

## Online Appendix – For Online Publication Only

Table A.1: Estimated capital gains by region

	midline to endline 1 (4 months)	midline to endline 2 (18 months)	average monthly (baseline to endline 2)
Ntungamo	1.084	1.36	1.017
Ibanda	1.079	1.47	1.022
Kagadi	1.078	1.42	1.020
Overall	1.081	1.41	1.019

Table A.2: Characteristics of those selecting the high-risk v. low-risk lottery

	high-risk	N	low-risk	N	diff	p-value
monthly income <sub>m</sub>	399,435	282	370,822	766	28,613	0.27
monthly income/adult equiv <sub>m</sub>	123,014	282	126,607	766	-3,593	0.70
ln monthly income <sub>m</sub>	12	282	12	766	-.042	0.73
Δ ln monthly income <sub>m-b</sub>	.71	282	1.2	766	-.46**	0.02
monthly crop income <sub>m</sub>	100,060	282	71,240	766	28,820***	0.00
crop income/total income <sub>m</sub>	.3	282	.26	766	.047**	0.01
monthly crop income/adult equiv <sub>m</sub>	30,418	282	23,044	766	7,374***	0.00
ln monthly crop income <sub>m</sub>	9.7	282	9.1	766	.62**	0.03
Δ ln monthly crop income <sub>m-b</sub>	2.3	282	1.9	766	.41	0.21
weekly cons <sub>m</sub>	44,553	282	39,428	766	5,124***	0.01
weekly cons/adult equiv <sub>m</sub>	14,048	282	13,793	766	255	0.75
ln weekly cons <sub>m</sub>	10	282	10	766	.15**	0.02
Δ ln weekly cons <sub>m-b</sub>	.38	282	.23	766	.15**	0.02
bus assets <sub>m</sub>	827,879	282	577,060	766	250,820***	0.01
bus assets/wealth <sub>m</sub>	.29	282	.24	766	.054**	0.04
bus assets/adult equiv <sub>m</sub>	297,007	282	218,388	766	78,619*	0.06
ln bus assets <sub>m</sub>	5.2	282	4.2	766	.98**	0.03
Δ ln bus assets <sub>m-b</sub>	-.25	282	-.34	766	.094	0.80
savings <sub>m</sub>	322,755	282	275,849	766	46,907*	0.10
savings/adult equiv <sub>m</sub>	103,210	282	96,463	766	6,747	0.52
ln savings <sub>m</sub>	10	282	9.7	766	.31	0.36
Δ ln savings <sub>m-b</sub>	2	282	1.2	766	.8**	0.05
wealth (sav + bus assets) <sub>m</sub>	1,248,507	282	919,376	766	329,132***	0.01
wealth (savgs + bus assets)/adult equiv <sub>m</sub>	432,560	282	337,533	766	95,027*	0.06
ln wealth (savgs + bus assets) <sub>m</sub>	11	282	11	766	.62*	0.06
Δ ln wealth (savgs + bus assets) <sub>m-b</sub>	2.2	282	1.4	766	.78**	0.03
net wealth (sav + bus assets - cred) <sub>m</sub>	1,073,643	282	743,837	766	329,806***	0.01
net wealth (savgs + bus assets - cred)/adult equiv <sub>m</sub>	378,620	282	277,381	766	101,240**	0.05
ln net wealth (savgs + bus assets - cred) <sub>m</sub>	9.9	282	8.9	766	.98**	0.02
Δ ln net wealth (savgs + bus assets - cred) <sub>m-b</sub>	2.8	282	1.3	766	1.6***	0.00
wants credit to increase income <sub>b</sub> (0/1)	.84	282	.78	766	.061**	0.03
would invest >\$100 <sub>b</sub> (0/1)	.95	282	.91	766	.038**	0.04
would use credit for bus investment <sub>b</sub> (0/1)	.67	282	.6	766	.071**	0.04
would use credit for crop/lvstck investment <sub>b</sub> (0/1)	.053	282	.08	766	-.026	0.14
work hours per week <sub>m</sub>	78	282	77	766	.45	0.77
farmer <sub>m</sub> (0/1)	.71	282	.75	766	-.038	0.22
operated business <sub>m</sub> (0/1)	.59	282	.54	766	.052	0.13
female (0/1)	.42	282	.5	766	-.085**	0.01
respondent age	37	282	35	766	2.2***	0.01
HH head (0/1)	.66	282	.6	766	.056*	0.10
num people in HH <sub>b</sub>	5.5	282	5	766	.48***	0.00
num adult females <sub>b</sub>	1.1	282	1.1	766	-.004	0.92
num adult males <sub>b</sub>	1.5	282	1.4	766	.14*	0.07
num children <sub>b</sub>	2.8	282	2.5	766	.35***	0.00
would invest for 53% exp gain <sub>b</sub> (0/1)	.67	282	.64	766	.031	0.36
would invest for 105% exp gain <sub>b</sub> (0/1)	.7	282	.67	766	.03	0.36
would invest for 1% mthly interest <sub>b</sub> (0/1)	.24	282	.23	766	.0065	0.82
desired mthly interest to consider investing now <sub>b</sub>	16	282	16	766	.25	0.86
Observations	1048					

