



Supporting Online Material for

Microcredit in Theory and Practice: Using Randomized Credit Scoring for Impact Evaluation

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This PDF file includes:

Tables S1 to S4

Other supplemental material for this manuscript includes the following:

Data set and do files

SOM Table S1. Orthogonality of Treatment to Applicant Characteristics and Attrition

Dependent Variable:	<i>I</i> = Loan Assigned		<i>I</i> = Surveyed		<i>I</i> = Loan Assigned		
	Covariates:		Covariates:		Covariates:		
	Simple	Simple	Simple	Simple + Interacted with Treatment	Simple	Simple	
sample:	frame	frame	frame	frame	surveyed=1	surveyed=1, female	surveyed=1, male
Mean (dependent variable)	0.80	0.70	0.69	0.69	0.80	0.81	0.75
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Male	0.058** (0.029)		0.077** (0.033)	0.008 (0.075)	0.0492 (0.0372)		
Marital status -- Married	-0.005 (0.037)		0.057 (0.042)	-0.019 (0.097)	-0.0181 (0.0491)	0.0348 (0.0560)	-0.224* (0.120)
Marital Status -- Widowed / separated	0.001 (0.046)		0.032 (0.051)	0.098 (0.122)	0.0444 (0.0575)	0.0846 (0.0624)	-0.0157 (0.246)
Number of dependents	-0.003 (0.007)		0.028*** (0.007)	0.001 (0.016)	-0.00247 (0.00753)	-0.00446 (0.00851)	0.0103 (0.0198)
Age of applicant	0.000 (0.001)		0.000 (0.001)	0.001 (0.003)	0.000512 (0.00152)	0.000513 (0.00156)	0.00590 (0.00541)
Education -- Some college	0.000 (0.025)		-0.022 (0.030)	-0.082 (0.075)	-0.0243 (0.0307)	-0.0157 (0.0331)	-0.0710 (0.0904)
Education -- Graduated high school	-0.022 (0.025)		0.006 (0.028)	-0.014 (0.071)	-0.00900 (0.0292)	-0.0130 (0.0307)	0.0195 (0.111)
Education -- Some high school or less	-0.017 (0.048)		0.070 (0.046)	0.178 (0.119)	0.0318 (0.0525)	0.0259 (0.0540)	-0.0261 (0.297)
Primary business location -- Poblacion	0.015 (0.028)		0.006 (0.031)	0.130 (0.081)	0.0379 (0.0335)	0.0271 (0.0364)	0.101 (0.0957)
Primary business location -- Public market	-0.011 (0.034)		-0.004 (0.039)	0.148 (0.097)	0.0157 (0.0414)	-0.0104 (0.0444)	0.133 (0.106)
Primary business property arrangement -- Lease	0.000 (0.040)		-0.186*** (0.049)	0.038 (0.126)	0.0191 (0.0550)	0.0108 (0.0564)	-0.0604 (0.150)
Primary business property arrangement -- Rent	-0.009 (0.027)		-0.151*** (0.030)	-0.086 (0.070)	-0.0258 (0.0331)	-0.0309 (0.0363)	0.0281 (0.0967)
Primary business type -- Small grocery/convenience store	-0.031 (0.028)		0.011 (0.031)	0.149* (0.072)	0.0111 (0.0331)	0.00794 (0.0355)	0.00447 (0.107)
Primary business type -- Wholesale	0.023 (0.043)		-0.097* (0.055)	-0.136 (0.138)	0.0195 (0.0608)	0.0317 (0.0631)	-0.0164 (0.231)
Primary business type -- Service	-0.001 (0.035)		-0.004 (0.041)	0.067 (0.099)	0.0301 (0.0432)	0.0215 (0.0487)	0.0900 (0.101)
Primary business type -- Manufacturing (not food processing)	-0.156* (0.080)		-0.053 (0.083)	-0.029 (0.174)	-0.176* (0.0998)	-0.231** (0.111)	0.0817 (0.217)
Primary business type -- Food vending	-0.028 (0.038)		0.007 (0.042)	0.108 (0.104)	-0.0123 (0.0471)	0.000275 (0.0497)	-0.0301 (0.164)
No regular employees in primary business	0.030 (0.031)		0.091** (0.036)	-0.063 (0.086)	0.0155 (0.0387)	0.0147 (0.0438)	-0.00344 (0.0955)
One regular employee in primary business	0.046 (0.038)		0.055 (0.046)	0.012 (0.118)	-0.00141 (0.0388)	0.0378 (0.0416)	-0.172 (0.118)
Log of years primary business in business	0.012 (0.014)		0.033** (0.015)	-0.090** (0.037)	-0.0206 (0.0165)	-0.0151 (0.0177)	-0.0591 (0.0533)
Log of net weekly cash flow	0.000 (0.013)		-0.016 (0.015)	0.003 (0.018)	-0.00273 (0.0152)	0.00135 (0.0161)	-0.00617 (0.0465)
Assigned to treatment group		0.0098 (0.0299)					
Interaction of all above covariates with treatment							
P-value on joint F-test: all RHS covariates listed above > 0?	0.85		0.00		0.82	0.90	0.55
P-value on joint F-test: all RHS covariates interaction terms > 0?				0.18			
Number of Observations	1598	1602	1598	1598	1113	948	165

