

Online Appendix

Pay Me Later: Savings Constraints and the Demand for Deferred Payments

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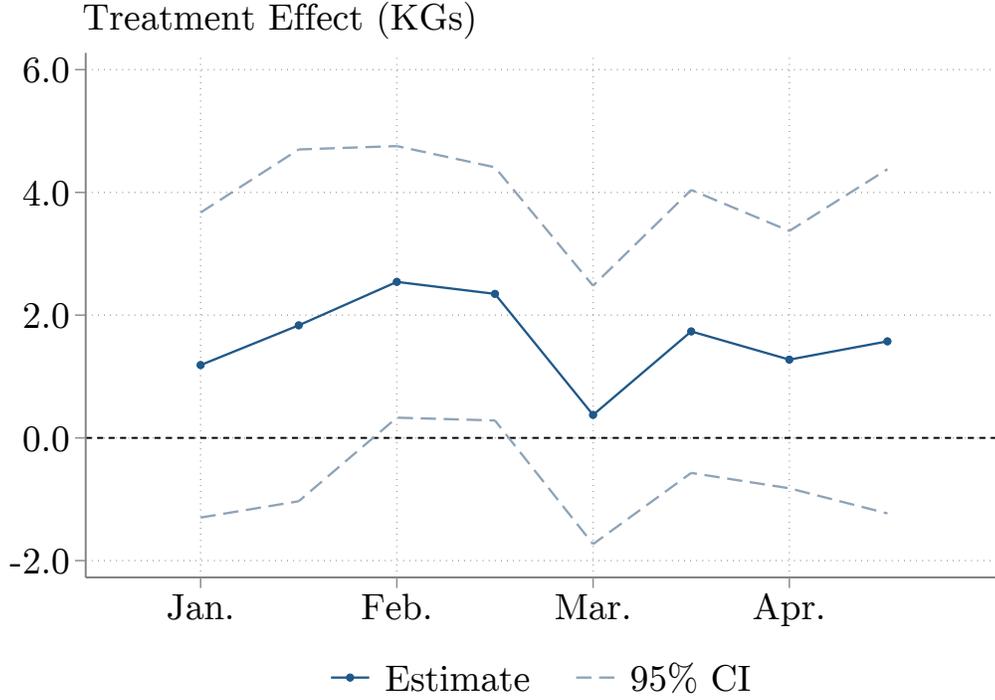
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Appendix A: Additional Figures and Tables

Figure A1: Labor Supply Effects Over Time

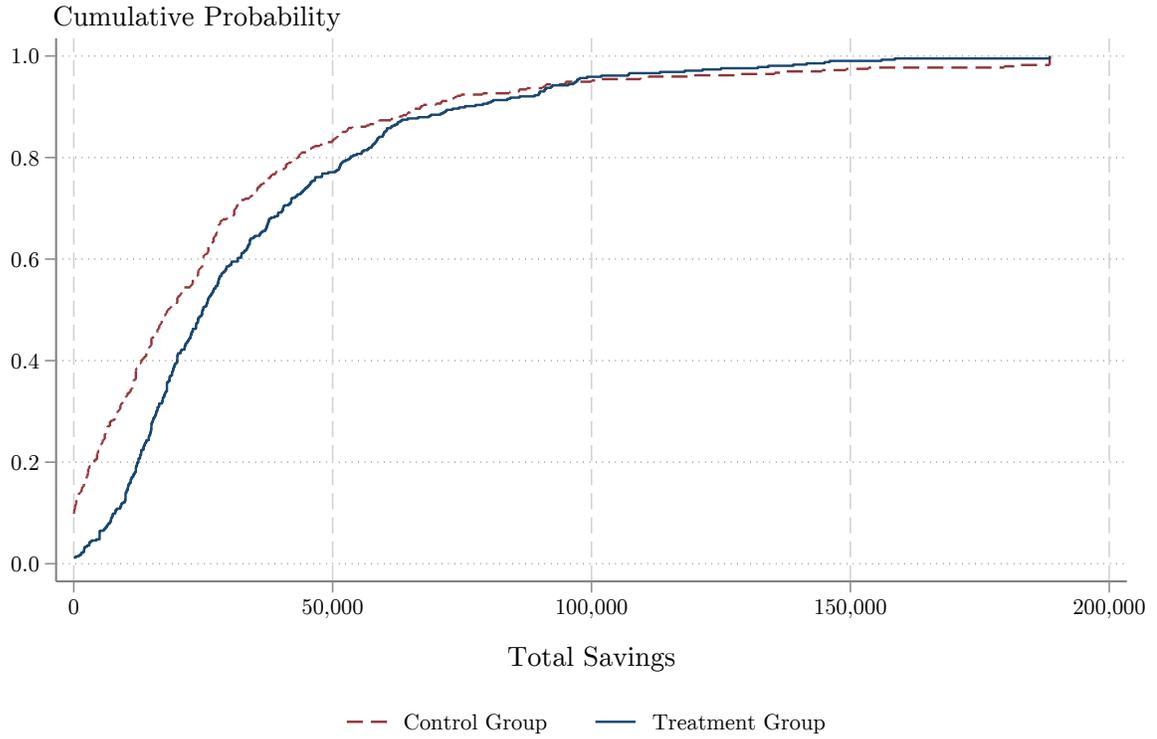


Notes: This figure shows treatment effects on kilograms (KGs) of tea plucked by for every two-week (fortnight) pay period. The specification that we use is:

$$y_{it} = \alpha + \delta_s + \gamma Z_i + y_{isb} + \sum_j \left(\beta_j (Treat_i \times Fortnight_j) + \lambda_j Fortnight_j \right) + \epsilon_{ist}$$