All quantities in UGX; Outliers top/bottom coded to 95th/5th percentile; Δ = midline - baseline

\*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < 0.01$

Table A.3: SUR with household budget constraint and disaggregated income - First endline

	C	S	I1-bus	I2-land <sup>†</sup>	I3-ag	Y1-bus	Y2-non-bus	B
won lottery (0/1)	106,974 (133,725)	50,118* (25,774)	255,523** (112,059)	-239,079 (207,029)	170,541** (66,771)	23,887 (15,932)	-24,080* (12,855)	-5,151 (17,781)
won large lottery (0/1)	-277,385 (274,840)	64,794 (52,999)	165,463 (230,375)	1,474,526*** (425,457)	-32,666 (137,169)	-276 (32,704)	13,782 (26,382)	-9,290 (36,539)
risk loving (0/1)	231,121 (173,191)	20,170 (32,282)	96,730 (141,375)	-578,809 (873,053)	33,563 (85,257)	18,167 (19,779)	-9,289 (15,890)	957 (22,097)
district fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Within-equation tests:</i>								
$\beta_1 + \beta_2$	-170,411	114,912	420,986	1,235,447	137,875	23,611	-10,299	-14,441
P-value: $\beta_1 + \beta_2 = 0$	.48	.013	.036	.0009	.25	.41	.66	.65
<i>Cross-equation tests:</i>								
Small grant	P-value:	Constraint	.53		95% CI:	ROI Bus	[-2.13, 5.97]	Mean: 1.92
Large grant	P-value:	Constraint	.05		95% CI:	ROI Bus	[-1.89, 3.74]	Mean: .92
Control mean if risk loving = 0	2,569,200	259,468	916,786	14,513,024	516,504	123,741	185,643	77,807
Control mean if risk loving = 1	2,864,632	271,428	1,208,440	16,118,755	729,386	147,763	169,939	85,377
R <sup>2</sup>	.32	.48	.53	.69	.32	.36	.47	.21
Observations	867	867	867	867	867	867	867	867

Standard errors in parentheses

C: home dur/cons; S: savings; I1: bus assets; I2: land val (cap gains); I3: ag assets/livestk; Y1: bus income; Y2: non-bus income; B: net credit

Land<sup>†</sup> refers to capital gains-adjusted land values, as in Equation 6

SUR with constraint  $C + S + I1 + I2 + I3 - Y1 - Y2 - B = \text{cash grant}$

All quantities in UGX; Outliers top/bottom coded to 95th/5th percentile

Controls include: base & mid levels of outcome, income, patience, gender, hh head, age, age<sup>2</sup>, num ad females, num ad males, num children

ROI estimated for business income and investment only: returns calculated from business income relative to business investment

\*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < 0.01$

Table A.4: **SUR with household budget constraint and disaggregated income - Second endline**

