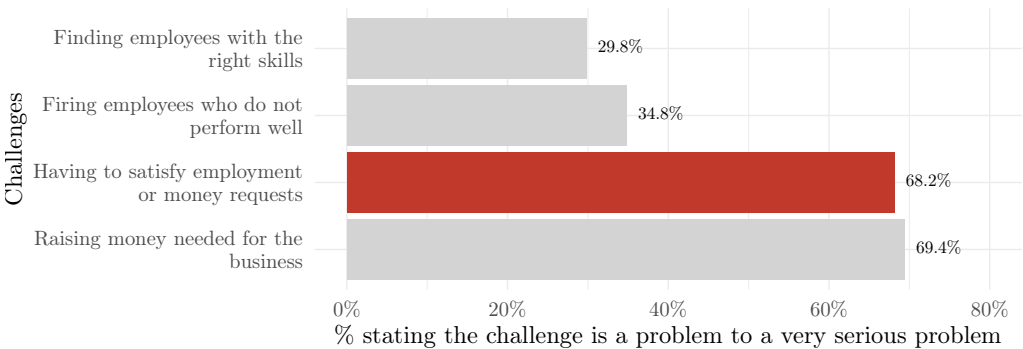


FIGURE G.2.—**“How problematic is the following issue when thinking about increasing the productivity of this business?”** *Note:* Data: September 2022 employer survey (N = 399 employers). Respondents ranked potential challenges to their firm’s productivity on a scale from 1 (“not at all a problem”) to 5 (“a very serious problem”). Reported values aggregate responses identifying each challenge as “a problem,” “a serious problem,” or “a very serious problem.”

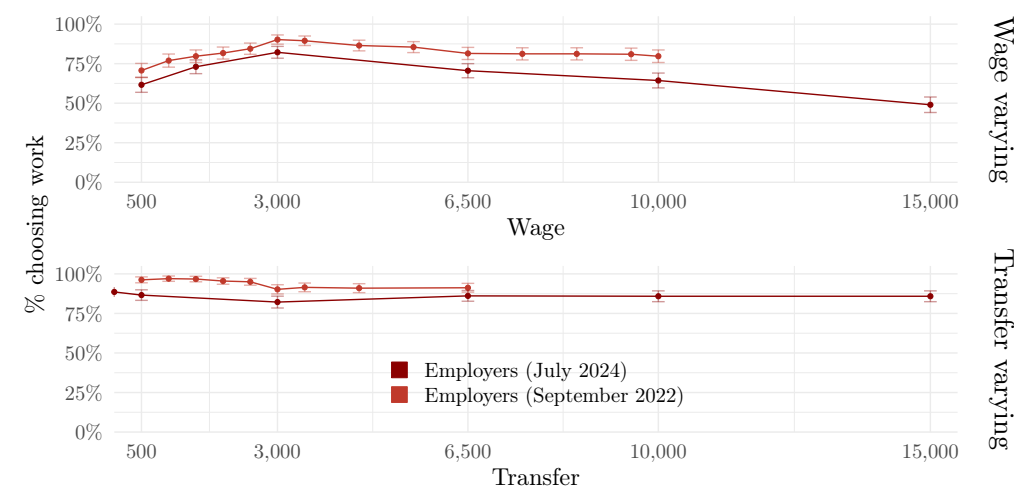


FIGURE G.3.—**Work redistribution choices: peak (2022) versus lean (2024) season** *Note:* Data: main experiment (September 2022; N = 399 employers) and the baseline scenario of the multi-scenario replication (July 2024; N = 405 employers). Each panel plots the share of employers choosing work (y-axis): the top panel varies the wage offered for work and the bottom panel varies the cash transfer (x-axis, UGX), holding the other fixed. The September 2022 experiment uses the standard wage and transfer grids. The July 2024 follow-up uses an expanded grid, with wages ranging from UGX 500 to UGX 15,000, and transfers ranging from UGX 0 to UGX 15,000. Confidence intervals are at the 95% level.