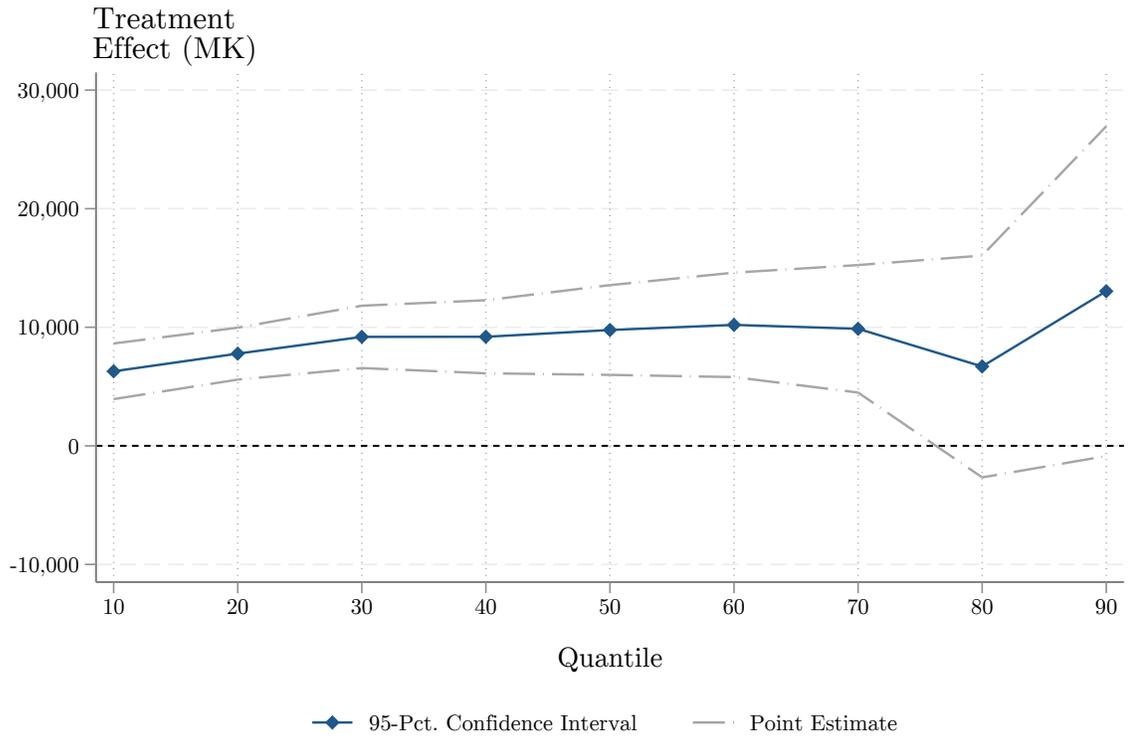
where $Fortnight_j$ is an indicator that day t falls in a particular two-week period. The sample used for the analysis includes all dates on which labor supply could plausibly have been affected by the treatment. Therefore, the estimation sample includes the first day that workers learned their treatment status (which was before deductions began) and ends on the day the treated workers received their deferred wage payments (which was three weeks after the deductions ended). The figure plots the estimates of β as solid dots in the connected series. The dashed lines illustrate the 95-percent confidence interval for the coefficients; standard errors are clustered by worker.

Figure A2: Impacts on the Distribution of Total Savings (Unresidualized)



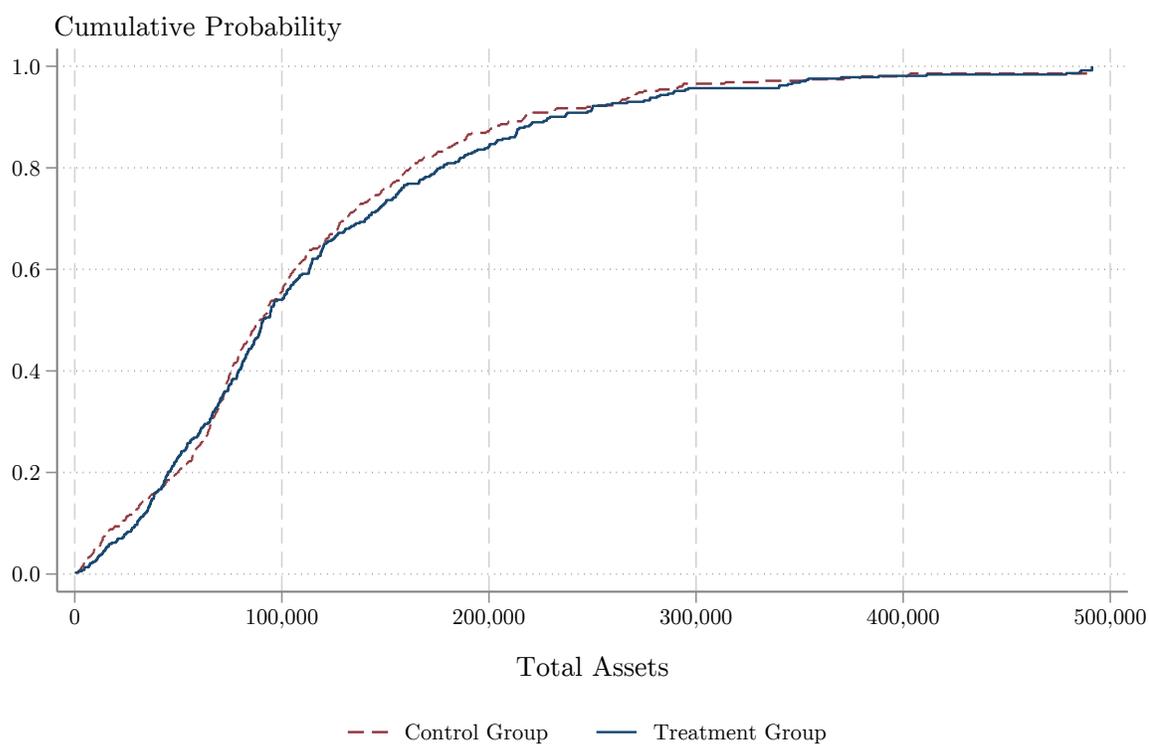
Notes: This figure plots cumulative density functions (CDFs) of total reported savings (MK). CDFs are shown separately for the treatment and control groups, shown by the solid blue and dashed red lines, respectively. Total savings is calculated using data from the second follow-up survey and administrative data. Kolmogorov-Smirnov test of equality of distributions: $D = 0.201$, p -value < 0.001 . Anderson-Darling test of equality of distributions: $A^2 = 0.054$, p -value < 0.001 .

