## Online Appendix: not for print publication

## Appendix A: Additional Tables and Figures

Table A1: Summary Statistics

| Variable: | Mean | S.D. | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Subject Characteristics |  |  |  |  |  |  |
| Female | 0.58 | 0.49 | 1 | 0 | 1 | 478 |
| Age | 33.26 | 9.75 | 32 | 18 | 69 | 461 |
| Completed primary school | 0.95 | 0.23 | 1 | 0 | 1 | 478 |
| Completed secondary school | 0.56 | 0.50 | 1 | 0 | 1 | 478 |
| Married or cohabitating | 0.57 | 0.50 | 1 | 0 | 1 | 478 |
| Has personal bank account | 0.52 | 0.50 | 1 | 0 | 1 | 478 |
| Has account with at least 1,000 shillings | 0.24 | 0.43 | 0 | 0 | 1 | 478 |
| Average daily expenditure (in shillings) | 201.49 | 198.53 | 146.43 | 0.14 | 2857.14 | 478 |
| Subject describes self as very-patient | 0.64 | 0.48 | 1 | 0 | 1 | 494 |
| Trusts that lab payments will be sent on time | 0.97 | 0.16 | 1 | 0 | 1 | 478 |

Table A2: Summary Statistics by Experimental Treatment

|  | Experimental Treatment: |  | Difference |
| :---: | :---: | :---: | :---: |
|  | Immediate Payouts | $\begin{gathered} \text { End-of-DAY } \\ \text { Payouts } \end{gathered}$ |  |
| Female | 0.60 | 0.55 | 0.04 |
|  | [0.49] | [0.50] | (0.05) |
| Age | 32.79 | 34.35 | -1.56 |
|  | [9.42] | [10.43] | (0.99) |
| Completed primary school | 0.96 | 0.92 | 0.04* |
|  | [0.20] | [0.28] | (0.02) |
| Completed secondary school | 0.55 | 0.59 | -0.04 |
|  | [0.50] | [0.49] | (0.05) |
| Married or cohabitating | 0.58 | 0.55 | 0.02 |
|  | [0.49] | [0.50] | (0.05) |
| Has personal bank account | 0.53 | 0.51 | 0.01 |
|  | [0.50] | [0.50] | (0.05) |
| Has account with at least 1,000 shillings | 0.27 | 0.17 | 0.10** |
|  | [0.45] | [0.38] | (0.04) |
| Average daily expenditure (in shillings) | 201.54 | 201.37 | 0.16 |
|  | [217.31] | [146.00] | (19.85) |
| Subject describes self as very-patient | 0.66 | 0.58 | 0.07 |
|  | [0.47] | [0.49] | (0.05) |
| Trusts that lab payments will be sent on time | 0.98 | 0.97 | 0.01 |
|  | [0.15] | [0.18] | (0.02) |

[^0]Table A3: ML Estimates of Model Parameters in Immediate vs. End-of-Day Payment Treatments

| Specification: |  | ML |
| :--- | :---: | :---: |
|  | $(1)$ | ML |
|  | $0.890^{* * *}$ | $0.905^{* * *}$ |
| $\beta_{\text {immediate }}$ | $(0.013)$ | $(0.013)$ |
| $\beta_{\text {eod }}$ | $0.971^{* * *}$ | $0.976^{* * *}$ |
|  | $(0.023)$ | $(0.021)$ |
| $\delta_{\text {immediate }}$ | $0.914^{* * *}$ | $0.913^{* * *}$ |
| $\delta_{\text {eod }}$ | $(0.004)$ | $(0.003)$ |
|  | $0.940^{* * *}$ | $0.940^{* * *}$ |
| $\rho_{\text {immediate }}$ | $(0.006)$ | $(0.005)$ |
| $\rho_{\text {eod }}$ | $0.543^{* * *}$ | $0.840^{* * *}$ |
|  | $(0.009)$ | $(0.012)$ |
| $\omega$ | $0.590^{* * *}$ | $0.886^{* * *}$ |
|  | $(0.015)$ | $(0.020)$ |
| $H_{0}: \beta_{\text {immediate }}=1$ | 0 | $\omega_{i}$ |
| $H_{0}: \beta_{\text {eod }}=1$ | - | - |
| $H_{0}: \beta_{\text {immediate }}=\beta_{\text {eod }}$ | 0.000 | 0.000 |
| $H_{0}: \delta_{\text {immediate }}=1$ | 0.207 | 0.246 |
| $H_{0}: \delta_{\text {eod }}=1$ | 0.000 | 0.000 |
| $H_{0}: \delta_{\text {immediate }}=\delta_{\text {eod }}$ | 0.000 | 0.000 |
| $H_{0}: \rho_{\text {immediate }}=\rho_{\text {eod }}$ | 0.008 | 0.000 |
| Observations | 23712 | 23712 |
| Subjects | 494 | 494 |

Parameters estimated via maximum likelihood. Standard errors calculated using the inverse Hessian. $\omega_{i}$ indicates self-reported average daily expenditure, which varies across subjects.