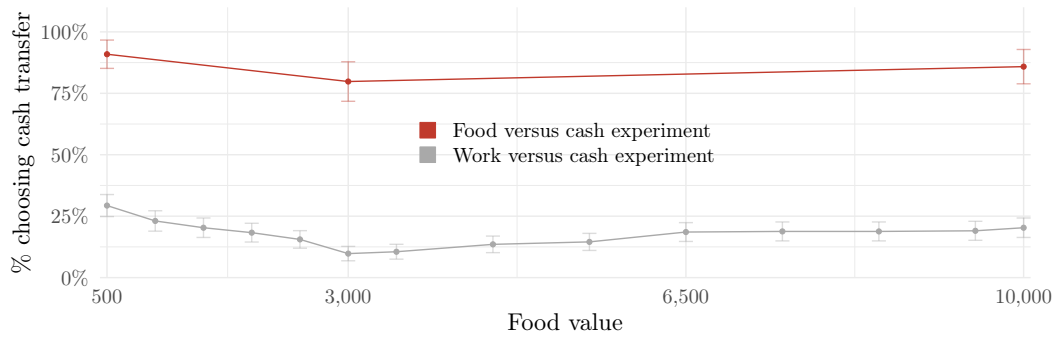


FIGURE G.4.—**Cash redistribution choices in food-versus-cash experiment.** *Note:* Data: main experiment (September 2022) and food-versus-cash experiment (March 2023). The figure compares the share of respondents choosing a UGX 3,000 unconditional cash transfer when the alternative is a meal or snack (red line) with the corresponding share when the alternative is hiring in the main experiment (gray line). Confidence intervals are at the 95% level.

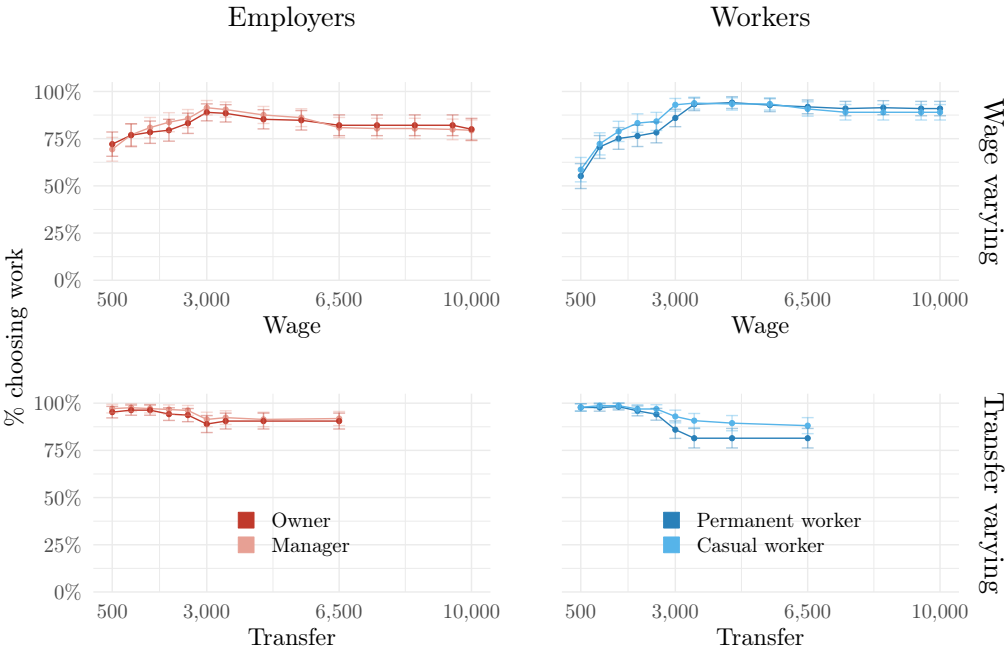


FIGURE G.5.—**Work redistribution by role (work-versus-cash experiment).** *Note:* Data: main experiment (September 2022; N = 399 employers, N = 449 workers). The panels plot the share of work choices by wage (top panel; the alternative is a UGX 3,000 transfer) and by transfer (bottom panel; the alternative is hiring at a UGX 3,000 wage). Workers self-identified their role in the firm. Confidence intervals are at the 95% level.