OLS with Huber-White standard errors in parentheses -- * significant at 10%; ** significant at 5%; *** significant at 1%. Sample frame contains 1,601 marginal applicants eligible for the treatment (i.e., for loan approval). Other regressors (not shown) are the randomization conditions (credit score cut-offs), application month, application year, survey month, and survey year. 'Single' is the omitted marital status category. 'College graduate' is the omitted educational attainment variable. 'Barangay [neighborhood]' is the omitted primary business location variable. 'Own' is the omitted primary business property arrangement. 'Other retail' is the omitted primary business type variable.

SOM Table S2. Microcredit in Theory: Intention-to-Treat Effects of Credit Access on Widely Hypothesized Outcomes for high versus low approval probability borrowers

	Full Sample	Treatment Effect for Low Credit Score Applicants	Incremental Treatment Effect for High Credit Score Applicants	Treatment Effect for Intercept (Credit Score = 0)	Incremental Treatment Effect for each Point on a Credit Score
	(1)	(2a)	(2b)	(3a)	(3b)
Borrowing					
Number of loans from financial institutions in month before survey	0.094** (0.045) [0.359]	0.074 (0.094) [0.370]	0.025 (0.106) [0.354]	0.198 (0.393) [0.359]	-0.002 (0.008) [0.359]
Number of loans from friends, family, or moneylenders in month before survey	-0.011 (0.042) [0.286]	0.122 (0.095) [0.233]	-0.174* (0.106) [0.313]	0.271 (0.371) [0.286]	-0.006 (0.007) [0.286]
Repeat Borrowing					
Number of loans from FMB in year before survey from admin data	1.185*** (0.073) [0.122]	1.138*** (0.171) [0.027]	0.061 (0.186) [0.168]	0.792 (0.665) [0.122]	0.008 (0.013) [0.122]
Number of loans from FMB in month before survey from admin data	0.298*** (0.029) [0.040]	0.330*** (0.063) [0]	-0.043 (0.070) [0.060]	0.418 (0.256) [0.040]	-0.002 (0.005) [0.040]
Business Size					
Number of Businesses in Household	-0.102* (0.060) [1.378]	-0.365*** (0.118) [1.53]	0.344** (0.134) [1.30]	-1.533*** (0.445) [1.378]	0.029*** (0.009) [1.378]
Number of Paid Employees (not Including In-kind Contributions) in All Household Businesses	-0.273** (0.123) [0.878]	-0.369 (0.230) [0.795]	0.125 (0.273) [0.919]	-0.974 (1.202) [0.878]	0.014 (0.024) [0.878]
Subjective Well-Being					
Life Satisfaction (Scale: 1-4, 1=Not at All, 4=Very)	0.016 (0.063) [2.818]	-0.127 (0.132) [2.889]	0.187 (0.149) [2.784]	-0.526 (0.543) [2.818]	0.011 (0.011) [2.818]
Job Stress (Scale: -12 to 0 : 0 = no stress, -12 = always stressed)	-0.190 (0.227) [-6.725]	0.133 (0.451) [-7.014]	-0.423 (0.513) [-6.582]	2.162 (-0.423) [-6.725]	-0.047 (0.038) [-6.725]
Summary Index of above outcomes, optimism, calmness, worry, job satisfaction, decision power, & socio-economic status	-0.053* (0.030) [0.000]	-0.110* (0.063) [0.000]	0.074 (0.071) [0.000]	-0.176 (0.252) [0.000]	0.002 (0.005) [0.000]
	N=1,062-1,113	N(High score)=952-998		N=1,062-1,113	

Cells in columns (1) and (2a) present OLS results for the independent variable 'assigned a loan' (Huber-White standard errors in parentheses), with the control group mean for the dependent variable listed in that row in brackets. Cells in column 2b present estimates for the interaction between 'assigned a loan' and 'male'. Sample sizes range due to survey question nonresponse. The summary index is in standard deviation units of the average outcome of its components. All estimates control for probability of assignment to treatment and for timing of treatment assignment and survey measurement. Borrowing measures do not count the 1% of loans that are too big (>50,000 pesos) too big to be plausibly affected by the treatment.