Table A4: Tobit Estimates of Model Parameters in Immediate vs. End-of-Day Payment Treatments

| Specification: | TOBIT <br> $(1)$ | TOBIT <br> $(2)$ |
| :--- | :---: | :---: |
| $\beta_{\text {immediate }}$ | $0.863^{* * *}$ | $0.902^{* * *}$ |
| $\beta_{\text {eod }}$ | $(0.030)$ | $(0.028)$ |
|  | $0.933^{* * *}$ | $0.958^{* * *}$ |
| $\delta_{\text {immediate }}$ | $(0.046)$ | $(0.036)$ |
| $\delta_{\text {eod }}$ | $0.991^{* * *}$ | $0.998^{* * *}$ |
|  | $(0.016)$ | $(0.014)$ |
| $\rho_{\text {immediate }}$ | $0.980^{* * *}$ | $0.960^{* * *}$ |
|  | $(0.018)$ | $(0.010)$ |
| $\rho_{\text {eod }}$ | $0.739^{* * *}$ | $1.417^{* * *}$ |
|  | $(0.031)$ | $(0.055)$ |
| $\omega$ | $0.759^{* * *}$ | $1.321^{* * *}$ |
|  | $(0.055)$ | $(0.110)$ |
| $H_{0}: \beta_{\text {immediate }}=1$ | 0 | $\bar{\omega}_{i}$ |
| $H_{0}: \beta_{\text {eod }}=1$ | - | - |
| $H_{0}: \beta_{\text {immediate }}=\beta_{\text {eod }}$ | 0.000 | 0.001 |
| $H_{0}: \delta_{\text {immediate }}=1$ | 0.145 | 0.233 |
| $H_{0}: \delta_{\text {eod }}=1$ | 0.556 | 0.221 |
| $H_{0}: \delta_{\text {immediate }}=\delta_{\text {eod }}$ | 0.883 |  |
| $H_{0}: \rho_{\text {immediate }}=\rho_{\text {eod }}$ | 0.662 | 0.750 |
| Observations | 23712 | 0.031 |
| Subjects | 0.484 |  |

Robust standard errors clustered at the session level. $\omega_{i}$ indicates self-reported average daily expenditure, which varies across subjects.

Table A5: NLS Estimates of Model Parameters - Subjects with No GARP Violations

| Specification: | NLS <br> (1) | NLS <br> (2) | NLS <br> (3) |
| :---: | :---: | :---: | :---: |
| $\beta_{\text {immediate }}$ | $\begin{gathered} 0.893^{* * *} \\ (0.015) \end{gathered}$ | $\begin{gathered} 0.921^{* * *} \\ (0.014) \end{gathered}$ | $\begin{gathered} 0.928^{* * *} \\ (0.013) \end{gathered}$ |
| $\beta_{\text {eod }}$ | $\begin{gathered} 0.970^{* * *} \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.981^{* * *} \\ (0.023) \end{gathered}$ | $\begin{gathered} 0.986^{* * *} \\ (0.025) \end{gathered}$ |
| $\delta_{\text {immediate }}$ | $\begin{gathered} 0.950^{* * *} \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.942^{* * *} \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.940^{* * *} \\ (0.008) \end{gathered}$ |
| $\delta_{\text {eod }}$ | $\begin{gathered} 0.971^{* * *} \\ (0.015) \end{gathered}$ | $\begin{gathered} 0.963^{* * *} \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.956^{* * *} \\ (0.010) \end{gathered}$ |
| $\rho_{\text {immediate }}$ | $\begin{gathered} 0.533^{* * *} \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.860^{* * *} \\ (0.041) \end{gathered}$ | $\begin{gathered} 1.226^{* * *} \\ (0.111) \end{gathered}$ |
| $\rho_{\text {eod }}$ | $\begin{gathered} 0.559^{* * *} \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.887^{* * *} \\ (0.047) \end{gathered}$ | $\begin{gathered} 1.112^{* * *} \\ (0.090) \end{gathered}$ |
| $\omega_{\text {immediate }}$ | 0 | $\bar{\omega}_{i}$ | $522.753^{* * *}$ |
|  | - | - | (80.083) |
| $\omega_{\text {eod }}$ | 0 | $\bar{\omega}_{i}$ | 404.539*** |
|  | - | - | (54.431) |
| $H_{0}: \beta_{\text {immediate }}=1$ | 0.000 | 0.000 | 0.000 |
| $H_{0}: \beta_{\text {eod }}=1$ | 0.317 | 0.410 | 0.573 |
| $H_{0}: \beta_{\text {immediate }}=\beta_{\text {eod }}$ | 0.026 | 0.029 | 0.045 |
| $H_{0}: \delta_{\text {immediate }}=1$ | 0.000 | 0.000 | 0.000 |
| $H_{0}: \delta_{\text {eod }}=1$ | 0.052 | 0.003 | 0.000 |
| $H_{0}: \delta_{\text {immediate }}=\delta_{\text {eod }}$ | 0.261 | 0.161 | 0.211 |
| $H_{0}: \rho_{\text {immediate }}+\rho_{\text {eod }}$ | 0.537 | 0.677 | 0.429 |
| $H_{0}: \omega_{\text {immediate }}+\omega_{\text {eod }}$ |  |  | 0.229 |
| Observations | 14544 | 14544 | 14544 |
| Subjects | 303 | 303 | 303 |

Robust standard errors clustered at the session level. $\bar{\omega}_{i}$ indicates self-reported average daily expenditure, which varies across subjects.