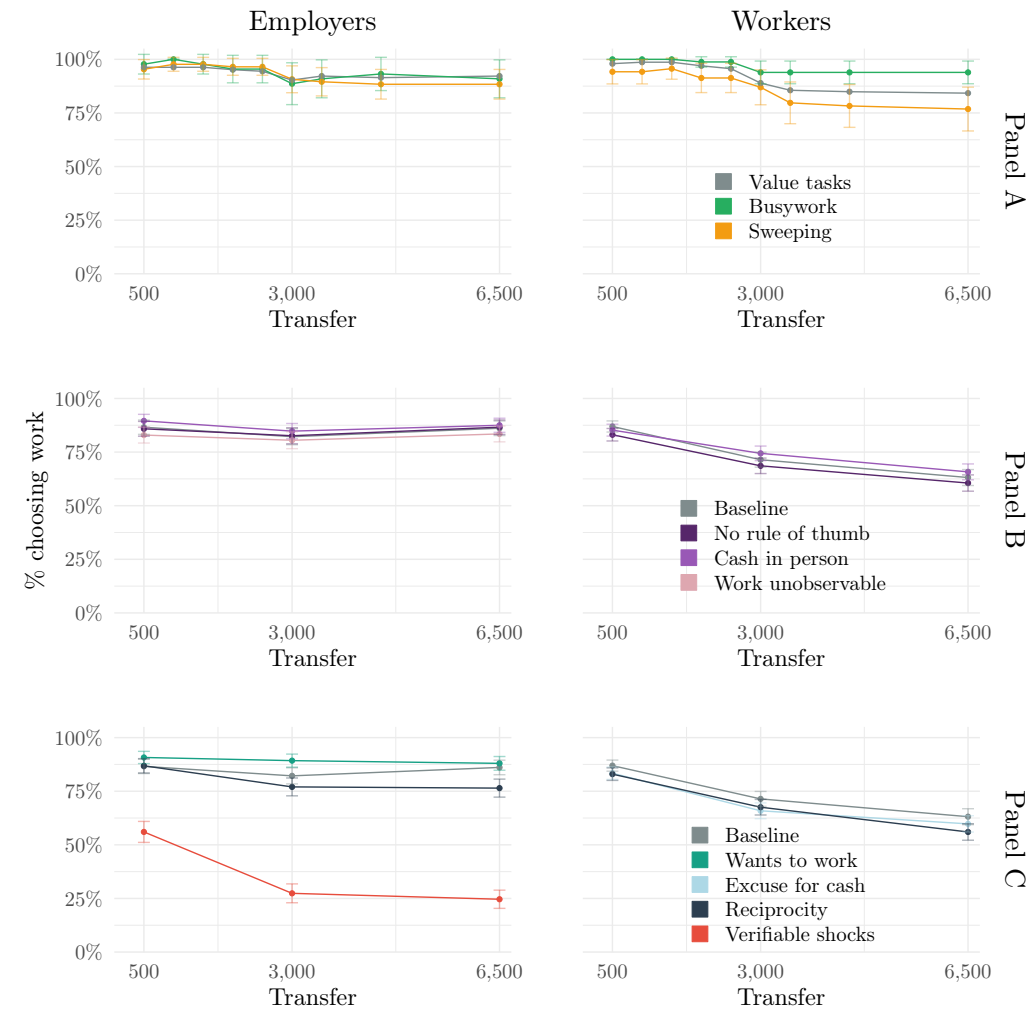


FIGURE G.6.—**Work redistribution choices: transfer varying.** *Note:* Data: main experiment (September 2022; N = 399 employers, N = 449 workers; Panel A) and the multi-scenario replication (July 2024; N = 405 employers, N = 652 workers; Panels B and C). The figure plots the share choosing work by transfer amount (x-axis, UGX) for employers (left) and workers (right), at the decision nodes where the outside option is hiring for a UGX 3,000 wage. Panel A compares task types (value tasks versus busywork and sweeping); Panels B and C compare the multi-scenario replication conditions, defined in Online Appendix C.3. “Value tasks” are the choices of respondents whose pair has been randomly assigned to loading, weighing, or sealing. Confidence intervals are at the 95% level.