Figure A3: Quantile Treatment Effects on Total Savings



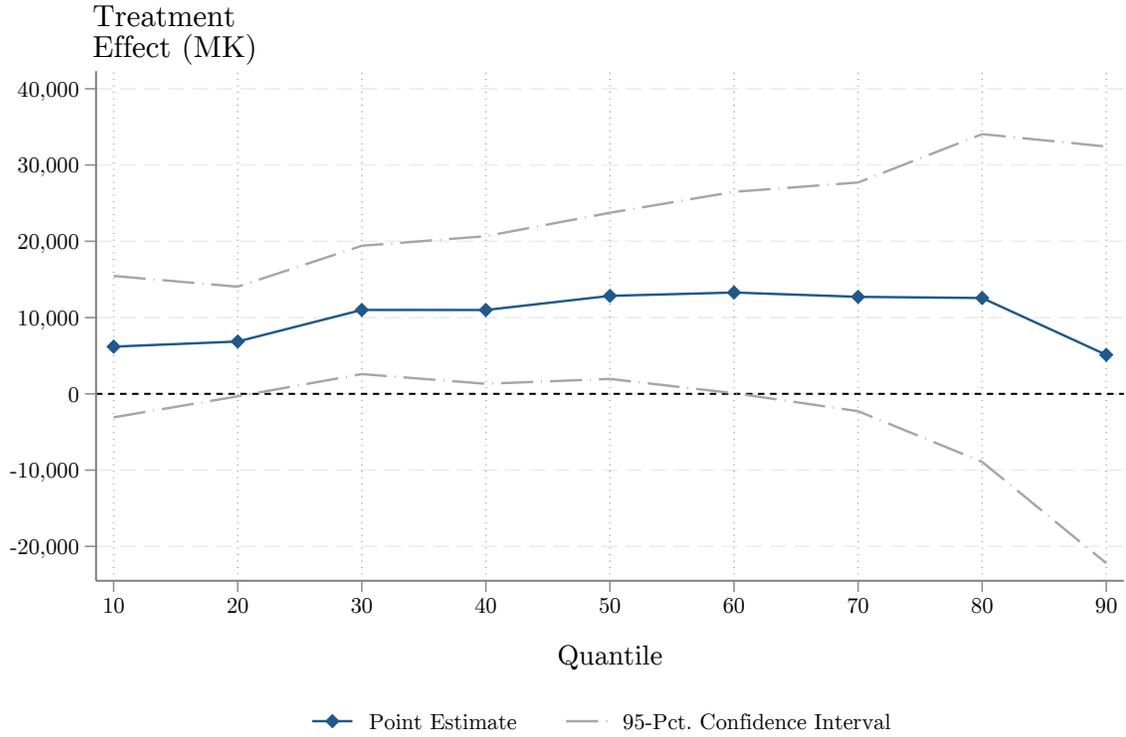
Notes: This figure plots estimated quantile treatment effects (QTEs) of the deferred wages scheme on total savings. Total savings is calculated using data from the second follow-up survey and administrative data. The specification used to estimate the QTEs uses the same set of controls listed in Equation 1

Figure A4: Impacts on the Distribution of Total Assets Four Months After Payout (Un-residualized)



Notes: This figure plots cumulative density functions (CDFs) of the total value of assets (MK). CDFs are shown separately for the treatment and control groups, shown by the solid blue and dashed red lines, respectively. Asset values are calculated using data from the fourth follow-up survey, which occurred four months after the lump-sum payout of the deferred wages scheme. Kolmogorov-Smirnov test of equality of distributions: $D = 0.046$, p -value = 0.839. Anderson-Darling test of equality of distributions: $A^2 = 0.004$, p -value = 0.290.

Figure A5: Quantile Treatment Effects on Total Assets Four Months After Payout



Notes: This figure plots estimated quantile treatment effects (QTEs) of the deferred wages scheme on total assets. The specification used to estimate the QTEs uses the same set of controls listed in Equation 1

Table A1: Baseline Descriptive Statistics and Balance

	(1)	(2)	(3)	(4)	(5)
	Control		Treatment		<i>p</i> -value
	Average	(S.D.)	Average	(S.D.)	(1)=(3)
<u>Panel A: Demographics</u>					
Female	0.35	(0.48)	0.35	(0.48)	0.952
Married	0.69	(0.46)	0.71	(0.46)	0.624
Age	39.5	(11.2)	39.5	(10.3)	0.986
Years of schooling	4.9	(3.6)	4.7	(3.4)	0.599
Number of children in household	2.5	(1.5)	2.7	(1.5)	0.055
<u>Panel B: Work and Income</u>					
Plucker	0.76	(0.43)	0.77	(0.42)	0.601
Share of days plucked tea, admin.	0.41	(0.28)	0.43	(0.28)	0.448
Average daily Output [kg], admin.	10.5	(10.0)	11.1	(10.2)	0.338
HH income past 14 days [MK], survey	18,668	(21,053)	19,425	(23,492)	0.651
<u>Panel C: Financial Behaviors</u>					
Total savings [MK]	33,919	(54,154)	30,236	(47,801)	0.246
Formal savings [MK]	1,553	(7,562)	1,071	(5,944)	0.270
Informal savings [MK]	32,054	(50,509)	29,101	(45,616)	0.319
Asset index (PCA)	0.000	(1.000)	-0.094	(1.018)	0.151
Total 14-day expenditures [MK]	16,737	(11,508)	16,163	(12,041)	0.415
Any purchase > 5k, past 30 days	0.01	(0.12)	0.03	(0.16)	0.241
Observations	432		438		
<i>p</i> -value of joint test					0.437

Notes: Sample includes 870 permanent full-time employees who wanted to enroll in the deferred wages scheme at the social network survey. Treatment-control differences and *p*-values estimated by running Equation 1 with the balance variable on the left-hand side. The joint balance test is conducted by putting the treatment indicator on the left-hand side of Equation 1 and adding all the balance variables to the right-hand side. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment.

