A Meta-Analysis of the Take-Up and Utilization of Formal Savings Accounts

James C. Knowles

Abstract

Improving access to formal savings accounts is considered by many to be an effective intervention to help poor households accumulate assets and smooth their consumption over time. This report presents a meta-analysis of the results of 13 randomized controlled experiments with interventions (or treatment arms) designed to remove the pecuniary costs of opening and using a basic savings account. The analysis focuses on two effects: (1) the proportion of experimental participants who decide to open savings accounts offered under the experiments ("take up"), and (2) the proportion of participants who "actively use" the opened accounts (defined as making two or more deposits during the reporting period). The 13 experiments were conducted in a variety of country settings and involved participants with widely varying characteristics. Accordingly, random-effects estimates are preferred. Characteristics of the participants used as moderator variables in the analysis include gender, whether banked at baseline, and household income per capita. The results indicate that the random-effects point estimate of the mean proportion of experimental participants taking up a formal saving account with most transactions costs removed is 0.46, with a 95 percent confidence interval of 0.26 to 0.65. Among moderator variables, females are an estimated 38 percent more likely to take up the offer (p=0.171), with household income and being previously banked at baseline both negatively related to take up (p=0.62 and p=0.25 respectively). Among the six experiments reporting active use, the mean proportion is 0.35 (compared to a mean take-up proportion of 0.55 in the same six experiments), with a 95 percent confidence interval of 0.13 to 0.57.



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1. Introduction

This report presents a meta-analysis of randomized controlled experiments (RCTs) with interventions that facilitate access to basic savings accounts. The meta-analysis is limited to two outcomes: (1) whether participants decide to open savings accounts offered under the experiments ("take up"), and (2) whether they "actively use" the opened accounts. Although these are only initial intermediate outcomes expected in experiments making such offers, they are important both as first steps in the results chains and because the gap between take up and active use has been cited as an important issue in the literature (Karlan, Ratan, and Zinman 2014).

The experiments meta-analyzed in this report are a small subset of a larger and rapidly growing literature on savings experiments. The experiments described in this literature cover a wide range of interventions, including: (1) removal of the fixed costs of opening a savings account (the focus of this report), (2) incentives beyond the removal of fixed costs to encourage the opening of an account and/or its utilization (e.g., incentives that exceed transactions costs, lottery prizes), and (3) material and/or behavioral incentives to encourage saving in accounts that are opened in connection with the experiment (e.g., subsidized interest rates, commitments, peer group pressure, reminders). The full range of possible outcomes from these interventions include: (1) initial take-up and subsequent utilization (the focus of this report), (2) the savings deposited in the formal savings accounts opened in connection with the experiment, (3) total savings (reflecting the possibility that funds may be shifted from other savings instruments to the experimental savings accounts), and (4) a wide range of possible downstream outcomes that might be affected by increased savings, including investment in farm, business or personal assets, farm or business income, and other indicators of general welfare (e.g., household income and consumption, satisfaction with life, empowerment).

Given the wide range of possible interventions and outcomes, it is challenging to identify a sufficient number of experiments that report on comparable interventions and outcomes. The analysis in this report focuses narrowly on experiments with interventions that are designed to address the pecuniary transactions costs related to opening and using a savings account. These pecuniary costs vary across settings, depending partly on local bank practices and government regulations, but they include some or all of the following: (1) initial deposits required to open an account, (2) minimum cash balances required to keep an account open, (3) periodic (usually monthly) account maintenance charges, and (4) charges for making deposits and/or withdrawals. In some settings, pecuniary transactions costs also include significant time and related costs (e.g., transportation, ID photos) to complete the required paper work to open an account and the time and transportation costs involved in using an account (although many savings experiments try to minimize these costs by limiting the sample of participants to those with convenient access to banking services).

Appendix 1 lists the 13 experiments (reported in 11 studies) that are meta-analyzed in this report. These experiments all have one or more treatment arms offering access to a basic no-frills savings account with minimal transaction costs. Appendix 2 lists 36 studies reporting on savings experiments that are not included because their experimental treatment arms are

limited to interventions that: (1) do not involve opening individual savings accounts (e.g., group savings schemes, lock boxes), (2) impose restrictions on the use of funds deposited in the account (e.g., savings accounts with hard commitments, retirement accounts, special purpose accounts), (3) provide financial incentives to open accounts that exceed transactions costs, (4) provide incentives linked to account balances (e.g., subsidized interest rates), or that (5) provide enhanced "behavioral" features (e.g., commitments to deposit or not to withdraw, reminders, labeling of accounts for certain purposes, peer reinforcement, financial literacy training).

For the purposes of this meta-analysis, account "take up" is considered to occur if the account has received at least one deposit (including any required opening deposit). An account is considered to have been "actively used" if two or more deposits (including any required opening deposit) have been made during the reporting period (typically 6 months to one year). All 13 of the experiments included in the meta-analysis report account take-up, whereas only 6 of the 13 experiments report whether accounts were actively used.

In addition to these two effects, consideration was also given to the possibility of including meta-analyses of the number of account deposits or number of transactions (i.e., the sum of deposits and withdrawals during the reporting period) as an additional indicator of active use. However, only 4 of the 13 experiments reported the number of deposits and withdrawals during reporting period, while a fifth reported the total number of transactions. Lastly, the meta-analysis also examines the correlation between the account take up and the following moderator (independent) variables: (1) the proportion of sample participants who are female, (2) the average per capita income of sample participants, and (3) the proportion of sample participants who were banked at baseline.