Table A6: NLS Estimates of Model Parameters - Subjects with Basic Consistency Indices $\geq 0.85$

| Specification: |  | NLS | NLS |
| :--- | :---: | :---: | :---: |
|  | $(1)$ | $(2)$ | NLS |
|  | $0.918^{* * *}$ | $0.938^{* * *}$ | $0.905^{* * *}$ |
| $\beta_{\text {immediate }}$ | $(0.018)$ | $(0.016)$ | $(0.016)$ |
| $\beta_{\text {eod }}$ | $0.999^{* * *}$ | $1.012^{* * *}$ | $0.958^{* * *}$ |
|  | $(0.031)$ | $(0.025)$ | $(0.028)$ |
| $\delta_{\text {immediate }}$ | $0.958^{* * *}$ | $0.951^{* * *}$ | $0.943^{* * *}$ |
| $\delta_{\text {eod }}$ | $(0.009)$ | $(0.008)$ | $(0.009)$ |
|  | $0.977^{* * *}$ | $0.971^{* * *}$ | $0.967^{* * *}$ |
| $\rho_{\text {immediate }}$ | $(0.016)$ | $(0.013)$ | $(0.015)$ |
|  | $0.463^{* * *}$ | $0.761^{* * *}$ | $0.193^{* * *}$ |
| $\rho_{\text {eod }}$ | $(0.018)$ | $(0.030)$ | $(0.013)$ |
|  | $0.491^{* * *}$ | $0.796^{* * *}$ | $0.237^{* * *}$ |
| $\omega_{\text {immediate }}$ | $(0.019)$ | $(0.031)$ | $(0.016)$ |
| $\omega_{\text {eod }}$ | 0 | $\omega_{i}$ | $-114.747^{* * *}$ |
|  | - | - | $(7.682)$ |
| $H_{0}: \beta_{\text {immediate }}=1$ | 0 | $\omega_{i}$ | $-103.761^{* * *}$ |
| $H_{0}: \beta_{\text {eod }}=1$ | - | - | $(10.837)$ |
| $H_{0}: \beta_{\text {immediate }}=\beta_{\text {eod }}$ | 0.000 | 0.000 | 0.000 |
| $H_{0}: \delta_{\text {immediate }}=1$ | 0.071 | 0.649 | 0.143 |
| $H_{0}: \delta_{\text {eod }}=1$ | 0.000 | 0.019 | 0.115 |
| $H_{0}: \delta_{\text {immediate }}=\delta_{\text {eod }}$ | 0.163 | 0.030 | 0.000 |
| $H_{0}: \rho_{\text {immediate }}+\rho_{\text {eod }}$ | 0.299 | 0.200 | 0.040 |
| $H_{0}: \omega_{\text {immediate }}+\omega_{\text {eod }}$ |  | 0.410 | 0.035 |
| Observations | 15888 | 15888 | 15888 |
| Subjects | 331 | 331 | 331 |

Robust standard errors clustered at the session level. $\bar{\omega}_{i}$ indicates self-reported average daily expenditure, which varies across subjects.

Table A7: NLS Estimates of Model Parameters Assuming CARA Utility

\left.| Specification: | NLS |
| :--- | :---: |
| (1) |  |$\right]$| $0.941^{* * *}$ |  |
| :--- | :---: |
| $(0.010)$ |  |
| $\beta_{\text {immediate }}$ | $0.988^{* * *}$ |
| $\beta_{\text {eod }}$ | $(0.020)$ |
|  | $0.937^{* * *}$ |
| $\delta_{\text {immediate }}$ | $(0.004)$ |
| $\delta_{\text {eod }}$ | $0.949^{* * *}$ |
|  | $(0.006)$ |
| $\alpha_{\text {immediate }}$ | $0.001^{* * *}$ |
|  | $(0.000)$ |
| $\alpha_{\text {eod }}$ | $0.001^{* * *}$ |
|  | $(0.000)$ |
| $H_{0}: \beta_{\text {immediate }}=1$ | 0.000 |
| $H_{0}: \beta_{\text {eod }}=1$ | 0.542 |
| $H_{0}: \beta_{\text {immediate }}=\beta_{\text {eod }}$ | 0.038 |
| $H_{0}: \delta_{\text {immediate }}=1$ | 0.000 |
| $H_{0}: \delta_{\text {eod }}=1$ | 0.000 |
| $H_{0}: \delta_{\text {immediate }}=\delta_{\text {eod }}$ | 0.092 |
| $H_{0}: \rho_{\text {immediate }}=\rho_{\text {eod }}$ | 0.670 |
| Observations | 23712 |
| Subjects |  |
| Robust standard errors clustered at the |  |
| session level. |  |

