

FIGURE 1. TIMELINE OF INTERVENTION AND DATA COLLECTION

TABLE 2—CREDIT

	Spandana (1)	Other MFI (2)	Any MFI (3)	Other bank (4)	Informal (5)	Total (6)	Ever late on payment? (7)	Number of cycles borrowed from an MFI (8)	Index of dependent variables (9)
<i>Panel A. Endline 1</i>									
<i>Credit access</i>									
Treated area	0.127*** (0.020)	-0.012 (0.024)	0.084*** (0.027)	0.003 (0.012)	-0.052** (0.021)	-0.023 (0.014)	-0.060** -0.026	0.084** (0.041)	0.106*** (0.0291)
Observations	6,811	6,657	6,811	6,811	6,811	6,862	6,475	6,811	6,862
Control mean	0.051	0.149	0.183	0.079	0.761	0.867	0.616	0.330	0.000
Hochberg-corrected <i>p</i> -value									0.000
<i>Loan amounts (in Rupees)</i>									
Treated area	1,334*** (230)	-94 (336)	1,286*** (439)	75 (2,163)	-1,069 (2,520)	2,856 (4,548)			
Observations	6,811	6,708	6,811	6,811	6,811	6,862			
Control mean	597	1,806	2,374	8,422	41,045	59,836			
<i>Panel B. Endline 2</i>									
<i>Credit access</i>									
Treated area	0.063*** (0.019)	-0.039 (0.026)	0.002 (0.029)	0.001 (0.009)	0.002 (0.018)	0.000 (0.010)	0.007 (0.021)	0.085 (0.067)	0.0288 (0.0253)
Observations	6,142	6,142	6,142	6,142	6,142	6,142	6,142	5,926	6,142
Control mean	0.111	0.268	0.331	0.073	0.603	0.904	0.598	0.724	0.000
Hochberg-corrected <i>p</i> -value									0.256
<i>Loan amounts (in Rupees)</i>									
Treated area	979*** (287)	-217 (628)	799 (669)	-1,181 (1,086)	158 (2,940)	2,554 (6,156)			
Observations	6,142	6,142	6,142	6,142	6,142	6,142			
Control mean	1,567	4,775	5,544	6,127	32,356	88,632			

Notes: The table presents the coefficient of a “treatment” dummy in a regression of each variable on treatment (with control variables listed in the text). Cluster-robust standard errors in parentheses. Results are weighted to account for oversampling of Spandana borrowers. Columns 1–6 under “Credit access” report the probability of having at least one loan from the source listed. The corresponding columns under “Loan amounts” report the loan amount (zero for nonborrowers). “Informal lender” includes moneylenders, loans from friends/family, and buying goods/services on credit. Number of loan cycles from an MFI is the maximum number of loan cycles borrowed with a single MFI, including the current loan (if any); number of cycles is zero for MFI never-borrowers. All monetary amounts in 2007 Rs. Column 9 presents the coefficient of a “treatment” dummy in a regression on treatment of an index of z -scores of the outcome variables in columns 1–8 (including both credit access and loan amounts) for each round following Kling, Liebman, and Katz (2007). p -values for this regression are reported using Hochberg’s step-up method to control the FWER across all index outcomes. See text for details.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