Table A2: Predictors of Attrition by Treatment Status

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Outcome: Attrited [=1]									
	Survey Round 1	Survey Round 2	Survey Round 2	Survey Round 3	Survey Round 3	Survey Round 4	Survey Round 4	Survey Round 5	Survey Round 5	Survey Round 5
Treatment	-0.007 (0.013)	-0.007 (0.013)	-0.030 (0.018)	-0.030 (0.018)	0.002 (0.020)	0.002 (0.020)	-0.031 (0.026)	-0.031 (0.026)	-0.005 (0.029)	-0.004 (0.029)
Male	0.021 (0.021)	0.027 (0.039)	0.018 (0.024)	0.006 (0.042)	-0.025 (0.028)	-0.006 (0.047)	0.014 (0.039)	-0.013 (0.066)	-0.006 (0.043)	0.043 (0.069)
Married	0.001 (0.009)	-0.006 (0.017)	0.011 (0.012)	-0.000 (0.018)	0.013 (0.013)	0.014 (0.020)	0.017 (0.017)	0.029 (0.029)	0.019 (0.019)	-0.028 (0.030)
Age	0.001 (0.001)	0.000 (0.001)	0.002 (0.001)	0.002 (0.001)	0.002 (0.001)	-0.000 (0.002)	0.002 (0.001)	0.001 (0.002)	0.001 (0.002)	0.003 (0.002)
Years of schooling	0.002 (0.002)	-0.000 (0.004)	0.002 (0.003)	0.003 (0.005)	0.002 (0.004)	0.000 (0.005)	0.006 (0.004)	0.005 (0.006)	0.003 (0.005)	0.001 (0.007)
Number of children in household	0.005 (0.005)	0.012 (0.007)	0.002 (0.008)	0.004 (0.012)	-0.003 (0.008)	-0.001 (0.010)	-0.001 (0.009)	0.006 (0.014)	-0.016 (0.011)	-0.019 (0.015)
Plucker	0.005 (0.034)	0.014 (0.045)	-0.027 (0.042)	-0.074 (0.051)	0.008 (0.045)	-0.035 (0.057)	-0.006 (0.053)	-0.080 (0.075)	0.025 (0.059)	0.101 (0.078)
Share of days plucked tea, admin.	-0.107 (0.068)	-0.136 (0.078)	-0.193 (0.086)	-0.178 (0.094)	-0.188 (0.092)	-0.260 (0.118)	-0.027 (0.115)	-0.037 (0.156)	-0.255 (0.139)	-0.281 (0.186)
Average daily output [10 kg], admin.	0.001 (0.001)	0.002 (0.001)	0.002 (0.001)	0.002 (0.002)	0.003 (0.002)	0.007 (0.003)	-0.000 (0.002)	0.003 (0.003)	0.005 (0.003)	0.005 (0.004)
HH inc. past 14 days [1,000 MK], survey	0.001 (0.004)	0.006 (0.008)	-0.002 (0.005)	0.002 (0.009)	0.004 (0.005)	0.011 (0.009)	0.002 (0.007)	0.003 (0.011)	-0.006 (0.007)	-0.002 (0.010)
Formal savings [1,000 MK]	0.002 (0.012)	0.013 (0.019)	-0.028 (0.008)	-0.032 (0.010)	-0.031 (0.009)	-0.022 (0.012)	-0.034 (0.014)	-0.024 (0.021)	0.004 (0.025)	-0.022 (0.027)
Informal savings [1,000 MK]	-0.001 (0.001)	-0.001 (0.002)	0.003 (0.003)	0.003 (0.004)	-0.001 (0.003)	-0.004 (0.003)	0.003 (0.004)	-0.004 (0.004)	-0.001 (0.004)	-0.001 (0.005)
Asset index (PCA)	0.007 (0.007)	-0.000 (0.010)	0.010 (0.010)	-0.004 (0.016)	0.031 (0.013)	0.035 (0.019)	0.016 (0.015)	0.010 (0.023)	0.038 (0.018)	0.057 (0.026)
Total 14-day expenditures [1,000 MK]	-0.008 (0.004)	-0.014 (0.007)	-0.005 (0.007)	-0.013 (0.012)	-0.000 (0.009)	-0.004 (0.014)	0.002 (0.013)	0.012 (0.020)	0.011 (0.013)	0.006 (0.019)
Any purchase > 5k, past 30 days	-0.042 (0.013)	-0.045 (0.023)	-0.017 (0.061)	0.108 (0.160)	0.027 (0.077)	-0.064 (0.038)	-0.157 (0.024)	-0.146 (0.050)	-0.113 (0.071)	-0.218 (0.049)

(continued)

Table A2: Predictors of Attrition by Treatment Status (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Outcome: Attrited [=1]									
	Survey Round 1	Survey Round 2	Survey Round 3	Survey Round 4	Survey Round 5					
Treatment interacted with:										
Male		-0.015 (0.044)		0.017 (0.052)		-0.053 (0.059)		0.036 (0.083)		-0.067 (0.088)
Married		0.015 (0.019)		0.028 (0.024)		0.002 (0.025)		-0.017 (0.036)		0.08 (0.038)
Age		0.001 (0.001)		-0.001 (0.002)		0.003 (0.002)		0.002 (0.003)		-0.003 (0.003)
Years of schooling		0.004 (0.005)		-0.002 (0.006)		0.003 (0.007)		0.001 (0.009)		0.003 (0.010)
Number of children in household		-0.015 (0.010)		-0.004 (0.015)		-0.002 (0.015)		-0.014 (0.019)		0.003 (0.021)
Plucker		-0.013 (0.063)		0.093 (0.078)		0.082 (0.085)		0.126 (0.101)		-0.140 (0.115)
Share of days plucked tea, admin.		0.055 (0.115)		-0.021 (0.147)		0.179 (0.172)		0.051 (0.219)		0.078 (0.255)
Average daily output [10 kg], admin.		-0.002 (0.002)		-0.001 (0.002)		-0.009 (0.003)		-0.006 (0.004)		-0.001 (0.005)
HH inc. past 14 days [1000 MK], survey		-0.010 (0.008)		-0.009 (0.010)		-0.015 (0.011)		-0.004 (0.014)		-0.008 (0.014)
Formal savings [1000 MK]		-0.024 (0.020)		0.015 (0.017)		-0.019 (0.018)		-0.025 (0.028)		0.072 (0.050)
Informal savings [1000 MK]		0.000 (0.002)		0.000 (0.005)		0.006 (0.005)		0.016 (0.007)		-0.001 (0.007)
Asset index (PCA)		0.015 (0.014)		0.029 (0.020)		-0.005 (0.026)		0.012 (0.031)		-0.042 (0.035)
Total 14-day expenditures [1000 MK]		0.012 (0.009)		0.015 (0.014)		0.008 (0.018)		-0.021 (0.024)		0.015 (0.026)
Any purchase > 5k, past 30 days		0.009 (0.031)		-0.177 (0.163)		0.176 (0.123)		0.016 (0.062)		0.112 (0.112)
Observations	870	870	870	870	870	870	870	870	870	870
Adjusted R-squared	0.00	0.00	0.04	0.04	0.02	0.02	0.02	0.02	0.04	0.04
<i>p</i> -values for:										
Treatment indicator	0.603	0.601	0.094	0.091	0.930	0.921	0.229	0.231	0.865	0.889
Interactions		0.871		0.441		0.180		0.578		0.259
Treatment and interactions		0.907		0.382		0.229		0.473		0.316
Control-group Average	0.037	0.037	0.086	0.086	0.095	0.095	0.188	0.188	0.248	0.248

Notes: Sample includes 870 permanent full-time employees who wanted to enroll in the deferred wages scheme at the social network survey. Heteroskedasticity-robust standard errors in parentheses.