2. Methods

The search procedure used in this report to identify relevant saving experiments does not adhere to the usual protocols for meta-analyses, which involve developing clear and transparent search procedures to ensure that all relevant experiments are included (to prevent bias) and to permit replication of the analysis by a third party. Instead, the search procedure used can be perhaps most generously described as "iterative." The author was already familiar with several savings studies from previous work, and the review process began with those studies. Google searches were then conducted for apparently relevant studies cited or topics discussed in each reviewed study. Two significant obstacles were encountered during the search process: (1) multiple reports prepared from the same experiment (e.g., reports focusing on different treatment arms, follow-up experiments limited to a single treatment arm, additional rounds of data collection), and (2) multiple versions of the same report, in some cases with different titles and conflicting data. In the case of multiple versions of the same report, information from the most recent version was used in the meta-analysis. In addition, it was observed that there is an unusually long delay between initial versions of reports and publication. For example, only 2 of the 13 included experiments have been published. All of these features of the literature make it more difficult to identify relevant experiments using standard search procedures. No attempts have yet been made to contact authors for additional information, although this may be done in the

future. In addition, a more systematic search procedure is also planned, if only to assess whether any relevant experiments have been omitted.

The author alone was involved in coding the experiments included in the analysis. This task was more challenging than expected due to the considerable variation in the reporting of experimental effects. Some experiments used regression models to estimate effects, with treatments typically represented by dummy variables and controls, by the omitted categories. However, several of the experiments with samples restricted to unbanked households or unbanked individuals at baseline reported effects only for the treated portion of the sample, the implicit assumption being that the values for the control sample are zero.¹ In such cases, estimated standard errors were usually not reported and had to be calculated using the standard formula for calculating the sampling error of a sample proportion (i.e., $se_p=sqrt(p*[1-p]/n)$, where p is the sample proportion and n is the sample size). In the case of cluster-randomized experiments, however, estimates of standard errors adjusted for the effects of sample clustering were obtained from estimated regression models.

The experiments reporting an "active use" effect usually defined it as the proportion of accounts with 2, 3 or 5 deposits during the reference period (most often 6 months to one year, but as long as two years). In this report, active use is coded as 0 if there is no or only one deposit during the reference period (including any required opening deposit) and 1 if there are two or more deposits. This is a fairly liberal definition of "active use," but it is the only measure available in all six experiments reporting data on account utilization.

The moderator variables selected for inclusion in the meta-analysis are both theoretically relevant and reported in most of the included experiments. The data on the proportion of experimental participants who are female and who were banked at baseline are considered reliable. The income data, which are reported for only 11 of the 13 experiments, are less reliable because of the variety of income measures reported (e.g., income versus expenditure, individual versus household income). Measures of household income were converted to per capita income by dividing the reported total by reported household size. However, some experiments only report the income or earnings of experimental participants. All income measures were converted to US dollars using exchange rates reported in the studies.

3. Results

It has been suggested that randomized savings experiments are too varied in terms of sampling and interventions to support a formal meta-analysis (Dupas, Karlan, Robinson and Ubfal 2016). Indeed, the samples of the experiments included in this report (Appendix 1) vary greatly both in terms of settings (i.e., 7 experiments from sub-Saharan Africa, 3 from South Asia, and one each from Europe, North America and Latin America) and in terms of the characteristics of the experimental participants, including their occupations (i.e., farmers, micro-entrepreneurs, international migrants), urban-rural location and gender. It would be

¹ In some cases, this may have been done to eliminate the cost of conducting a follow-up household survey of participants assigned to the control group.

incorrect to expect the 13 experiments to have exactly the same effects, as might be the case in some randomized medical trials involving subjects narrowly defined in terms of age, sex and other relevant characteristics. A meta-analysis of such relatively homogeneous experiments is often done as a "fixed-effects" meta-analysis, with the effects of individual experiments weighted by the inverse of some measure of their sampling error (e.g., the pooled standard error of the treatment and control effects), with the result that experiments with a larger sample are given greater weight in estimating the overall effect. With the 13 experiments listed in Appendix 1, it is more reasonable to assume that the observed effects of the individual experiments reflect random drawings from a distribution of widely varying effects, in which case a "random-effects" meta-analysis is preferred. In this case, the individual study weights reflect both the sampling errors of the individual experiments and the observed heterogeneity across experiments after adjusting for sampling variation.

3.1 Account take up

Purely for illustrative purposes, Figure 1 shows the results of a fixed-effects meta-analysis (MA) of account take-up in the 13 experiments, using the estimates of take up and standard errors provided in columns 1-2 of Table 1).² The results indicate that the overall point estimate of the proportion of experimental participants taking up a savings account with most transactions costs removed is 0.37, with a 95 percent confidence interval of 0.36 to 0.38. In calculating this overall estimate, a single study (from Chile) with the lowest estimated standard error (column 2 of Table 1), receives 37 percent of the total weight (the sizes of the boxes in the chart are proportional to the weights listed in the final column of Figure 1). However, a fixed-effects MA is inappropriate in this case because heterogeneity in the estimated treatment effects accounts for 97.3 percent of the observed variation in treatment effects across the 13 experiments (i.e., sampling error accounts for less than one percent of the variation in the estimated treatment effects), as indicated by the I² statistic reported in the bottom row of the chart. A random-effects MA is clearly more appropriate in this case.

² The MA results presented in Figures 1 and 2 were obtained using the Stata user-developed program "metan" for the estimation of fixed and random-effects MA. For a comprehensive description of Stata software available for meta-analysis, see Palmer and Sterne (2016).