SOM Table S3. Microcredit in Practice: Intention-to-Treat Effects on Household Risk Management for high versus low approval probability borrowers

	Full Sample	Treatment Effect for Low Credit Score Applicants	Incremental Treatment Effect for High Credit Score Applicants	Treatment Effect for Intercept (Credit Score = 0)	Incremental Treatment Effect for each Point on a Credit Score
	(1)	(2a)	(2b)	(3a)	(3b)
Financial Instruments					
Any Health Insurance	-0.035 (0.038) [0.658]	-0.089 (0.078) [0.671]	0.070 (0.089) [0.651]	-0.083 (0.320) [0.658]	0.001 (0.006) [0.658]
Any Other Type of Insurance	-0.079** (0.039) [0.486]	-0.137* (0.079) [0.479]	0.076 (0.090) [0.490]	-0.106 (0.333) [0.486]	0.001 (0.007) [0.486]
Any Savings in Household	0.002 (0.039) [0.591]	-0.017 (0.080) [0.556]	0.025 (0.091) [0.608]	0.234 (0.330) [0.591]	-0.005 (0.006) [0.591]
Family/Community Networks					
Trust that you would not be taken advantage of you (1= People would take advantage. 10= People would be fair)	-0.060 (0.082) [7.685]	-0.007 (0.176) [7.333]	-0.070 (0.199) [7.857]	0.480 (0.736) [7.685]	-0.011 (0.014) [7.685]
Trust in your neighborhood (-4 = No trust, -1 = Complete trust)	0.209** (0.090) [-2.215]	0.052 (0.180) [2.111]	0.205 (0.208) [2.265]	-1.339* (0.717) [-2.215]	0.031** (0.014) [-2.215]
Trust in people you know personally (-4 = No trust, -1 = Complete trust)	0.036 (0.093) [-1.895]	-0.174 (0.182) [-1.764]	0.275 (0.211) [-1.959]	-0.867 (0.800) [-1.895]	0.018 (0.016) [-1.895]
Trust in your business associates (-4 = No trust, -1 = Complete trust)	0.101 (0.089) [-2.184]	-0.048 (0.169) [2.014]	0.195 (0.199) [2.267]	0.045 (0.726) [-2.184]	0.001 (0.015) [-2.184]
Could get financial assistance from family or friends in an emergency.	0.010 (0.027) [0.883]	-0.031 (0.057) [0.891]	0.053 (0.064) [0.880]	-0.092 (0.229) [0.883]	0.002 (0.005) [0.883]
Could get 10,000 pesos-worth of financial assistance from family or friends in an emergency.	0.102*** (0.040) [0.370]	0.046 (0.082) [0.391]	0.074 (0.093) [0.361]	-0.074 (0.350) [0.370]	0.003 (0.007) [0.370]
Could get unlimited financial assistance from family or friends in an emergency.	0.090** (0.035) [0.254]	0.017 (0.074) [0.281]	0.096 (0.083) [0.241]	-0.289 (0.326) [0.254]	0.008 (0.006) [0.254]
	N=995-1,113	N(High score)=853-1,000		N=995-1,113	

Impacts on trust outcomes estimated using ordered probit. Cells in columns (1) and (2a) present OLS or ordered probit results for the independent variable 'assigned a loan' (Huber-White standard errors in parentheses), with the control group mean for the dependent variable listed in that row in brackets. Cells in column 2b present estimates for the interaction between 'assigned a loan' and 'male'. Sample sizes range due to survey question nonresponse. All estimates control for probability of assignment to treatment and for timing of treatment assignment and survey measurement.

SOM Table S4. Microcredit in Theory: Intention-to-Treat Effects of Credit Access on Widely Hypothesized Outcomes. Effects on business profits, gross sales and inventory

	Full Sample (1)	Females (2a)	Incremental Effect on Males (2b)
Business Size			
Number of Businesses in Household	-0.102* (0.060) [1.378]	-0.057 (0.062) [1.354]	-0.265 (0.181) [1.488]
Number of Paid Employees (not Including In-kind Contributions) in All Household Businesses	-0.273** (0.123) [0.878]	-0.214 (0.130) [0.801]	-0.272 (0.417) [1.220]
Log Gross sales for All Household Businesses	0.026 -0.102 [62,289]	0.085 -0.111 [59,386]	-0.296 -0.245 [74,921]
Log Inventory for All Household Businesses	0.093 -0.153 [54,457]	0.154 -0.164 [50,998]	-0.283 -0.45 [69,923]
Business profits			
Log Profits for All Household Businesses	0.067 (0.097) [15,558]	0.059 (0.110) [15,865]	0.085 (0.221) [14,211]
	N=866-1,113	N(Male)=125-165	

Cells in columns (1) and (2a) present OLS results for the independent variable 'assigned a loan' (Huber-White standard errors in parentheses), with the control group mean for the dependent variable listed in that row in brackets. Cells in column 2b present estimates for the interaction between 'assigned a loan' and 'male'. Sample sizes range due to survey question nonresponse. The summary index is in standard deviation units of the average outcome of its components. All estimates control for probability of assignment to treatment and for timing of treatment assignment and survey measurement. Borrowing measures do not count the 1% of loans that are too big (>50,000 pesos) to be plausibly affected by the treatment. Log of profits for all Household businesses drops the observations that report zero (37 obs) or negative values (8 obs). Log of gross sales for all Household businesses drops the observations that report zero sales (28 obs). Log of inventory for all Household businesses drops the observations that report zero inventory (98 obs). The means reported in brackets for Gross sales, Inventory and Profits are the levels, not logs.