Table A3: Correlates of Enrollment

	(1)	(2)	(3)	(4)
	Sample: All persons contacted via information			
	Regression Results			
	Summary statistics		Dep. var.: Found for offer interview and wants to sign up [=1]	
	Average	S.D.	Coef.	(S.E.)
Demographics				
Female	0.38	0.48	-0.06	(0.02)
Age [10s of years]	3.95	1.14	0.00	(0.01)
Married	0.68	0.47	0.03	(0.02)
Economic status				
Worried about having enough food in off-season	0.73	0.44	-0.15	(0.03)
Expected income in typical pay period [10000 MK]	1.68	0.43	0.16	(0.03)
Savings group participation				
Currently participating	0.87	0.34	0.42	(0.02)
Participated in last main season	0.68	0.47	-0.02	(0.02)
Main savings goal for the next 12 months				
Build/improve house	0.34	0.47	0.08	(0.02)
Food	0.26	0.44	-0.10	(0.03)
School fees	0.15	0.36	-0.12	(0.03)
Household asset	0.12	0.33	0.11	(0.04)
Other	0.13	0.34	0.05	(0.03)
Biggest challenge for saving				
Temptation to spend	0.37	0.48	0.12	(0.02)
No money / Need to eat / Other spending needs	0.34	0.47	-0.18	(0.02)
Pressure from relatives or friends to give money	0.10	0.30	0.01	(0.04)
Health shocks	0.07	0.25	0.04	(0.05)
Fear of theft (from family or non-family)	0.04	0.20	0.07	(0.06)
Other	0.09	0.28	0.07	(0.04)
Observations	1,897 [†]		1,897 [†]	
Average of outcome variable			0.458	

Notes: This table presents correlations of eventual enrollment in the deferred wage scheme offered for the main intervention. Heteroskedasticity-robust standard errors in parentheses.

†: “Expected income” has one missing observation. We deal with the missing observation by creating an indicator for missing and setting the missing value equal to zero for the respondent.

Table A4: Impacts on Informal Savings by Category (February-April 2017)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Informal Savings										
	Financial Savings						Non-Financial Savings				
	Total Informal Savings	Total	Cash at Home or Hidden	Held by Someone Else for Safekeeping	Cash in Pockets	Savings Groups	Total	Business Inventory	Stored Food	Maize	Other Food
Panel A: Any Deposit in past 14 days [=1] (Pooled Follow-up 1 & 2)											
Treatment	-0.001 (0.001)	-0.072 (0.025)	-0.016 (0.019)	0.001 (0.009)	0.036 (0.018)	-0.063 (0.028)	0.000 (0.002)	0.001 (0.009)	0.000 (0.002)	0.021 (0.022)	0.000 (0.003)
Source:	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys
Observations	1,651	1,651	1,651	1,651	810	1,651	1,651	1,651	1,651	1,651	1,651
Adjusted R-squared	0.01	0.12	0.04	0.00	0.00	0.12	0.00	0.02	0.00	0.05	0.00
Control-group Average	1.000	0.698	0.201	0.030	0.051	0.597	0.999	0.027	0.999	0.732	0.996
Panel B: Savings balances at end of deduction period [MK] (Follow-up 2 Only)											
Treatment	-3,609 (1,926)	-1,340 (1,195)	-1,161 (717)	180 (199)	28 (103)	-328 (797)	-2,305 (1,116)	20 (426)	-2,258 (943)	-2,161 (838)	-236 (215)
Source:	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys	Surveys
Observations	810	810	810	810	810	810	810	810	810	810	810
Adjusted R-squared	0.15	0.05	0.04	0.01	0.00	0.03	0.21	0.01	0.24	0.22	0.10
Control-group Average	26,850	11,281	5,057	436	380	5,102	15,256	996	14,123	12,328	1,601

Notes: All measures of reported savings outcomes are recorded during the deductions period of the savings scheme, which ran from February to April 2017. Each outcome is an aggregate or detailed measure of reported savings. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment. Heteroskedasticity-robust standard errors, clustered by worker, in parentheses.

Table A5: Flow of Funds After Lump-Sum Payout

	(1)	(2)	(3)	(4)
	Total	Net savings	Net money	Net transfers
	expenditures	deposits	loaned	made
	[MK]	(excluding	[MK]	[MK]
		savings scheme)		
		[MK]		
<u>Panel A: Interviewed within 14 days of payout (recall period = days since payout)</u>				
Treatment	5,787	291	712	153
	(1,261)	(710)	(361)	(175)
Observations	342	342	342	342
Adjusted R-squared	0.11	0.02	-0.03	-0.01
Control-group Average	16,060	1,783	-305	9
<u>Panel B: Interviewed more than 14 days after payout (recall period = 14 days, fixed)</u>				
Treatment	-772	-151	640	-102
	(1,249)	(698)	(305)	(164)
Observations	446	446	446	446
Adjusted R-squared	0.04	0.01	0.00	-0.01
Control-group Average	17,598	738	-124	27

Notes: The lump sum payout of the workers' deferred wages occurred on May 6, 2017. The data for post-payout outcomes comes from the third follow-up survey. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment. Heteroskedasticity-robust standard errors in parentheses.

Table A6: Impacts on Short-term Expenditures Following Payout by Week

Treatment interactions	Interview dates	Recall period for questions (days)	Recall period includes day of payout?	N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Spending per day [MK]						Bulk purchases/day	
					Total	Food		Durables		Any > 5k [=1]	Sum of purchases > 5k [MK]	
						All	Storable	All	House improve- ments			
Treatment × week 1	May 10-13	4-7	Yes	179	973 (318)	573 (141)	509 (133)	536 (129)	218 (238)	221 (140)	0.016 (0.013)	525 (267)
Treatment × week 2	May 16-20	10-14	Yes	163	676 (174)	338 (77)	283 (68)	212 (61)	325 (138)	169 (85)	0.019 (0.007)	498 (160)
Treatment × week 3	May 22-27	14	No	218	-115 (133)	-77 (63)	-26 (53)	-18 (48)	-11 (86)	25 (45)	0.000 (0.005)	-67 (112)
Treatment × week 4	May 29 - June 3	14	No	115	-131 (183)	51 (99)	80 (77)	72 (66)	-148 (115)	-20 (60)	-0.001 (0.006)	-56 (124)
Treatment × week 5	June 5-10	14	No	115	128 (209)	142 (90)	130 (69)	106 (61)	-53 (157)	-25 (64)	0.008 (0.007)	112 (177)
Control-group Averages												
	Week 1				2,771	1,401	987	654	860	228	0.047	720
	Week 2				1,563	847	633	421	498	169	0.034	557
	Week 3				1,272	668	479	317	405	88	0.023	378
	Week 4				1,282	748	523	350	344	77	0.023	340
	Week 5				1,203	603	404	233	446	86	0.019	381
	Adjusted R-squared				0.23	0.25	0.18	0.13	0.06	0.02	0.05	0.06

Notes: All measures of expenditure outcomes are recorded in the period after the lump-sum payout of the savings scheme, which happened on May 6, 2017. This data comes from the third follow-up survey (FS3). Each outcome is an aggregate or detailed measure of a type of expenditure. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment. Heteroskedasticity-robust standard errors in parentheses.