Lead					%
author	Country			ES (95% CI)	Weight
Prina_2013	Nepal		+	0.84 (0.81, 0.87)	9.35
Dupas_2017	Kenya_1		+	0.69 (0.65, 0.73)	6.22
Dupas_2013	Kenya_2		+	0.87 (0.81, 0.92)	2.96
Dupas_2016a	Uganda	+		0.42 (0.39, 0.45)	9.82
Dupas_2016b	Malawi_1	•		0.41 (0.38, 0.44)	9.65
Dupas_2016c	Chile	•		0.06 (0.04, 0.08)	36.88
Brune_2013	Malawi_2			0.16 (0.06, 0.26)	0.89
Chin_2011	USA			0.38 (0.27, 0.49)	0.73
Callen_2016	Sri Lanka		+	0.89 (0.86, 0.92)	8.81
Montalvao_2017	Tanzania	+		0.39 (0.35, 0.43)	5.54
Laajaj_2013	Mozambique	-		0.14 (0.08, 0.20)	2.46
Somville_2017	India			0.64 (0.55, 0.73)	0.98
Barboni_2017	Italy	+		0.08 (0.04, 0.12)	5.69
Overall (I-squared =	= 99.7%, p = 0.000)			0.37 (0.36, 0.38)	100.00

Figure 1. Fixed-effect meta-analysis of savings deposit take up

Study	Country	Take up	SE of take up	Active use	SE of active use
		(1)	(2)	(3)	(4)
Prina_2013	Nepal	0.840	0.0154	0.800	0.0168
Dupas_2017	Kenya_1	0.690	0.0189	0.280	0.0183
Dupas_2013	Kenya_2	0.865	0.0274	0.410	0.0394
Dupas_2016a	Uganda	0.420	0.0150	0.320	0.0142
Dupas_2016b	Malawi_1	0.410	0.0152	0.250	0.0133
Dupas_2016c	Chile	0.060	0.0078	0.050	0.0071
Brune_2013	Malawi_2	0.160	0.0500	NR	NR
Chin_2011	USA	0.382	0.0550	NR	NR
Callen_2016	Sri Lanka	0.890	0.0159	NR	NR
Montalvao_2017	Tanzania	0.392	0.0200	NR	NR
Laajaj_2013	Mozambique	0.140	0.0300	NR	NR
Somville_2017	India	0.640	0.0475	NR	NR
Barboni_2017	Italy	0.080	0.0197	NR	NR

Table 1. Data on account take up and active use

SE=estimated standard error, NR=not reported in the study.

Figure 2 shows the results of a random-effects MA of the data in columns 1-2 of Table 1. Figure 2 is similar to Figure 1 in some respects, for example, the data points referring to the individual experiments are in the same positions. However, the weights are very different (listed in the last columns of Figures 1 and 2). As previously mentioned, the weights in a random effects analysis reflect both the estimated standard errors of the individual experiments and the variation in the estimated effects across experiments after adjusting for sampling variation (i.e., the heterogeneity in the effects). Because the sampling variation is relatively small compared to the heterogeneity in the estimated effects, there is little variation in the weights between experiments (the boxes in Figure 2 all appear to be of the same size). Larger experiments with smaller estimated standard errors do not carry as much weight in a random-effects MA as they do in a fixed-effect MA. Because the weights are different, the estimated overall effect in Figure 2 is different (0.46 versus 0.37 in Figure 1), reflecting the considerably smaller weight given to the Chile experiment in the random-effects MA (a weight of 7.74 versus a weight of 36.88 in the fixed-effect analysis). Although the estimated overall effect is statistically significant in both analyses (p=0.000), the 95 percent confidence interval estimate in the random-effects MA is much wider, i.e., from 0.27 to 0.65 (represented by the width of the diamond symbol), compared to only 0.36 to 0.38 in Figure 1, reflecting the large heterogeneity in the estimated effects. Figure 2 also shows a considerably wider 95 percent confidence interval for the approximate predictive distribution of a future experiment (displayed as lines extending from the diamond symbol), reflecting uncertainty in the location and spread of the random effects distribution. According to this

wide confidence interval, the estimated effect of a future experiment could be anywhere within the observationally possible interval of zero to one.³

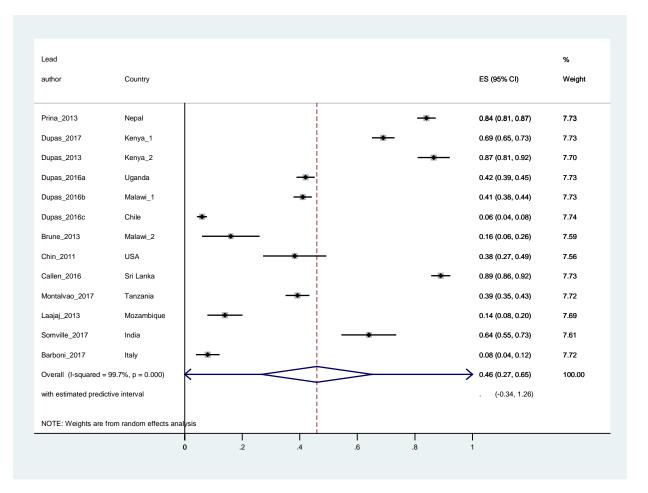


Figure 2. Random-effects meta-analysis of savings deposit take up

The results in Figures 1 and 2 indicate that there is considerable heterogeneity in the observed treatment effects. Some of this heterogeneity is inevitable, given the widely divergent geographical settings and characteristics (both observed and unobserved) of the participants in the 13 included experiments. However, some observed characteristics may explain at least some of the observed heterogeneity. Table 2 lists data on a set of moderator (independent) variables referring to characteristics of the experimental participants that