	C	S	I1-bus	I2-land <sup>†</sup>	I3-ag	Y1-bus	Y2-non-bus	B
won lottery (0/1)	22,245 (484,954)	38,607 (30,475)	240,412* (138,843)	-41,799 (498,428)	90,298 (70,240)	16,164 (16,883)	-7,596 (14,713)	-34,510 (25,685)
won large lottery (0/1)	-287,230 (996,920)	46,849 (62,665)	181,203 (285,441)	1,573,977 (1,024,704)	-157,991 (144,290)	1,797 (34,659)	-2,904 (30,195)	11,235 (52,781)
risk loving (0/1)	1,132,308 (708,758)	12,529 (38,746)	76,250 (178,019)	165,967 (1,085,947)	169,024* (90,055)	20,967 (21,037)	5,083 (18,209)	-57,256* (31,884)
district fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Within-equation tests:</i>								
$\beta_1 + \beta_2$	-264,985	85,456	421,615	1,532,178	-67,693	17,961	-10,500	-23,275
P-value: $\beta_1 + \beta_2 = 0$	.76	.12	.09	.59	.59	.55	.69	.61
<i>Cross-equation tests:</i>								
Small grant	P-value:	Constraint	.65		95% CI:	ROI Bus	[-2.13, 4.49]	Mean: 1.18
Large grant	P-value:	Constraint	.12		95% CI:	ROI Bus	[-1.89, 3.19]	Mean: .65
Control mean if risk loving = 0	2,569,200	259,468	916,786	14,513,024	516,504	115,072	151,632	77,807
Control mean if risk loving = 1	2,864,632	271,428	1,208,440	16,118,755	729,386	132,962	147,509	85,377
R <sup>2</sup>	.26	.28	.43	.5	.19	.26	.27	.083
Observations	867	867	867	867	867	867	867	867

Standard errors in parentheses

C: home dur/cons; S: savings; I1: bus assets; I2: land val (cap gains); I3: ag assets/livestk; Y1: bus income; Y2: non-bus income; B: net credit

Land<sup>†</sup> refers to capital gains-adjusted land values, as in Equation 6

SUR with constraint  $C + S + I1 + I2 + I3 - Y1 - Y2 - B = \text{cash grant}$

All quantities in UGX; Outliers top/bottom coded to 95th/5th percentile

Controls include: base & mid levels of outcome, income, patience, gender, hh head, age, age<sup>2</sup>, num ad females, num ad males, num children

ROI estimated for business income and investment only: returns calculated from business income relative to business investment

\*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < 0.01$

Table A.5: Grant effects on disaggregated components of the household budget constraint - First endline

	C: Consumption		I1: Business Investment		I3: Agricultural Investment	
	(1) wkly cons <sub>e1</sub>	(2) durables <sub>e1</sub>	(3) bus inventory <sub>e1</sub>	(4) bus assets, no stock <sub>e1</sub>	(5) livestock <sub>e1</sub>	(6) ag assets, exc livestock <sub>e1</sub>
won lottery (0/1)	-4,407 (6,625)	20,860 (16,949)	127,501*** (42,264)	68,322 (77,650)	152,667** (70,206)	-476 (1,155)
won large lottery (0/1)	10,635 (13,613)	-13,069 (34,908)	178,976** (86,850)	128,596 (159,383)	53,455 (144,186)	868 (2,373)
risk loving (0/1)	1,790 (8,211)	3,473 (21,060)	-1,097 (52,395)	30,151 (96,304)	700 (87,546)	1,166 (1,433)
district fe's	Yes	Yes	Yes	Yes	Yes	Yes
demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
$\beta_1 + \beta_2$	6,227	7,791	306,477	196,919	206,122	392
P-value: $\beta_1 + \beta_2 = 0$	.6	.8	.000057	.16	.1	.85
Control mean if risk loving = 0	116,552	248,341	285,471	547,412	493,951	21,684
Control mean if risk loving = 1	124,135	274,960	320,723	768,031	698,824	24,692
R <sup>2</sup>	.31	.34	.46	.5	.31	.27
Observations	867	867	867	867	867	867