Table A7: Downstream Effects on Asset Ownership—Full List of Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	PCA Indices								
	Assets and livestock								
	All, number owned	All, number purchased since baseline	Stored building materials, number owned	Improvements to house, any	Bought any asset [=1]	Made any improvements to house [=1]	Wall material improved since baseline [=1]	Started new house [=1]	Iron sheet roof [=1]
Panel A: Four Months After Initial Scheme Ended									
Treatment	0.164 (0.062)	-0.012 (0.073)	0.385 (0.100)	0.049 (0.077)	0.048 (0.036)	0.035 (0.032)	0.007 (0.017)	-0.000 (0.014)	0.007 (0.032)
<i>p</i> -value									
Naïve	0.008	0.865	0.000	0.529	0.190	0.265	0.675	0.975	0.832
FWER-corrected	0.070	0.995	0.001	0.975	0.742	0.823	0.994	0.995	0.995
Observations	723	723	723	723	723	723	723	723	723
Adjusted R-squared	0.39	0.06	0.04	0.02	0.04	0.01	0.02	-0.01	0.02
Control-Group Average	0.000	0.000	0.000	0.000	0.550	0.219	0.051	0.031	0.752
Control-Group S.D.	1.000	1.000	1.000	1.000	0.498	0.414	0.221	0.174	0.432
Panel B: Two Years After Initial Scheme, Nine Months After Repeated Schemes – ITT Estimates									
Treatment	0.063 (0.061)	0.062 (0.078)	0.092 (0.077)	0.128 (0.083)	0.021 (0.027)	0.038 (0.038)	0.010 (0.022)	0.031 (0.023)	0.077 (0.029)
<i>p</i> -value									
Naïve	0.302	0.431	0.230	0.124	0.436	0.315	0.643	0.179	0.007
FWER-corrected	0.803	0.808	0.760	0.587	0.808	0.803	0.808	0.708	0.041
Observations	659	661	661	662	662	662	662	662	662
Adjusted R-squared	0.40	0.11	0.07	0.00	0.03	0.01	0.01	0.00	0.05
Control-group Average	0.000	0.000	0.000	0.000	0.843	0.369	0.083	0.080	0.788
Control-group S.D.	1.000	1.000	1.000	1.000	0.364	0.483	0.276	0.272	0.410

Notes: Assets are measured four months (Panel A) or two years (Panel B) after the payout of the initial savings scheme, using survey data from the fourth and fifth follow-up surveys, respectively. The treatment group was re-treated twice between the four-month and the two-year follow-up, and there was then a nine-month delay before data collection. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment. Heteroskedasticity-robust standard errors in parentheses.

Table A8: Downstream Effects on Asset Ownership—Adjusting for Potential Spillovers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Medium-run follow-up:				Long-run follow-up:		
	Four months after payout of initial scheme				About two years after initial scheme		
	Asset ownership index	Asset ownership value [MK]	Stored building materials [MK]	Stored iron sheets [MK]	Asset ownership index	House improvement index	Iron sheet roof [=1]
Treatment	0.164 (0.062)	11,342 (5,682)	7,381 (2,379)	4,508 (1,856)	0.063 (0.062)	0.127 (0.083)	0.076 (0.029)
<i>p</i> -values							
Naïve	0.008	0.046	0.002	0.015	0.310	0.127	0.008
FWER-corr., in table	0.032	0.124	0.012	0.056	0.298	0.258	0.032
FWER-corr., extended [†]	0.068	—	—	—	0.810	0.597	0.046
# peers	-0.000 (0.019)	1,819 (2,101)	621 (741)	481 (565)	0.019 (0.019)	0.004 (0.025)	-0.003 (0.008)
# peers in treatment	-0.003 (0.027)	-1,387 (2,571)	510 (993)	433 (797)	-0.011 (0.026)	0.007 (0.039)	0.013 (0.012)
Observations	723	723	723	723	659	662	662
Adjusted R-squared	0.39	0.30	0.05	0.03	0.40	-0.01	0.05
Control-group Average	0.000	112,239	17,682	13,426	0.000	0.000	0.788
Control-group S.D.	1.000	87,969	29,129	23,552	1.000	1.000	0.410

Notes: Assets are measured four months (Panel A) or two years (Panel B) after the payout of the initial savings scheme, using survey data from the fourth and fifth follow-up surveys, respectively. The treatment group was re-treated twice between the four-month and the two-year followup, and there was then a nine-month delay before data collection. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment. Heteroskedasticity-robust standard errors in parentheses.

[†] Extended FWER correction uses a more-comprehensive set of assets from Appendix Table A7, not all of which appear in this table; see text for details

Table A9: Downstream Effects on Asset Ownership—Full List of Outcomes, Adjusting for Potential Spillovers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	PCA Indices								
	Assets and livestock								
	All, number owned	All, number purchased since baseline	Stored building materials, number owned	Improvements to house, any	Bought any asset [=1]	Made any improvements to house [=1]	Wall material improved since baseline [=1]	Started new house [=1]	Iron sheet roof [=1]
Panel A: Four Months After Initial Scheme Ended									
Treatment	0.164	-0.013	0.384	0.048	0.047	0.036	0.007	-0.000	0.007
	(0.062)	(0.073)	(0.100)	(0.077)	(0.036)	(0.032)	(0.017)	(0.014)	(0.032)
<i>p</i> -value									
Naïve	0.008	0.855	0.000	0.531	0.194	0.262	0.671	0.979	0.831
FWER-corrected	0.068	0.995	0.001	0.976	0.744	0.813	0.992	0.995	0.995
# peers	-0.000	0.015	0.024	0.035	-0.004	0.018	-0.002	-0.000	-0.007
	(0.019)	(0.019)	(0.034)	(0.022)	(0.011)	(0.009)	(0.005)	(0.004)	(0.008)
# peers in treatment	-0.003	0.009	0.004	-0.031	0.017	-0.024	-0.000	-0.002	0.005
	(0.027)	(0.030)	(0.043)	(0.030)	(0.016)	(0.013)	(0.007)	(0.006)	(0.013)
Observations	723	723	723	723	723	723	723	723	723
Adjusted R-squared	0.39	0.06	0.05	0.02	0.04	0.01	0.01	-0.02	0.02
Control-Group Average	0.000	0.000	0.000	0.000	0.550	0.219	0.0513	0.0313	0.752
Control-Group S.D.	1.000	1.000	1.000	1.000	0.498	0.414	0.221	0.174	0.432
Panel B: Two Years After Initial Scheme. Nine Months After Repeated Schemes – ITT Estimates									
Treatment	0.063	0.060	0.090	0.127	0.020	0.038	0.010	0.031	0.076
	(0.062)	(0.078)	(0.076)	(0.083)	(0.027)	(0.038)	(0.022)	(0.023)	(0.029)
<i>p</i> -value									
Naïve	0.310	0.447	0.239	0.127	0.464	0.321	0.644	0.183	0.008
FWER-corrected	0.810	0.824	0.778	0.597	0.824	0.810	0.824	0.722	0.046
# peers	0.019	0.008	0.027	0.004	-0.014	0.002	-0.004	0.006	-0.003
	(0.019)	(0.026)	(0.023)	(0.025)	(0.007)	(0.011)	(0.006)	(0.007)	(0.008)
# peers in treatment	-0.011	0.012	-0.011	0.007	0.031	0.002	0.005	-0.005	0.013
	(0.026)	(0.032)	(0.029)	(0.039)	(0.010)	(0.016)	(0.010)	(0.010)	(0.012)
Observations	659	661	661	662	662	662	662	662	662
Adjusted R-squared	0.40	0.11	0.08	0.00	0.04	0.01	0.01	0.00	0.05
Control-group Average	0.000	0.000	0.000	0.000	0.843	0.369	0.0831	0.0800	0.788
Control-group S.D.	1.000	1.000	1.000	1.000	0.364	0.483	0.276	0.272	0.410