³ It is conventional in meta-analysis to use procedures designed to reveal whether there is evidence of "publication bias" in the included experiments (e.g., any tendency for smaller experiments with less definitive results to be omitted from the sample). Such bias is unlikely to be present in the data analyzed in Figure 2 because 11 of the 13 experiments are described in unpublished reports. However, the possibility of bias was investigated using the Stata program "metabias" (Palmer and Sterne 2016). The null hypothesis of no bias could not be rejected at conventional significance levels for either of the two supported tests (i.e., the Begg and Mazumdar adjusted rank correlation test for publication bias and the Egger et al. regression asymmetry test for publication bias).

could plausibly account for at least some of the observed heterogeneity: (1) the proportion who are female (Female), (2) their annual income per capita (Income), and (3) the proportion who were banked at baseline (Banked). Table 3 presents bivariate "meta regression" estimates for each of these moderator variables.⁴ The results indicate that none of the moderator variables is statistically significant (which is not surprising, given that there are only 13 observations on Female and Banked and only 11 on Income). The strongest estimated relationship (positive) is that between take up and the proportion of participants who are female (t=1.47), which is shown in Figure 3.⁵ According to the estimated coefficient of Female (Table 3, column 2), a sample that is 100 percent female has a predicted take up rate of 63 percent, compared to only 26 percent for a male-only sample. This is a large difference.⁶

Study	Country	Proportion female	Annual income per capita (US dollars)	Proportion banked at baseline
		(1)	(2)	(3)
Prina_2013	Nepal	1.000	277	0.17
Dupas_2017	Kenya_1	0.582		0.00
Dupas_2013	Kenya_2	0.690	755	0.00
Dupas_2016a	Uganda	0.720	384	0.00
Dupas_2016b	Malawi_1	0.680	216	0.00
Dupas_2016c	Chile	0.780	789	0.00
Brune_2013	Malawi_2	0.063	170	0.63
Chin_2011	USA	0.000	8,794	0.00
Callen_2016	Sri Lanka	0.521	797	0.00
Montalvao_2017	Tanzania	1.000	924	0.33
Laajaj_2013	Mozambique	0.160	803	0.02
Somville_2017	India	0.500		0.00
Barboni_2017	Italy	0.320	3,672	0.23

Table 2. Moderator variables

⁴ The estimates presented in Table 3 were obtained using the Stata user-developed program "metareg" for metaregression estimation (Palmer and Sterne 2016).

⁵ It is noted that the Chin et al (2011) experiment was initially open to female participants (Chin et al. 2011). However, only 11 female migrants applied (compared to 215 males), and it was decided to drop the few females from the sample.

⁶ The relationship between account take up and Female is robust with respect to the inclusion of Banked. If both Female and Banked are specified (not shown), the estimated coefficient of Female decreases only from 0.3767 to 0.3325.

Moderator variable	Constant (intercept)	Estimated coefficient	Estimated standard error	p> t	p> t adjusted*	N
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.25545	0.3767	0.2571	0.171	0.219	13
Income	0.4556	-0.000021	0.0000405	0.616	0.627	11
Banked	0.5169	-0.5420	0.4490	0.253	0.301	13

Table 3. Meta-regression results for savings account take up

* The estimates of p in column 5 are prepared using the "permute" option in "metareg", which adjusts for the small sample size.

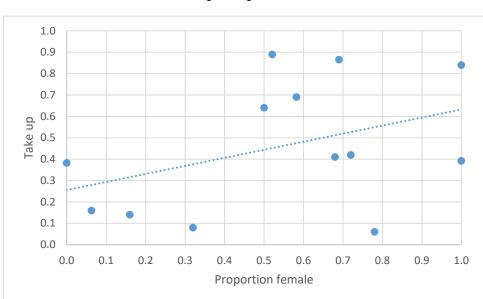


Figure 3. Relationship between account take up and the proportion of female participants

Source: Take up: Table 1 (column 1); Female: Table 2 (column 1)

3.2 Active use

Although only 6 of the 13 experiments report "active use" of the accounts (i.e., two or more deposits during the reporting period, including any required initial deposit), it is also possible to do a meta-analysis of this outcome. Figure 4 shows the results of a random-effects MA of active use. There is again considerable heterogeneity in the estimated effect across the six experiments. However, even in such a small sample, the estimated effect of active use is significantly different from zero (p=0.002). The estimate of the overall effect is 0.35, with a 95 percent confidence interval of 0.13 to 0.57 (which can be compared to the estimated take-

up rate of 55 percent and a 95 percent confidence interval of 26 percent to 84 percent in these same six studies). The number of sample points for active use are too few to support meaningful moderator analysis (for example, only one of the six experiments reporting active use has a non-zero proportion of participants banked at baseline). Figure 4 also shows a considerably wider 95 percent confidence interval for the approximate predictive distribution of a future experiment (displayed as lines extending from the diamond symbol), indicating that the estimated active use effect of a future experiment could be anywhere within the observationally possible interval of zero to one.