Table A8: Regressions of Fraction of Budget Allocated to Earlier Payment Date

| Specification: | OLS <br> (1) | OLS <br> (2) | OLS <br> (3) | Tobit <br> (4) | Tobit <br> (5) | Tobit <br> (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Front-end delay $=0$ days | $\begin{gathered} 0.031^{* * *} \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.034^{* * *} \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.034^{* * *} \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.043^{* * *} \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.049^{* * *} \\ (0.013) \end{gathered}$ | $\begin{gathered} 0.049 * * * \\ (0.013) \end{gathered}$ |
| End-of-day payment treatment | $\begin{aligned} & -0.003 \\ & (0.025) \end{aligned}$ | $\begin{gathered} -0.004 \\ (0.026) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.026) \end{gathered}$ | $\begin{aligned} & -0.007 \\ & (0.042) \end{aligned}$ | $\begin{aligned} & -0.008 \\ & (0.042) \end{aligned}$ | $\begin{aligned} & -0.008 \\ & (0.043) \end{aligned}$ |
| Front-end delay $=0$ days $\times$ end-of-day treatment | $\begin{gathered} -0.025^{* *} \\ (0.012) \end{gathered}$ | $\begin{gathered} -0.025^{* *} \\ (0.012) \end{gathered}$ | $\begin{aligned} & -0.024^{*} \\ & (0.013) \end{aligned}$ | $\begin{aligned} & -0.04^{* *} \\ & (0.019) \end{aligned}$ | $\begin{aligned} & -0.04^{* *} \\ & (0.019) \end{aligned}$ | $\begin{aligned} & -0.04^{*} \\ & (0.021) \end{aligned}$ |
| Lower expected liquidity at later payment date | . | $\begin{aligned} & 0.025^{* *} \\ & (0.011) \end{aligned}$ | $\begin{gathered} 0.023^{*} \\ (0.013) \end{gathered}$ |  | $\begin{aligned} & 0.04^{* *} \\ & (0.019) \end{aligned}$ | $\begin{aligned} & 0.041^{* *} \\ & (0.021) \end{aligned}$ |
| End-of-day treatment $\times$ lower liquidity at later date | . | . | $\begin{gathered} 0.004 \\ (0.023) \end{gathered}$ | . | . | $\begin{aligned} & -0.003 \\ & (0.039) \end{aligned}$ |
| $H_{0}$ : no impact of front-end-delay $=0$ days in end-of-day treatment | 0.556 | 0.350 | 0.352 | 0.853 | 0.595 | 0.627 |
| Observations | 15552 | 15552 | 15552 | 15552 | 15552 | 15552 |
| Subjects | 324 | 324 | 324 | 324 | 324 | 324 |

Robust standard errors clustered at the session level. The dependent variable in all specifications is the fraction of the early-valued budget allocated to the earlier payment date. Tobit regressions (in Columns 4-6) adjust for censoring of the dependent variable at 0 and 1 . All regressions include controls for the size of the early-valued budget, the interest rate, and the delay between payments.

Table A9: Convex Time Budget Decision Problems

| Set | Decision | Front-End <br> Delay ( $t$ ) | Early vs. Later Delay (k) | Early Max | Later Max | $1+\mathrm{r}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 14 | 14 | 400 | 440 | 1.1 |
| 1 | 2 | 14 | 14 | 400 | 500 | 1.25 |
| 1 | 3 | 14 | 14 | 400 | 700 | 1.75 |
| 1 | 4 | 14 | 14 | 400 | 800 | 2 |
| 1 | 5 | 14 | 14 | 400 | 1200 | 3 |
| 1 | 6 | 14 | 14 | 400 | 1600 | 4 |
| 2 | 7 | 0 | 28 | 400 | 440 | 1.1 |
| 2 | 8 | 0 | 28 | 400 | 500 | 1.25 |
| 2 | 9 | 0 | 28 | 400 | 700 | 1.75 |
| 2 | 10 | 0 | 28 | 400 | 800 | 2 |
| 2 | 11 | 0 | 28 | 400 | 1200 | 3 |
| 2 | 12 | 0 | 28 | 400 | 1600 | 4 |
| 3 | 13 | 0 | 14 | 400 | 440 | 1.1 |
| 3 | 14 | 0 | 14 | 400 | 500 | 1.25 |
| 3 | 15 | 0 | 14 | 400 | 700 | 1.75 |
| 3 | 16 | 0 | 14 | 400 | 800 | 2 |
| 3 | 17 | 0 | 14 | 400 | 1200 | 3 |
| 3 | 18 | 0 | 14 | 400 | 1600 | 4 |
| 4 | 19 | 14 | 14 | 600 | 660 | 1.1 |
| 4 | 20 | 14 | 14 | 600 | 750 | 1.25 |
| 4 | 21 | 14 | 14 | 600 | 1050 | 1.75 |
| 4 | 22 | 14 | 14 | 600 | 1200 | 2 |
| 4 | 23 | 14 | 14 | 600 | 1800 | 3 |
| 4 | 24 | 14 | 14 | 600 | 2400 | 4 |
| 5 | 25 | 28 | 14 | 400 | 440 | 1.1 |
| 5 | 26 | 28 | 14 | 400 | 500 | 1.25 |
| 5 | 27 | 28 | 14 | 400 | 700 | 1.75 |
| 5 | 28 | 28 | 14 | 400 | 800 | 2 |
| 5 | 29 | 28 | 14 | 400 | 1200 | 3 |
| 5 | 30 | 28 | 14 | 400 | 1600 | 4 |
| 6 | 31 | 28 | 28 | 400 | 440 | 1.1 |
| 6 | 32 | 28 | 28 | 400 | 500 | 1.25 |
| 6 | 33 | 28 | 28 | 400 | 700 | 1.75 |
| 6 | 34 | 28 | 28 | 400 | 800 | 2 |
| 6 | 35 | 28 | 28 | 400 | 1200 | 3 |
| 6 | 36 | 28 | 28 | 400 | 1600 | 4 |
| 7 | 37 | 0 | 14 | 600 | 660 | 1.1 |
| 7 | 38 | 0 | 14 | 600 | 750 | 1.25 |
| 7 | 39 | 0 | 14 | 600 | 1050 | 1.75 |
| 7 | 40 | 0 | 14 | 600 | 1200 | 2 |
| 7 | 41 | 0 | 14 | 600 | 1800 | 3 |
| 7 | 42 | 0 | 14 | 600 | 2400 | 4 |
| 8 | 43 | 14 | 28 | 400 | 440 | 1.1 |
| 8 | 44 | 14 | 28 | 400 | 500 | 1.25 |
| 8 | 45 | 14 | 28 | 400 | 700 | 1.75 |
| 8 | 46 | 14 | 28 | 400 | 800 | 2 |
| 8 | 47 | 14 | 28 | 400 | 1200 | 3 |
| 8 | 48 | 14 | 28 | 400 | 1600 | 4 |