Notes: Assets are measured four months (Panel A) or two years (Panel B) after the payout of the initial savings scheme, using survey data from the fourth and fifth follow-up surveys, respectively. The treatment group was re-treated twice between the four-month and the two-year followup, and there was then a nine-month delay before data collection. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment. Heteroskedasticity-robust standard errors in parentheses.

Table A10: Repeat Sign-up in Treatment Group

	(1) Obs.	(2) Average	(3) S.D.
<u>Panel A. Repeat take-up of savings scheme</u>			
Off-season 2017	372	0.812	0.391
Main season 2018	372	0.780	0.415
<u>Panel B. Threshold choices among 2017 off-season repeat takers</u>			
Minimum take-home pay [MK]	302	7,559	4,855
Maximum deduction [MK]	302	3,476	1,796
<u>Panel C. Threshold choices among 2018 main season repeat takers</u>			
Minimum take-home pay [MK]	290	8,453	5,565
Maximum deduction [MK]	290	4,195	2,156

Notes: This table reports repeat sign-up and savings choice statistics for the original treatment group of workers in the 2017 off-season and 2018 main agricultural season. Monetary values are in Malawi Kwacha (MK); \$1 USD equalled approximately MK 750 at the time of the experiment.

Table A11: Impact of Payout and Access Features on Take-up

	(1) Would Enroll [=1]
Smooth payout	-0.197 (0.052)
More access	-0.041 (0.052)
Observations	542
Adjusted R-squared	0.025
Control-group Average	0.559

Notes: This table reports an analysis of sign-up decisions for a sample of workers that were not part of the original savings scheme. These workers made choices to participate in a version of the savings scheme offered during the 2018 main agricultural season. Workers received offers to join either the original version of the deferred wages scheme or one of two modified versions. “Smooth payout” is an offer to participate in a version of the savings scheme where payout would occur as six separate payouts in two-week intervals at the end of the deduction period. “More access” is an offer to participate in a version of the savings scheme where workers could withdraw accumulated funds at any point during the deduction period. Heteroskedasticity-robust standard errors in parentheses.

Appendix B: Details of Information Sessions

To recruit the sample for our experiment, field staff visited divisions at the firm and conducted product information sessions with all workers who were present at work. Information sessions were typically held in small groups, with four participants in the average session. About 17 percent of sessions were conducted one-on-one. Most information sessions lasted between 10 and 30 minutes. The text below reproduces the guide that field staff used during the information sessions.

B1 Field Staff Guide for Information Sessions

1. Introduction:

- This is a new program with limited places.
- The Deferred Wages program is a new scheme under consideration by Lujeri.
- This would be an agreement between you and Lujeri.
- At this stage only some people can participate. In the future, the program may be expanded to include more workers.
- To be fair, we choose who participates by using a lottery among those people who state they are interested.
- We will explain the program to you now and we ask you if you're interested. If you are, then we will come back once more to tell you if you have been chosen and—if you were chosen—what your final deferred wages election is.

2. *Explain*—How does it work?

- If (and only if) you are interested AND you are selected for participation (which is determined by chance):
- You would be allowed to deduct a portion of your net pay each fortnight

- At the end of the main season—after 6 fortnights of deductions—you receive a single lump sum of all deductions at once, on the 7th payday.
- You set the minimum amount of your net pay that you want to receive each payday.
- You also set a maximum amount to be deducted each from each payday. This is the most money that would be delayed until the later lump sum payment.

3. *Explain*—Use the following examples when giving “Presentation Dialogue”:

- **Scenario 1: No deductions**

- Suppose you choose a minimum payout of MK 8,000—this means that every pay day you would get at least MK 8,000 before any part of your wages are deferred.
- Suppose you choose a maximum deduction of MK 3,000—this means that after your minimum payout of MK 8,000 is reached, part of your wages will get deducted, up to MK 3,000.
- Suppose after tax and other deductions your net pay for a fortnight is MK 6,500.
 - * In this example, since your net income is MK 6,500 and you chose MK 8,000 as your min payout and MK 13,000 as your maximum deduction, you would receive MK 6,500 in cash on the regular payday.
 - * MK 0 would get deferred until the final payout date.

- **Scenario 2: Partial deductions**

- Suppose you choose a minimum payout of MK 8,000—this means that every payday you would get at least MK 8,000 before any part of your wages are deferred.

- Suppose you choose a maximum deduction of MK 3,000—this means that after your minimum payout of MK 8,000 is reached, part of your wages will get deducted, up to MK 3,000.
- Suppose after tax and other deductions your net pay for a fortnight is MK 10,000.
 - * In this example, since your net income is MK 10,000 and you chose MK 8,000 as your min payout and MK 3,000 as your maximum deduction, you would receive MK 8,000 in cash on the regular payday.
 - * MK 2,000 would get deferred until the final payout date.

● **Scenario 3: Maximum deductions**

- Suppose you choose a minimum payout of MK 8,000—this means that every pay day you would get at least MK 8,000 before any part of your wages are deferred.
- Suppose you choose a maximum deduction of MK 3,000—this means that after your minimum payout of MK 8,000 is reached, part of your wages will get deducted, up to MK 3,000.
- Suppose after tax and other deductions your net pay for a fortnight is MK 15,000.
 - * In this example, since your net income is MK 15,000 and you chose MK 8,000 as your min payout and MK 3,000 as your maximum deduction, you would receive MK 12,000 in cash on the regular payday.
 - * MK 3,000 would get deferred until the final payout date.

4. *Explain*—When will the scheme start?

- Deductions would begin in late January or early February 2017, and they would stop at the end of the main season.
- The lump sum payout would happen in May or June 2017.

- The final dates will be chosen soon.
- We will come back to see you in January or February to let you know if you've been selected.