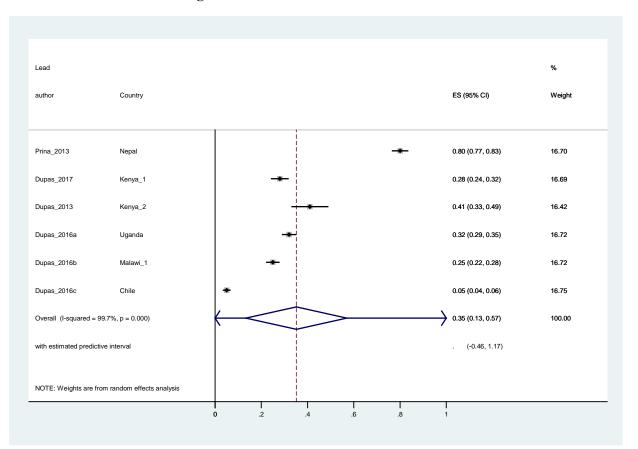


Figure 4. Random-effects MA of active use

4. Conclusions

The meta-analyses indicates that an estimated 46 percent of individuals (with a 95 percent confidence interval of 27 percent to 65 percent) would accept an offer to open a savings account involving minimal or no account opening and transactions costs. The results also indicate that the take-up rate is positively (but not significantly) related to gender (t=1.47), such that females have an estimated take-up rate of 63 percent versus only 26 percent among males. The results also indicate that there is considerable heterogeneity in the take-up rate across individual experiments. Consequently, a 95 percent confidence interval of the take-up rate for a new experiment includes the entire range of possible values between 0 percent and

100 percent. Although only 6 of the 13 experiments reported on active use of accounts once opened (i.e., two or more deposits during the reporting period), a meta-analysis based on these six experiments indicates that an estimated 35 percent of individuals opening such accounts (with a 95 percent confidence interval of 13 percent to 57 percent) would actively use them. Although estimated active use is substantially lower than the corresponding account take-up rate of 55 percent (based on a meta-analysis of the take-up rate for the same six studies), it is not negligible.

References

Studies reporting on the 13 savings experiments included in the meta-analysis

- Barboni, G., A. Cassar and T. Demont. 2017. "Financial Exclusion in Developed Countries: a Field Experiment Among Migrants and Low-income People in Italy." Processed, Princeton University, Princeton, NJ.
- Brune, L., X. Giné, J. Goldberg, D. Yang. 2013. "Commitments to Save: A Field Experiment in Rural Malawi." Processed, Department of Economics, University of Michigan, Ann Arbor, MI (February).
- Callen, M., S. de Mel, C. McIntosh and C. Woodruff. 2016. "What are the Headwaters of Formal Savings? Experimental Evidence from Sri Lanka." Processed, Harvard Kennedy School, Cambridge, MA (February).
- Chin, A., L. Karkoviata and N. Wilcox. 2011. "Impact of Bank Accounts on Migrant Savings and Remittances: Evidence from a Field Experiment." Processed, University of Houston, Houston, TX (June).
- Dupas, P. and J. Robinson. 2013. "Savings Constraints and Microeconomic Development: Evidence from a Field Experiment in Kenya." *American Economic Journal: Applied Economics* 5(1):163-192.
- Dupas, P., D. Karlan, J. Robinson and D. Ubfal. 2016. "Banking the Unbanked: Evidence from Three Countries." Working Paper 440, Center for Global Development, Washington, DC (November).
- Dupas, P., A. Keats and J. Robinson. 2017. "The Effect of Savings Accounts on Interpersonal Financial Relationships: Evidence from a Field Experiment in Rural Kenya." Processed, Stanford University, Palo Alto, CA (April).
- Laajaj. R. 2013. "Can Matched Savings Stimulate Asset Accumulation? Theory and Evidence from a Field Experiment in Mozambique." Processed (January).
- Montalvao, J., G. Bastian, M. Goldstein and I. Bianchi. 2017. "Short-Term Impacts of Improved Access to Mobile Savings, with and without Business Training: Experimental Evidence from Tanzania." Processed, The World Bank, Washington DC (October).
- Prina, Silvia. 2015. "Banking the Poor via Savings Accounts: Evidence from a Field Experiment." *Journal of Development Economics* 115(C):16-31.
- Somville, V. and L. Vandewalle. 2017. "Access to Formal Banking and Household Finances: Experimental Evidence from India." CMI Working Paper 1, Christien Michelsen Institute, Bergen, Norway (February).

Studies reporting on savings experiments reviewed but not included in the meta-analysis

Abebe, G., B. Tekle and Y. Mano. 2016. "Changing saving and investment behavior: the impact of financial literacy training and reminders on micro-businesses." Working Paper WPS/2016-08, Center for the Study of African Economies, Oxford University, Oxford UK (April).