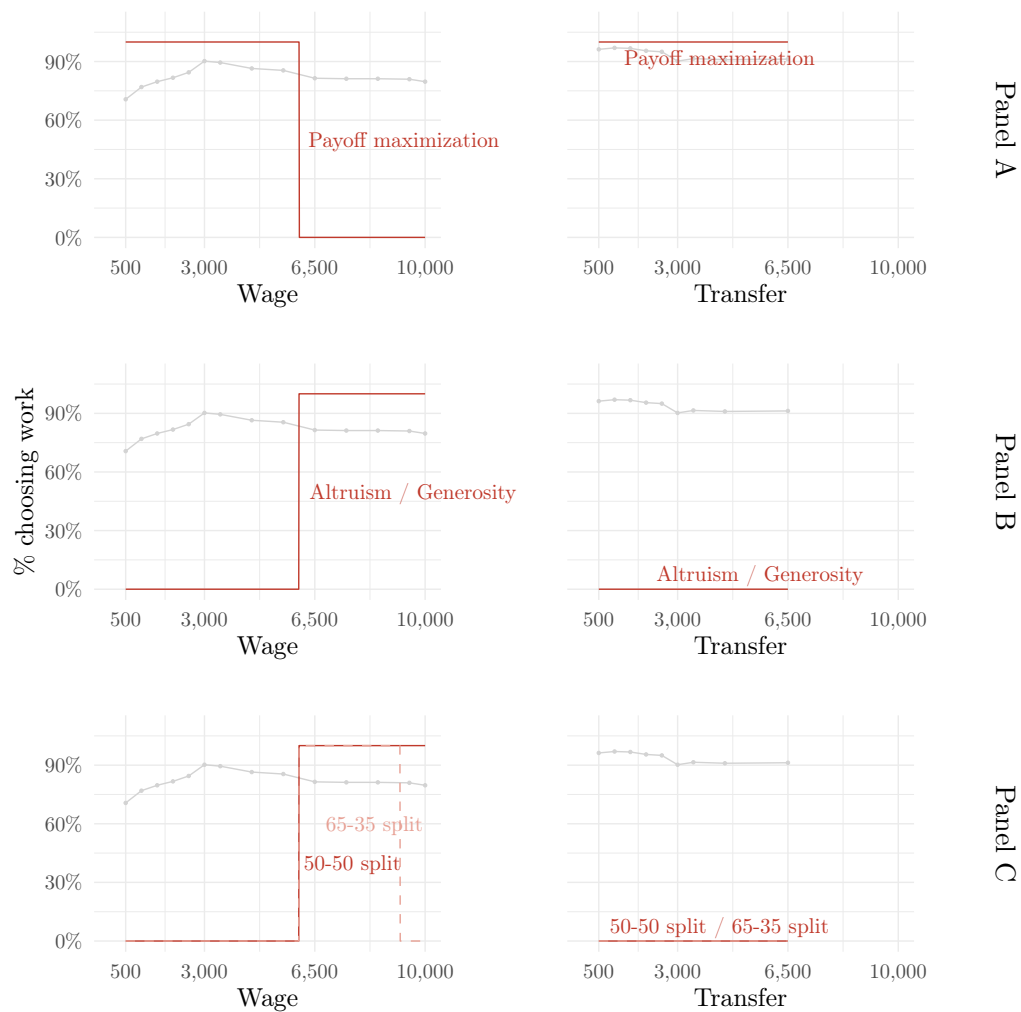


FIGURE G.7.—**Employers' benchmarks.** *Note:* The figure plots the employers' decision rule ($h_A^*(w, t)$) from Online Appendix A for all benchmarks. Panel A: decision rule that maximizes the employer' payoffs. Panel B: altruistic/generous employer. Panel C: 50-50 target split (solid line) and 65-35 target split (dashed line). All panels compare the decision rule with the main experiment data (gray line).