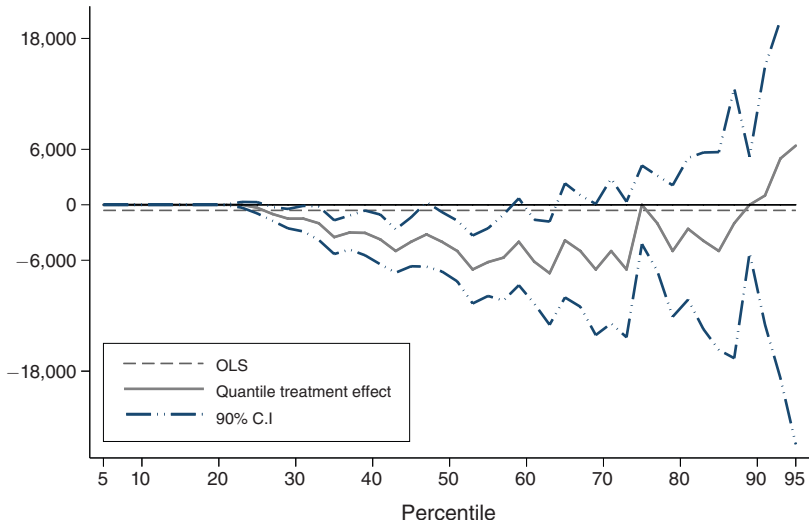


FIGURE 2. TREATMENT EFFECT ON INFORMAL BORROWING (*Endline 1*)

Notes: Informal borrowing: borrowing from moneylenders, friends and family, and buying goods on credit. Confidence intervals are cluster-bootstrapped at the neighborhood level. For quantiles 0.05 to 0.20, confidence intervals are not reported because the quantile does not vary sufficiently across neighborhoods to bootstrap standard errors. The point estimates are zero for these quantiles.

TABLE 3—SELF-EMPLOYMENT ACTIVITIES: REVENUES, ASSETS, AND PROFITS (*All households*)

	Assets (stock) (1)	Investment in last 12 months (2)	Expenses (3)	Profit (4)	Has a self- employment activity (5)	Number of self- employment activities (6)	Has started a business in the last 12 months (7)	Has closed a business in the last 12 months (8)	Index of dependent variables (9)
<i>Panel A. Endline 1</i>									
Treated area	598 (384)	391* (213)	255 (1,056)	354 (314)	0.0083 (0.0215)	0.018 (0.0380)	0.009 (0.006)	0.002 (0.008)	0.0357 (0.0188)
Observations	6,800	6,800	6,685	6,239	6,810	6,810	6,757	2,352	6,810
Control mean	2,498	280	4,055	745	0.349	0.503	0.047	0.037	0.000
Hochberg-corrected <i>p</i> -value									0.175
<i>Panel B. Endline 2</i>									
Treated area	1,261** (530)	-134 (207)	-530 (547)	542 (372)	0.023 (0.023)	0.045 (0.040)	-0.000 (0.010)	-0.000 (0.006)	0.0151 (0.0186)
Observations	6,142	6,142	6,116	6,090	6,142	6,142	6,142	6,142	6,142
Control mean	5,003	1,007	5,225	953	0.418	0.561	0.083	0.053	0.000
Hochberg-corrected <i>p</i> -value									>0.999

Notes: The table presents the coefficient of a “treatment” dummy in a regression of each variable on treatment (with control variables listed in the text). Cluster-robust standard errors in parentheses. Results are weighted to account for oversampling of Spandana borrowers. The outcome variables are set to zero when the household does not have a business. Business outcomes are aggregated at the household level when the households have more than one business. Information on closing a business in the year prior to the endline 1 survey was only collected for those who had a business as of endline 1. Observations with missing or inconsistent itemized sales or revenues are dropped in columns 3 and 4. See online Appendix 1 for description of the construction of the profits, sales, and inputs variables. All monetary amounts in 2007 Rs. Column 9 presents the coefficient of a “treatment” dummy in a regression on treatment of an index of *z*-scores of the outcome variables in columns 1–8, plus revenues, number of new businesses, and number of new female-run businesses (see online Appendix Table A6, columns 1–3) for each round following Kling, Liebman, and Katz (2007). *p*-values for this regression are reported using Hochberg’s step-up method to control the FWER across all index outcomes. See text for details.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE 3B—SELF-EMPLOYMENT ACTIVITIES: REVENUES, ASSETS AND PROFITS (*Households with old businesses*)