5. *Explain*—Emergency exit procedure:

- In the event of a serious emergency, participants can withdraw their deductions on a payday prior to the end of the main season – but they must follow the Emergency Exit Protocol
- Meets the division head clerk, present the reason for early withdrawal, and fill and signs “Emergency Exit Procedures Form.” The head clerk must notify the payroll office at least 7 days before the next payday.
- All these things must happen at least 7 days before the next payday.

6. *Explain*—It is important to remember that selection is done by lottery.

- If you are interested in participating in the Deferred Wages scheme, your name will be entered into a lottery. The program will not be available to everyone interested—only some people will have the opportunity to partake in Deferred Wages at this stage.
- Remember: we explain the program to you now and we ask you if you're interested. If you are, then we will come back once more to tell you if you have been chosen and—if you were chosen—we will ask what your final deferred wages election is.

7. FAQ:

- (a) Are taxes deducted from lump sum of deferred wages?

No, taxes will not be deducted from lump sum payments at the end of the deduction period. Taxes will be deducted each fortnight from full Basic Pay as usual. DW deductions will be applied to Net Pay. So deductions for DW are already NET of taxes and will not be taxed again.

- (b) On the lump sum payout date, can I receive my lump sum of deductions separately from my regular wages?

No, the lump sum of deferred wages will be given in the same envelope on the day of the lump sum payout in which regular wages will be paid in.

- (c) What if I have an emergency and I need to withdraw before the lump sum payout date?

Serious emergencies include termination of work contract, death, illness, illness or death of immediate family member, loss of shelter. In these situations, you may meet division head clerk, present the reason for early withdrawal and fill and sign "Emergency Exit Procedures form." The head clerk must notify the payroll office at least 7 days before the next payday. Deductions will stop at the start of the next working fortnight. Any previous deductions can only be collected at the following payday, provided that the necessary steps were completed at least 7 days before the payday. If you withdraw from the program, your deductions will be canceled for the rest of the season.

- (d) Can I decide to increase or decrease my deduction thresholds later?

Workers will have the option of increasing or decreasing their Deduction Thresholds once during the deduction period.

- (e) When will I find out if I've been chosen?

We will come back to see you in late January or early February to let you know if you've been selected.

- (f) Will I earn interest on my deductions? *No, interest will not be offered for this program.*

Appendix C: Details on Variable Definitions

C1 Measures of Peers

As detailed in Section II, we collected a social network survey to investigate potential spillover effects. Our approach is based on [Tjernstrom \(2017\)](#). The network questions were introduced as follows:

We want to ask about people you know at work. We want to know which of your co-workers are your good friends, and also other people you interact with financially. People you interact with financially are people who you give loans to or receive loans from, or give to or receive gifts or transfers from, or who you are in a savings group with.

We then showed people pictures of all their co-workers, defined as a member of the same gang at work. Respondents were asked “Which of these people are your good friends or people you interact with financially (loans/gifts/savings groups)?”

Next, they then were asked to select all the faces of people who were good friends and/or people they interacted with financially. For each person selected, they identified whether this was:

- A good friend?
- A friend? [but not a good friend]
- A relative?
- A neighbor?
- Other

They also were asked:

- Did you have a loan with this person?

- Did the person have a loan with you?
- Did you receive any gifts of any kind – small, large, cash or in-kind – from this person?
- Did you give any gifts of any kind – small, large, cash or in-kind – to this person?

Finally, there were follow-up questions for affirmative answers to each financial tie:

- What was the value of the (last) loan you had from this person?
- What was the value of the (last) loan you gave to this person?
- What was the value of the (last) transfer or gift you received from this person?
- What was the value of the (last) transfer or gift you gave to this person?

We define as a peer any co-worker selected by the respondent from the grid of faces, which indicates that the person was either a good friend or someone they interacted with financially.

C2 Measures of Self-Control Problems

In our supplementary experiment on the impact of manual deposits, we collected survey data on regret and past consumption choices as a proxy for whether the respondent had self-control problems. The survey asked respondents the following question:

Which of the following statements would best describe your situation? When you buy things:

- (A) You usually regret buying them afterwards because you did not think enough about the purchase beforehand and you bought the item on impulse;*
- (B) You sometimes regret buying them;*
- (C) You rarely regret buying them.*

In the sample ($N=186$), we found that 38 percent agreed with (A), 23 percent agreed with (B), and 39 percent agreed with (C). We code individuals who selected (A) as having “high” self-control problems, who selected (B) as having “medium” self-control problems, and who selected (C) as having “low” self control problems.

C3 Measures of Kin Taxes

In our supplementary experiment on the impact of manual deposits, we also collected survey data to create a proxy for kin taxes. Each respondent was asked the following question on their preferences over an unexpected gift:

Q1 If you had the choice between receiving an unexpected gift of MK 5,000 privately without anyone knowing that you received any money or receiving MK 8,000 in front of everybody at the office during payday, which one would you prefer?

(A) 5,000 privately;

(B) 8,000 publicly.

Based on their responses to this question, they were asked one of two follow-up questions. If they chose 5,000 privately, they were asked:

Q2-V1 If you had the choice between receiving an unexpected gift of MK 5,000 privately without anyone knowing that you received any money or receiving MK 10,000 in front of everybody at the office during payday, which one would you prefer?

(A) 5,000 privately;

(B) 10,000 publicly.

If they chose 8,000 publicly, they were asked:

Q2-V2 If you had the choice between receiving an unexpected gift of MK 5,000 privately without anyone knowing that you received any money or receiving MK 6,000 in front of everybody at the office during payday, which one would you prefer?

(A) 5,000 privately;

(B) 6,000 publicly.

These questions were motivated by evidence that publicly-received money is more likely to be taxed by kin (Goldberg, 2017) and that people are willing to forgo part of their earnings in order to hide money from kin (Jakiela and Ozier, 2016). On the initial question Q1, 114 respondents (61 percent) chose to receive MK 8,000 publicly and 72 (39 percent) chose to receive MK 5,000. For the 114 workers who were asked Q2-V1, 104 (91 percent) chose to receive MK 6,000 publicly and 10 (9 percent) chose to receive MK 5,000. For the 72 workers who were asked Q2-V2, 52 (72 percent) chose to receive MK 5,000 privately and 20 (28 percent) chose to receive MK 10,000 publicly. For the 114 respondents that received question Q2-V1, we code respondents as having “low” kin taxes if they chose to receive MK 6,000 publicly and “medium” kin taxes if they chose to receive MK 5,000 privately. For the 72 respondents that received Q2-V2, we code respondents as having “high” kin taxes if they chose MK 5,000 and “medium” kin taxes if they chose MK 10,000. Based on these rules, 28 percent, 16 percent and 56 percent of respondents had high, medium and low kin taxes, respectively.

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