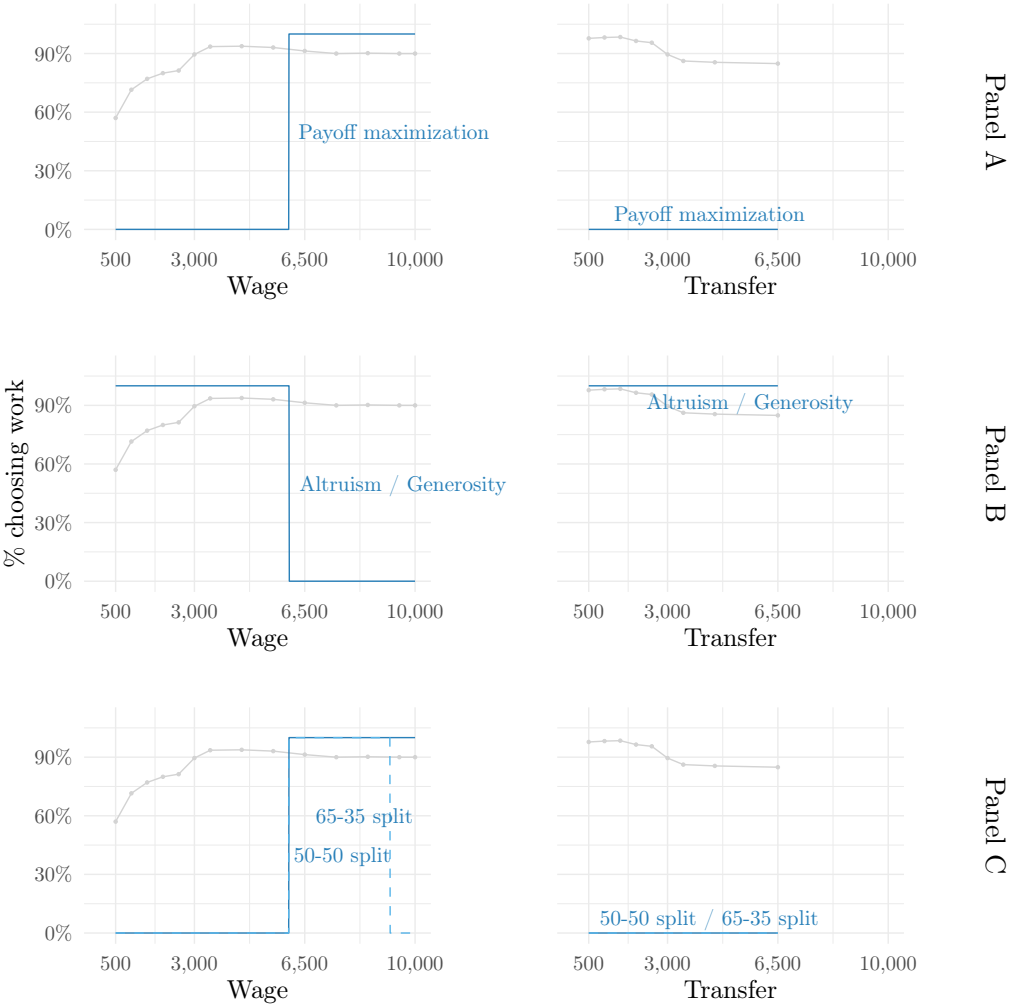


FIGURE G.8.—**Workers' benchmarks.** *Note:* The figure plots the workers' decision rule ($h_B^*(w, t)$) from Online Appendix A for all benchmarks. Panel A: decision rule that maximizes the workers' payoffs. Panel B: altruistic/generous worker. Panel C: 50-50 target split (solid line) and 65-35 target split (dashed line). All panels compare the respective decision rule with the main experiment data (gray line).