	Assets (stock) (1)	Investment in last 12 months (2)	Revenue (3)	Expenses (4)	Profit (5)	Employees (6)	Index of dependent variables (7)
<i>Panel A. Endline 1</i>							
Treated area	898 (1,063)	1,119 (698)	5,266 (3,720)	1,620 (3,257)	2,105* (1,100)	−0.05 (0.0824)	0.09 (0.0406)
Observations	2,083	2,083	1,955	2,020	1,624	2,088	2,088
Control mean	6,757	678	14,505	12,325	2,038	0.41	0.00
Hochberg-corrected <i>p</i> -value							0.057
<i>Panel B. Endline 2</i>							
Treated area	1,682 (1,412)	−948 (588)	343 (1,263)	−2,644* (1,491)	839 (945)	−0.12 (0.099)	−0.007 −0.0263
Observations	1,878	1,878	1,859	1,862	1,844	1,878	1,878
Control mean	10,301	2,292	12,564	12,418	1,948	0.46	0.00
Hochberg-corrected <i>p</i> -value							>0.999

Notes: The table presents the coefficient of a “treatment” dummy in a regression of each variable on treatment (with control variables listed in the text). Cluster-robust standard errors in parentheses. Results are weighted to account for oversampling of Spandana borrowers. The outcome variables are set to missing when the household does not have an old business (i.e., one started more than a year prior to the survey). Business outcomes are aggregated at the household level when households have more than one business. Observations with missing or inconsistent itemized sales or revenues are dropped in columns 3 to 5. See online Appendix 1 for description of the construction of the profits, sales, and inputs variables. All monetary amounts in 2007 Rs. Column 7 presents the coefficient of a “treatment” dummy in a regression on treatment of an index of *z*-scores of the outcome variables in columns 1–6 for each round following Kling, Liebman, and Katz (2007). *p*-values for this regression are reported using Hochberg’s step-up method to control the FWER across all index outcomes. See text for details.

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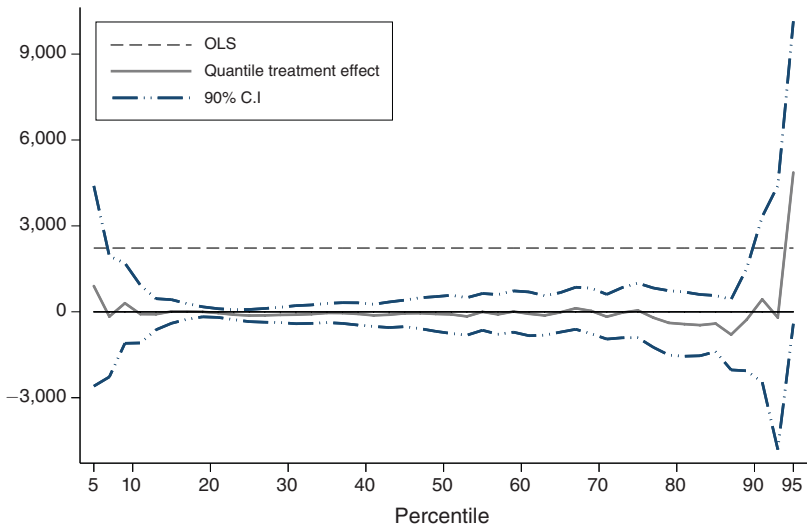


FIGURE 3. TREATMENT EFFECT ON BUSINESS PROFITS
(HHs who have an old business, endline 1)

Notes: Old businesses are businesses started at least one year before the survey. Confidence intervals are cluster-bootstrapped at the neighborhood level.