Table A10: Multiple Price List Decision Problems

| Set | Decision | Front-End <br> Delay $(\boldsymbol{t})$ | Early <br> Later <br> $(\boldsymbol{k})$ | vs. <br> Delay | Early Max | Later Max | $\mathbf{1}+\mathbf{r}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 14 | 14 | 400 | 440 | 1.1 |  |
| 1 | 2 | 14 | 14 | 400 | 500 | 1.25 |  |
| 1 | 3 | 14 | 14 | 400 | 700 | 1.75 |  |
| 1 | 4 | 14 | 14 | 400 | 800 | 2 |  |
| 1 | 5 | 14 | 14 | 400 | 1200 | 3 |  |
| 1 | 6 | 14 | 14 | 400 | 1600 | 4 |  |
| 2 | 7 | 0 | 28 | 400 | 440 | 1.1 |  |
| 2 | 8 | 0 | 28 | 400 | 500 | 1.25 |  |
| 2 | 9 | 0 | 28 | 400 | 700 | 1.75 |  |
| 2 | 10 | 0 | 28 | 400 | 800 | 2 |  |
| 2 | 11 | 0 | 28 | 400 | 1200 | 3 |  |
| 2 | 12 | 0 | 28 | 400 | 1600 | 4 |  |
| 3 | 13 | 0 | 14 | 400 | 440 | 1.1 |  |
| 3 | 14 | 0 | 14 | 400 | 500 | 1.25 |  |
| 3 | 15 | 0 | 14 | 400 | 700 | 1.75 |  |
| 3 | 16 | 0 | 14 | 400 | 800 | 2 |  |
| 3 | 17 | 0 | 14 | 400 | 1200 | 3 |  |
| 3 | 18 | 0 | 14 | 400 | 1600 | 4 |  |
| 4 | 19 | 14 | 28 | 400 | 440 | 1.1 |  |
| 4 | 20 | 14 | 28 | 400 | 500 | 1.25 |  |
| 4 | 21 | 14 | 28 | 400 | 700 | 1.75 |  |
| 4 | 22 | 14 | 28 | 400 | 800 | 2 |  |
| 4 | 23 | 14 | 28 | 400 | 1200 | 3 |  |
| 4 | 24 | 14 | 28 | 400 | 1600 | 4 |  |

Figure A1: Timeline of Experimental Sessions

|  | Official Start Time: 8:00 AM |
| ---: | :--- |
| 8:00 | Subjects arrive at Busara Lab |
| 8:15 | Informed consent obtained |
| $8: 30$ | Experimental instructions read aloud |
| $8: 45$ | Practice rounds |
| $9: 00$ | Subjects complete experimental tasks |
| $9: 15$ | Subjects complete experimental tasks |
| $9: 30$ | Subjects complete experimental tasks |
| $9: 45$ | Subjects complete post-experiment survey |
|  | Subjects depart Busara Lab, payments sent |

Official Start Time: 10:00 AM

| $10: 00$ | Subjects arrive at Busara Lab |
| :--- | :--- |
| $10: 15$ | Informed consent obtained |
| $10: 30$ | Experimental instructions read aloud |
| 10:45 | Practice rounds |
| 11:00 | Subjects complete experimental tasks |
| $11: 15$ | Subjects complete experimental tasks |
| $11: 30$ | Subjects complete experimental tasks |
| $11: 45$ | Subjects complete post-experiment survey |
| $12: 00$ | Subjects depart Busara Lab, payments sent |

Figure A2: Fraction of Budget Allocated to Earlier Payment Date, by Treatment


Immediate payment treatment $X$ front-end delay $=0$
Immediate payment treatment $X$ front-end delay $>0-----$
End-of-day payment treatment $X$ front-end delay $=0$---------
End-of-day payment treatment X front-end delay $>0$ ———

Figure A3: Screenshot of a CTB Decision


Figure A4: Screenshot of an MPL Decision


## Appendix B: Experimental Instructions

Translated from Swahili. Yellow headings should not be read aloud. The payment time for this session is 10:00
AM for 8:00 AM sessions and 12:00 noon for 10:00 AM sessions ( 2 hours after the session starts). This time is denoted with XXXX below.

INTRODUCTION

This is a study of the different ways people make decisions about money.
Please listen carefully to the instructions that are being read to you.
Tell us if you have any questions or if there is anything that you do not understand.

## PAYMENTS

Each of you will receive two payments for participating in this study, an EARLIER payment and a LATER payment.

You will receive the EARLIER payment on an EARLIER date, and you will receive the LATER payment on a LATER date.
These two payments will be sent via M-Pesa by XXXX o'clock on each date

So, if you receive a payment today, it will be sent to you before you leave the Busara Center.

On the day that you are scheduled to receive one of your payments, we will send you a text message reminder that the payment is coming.

After you receive the text message, your payment will be sent via M-Pesa.