- Akbas, M., D. Ariely, D.A. Robalino and M. Weber. (undated presentation). "How to help informal workers to save: Evidence from a field experiment in Kenya." Duke University, Durham, NC.
- Aggarwal, S., E. Francis and J. Robinson. 2017. "Grain Today, Gain Tomorrow: Evidence from a Storage Experiment with Savings Clubs in Kenya." Processed, Indian School of Business, Hyderabad, India (July).
- Ashraf, N., D. Karlan and W. Yin. 2004. "SEED: A Commitment Savings Product in the Philippines." Processed, Harvard University, Cambridge, MA (December).
- Ashraf, N., D. Karlan and W. Yin. 2006. "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines." *Quarterly Journal of Economics* (131):635-672.
- Ashraf, N., D. Aycinena, C. Martinez and D. Yang. 2015. "Savings in Transnational Households: A Field Experiment among Migrants from El Salvador." *The Review of Economics and Statistics* 97(2):332-351.
- Ashraf, N., D. Karlan and W. Yin. 2009. "Female Empowerment: Impact of a Commitment Savings Product in the Philippines." *World Development* 38(3):333-344.
- Ashraf, N., D. Karlan and W. Yin. 2006. "Household Decision Making and Savings Impacts: Further Evidence from a Commitment Savings Product in the Philippines." Yale Growth Center Discussion Paper No. 939, Yale University, New Haven, CT (June).
- Atalay, K., F. Bakhtiar, S. Cheung and R. Slonim. 2012. "Savings and Prize-Linked Savings Accounts." IZA DP No. 6927, Institute for the Study of Labor, Bonn, Germany (October).
- Atkinson, J., A. de Janvry, C. McIntosh and E. Sadoulet. 2010. "Creating Incentives to Save among Microfinance Borrowers: A Behavioral Experiment from Guatemala." Processed, UC Berkeley, Berkeley, CA (December)
- Basu, K. and S.S. Bisht. 2015. "The economics and psychology of long term savings and pensions: a randomized experiment among low-income entrepreneurs in Maharashtra, India." Grantee final report for 3ie, Processed, Hunter College, City University of New York, New York, NY (March).
- Beaman, L., D. Karlan and B. Thuysbaert. 2014. "Saving for a (not so) Rainy Day: A Randomized Evaluation of Savings Groups in Mali." Working Paper WP-14, Northwestern University, Evanston, IL (October).
- Beverly, S.G., M.M. Clancy, J. Huang and M. Sherraden. 2015. "The SEED for Oklahoma Kids Child Development Account Experiment: Accounts, Assets, Earnings and Savings." CSD Research Brief 15-29, Washington University, St. Louis, MO (October).
- Casaburi, L. and R. Macchiavello. 2015. "Firm and Market Response to Saving Constraints: Evidence from the Kenyan Dairy Industry." Processed, Stanford University, Palo Alto, CA (November).
- Chowa, G., R. Masa, D. Ansong, M. Despard, S. Wu and D. Hughes. 2015. "Impacts of Financial Inclusion on Youth Development: Findings from the Ghana YouthSave Experiment." CSD Research Report No. 15-35, University of North Carolina at Chapel Hill, Chapel Hill, NC.
- Cole, S., T. Sampson and B. Zia. 2009. "Financial Literacy, Financial Decisions, and the Demand for Financial Services: Evidence from India and Indonesia." Working Paper 09-117, Harvard Business School, Cambridge, MA.

- Delavallade, C., F. Dizon, R.V. Hill and J.P. Petraud. 2015. "Managing Risk with Insurance and Savings: Experimental Evidence for Male and Female Farm Managers in the Sahel." Policy Research Working Paper 7176, The World Bank, Washington, DC (January).
- de Mel, S., D. Herath, C. McIintosh and C. Woodruff. 2012. "Linking Savings Accounts to Mobile Phones: Are Potential Users Interested?" Working Paper F-3022-LKA-1, International Growth Centre, London, UK (March).
- Duflo, E., W. Gale, J. Liebman, P. Orszag and E. Saez. 2006. "Saving Incentives for Lowand Middle-Income Families: Evidence from a Field Experiment with H&R Block." Processed, MIT, Cambridge, MA (February).
- Dupas, P. and J. Robinson. 2012. "Why Don't the Poor Save More? Evidence from Health Savings Experiments." Processed, Stanford University, Palo Alto, CA (February).
- Fiorillo, A., L. Potok and J. Wright. 2014. "Applying Behavioral Economics to Improve Microsavings Outcomes." Ideas 42, Washington, DC (February).
- Gertler, P., S. Higgins, A. Scott and E. Seira. 2017. "The Long-Term Effects of Temporary Incentives to Save: Evidence from a Field Experiment in Mexico." Processed, UC Berkeley, Berkeley, CA (August).
- Grayson, B., S. Dowdle, A. Beck and K. Khatami. 2013. "Microsavings: Barriers to Saving Learned from an Experiment in Uganda." *Sigma: Journal of Political and International Studies*, Volume 30, Article 3.
- Jamison, J.C., D. Karlan and J. Zinman. 2014. "Financial Education and Access to Savings Accounts: Complements or Substitutes? Evidence from Ugandan Youth Clubs." Processed, Innovations for Poverty Action, New Haven, CT (May).
- Karlan, D., M. McConnell, S. Mullainathan and J. Zinman. 2011. "Getting to the Top of Mind: How Reminders Increase Saving." Processed, Yale University, New Haven, CT (January).
- Karlan, D. and L.L. Linden. 2014. "Loose Knots: Strong versus Weak Commitments to Save for Education in Uganda." Processed, Yale University, New Haven, CT (July).
- Karlan, D. and J. Zinman. 2016. "Price and Control Elasticities of Demand for Savings." Processed, Yale University, New Haven, CT (December).
- Kast, F., S. Meier and D. Pomeranz. 2012. "Under-Savers Anonymous: Evidence on Self-Help Groups and Peer Pressure as a Savings Commitment Device." Working Paper 12-060, Harvard Business School, Cambridge, MA (January).
- Kast, F. and D. Pomeranz. 2014. "Saving More to Borrow Less: Experimental Evidence from Access to Formal Savings Accounts in Chile." Working Paper 20239, National Bureau of Economic Research, Cambridge, MA (June).
- Lipscomb, M. and L. Schechter. 2017. "Mobile Payment Systems: The Impact of Earmarked Savings on Sanitation Purchases." Processed, University of Virginia, Charlottesville, VA (August).
- Riley, E. 2017. "Can mobile money help overcome temptation spending and social pressure among microfinance clients?" Processed, Summer School in Development Economics, Oxford University, Oxford, UK (June).
- Salas, L.M. 2014. "Public vs. Private Mental Accounts: Experimental Evidence from Savings Groups in Colombia." Processed, Ph.D. Program in Economics, City University of New York—Graduate Center, New York, NY (March).