TABLE 1—INDIVIDUAL LEVEL SUMMARY STATISTICS AND BALANCE CHECK

	Sample mean SD	Coefficient (SE) on treatment dummies				Equality of means <i>p</i> -value	Obs.
		Safe Box	Lockbox	Health Pot	HSA		
<i>Demographic characteristics</i>							
Female	0.74 (0.44)	0.08 (0.08)	0.02 (0.08)	0.07 (0.08)	-0.07 (0.09)	0.29	771
Age	39.35 (13.12)	-4.99 (2.40)**	-3.18 (2.50)	-4.32 (2.36)*	-2.87 (2.51)	0.32	771
Married	0.78 (0.42)	-0.01 (0.09)	0.01 (0.06)	0.03 (0.07)	0.07 (0.06)	0.59	771
Number of children	3.84 (2.38)	-0.14 (0.30)	-0.62 (0.28)**	-0.29 (0.33)	-0.13 (0.27)	0.15	771
Years of education	6.27 (3.81)	-0.64 (0.61)	-0.42 (0.64)	1.06 (0.76)	-0.07 (0.56)	0.19	753
Can write in Swahili	0.73 (0.44)	-0.03 (0.06)	0.00 (0.07)	0.10 (0.06)	0.03 (0.06)	0.25	753
Cement floor at home	0.23 (0.42)	0.02 (0.09)	-0.02 (0.07)	0.13 (0.08)	0.04 (0.07)	0.24	750
Provider ¹	0.16 (0.37)	0.12 (0.05)**	0.04 (0.04)	0.08 (0.05)	0.04 (0.04)	0.13	771
Weekly income (Ksh)	602.28 (589.52)	-9.06 (83.54)	-84.32 (73.86)	120.18 (88.21)	13.60 (73.51)	0.23	715
<i>Health status and behavior</i>							
Probability children under five had malaria episode in past month	0.34 (0.42)	0.00 (0.07)	-0.01 (0.07)	-0.06 (0.08)	-0.05 (0.07)	0.85	398
Respondent had malaria in past month	0.20 (0.40)	0.03 (0.05)	0.00 (0.04)	0.03 (0.05)	-0.01 (0.04)	0.87	669
Treats drinking water with chlorine	0.52 (0.50)	0.02 (0.08)	-0.07 (0.08)	-0.01 (0.07)	-0.05 (0.06)	0.74	669
Number of bednets owned	1.69 (1.55)	-0.05 (0.25)	-0.39 (0.22)*	0.05 (0.31)	-0.01 (0.24)	0.15	674
<i>Time and risk preferences²</i>							
Somewhat patient	0.19 (0.39)	0.02 (0.05)	-0.01 (0.05)	0.00 (0.05)	-0.02 (0.04)	0.91	771
Present-biased	0.16 (0.37)	0.00 (0.05)	0.02 (0.05)	0.01 (0.05)	0.07 (0.05)	0.49	771
More patient now than in the future	0.18 (0.38)	0.00 (0.04)	0.04 (0.04)	0.01 (0.04)	-0.01 (0.04)	0.67	771
Maximal discount rate in present and in future	0.45 (0.50)	-0.06 (0.07)	-0.09 (0.07)	-0.05 (0.07)	-0.08 (0.06)	0.70	771
Amount invested in risky asset (out of 100 Ksh)	67.87 (23.47)	-0.90 (2.65)	-3.25 (2.68)	-0.26 (2.69)	0.62 (3.16)	0.59	771
Number of ROSCA memberships	1.61 (0.88)	0.17 (0.11)	-0.07 (0.11)	0.07 (0.14)	0.18 (0.13)	0.05*	771
<i>Why do you participate in ROSCAs? (Unprompted; more than one response possible)</i>							
It's easier to save in a group than on my own	0.94 (0.23)	-0.02 (0.03)	0.00 (0.02)	-0.01 (0.03)	-0.02 (0.03)	0.86	770
To have time to talk to my friends in the group/socialize	0.51 (0.50)	-0.05 (0.07)	0.07 (0.06)	0.01 (0.06)	0.01 (0.07)	0.30	770

Notes: Exchange rate was roughly 75 Ksh to US\$1 during the study period. Standard errors in parentheses, clustered at the ROSCA-level.