Standard errors in parentheses

All outcomes are in UGX; Outliers top/bottom coded to 95th/5th percentile

Controls include: midline or baseline level of outcome, patience, gender, hh head, age, age<sup>2</sup>, num ad females, num ad males, num children\*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < 0.01$

Table A.6: Grant effects on disaggregated components of the household budget constraint - Second endline

	C: Consumption		I1: Business Investment		I3: Agricultural Investment	
	(1)	(2)	(3)	(4)	(5)	(6)
	wkly cons <sub>e2</sub>	durables <sub>e2</sub>	bus inventory <sub>e2</sub>	bus assets, no stock <sub>e2</sub>	livestock <sub>e2</sub>	ag assets, exc livestock <sub>e2</sub>
won lottery (0/1)	3,280 (7,680)	27,899 (18,842)	54,891 (43,873)	128,888 (119,300)	103,419 (73,906)	422 (1,279)
won large lottery (0/1)	11,823 (15,782)	44,974 (38,807)	19,487 (90,155)	391,959 (244,873)	-98,613 (151,786)	2,105 (2,629)
risk loving (0/1)	12,563 (9,519)	4,907 (23,413)	20,597 (54,389)	-12,863 (147,960)	154,675* (92,161)	1,381 (1,588)
district fe's	Yes	Yes	Yes	Yes	Yes	Yes
demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
$\beta_1 + \beta_2$	15,103	72,874	74,379	520,847	4,806	2,527
P-value: $\beta_1 + \beta_2 = 0$	.27	.032	.34	.015	.97	.27
Control mean if risk loving = 0	116,753	258,584	286,676	703,200	463,165	22,524
Control mean if risk loving = 1	135,646	293,265	361,808	918,528	778,157	26,223
R <sup>2</sup>	.28	.31	.37	.36	.18	.26
Observations	867	867	867	867	867	867

Standard errors in parentheses

All outcomes are in UGX; Outliers top/bottom coded to 95th/5th percentile

Controls include: midline or baseline level of outcome, patience, gender, hh head, age, age<sup>2</sup>, num ad females, num ad males, num children

\*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < 0.01$

Table A.7: Grant effects on time allocation - First endline

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	tot hrs <sub>e1</sub>	own bus hrs <sub>e1</sub>	oth hh bus hrs <sub>e1</sub>	hired bus hrs <sub>e1</sub>	farm hrs <sub>e1</sub>	wage hrs <sub>e1</sub>	chore hrs <sub>e1</sub>
won lottery (0/1)	4.1 (2.6)	3.4** (1.6)	2.2** (.95)	2.6 (1.7)	-.98 (1.3)	1.8 (1.9)	-1.6* (.85)
won large lottery (0/1)	-1.1 (5.4)	.18 (3.3)	1.2 (2)	-.14 (3.5)	-3.7 (2.6)	3.5 (4)	.18 (1.8)
risk loving (0/1)	2.4 (3.2)	3 (2)	1.1 (1.2)	5.3** (2.1)	.84 (1.6)	.41 (2.4)	-2.2** (1.1)
district fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes
demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$\beta_1 + \beta_2$	3	3.6	3.4	2.4	-4.7	5.3	-1.4
P-value: $\beta_1 + \beta_2 = 0$	.52	.21	.05	.42	.04	.13	.36
Control mean if risk loving = 0	101	19	3.7	7.6	29	33	19
Control mean if risk loving = 1	103	22	4.2	12	30	33	16
R <sup>2</sup>	.39	.54	.33	.13	.21	.33	.29
Observations	867	867	867	867	867	867	867

Standard errors in parentheses

All outcome quantities are in hours per week; Outliers top/bottom coded to 95th/5th percentile

Controls include: midline level of outcome, patience, gender, hh head, age, age<sup>2</sup>, num ad females, num ad males, num children