If you do not receive one of your payments, you should immediately contact the staff at Busara by flashing +254(0) 704851141

THE SHOW UP FEE

How much money will you be paid in this study?
Each of you will receive 300 shillings just for participating in the study.
You will receive this money in two equal amounts of 150 shillings.
These two payments of 150 shillings will be sent to you via M-Pesa on the two different dates (the EARLIER date
and the LATER date).
You'll receive your payments before XXXX o'clock on each date.

THE PAYMENT DECISION

In addition to the 300 shillings, you will be paid money based on one of your decisions in this study.

You will make 72 decisions in this study.

The study has two parts.

In the first part of the study you will make 48 decisions; in the second part you will make 24 decisions.

After you've made all 72 decisions, the computer will choose one of the decisions to be the payment decision.

We will use the payment decision to determine how much money you are paid in this study.

All 72 decisions have the same chance of being chosen as the payment decision.
So, you should make each decision as if it were the payment decision.
At the end of the study, your computer will choose the payment decision.


Both of these payments will be sent via M-Pesa.

So, you will make how many decisions?

LAB ASSISTANT: WAIT FOR A RESPONDENT TO ANSWER

## IF NO ONE RESPONDS, READ:

How many decisions will you make?

72, yes.
You will make 72 decisions, and one of them will decide how much you are paid for this study.

And, you will receive how many payments?

LAB ASSISTANT: PAUSE TO ALLOW SUBJECTS TO ANSWER

## IF NO ONE RESPONDS, READ:

How many payments will you receive?

Yes, you will receive two payments - one at an EARLIER date and one on a LATER date.

Both of these payments will be sent via M-Pesa.

Are there any questions so far?

OK, let's continue.

THE COMPUTER INTERFACE

LAB ASSISTANT: START 0_CPR_TestMouse.ztt PROGRAM. WALK AROUND TO CONFIRM THAT TEST MOUSE PROGRAM HAS LOADED ON EVERY SUBJECT'S SCREEN.

Now, we will learn to use a computer.
In this study, you should touch the "screen" using the fleshy part of your finger.
Please don't hit or push the computer.
If the computer doesn't respond the first time, touch again or raise your hand to be assisted.

On your screen there is a green box.
Please touch it now to see how the touch screen works.
It has changed to what colour?

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LAB ASSISTANT: PAUSE TO ALLOW SUBEJCTS TO ANSWER
IF THEY DO NOT ANSWER, READ:
Which color?
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Red.
Touch it again

After the box has disappeared there is an "OK" button.
We'll use this button several times in today's study.
To learn how to use it, please touch it.
The box should disappear when you touch it.

LAB ASSISTANT: WALK AROUND TO CONFIRM THAT THE OK BUTTON HAS DISAPPEARED FROM EVERY SUBJECT'S SCREEN.

You will see the screen "Please wait till the study continues."
You will see this screen many times in the study today.
Are there any questions on using the computer?
OK, let's start with the first part of the study

THE CTB DECISION PROBLEM

LAB ASSISTANT: START 1_CTB_Single_Example.ztt PROGRAM.

Does everyone see an "OK" button in the center of the screen?
Please do not touch the "OK" button until I tell you.

## LAB ASSISTANT: CONFIRM THAT THE PROGRAM HAS STARTED ON ALL COMPUTERS.

Now please click the "OK" button in the center of the screen to move to the next screen.

## LAB ASSISTANT: CONFIRM THAT EVERYONE HAS TOUCHED THE "OK" BUTTON

Please do not touch the "OK" button and move forward to the next screen until I tell you

In this part of the study, you will make 48 decisions about how to divide money between two times, one is on an EARLIER date and one is on a LATER date.

So, you will decide how much money you want to be sent to you at the EARLIER date and how much you want at the LATER date.

The easiest way to explain how you will make decisions in this study is to show you an example.

For each decision that you will make, you will see a screen like the one that you have in front of you now.

These two boxes show you when you will receive the two payments.

LAB ASSISTANT: WALK AROUND AND POINT OUT THE 2 BOXES ON EACH SUBJECT'S SCREEN.

The box on the left shows the date of the EARLIER payment, and the box on the right shows the date of the LATER payment.


The boxes also show you the amount you will receive on each date.
The box on the left shows the amount of money in the EARLIER payment, and the box on the right shows the amount of the LATER payment.

The amounts are in red.


For now, you can see that the two amounts are 0.

Next, notice a thick blue and green line on the center of the screen.
Touch anywhere on that thick line - what do you see?

LAB ASSISTANT: PAUSE TO LET SUBJECTS ANSWER.

## IF NO ONE ANSWERS, READ:

What do you see above the thick line?

You should see a black pointer above the thick line and two buttons at the bottom part of the screen.

Now you also see that the two amounts are not zero anymore.

LAB ASSISTANT: WALK AROUND AND POINT OUT THE AMOUNT ON EACH SUBJECT'S SCREEN.

You can change the position of the pointer - moving it from right to left, or left to right - by touching anywhere on the thick line.

You will see (in the two boxes) that you are moving money between the EARLIER payment and the LATER payment by touching different parts on the thick line.

Thus, touching more towards the right side moves more money to the LATER payment from the EARLIER payment.

Please try this yourself
Touch anywhere on this thick line.
As you touch more towards the left side, the amount of the EARLIER payment increases and the amount of the LATER payment decreases.

As you touch more towards the right side, the amount of the EARLIER payment decreases and the amount of the LATER payment increases.