¹“Provider” is a dummy equal to 1 if the individual declared having given money to a relative or friend in the three months preceding the baseline survey, but not having asked for money from a relative or friend over the same time period.

²“Somewhat patient” is a dummy equal to 1 if the respondent prefers 55 Ksh (or less) in one month to 40 Ksh now. “Present-biased” is a dummy equal to 1 if the respondent exhibits a higher discount rate between today and one month from today than between one month from today and two months from today.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

TABLE 2—DESCRIPTIVE STATISTICS ON TAKE-UP OF EXPERIMENTAL SAVING TECHNOLOGIES

	After 6 months				After 12 months			
	Safe Box	Lockbox	Health Pot	HSA	Safe Box	Lockbox	Health Pot	HSA
<i>Panel A. Overall take-up</i>								
Currently uses the saving technology ^a	0.74	0.65	0.65	0.93	0.71	0.66	0.72	0.97
If uses technology: current balance (in Ksh)								
Median	200	200	N/A	71	200	248	N/A	90
Mean	634	321	N/A	145	311	573	N/A	192
SD	1,248	446	N/A	228	423	866	N/A	375
If uses: reports that technology “helped save more”	0.95	0.78	0.98	0.90	0.97	0.79	0.99	0.92
<i>Panel B. Safe Box and Lockbox only</i>								
Still has box	0.94	0.88			0.92	0.87		
If married: spouse knows about the box	0.78	0.79			0.93	0.90		
Ever called program officer to get <i>Lockbox</i> opened						0.31		
Refused key when offered at six-month follow-up		0.75						
<i>Panel C. Health Pot only</i>								
If participates: ever received health pot			0.30				0.58	
Received health product in kind			0.48				0.55	
Accompanied to buy health product at shop by ROSCA member			—				0.13	
Encouraged by others to use health pot funds to buy health product			—				0.36	
<i>Panel D. Health Savings Account only</i>								
<i>Deposits</i>								
Total number of deposits				4.54				6.50
Sum of all deposits (in Ksh)				148				222
<i>Withdrawals</i>								
If uses technology: ever withdrew				0.32				0.48
Mean withdrawal size, in Ksh				153				197
Purpose of withdrawal								
Health emergency				0.82				0.75
Funeral				0.00				0.04
To buy preventative health product				0.18				0.21
Observations	102	197	137	202	101	180	113	209

Notes: The data comes from unannounced home visits as well as ROSCA visits conducted after 6 months and 12 months. Data on balances in the boxes are based on direct observation by enumerators. Data on balances and withdrawals for the *HSA* group come from the *HSA* record book kept by treasurers for ROSCAs sampled for *HSA*. Exchange rate was roughly 75 Ksh to US\$1 during the study period.

^a Currently uses the technology = 1 if there is a nonzero amount in the box/*HSA*, or if contributes to health pot.