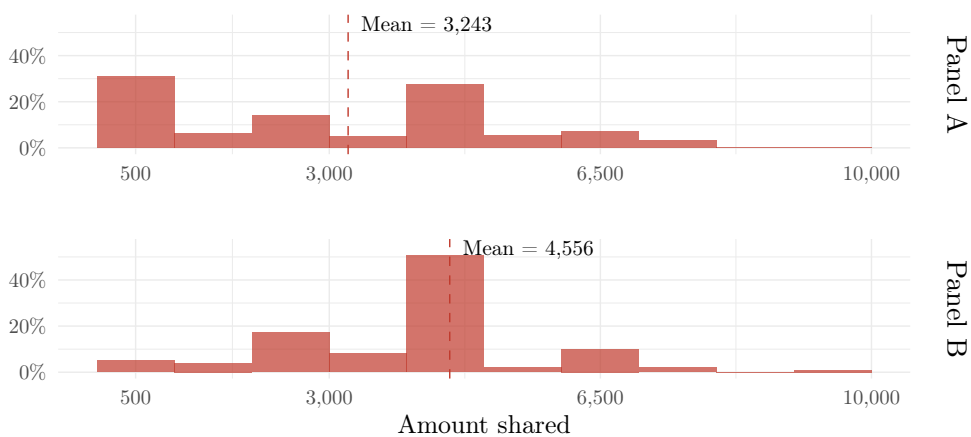


FIGURE G.9.—Employers’ unconditional redistribution preferences. *Note:* Data: September 2022 employer survey (N = 399 employers; Panel A) and March 2023 phone survey (N = 99 employers; Panel B). Respondents reported their unconditional redistribution preferences before the main experiment. We ask respondents how much a lottery winner whose payoff was UGX 15,000 should give to an anonymous loser whose payoff was UGX 1,000. The wording was: “You are Person A. Absent any constraints, how much money do you want to share?” In Panel B, the question is worded as follows: “If we asked 10 employers or owners in Kampala the question ‘Absent any constraints, as Person A, how much money do you want to share from a lottery win of UGX 15,000 with a person who only received UGX 1,000?’, what would be the most common amount given?”

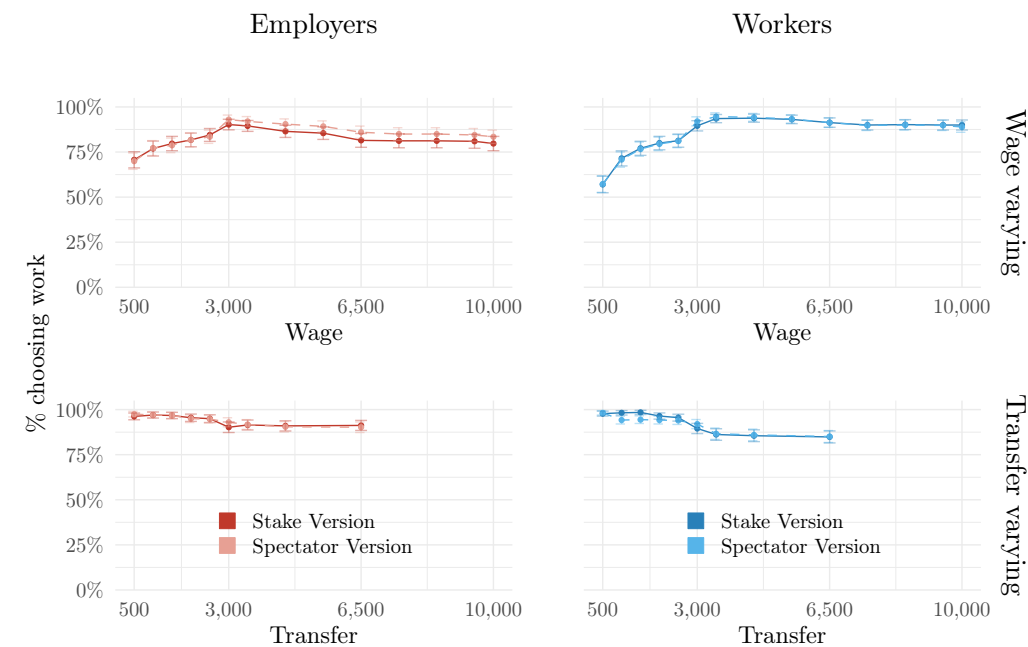


FIGURE G.10.—**Main Experiment versus Spectator Version.** *Note:* Data: September 2022 main experiment and spectator version (N = 399 employers, N = 449 workers). The panels plot the share of work choices in each version by wage (top panel; the alternative is a UGX 3,000 transfer) and by transfer (bottom panel; the alternative is hiring at a UGX 3,000 wage). Confidence intervals are at the 95% level.

H. ADDITIONAL TABLES

TABLE H.1
WORK REDISTRIBUTION CHOICES BY WAGE AND TRANSFER.