- Schaner, S. 2013. "The Cost of Convenience? Transactions Costs, Bargaining Power, and Savings Account Use in Kenya." Processed, Dartmouth College, Hanover, NH (August).
- Schaner, S. 2015. "Do Opposites Detract? Intrahousehold Preference Heterogeneity and Inefficient Strategic Savings." American Economic Journal: Applied Economics 7(2):135-174.
- Schaner, S. 2016. "The Persistent Power of Behavioral Change: Long-run Impacts of Temporary Savings Subsidies for the Poor." NBER Working Paper 22534, Cambridge, MA (August).

Other references

- Bachas, P., P. Gertler and S. Higgins. 2016. "Banking on Trust: How Debit Cards Health the Poor to Save More," Processed, UC Berkeley, Berkeley, CA (April).
- Burgess, R. and R. Pande. 2003. "Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment." Processed, Department of Economics, London School of Economics, London, UK (March).
- Buvinic, M. 2017. "Women's Economic Empowerment: What Works and What to Measure?" Presentation, Center for Global Development, Washington DC (October).
- Hunter, John E. and F.L. Schmidt. 2004. *Methods of Meta-Analysis: Correcting Error and Bias in Research Findings*. Thousand Oaks, CA: Sage Publications.
- Karlan, D., A.L. Ratan and J. Zinman. 2014. "Savings by and for the Poor: A Research Review and Agenda." *The Review of Income and Wealth* 60(1):36-78.
- Palmer, T.M. and J.A.C. Sterne. 2016. *Meta-Analysis in Stata: An Updated Collection from the Stata Journal*. Second edition. College Station, TX: Stata Press.
- Steinert, J.I., A. Movsisyan, J. Zenker, U. Filipiak, and Y. Shendderovich. 2016. "Protocol for a Systematic Review: Saving Promotion Interventions for Improving Saving Behaviour and Reducing Poverty in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis." The Campbell Collaboration (www.campbellcollaboration.org).
- Suri, T. and W. Jack. 2016. "The Long-run poverty and gender impacts of mobile money." *Science* 354 (6317):1288-1292.

Appendix 1. Included studies

Authors	Short title	Country	Sample	Intervention	Year of baseline data collection
G. Barboni, A. Cassar and T. Demont (2017)	Financial Exclusion among Migrants	Italy	189 participants from 480 randomly selected households (32% headed by females) that are eligible for public housing and social benefits from Ancona province, stratified by income and migrant status.	Participants were randomly assigned (individually) to treatment T1 (encouragement to open a current account (CA)), to treatment T2 (encouragement to open both a CA and a liquid savings account (LSA)), or to treatment T3 (encouragement to open both CA + LSA plus a commitment savings account (CSA)). All accounts were made free through distribution of vouchers.	2013
L. Brune, X. Gine, J. Goldberg, D. Yang (2013)	Commit-ments to save	Malawi	3,150 tobacco farmers (including 6.3% females) belonging to 299 farmer clubs.	130 of the farmer clubs were randomly assigned to treatment T1 (ordinary savings accounts), while 130 additional farmers clubs were assigned to treatment T2 (ordinary + commitment savings accounts) with the remaining 40 clubs serving as controls. Farmers' harvest proceeds could be paid directly into savings accounts under T1 and T2. All farmers were given financial training (including controls). T1 and T2 were additionally given assistance in opening bank accounts. N=1,411 farmers were offered ordinary savings accounts.	2009
M. Callen, S. de Mel, C. McIntosh and C. Woodruff (2016)	Headwaters of Saving	Sri Lanka	795 unbanked lower-income individuals residing at least 5 kilometers from the nearest bank branch who receive income frequently (mainly self-employed or daily wage laborers)	Half of the participants were randomly assigned (N=389, including 52% females) to the offer of a savings account with the minimum balance (\$4.50) paid by the experiment and with weekly deposit collection service using a mobile Point-of-Service (POS) handset that prints out deposit receipts on the spot.	2010
A. Chin, L, Karkoviata, N. Wilcox (2011)	Migrant Savings	USA	215 male Mexican migrants to the US residing in one small (unnamed) city. Eligibility included age > 18, no ID card, no US bank account and at least some amount of money remitted in last 12 months.	Participants were randomly assigned (N=115) to be offered assistance to obtain an ID card (a <i>matricula consular</i> card) that could be used to open a US bank account. The assistance included paying \$27 for the ID card, assistance in compiling the necessary documents and transportation to the Mexican consulate.	.2007