LAB ASSISTANT: PAUSE FOR ONE MINUTE TO ALLOW SUBJECTS TO TRY THIS THEMSELVES LAB ASSISTANT: WALK AROUND AND POINT THIS OUT ON THE SCREEN OF EACH SUBJECT

Now please touch to the end of the line on the right side
LAB ASSISTANT: IF SUBJECTS DO NOT DO THIS, READ:
Truly - please touch the end of the line on the right side now.
What do you see?
How much is the EARLIER payment?

LAB ASSISTANT: PAUSE TO ALLOW SUBJECTS TO ANSWER

## IF NO ONE ANSWERS, READ:

The earlier payment is how much?

That is correct! The EARLIER payment is now 0 .
And how much is the LATER payment?

## LAB ASSISTANT: PAUSE TO ALLOW SUBJECTS TO ANSWER

That is correct! The LATER payment is now 600 KSH .

Are there any questions so far?

LAB ASSISTANT: PAUSE TO ANSWER ANY QUESTIONS.
LAB ASSISTANT: ALSO, WALK AROUND TO CONFIRM THAT EVERYONE HAS TOUCHED NEAR THE RIGHT END OF THE THICK LINE (THE LATER PAYMENT SHOULD BE VERY CLOSE TO 600).

OK, now please touch the "OK" button to go to the next screen.
Now please touch to the end of the line on the left side.
Now, how much is the EARLIER payment?

LAB ASSISTANT: PAUSE TO ALLOW SUBJECTS TO ANSWER
IF NO ONE ANSWERS, READ:
The earlier payment is how much?

Yes, the EARLIER payment is now 400 KSH .
And how much is the LATER payment?

## LAB ASSISTANT: PAUSE TO ALLOW SUBJECTS TO ANSWER

That is correct! The LATER payment is now 0 .
Touching more towards the right side moves more money to the LATER payment from the EARLIER payment.

OK, now please touch the "OK" button to go to the next screen.

In this part of the study, you will make 48 decisions.
Each decision will be different.
In the boxes on the screen, you will see the highest amounts of money that you can receive at the EARLIER and LATER dates in that decision.
The highest amounts of money will not be the same in all decisions.

We just saw that, in these examples, if we touch to the end of the line on the left side, the EARLIER payment is 400 KSH and the LATER payment is 0 .

In other words, 400 KSH is the highest amount that you can be paid on the EARLIER date in these examples.

We can see that the highest amount is indicated here.

LAB ASSISTANT: WALK AROUND AND POINT THIS OUT.

Also, we've just seen that if we touch to the end of the line on the right side, the EARLIER payment is 0 and the LATER payment is 600 KSH .

So, in these examples, the highest amount that you can be paid on the LATER date is 600 KSH .

We can see that the highest amount is indicated here.

## LAB ASSISTANT: WALK AROUND AND POINT THIS OUT.

If you touch in the middle of the line, you will see that the EARLIER and LATER payments are both bigger than 0 , but smaller than the highest amounts.

Now practice touching different parts of the line and changing the size of the payments.
I will walk around to make sure everyone understands.

LAB ASSISTANT: WALK AROUND THE ROOM AND MAKE SURE EVERYONE IS ABLE TO DO THIS, SHOWING THEM HOW IF THEY ARE CONFUSED.

OK, now please touch the "OK" button to go to the next screen.
In each of the decisions in this study, you will see a screen like this one.
You will decide how you want to divide the money that you will be paid between the EARLIER payment and the LATER payment.

You will indicate your decision by touching anywhere you want on the line.

In the boxes on the screen, you will see the highest amounts of money that you can receive at the EARLIER and LATER dates in that decision.
The highest amounts of money will not be the same in all decisions.
The highest amount that you can receive on the LATER date is always the same or more than the highest amount that you can receive on the EARLIER date.

Can someone tell me the highest payment you can recieve on the EARLIER date in this example?

LAB ASSISTANT: CALL ON SOMEONE TO GIVE YOU THE ANSWER. IF NO ONE ANSWERS, POINT OUT THE highest payment on one subject's screen as you repeat the question, and have that subject ANSWER OUT LOUD.

That is correct, you highest amount you can receive on the EARLIER date is 450 KSH in this example.

Now, can someone tell me can the highest payment you can recieve on the LATER date in this example?

LAB ASSISTANT: CALL ON SOMEONE TO GIVE YOU THE ANSWER. IF NO ONE ANSWERS, POINT OUT THE highest payment on one subject's screen as you repeat the question, and have that subject ANSWER OUT LOUD.

That is correct, the highest amount you can receive on the LATER date is 675 KSH in this example.

Remember: the highest amounts of money will not be the same in all decisions.
Are there any questions?

Today, you will make decisions in 8 different rounds. Each round will have 6 decisions.
The dates of the EARLIER and the LATER payments might be different in each of the rounds.

At the beginning of each round, we'll announce when the EARLIER and LATER payments will take place for all the decisions in that round.

This information is also shown in the boxes on your screen.

So, for example, in this decision:
Can someone tell me when you will receive the EARLIER payment?

LAB ASSISTANT: CALL ON SOMEONE TO GIVE YOU THE ANSWER. IF NO ONE ANSWERS, POINT OUT THE EARLIER DATE ON ONE SUBJECT'S SCREEN AS YOU REPEAT THE QUESTION, AND HAVE THAT SUBJECT ANSWER OUT LOUD.