TABLE 3—AVERAGE IMPACTS OF SAVING TECHNOLOGIES AFTER 12 MONTHS

	Amount (in Ksh) spent on preventative health products since baseline		Could not afford full medical treatment for an illness in past three months		Reached health goal	
	(1)	(2)	(3)	(4)	(5)	(6)
(P_1) <i>Safe Box</i>	193.85 (82.11)**	169.47 (85.62)*	-0.10 (0.06)	-0.08 (0.06)	0.15 (0.06)**	0.14 (0.06)**
(P_2) <i>Lockbox</i>	64.84 (67.26)	57.54 (62.88)	-0.03 (0.06)	-0.03 (0.06)	-0.02 (0.06)	-0.03 (0.06)
(P_3) <i>Health Pot</i>	356.33 (103.89)***	331.00 (98.91)***	-0.03 (0.06)	-0.01 (0.06)	0.15 (0.07)**	0.13 (0.07)**
(P_4) <i>Health Savings Account</i>	33.70 (61.74)	18.42 (62.12)	-0.14 (0.06)**	-0.12 (0.06)*	0.04 (0.05)	0.04 (0.06)
Individual controls	No	Yes	No	Yes	No	Yes
ROSCA controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	771	771	771	771	771	771
R^2	0.06	0.1	0.08	0.11	0.04	0.05
Mean of dep. var. (control group)	257.83	257.83	0.31	0.31	0.34	0.34
SD of dep. var. (control group)	306.66	306.66	0.47	0.47	0.48	0.48
p -value for joint significance	0.01***	0.01***	0.18	0.25	0.01**	0.02**
<i>Implied impacts of products' features</i>						
Storage ($S = P_1$)	193.85 (82.11)**	169.47 (85.62)**	-0.10 (0.06)	-0.08 (0.06)	0.15 (0.06)**	0.14 (0.06)**
Earmarking for preventative health ($E_p = P_2 - P_1$)	-129.02 (81.39)	-111.93 (81.57)			-0.17 (0.06)***	-0.17 (0.06)***
Social commitment and credit ($C = P_3 - P_2$)	291.50 (108.6)***	273.46 (99.5)***			0.17 (0.06)***	0.17 (0.06)***
Earmarking for emergency treatment ($E_e = P_4 - P_1$)			-0.04 (0.06)	-0.04 (0.06)	-0.11 (0.06)	-0.10 (0.06)

Notes: Data from 12-month follow-up survey. OLS regressions. Columns 3–6: Linear probability model estimates. All regressions include an indicator variable for having been sampled for multiple treatments as well as ROSCA-level controls (monthly ROSCA contribution and the stratification dummies). Individual baseline controls in columns 2, 4, and 6 include gender, age, time preferences, marital status, whether the respondent is a net provider of loans/gifts in the community, and number of ROSCA memberships. Standard errors in parentheses, clustered at the ROSCA-level. Columns 1–2: Dependent variable is the total amount spent on preventative health products between baseline and endline survey conducted after 12 months. Columns 3–4: Dependent variable is a dummy equal to 1 if the respondent answered yes, at endline, to the question: “Was there a time in the last three months when you or somebody in your household needed a specific medicine or a specific treatment, but you didn’t have enough to purchase it?” Columns 5–6: Dummy equal to 1 if the health goal listed at baseline was reached.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

TABLE 6—LONG-TERM IMPACTS: USAGE OF SAVINGS TECHNOLOGIES AT 33 MONTHS

	After three years		
	Box ¹	Health Pot	HSA
Currently uses the saving technology ^a	0.39	0.48	0.53
If uses technology: current balance (in Ksh):			
Median	210	—	100
Mean	729	—	253
SD	1,660	—	443
If uses: reports that technology “helped save more”	0.69	0.97	0.84
<i>Safe Box and Lockbox</i>			
Still has box	0.65		
If married: spouse knows about the box	0.91		
Reports saving in the box for at least one specific goal	0.83		
Reports saving in the box for at least one goal that is health related	0.63		
If ever used box: total of all deposits:			
Proportion giving numerical estimate	0.71		
Median	1,850		
Mean	3,369		
SD	5,959		
Proportion reporting “a lot”	0.21		
If ever used box: total of all withdrawals:			
Proportion giving numerical estimate	0.71		
Median	1,500		
Mean	2,033		
SD	2,207		
Proportion reporting “a lot”	0.21		
<i>Health Pot</i>			
Participated in first health pot cycle		0.81	
If participated to first health pot cycle: received pot		0.95	
Received health product in kind		0.65	
<i>Health Savings only</i>			
If uses technology: ever withdrew			0.74
Mean withdrawal size, in Ksh			309
Purpose of withdrawal			
Health emergency			0.78
Funeral			0.03
To buy preventative health product			0.06
Other			0.16
Total number of observations	165	60	181

Notes: ^aCurrently uses the technology = 1 if there is a nonzero amount in the box/HSA, or if contributes to health pot.

¹We pool the Safe and Lockboxes because we gave the key back after 12 months (almost two years prior to this follow-up).