	Overall		W = [3,000, 10,000]		W = [500, 3,000]		T = [3,000, 6,500]		T = [500, 3,000]	
	Employers	Workers	Employers	Workers	Employers	Workers	Employers	Workers	Employers	Workers
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Main Experiment (September 2022)										
Wage (log)	0.017 (0.010)	0.099 (0.010)	-0.089 (0.016)	-0.019 (0.016)	0.097 (0.011)	0.164 (0.012)				
Transfer (log)	-0.064 (0.008)	-0.087 (0.008)					0.008 (0.016)	-0.051 (0.015)	-0.024 (0.007)	-0.034 (0.007)
Baseline work share			0.902	0.895	0.707	0.570	0.902	0.895	0.962	0.978
Obs.	8,778	9,878	3,591	4,041	2,394	2,694	1,596	1,796	2,394	2,694
Panel B: Replication Experiment (July 2024)										
Wage (log)	0.017 (0.010)	0.135 (0.007)	-0.148 (0.021)	0.120 (0.016)	0.114 (0.012)	0.122 (0.009)				
Transfer (log)	0.001 (0.006)	-0.091 (0.006)					0.033 (0.013)	-0.107 (0.015)	-0.025 (0.009)	-0.087 (0.008)
Baseline work share			0.822	0.714	0.616	0.487	0.822	0.714	0.866	0.869
Obs.	3,229	4,557	1,212	1,953	1,212	1,953	1,210	1,302	807	1,302

Note: Data: main experiment (September 2022; N = 399 employers, N = 449 workers; Panel A) and baseline scenario of the multi-scenario replication (July 2024; N = 405 employers, N = 652 workers; Panel B). The dependent variable is a dummy for the respondent choosing work redistribution. *Wage* is the wage associated with the work arrangement for a given decision (UGX 500–UGX 10,000). *Transfer* is the unconditional cash transfer for a given decision (UGX 500–UGX 6,500). *Baseline work share* is the share choosing work redistribution at each column's reference choice: W = min(W), T = 3,000 (wage varying), and W = 3,000, T = min(T) (transfer varying). Columns split decisions by the wage (W) and transfer (T) range shown, in UGX. The outside options are a UGX 3,000 transfer or wage, respectively. The choice at a wage equal to transfer is included in every quadrant. All regressions include respondent-level fixed effects. Standard errors are clustered at the respondent level.

TABLE H.2
WORK REDISTRIBUTION CHOICES BY RESPONDENT CHARACTERISTICS.

	September 2022				July 2024			
	Employers		Workers		Employers		Workers	
	Work	WTP	Work	WTP	Work	WTP	Work	WTP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Role: owner	-0.019 (0.030)	-0.177 (0.244)			0.026 (0.037)	-0.022 (0.311)		
Gender: male	0.007 (0.025)	0.192 (0.218)	-0.021 (0.050)	-0.316 (0.304)	0.004 (0.037)	0.088 (0.310)	0.058 (0.087)	-0.088 (0.347)
Age (years)	0.002 (0.002)	0.022 (0.013)	0.001 (0.002)	-0.006 (0.010)	-0.001 (0.002)	0.011 (0.016)	0.001 (0.003)	0.016 (0.013)
Education (years)	-0.003 (0.003)	-0.010 (0.028)	-0.004 (0.004)	-0.031 (0.024)				
Is casual worker			0.015 (0.020)	0.221 (0.138)			-0.069 (0.042)	-0.254 (0.202)
Income (monthly, million UGX)			0.003 (0.051)	0.742 (0.347)	-0.005 (0.005)	0.051 (0.037)	0.014 (0.046)	0.086 (0.228)
Tenure at firm (years)			0.000 (0.005)	-0.001 (0.033)			-0.007 (0.009)	-0.040 (0.043)
Skill (1–8)			0.010 (0.006)	0.051 (0.042)				
Hours worked (on standard day)			0.000 (0.005)	0.017 (0.031)			0.010 (0.007)	0.049 (0.031)
Days worked (in standard week)			-0.003 (0.010)	-0.011 (0.063)			0.006 (0.019)	-0.050 (0.092)
Has emergency							0.008 (0.038)	-0.209 (0.195)
Mean outcome	0.87	6.08	0.88	3.00	0.75	5.15	0.75	2.42
Obs.	8,756	398	9,350	425	2,483	356	2,758	394

Note: Data: main experiment (September 2022) and the baseline scenario in the multi-scenario replication (July 2024). *WTP* (willingness to pay) is in thousands UGX. The omitted category for the employer respondent role *Owner* is manager. For the workers, the omitted category for *Is casual worker* is permanent worker. *Skill (1–8)* refers to the number of tasks a worker self-reports to be able to perform. *Has emergency* indicates whether the respondent self-reported having an emergency requiring money in the past week. *Work* regressions control for log wage and log transfer; all regressions additionally include experimental controls (task dummies and whether the respondent usually performs the task), with respondent characteristics shown in the table. Standard errors in the *Work* regressions are clustered at the respondent level.