## That is correct, you will receive the EARLIER payment on XXXX, by XXXX AM/PM

Now, can someone tell me when you will receive the LATER payment?

LAB ASSISTANT: CALL ON SOMEONE TO GIVE YOU THE ANSWER. IF NO ONE ANSWERS, POINT OUT THE LATER DATE ON ONE SUBJECT'S SCREEN AS YOU REPEAT THE QUESTION, AND HAVE THAT SUBJECT ANSWER OUT LOUD.

That is correct, you will receive the LATER payment on XXXX, by XXXX AM/PM

LAB ASSISTANT: POINT THESE DATES OUT ON THE SCREEN.

Within a round, the date of the EARLIER payment is the same for all decisions and the date of the LATER payment is the same for all decisions.

In this part of the study, you will make 48 decisions.
You will indicate your decision by touching anywhere you want on the line.
To confirm your decision, you will be touching the "OK" button.
After each round, you will see a screen with the words "Please wait for the study to continue".

As we said earlier, the computer will choose one of your 72 decisions to be the payment decision.

All 48 decisions in the first part of the study have the same chance of being chosen, so you should think carefully about each decision.

Are there any questions?

If not, touck the "OK" button now.

We will start with a practice round.
This practice round will be the same as the 8 later rounds.
In this practice round, you will make 6 decisions about how you want to divide money between and EARLIER date and a LATER date.
This round is just for practice; these decisions will not be the payment decision.

LAB ASSISTANT: START 2_CTB_Practice_Round.ztt PROGRAM.

Does everyone see an "OK" button in the center of the screen?
Please do not touch the "OK" button until I tell you.

LAB ASSISTANT: CONFIRM THAT THE PROGRAM HAS STARTED ON ALL COMPUTERS.

Remember: this round is just for practice; these decisions will not be the payment decision.
Practice Round: on your screen you should see two dates. The date of the earlier payment is UPDATE and the
date of the later payment is XXXX .

Now please touch the "OK" button in the center of the screen and start making your decisions.

Remember, you have 6 decisions to make in this practice round.
After making each decision, touch the "OK" button to move forward.

## AT THE END OF THE PRACTICE ROUND:

Now we are ready to start with the study.
Remember to touch the "OK" button after you make each decision

LAB ASSISTANT: START 3_CTB Single_Set1.ztt PROGRAM NOW.

Now touch "OK"
Round 1: on your screen you should see two dates. The date of the earlier payment is UPDATE and the date of
the later payment is XXXX .

Please touch the "OK" button and start making your decisions.
Remember, you have 6 decisions to make in each round.
After making each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 4_CTB Single_Set2.ztt PROGRAM NOW.

Now touch "OK"
Round 2: Now, the date of the earlier payment is XXXX and the date of the later payment is XXXX .
Please touch the "OK" button and start making your decision.
Remember, you have 6 decisions to make in each round.

After each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 5_CTB Single_Set3.ztt PROGRAM NOW.

Now touch "OK"
Round 3: Now, the date of the earlier payment is $X X X X$ and the date of the later payment is $X X X X$.
Please touch the "OK" button and start making your decision.
Remember, you have 6 decisions to make in each round.
After each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 6_CTB Single_Set4.ztt PROGRAM NOW.

Now touch "OK"
Round 4: The date of the earlier payment is $X X X X$ and the date of the later payment is $X X X X$.
Please touch the "OK" button and start making your decision.
Remember, you have 6 decisions to make in each round.
After each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 7_CTB Single_Set5.ztt PROGRAM NOW.

Now touch "OK"

Round 5: The date of the earlier payment is $X X X X$ and the date of the later payment is $X X X X$.
Please touch the "OK" button and start making your decision.
Remember, you have 6 decisions to make in each round.
After each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 8_CTB Single_Set6.ztt PROGRAM NOW.

Now touch "OK"
Round 6: The date of the earlier payment is $X X X X$ and the date of the later payment is $X X X X$.
Please touch the "OK" button and start making your decision.
Remember, you have 6 decisions to make in each round.
After each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 9_CTB Single_Set7.ztt PROGRAM NOW.

Now touch "OK"
Round 7: The date of the earlier payment is $X X X X$ and the date of the later payment is $X X X X$
Please touch the "OK" button and start making your decision.
Remember, you have 6 decisions to make in each round.
After each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 10_CTB Single_Set8.ztt PROGRAM NOW.

Now touch "OK"
Round 8: The date of the earlier payment is $X X X X$ and the date of the later payment is $X X X X$.
Please touch the "OK" button and start making your decision.
Remember, you have 6 decisions to make in each round.
After each decision, touch the "OK" button to move forward.

LAB ASSISTANT: START 11_CTB Single SUMMARY.ztt PROGRAM NOW
NOTE TO LAB ASSISTANT:
RESPONDENTS SCREENS WILL BE BLANK WHEN THIS SUMMARY PROGRAM IS RUNNING

NOTE TO LAB ASSISTANT: SHUT CTB ZTREE AND SAVE DATA

NOTE TO LAB ASSISTANT:
THE SCREEN OF THE RESPONDENTS WILL BE BLANK WHEN THE SUMMARY PROGRAM IS RUNNING

The computer will now choose one of your 72 decisions for payment.

You will first answer some questions. After the questions, we will tell you how much money you will receive and when you will receive your payment.


[^0]:    Standard deviations in square brackets; standard errors in parentheses.