\*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < 0.01$

Table A.8: **Grant effects on time allocation - Second endline**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	tot hrs <sub>e2</sub>	own bus hrs <sub>e2</sub>	oth hh bus hrs <sub>e2</sub>	hired bus hrs <sub>e2</sub>	farm hrs <sub>e2</sub>	wage hrs <sub>e2</sub>	chore hrs <sub>e2</sub>
won lottery (0/1)	4.7 (3.1)	2.6 (2.1)	1.4 (1.1)	2.7* (1.4)	-1.1 (1.3)	2.9 (2)	-1.5 (.94)
won large lottery (0/1)	-7.6 (6.4)	-2.6 (4.3)	-.95 (2.3)	1.8 (2.9)	-.99 (2.6)	-4.1 (4.2)	.32 (1.9)
risk loving (0/1)	6.2 (3.9)	6.2** (2.6)	2.6* (1.4)	1.6 (1.7)	-2.1 (1.6)	3.2 (2.5)	-1.1 (1.2)
district fe's	Yes	Yes	Yes	Yes	Yes	Yes	Yes
demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$\beta_1 + \beta_2$	-2.9	.067	.45	4.5	-2.1	-1.2	-1.2
P-value: $\beta_1 + \beta_2 = 0$	.61	.99	.82	.073	.35	.74	.49
Control mean if risk loving = 0	101	19	3.9	5.5	29	31	19
Control mean if risk loving = 1	106	26	6.8	7	28	34	17
R <sup>2</sup>	.22	.33	.12	.057	.2	.25	.26
Observations	867	867	867	867	867	867	867

Standard errors in parentheses

All outcome quantities are in hours per week; Outliers top/bottom coded to 95th/5th percentile

Controls include: midline level of outcome, patience, gender, hh head, age, age<sup>2</sup>, num ad females, num ad males, num children

\*  $p < 0.1$ , \*\*  $p < .05$ , \*\*\*  $p < 0.01$



## Data Appendix – For Online Publication Only

All three survey rounds contained questions about household demographics (e.g., gender, age, educational level, whether or not head of household, number of female/male adults in the household, number of children in the household). Income is collected from detailed questions on subcategories, i.e. business, crop, livestock, and labor income, as well as direct questions on aggregate income and following up to see whether the participant viewed the aggregate or sum of disaggregates as a better predictor. Consumption is constructed from detailed questions on subcategories of regular spending (e.g., fish, meats, grains, fuel, airtime) over the period of a week plus questions on the frequency and amount of less regular expenses. In later survey rounds, we prime respondents with the income or consumption level that they reported at baseline or midline, and ask whether that level has increased, decreased, or stayed the same. If it has changed, we then ask for the new level. We find that this increases data quality by preventing drastically different interpretations of the same question over survey rounds. We also collect data on future expectations, and whether recent consumption/income was typical or atypical.

To construct business assets, we separately ask open ended questions about the level of business inventory and other non-inventory business assets. We again prime on previous responses in the same way that we did for income and consumption. In collecting data on household assets, we differentiate between household durables, such as radios, cell phones, televisions, and refrigerators, and land/home value. To collect information about household durables, we ask about the ownership and value of each type of durable. We separately ask respondents to report the value of their land, including any dwellings on the land. Agricultural assets include durables such as ploughs, axes, hammers, and spades, as well as livestock. We collect livestock at an aggregate level (current total value of livestock) and through disaggregated categories for each animal.

For savings, we ask questions about the stock of savings, but also changes over time, and we measure both aggregate savings, and savings by vehicle, including the formal savings account they received, other savings, and “cash in a secret place”. For credit, we record the lender amount, duration, and interest. We construct net wealth at midline as business assets plus savings minus credit. In the endline surveys, we retain a comparable measure of net wealth but also ask additional questions pertaining to household durables, land value, livestock, and other agricultural assets.<sup>34</sup>

In the endline surveys, we add questions about how the respondent has used the grant. We ask whether they have spent the grant, not yet spent the grant and plan to, or saved the grant (we also allow for a mix of these categories). If they have spent it, we ask how they have spent it, both through close-ended questions that decipher whether it was spent on investments or expenditures and through open-ended questions in which respondents list what they purchased with the grant. If they have not yet spent it but plan to, we ask on what.

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<sup>34</sup>These additional measures of wealth were left out of the midline survey in an effort to lessen the time burden on participants but were asked in both the baseline and endline surveys.