TABLE H.3
ESTIMATES OF FIRM SIZE AND PRODUCTIVITY ACCOUNTING FOR WORK REDISTRIBUTION.

	Observed	Effective (total)					Effective (symbolic)				
		Eff.	Eff. - Obs.			Obs./Eff.	Eff.	Eff. - Obs.			Obs./Eff.
			Levels	%	p-value			Levels	%	p-value	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A: Aggregate estimates											
Firms giving work											
Hours worked	1093.72	1000.23	-93.49	-11.18	0.000	121.95	1038.04	-55.68	-5.98	0.000	109.73
Revenue per hour	11.43	14.18	2.75	22.28	0.000	88.83	12.64	1.21	10.19	0.000	93.90
All firms											
Hours worked	983.69	942.38	-41.31	-4.94	0.000	109.70	959.08	-24.60	-2.64	0.000	104.30
Revenue per hour	10.78	12.03	1.25	10.09	0.000	94.94	11.33	0.55	4.61	0.000	97.24
Panel B: Roster-based estimates											
Firms giving work											
Hours worked	787.19	730.54	-56.65	-8.02	0.000	119.16	767.15	-20.04	-2.57	0.024	106.58
Revenue per hour	16.47	21.26	4.79	16.60	0.008	92.14	17.05	0.58	2.78	0.004	98.03
All firms											
Hours worked	718.42	692.54	-25.88	-3.66	0.000	108.75	709.27	-9.16	-1.17	0.024	103.00
Revenue per hour	15.45	17.67	2.22	7.70	0.008	96.36	15.72	0.27	1.29	0.004	99.09

Note: Data: employer surveys in July 2024 (N=405 employers). We exclude one outlier with redistribution hours above 90% of total hours and data-entry mistakes with reported redistribution hours above 100% of total hours: six in Panel A and five in Panel B. “Observed” is the standard measure. “Effective (total)” subtracts all redistribution-through-work hours, and “Effective (symbolic)” subtracts only symbolic or idle redistribution hours. Within each block, “Eff.” is the effective level, “Eff. - Obs.” is the difference from the observed level, reported in levels and as a percentage of observed, and “Obs./Eff.” is the mean firm-level ratio of observed to effective. We describe the construction of these estimates in Appendix F. Panel A reports estimates based on survey-reported monthly data. Panel B reports estimates based on a worker roster as a robustness check, as detailed in Online Appendix E. Monetary values are in thousand UGX. *p*-values are calculated using matched-pairs *t*-tests.

TABLE H.4
WORK REDISTRIBUTION CHOICES BY VERSION.

	Employers (1)	Workers (2)
Wage (log)	0.028 (0.009)	0.099 (0.010)
Transfer (log)	-0.064 (0.007)	-0.080 (0.007)
Spectator	0.013 (0.007)	-0.004 (0.005)
Mean outcome	0.87	0.88
Obs.	17,556	19,756

Note: Data: September 2022 N=399 employers, N=449 workers). The dependent variable is an indicator for choosing redistribution through work. *Wage* is the wage associated with the work option in a given decision (UGX 500–UGX 10,000). *Transfer* is the unconditional cash transfer in a given decision (UGX 500–UGX 6,500). The outside option is UGX 3,000: a transfer for employers and a wage for workers. Choices with wage equal to transfer are included in every quadrant. *Spectator* is an indicator for the spectator version of the main experiment. The omitted category is the stake version, which corresponds to the main experiment. All regressions include respondent fixed effects. Standard errors are clustered at the respondent level.

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- DE MEL, SURESH, DAVID MCKENZIE, AND CHRISTOPHER WOODRUFF (2019): “Labor Drops: Experimental Evidence on the Return to Additional Labor in Microenterprises,” *American Economic Journal: Applied Economics*, 11 (1), 202–35. [8]
- MCKENZIE, DAVID AND CHRISTOPHER WOODRUFF (2017): “Business practices in small firms in developing countries,” *Management Science*, 63 (9), 2967–2981. [8]