Authors	Short title	Country	Sample	Intervention	Year of baseline data collection
P. Dupas, A. Keats and J. Robinson (2017)	Effect on Interpersonal Relationships	Kenya	885 households in Busia district of Western Kenya, including 399 single-headed HHs and 486 dual-headed HHs. Banked and "atypical" HHs excluded from the study.	Individual adult household members (N=663, including 386 females) were randomly assigned to receive a voucher to cover the costs of opening a savings account (with more than one treated individual per household in some cases). Customers still had to pay withdrawal fees. The voucher was worth \$5 at the village bank and \$2.50 plus \$0.60 per month at the commercial bank. A free ATM card was also provided with a commercial bank account.	2010
P. Dupas and J. Robinson (2013)	Savings Constraints	Kenya	250 mainly self-employed and unbanked market vendors (mostly women) and male bicycle taxi drivers from one town in rural Western Kenya.	Individuals were randomly assigned to the offer of free non- interest bearing savings accounts at the village bank (N=156, including 104 females). The experiment paid the account opening fee (\$6.43) and minimum deposit (\$1.43). However, account holders still had to pay high withdrawal fees, ranging from \$0.10 to \$1.25 depending on size of withdrawal.	2006-2008 (3 waves)
P. Dupas, D. Karlan, J. Robinson and D. Ubfal (2016)	Banking the Unbanked	Uganda	2,160 unbanked households in rural areas with nearby banks, with at least one non-wage earner.	Individuals were randomly assigned (N=1,079, including 72% females) to receive a voucher to cover the costs of a basic no-frills, interest-free savings account with all fees waived for two years plus assistance to complete the necessary forms. The costs covered by the experiment included account opening fees of about \$15 and \$0.20 per month in maintenance fees.	2011
P. Dupas, D. Karlan, J. Robinson and D. Ubfal (2016)	Banking the Unbanked	Malawi	2,107 unbanked households in rural areas with nearby banks, with at least one non-wage earner.	Individuals were randomly assigned (N=1,079, including 68% females) to receive a voucher to cover the cost of a no-frills, interest free savings account with all fees waived for two years plus assistance in completing the necessary forms. The costs covered by the experiment included a minimum balance of \$3.50 and monthly maintenance fees of \$0.50. No fees were charged for teller withdrawals. However, a fee of \$0.40 was charged for ATM withdrawals, with the card costing an additional \$7.00.	2011

Authors	Short title	Country	Sample	Intervention	Year of baseline data collection
P. Dupas, D. Karlan, J. Robinson and D. Ubfal (2016)	Banking the Unbanked	Chile	1,975 unbanked respondents, quota sampled.	Individuals (N=938, including 78% females) were randomly assigned to receive assistance in completing the necessary forms to open a basic no-frills, interest-free savings account (the accounts were already free, with no opening or maintenance fees). However, a fee of \$0.62 was charged for withdrawals and for deposits (beyond 5 per month).	2011
R. Laajaj (2013)	Matched Savings	Mozam- bique	1,593 farmers from 94 localities (villages in most cases) served by mobile banks.	One-third of localities (N=581 farmers, including 16% females) were randomly assigned to treatment T1 (offer of financial education and promotion to open a no-cost savings account), while another third of localities were randomly assigned to treatment T2 (the same offer plus a 50% match on savings between the harvest and planting seasons), with the remaining localities serving as controls.	2011
J. Montalvao, I. Bianchi, G. Bastian and M. Goldstein (2017)	Short-term Impacts	Tanzania	4,000 female market vendors from 100 markets around Mbeya and Dodoma towns who are business owners, own a mobile phone, able to pass a basic literacy test and interested and available to take a 12-week business training program.	One-quarter of the participants (N=1,000, all female) were randomly assigned (individually) to treatment T1 (offer of a mobile savings account), while one-half were randomly assigned to treatment T2 (offer of a mobile savings account plus 12 weeks of business skills training), with the remaining participants serving as controls.	2016
S. Prina (2013)	Banking the Poor	Nepal	1,118 low-income urban female heads of household ages 18-55 in proximity to local bank branches, 17% with self-employment as their main source of income. Study took place in 19 slums in the outskirts of Nepal's second largest city (Pokhara).	Half of sample (N=567) randomly assigned individually to the offer of a free account with no maintenance or withdrawal fees at an NGO bank (GONESA), following a brief presentation on the value of savings.	2010
V. Somville and L. Vandewalle (2017)	Access to Formal Savings	India	204 randomly sampled unbanked rural villagers in Chhattisgarh state served by 17 "local bankers" who help customers with their banking transactions. Villages were selected in clusters for convenience (not randomly selected) and with the "local banker" the only source of formal banking services in each selected village.	Half of the participants (N=102, including 51 females) randomly assigned (individually) to the offer of a low-cost bank account, with the remaining participants used as controls. Treated participants were assisted with paper work and trained to make deposits, withdrawals and check balances and familiarized with the fingerprint recognition tool.	2013

Appendix A2. Excluded studies

Authors	Short title	Country	Sample	Intervention	Reason for exclusion
G. Abebe, B. Tekle, Y. Mano (2016)	Changing Saving and Investment Behavior	Ethiopia	Randomly selected microentrepreneurs in Addis Ababa.	T1 financial literacy training, T2 reminders, T3 both, T4 Control.	No savings accounts involved in the experiment. However, more than 80% of participants were already banked at baseline.
S. Aggarwal, E. Francis, J. Robinson (2017)	Grain Today	Kenya	274 randomly sampled ROSCAs.	ROSCA's were randomly allocated to a grain storage treatment (instead of cash payments).	No savings accounts, only grain storage.
M. Akbas, D. Ariely, D. Robalino, M. Weber (no date)	Informal Workers	Kenya	Informal sector workers with irregular income	Random assignment to 12 different pension plan treatments with matching but with no withdrawals permitted during the first three years.	Pension plans, not savings accounts
N. Ashraf, D. Karlan and W. Yin (2004)	SEED	Philippines	4,001 adult holders of savings accounts in Green Bank.	Participants randomly offered commitment savings accounts	Participants already have savings accounts
N. Ashraf, D. Karlan, W. Yin (2006)	Tying Odysseus to the Mast	Philippines	Same as above	Same as above	Same as above
N. Ashraf, D. Karlan and W. Yin (2009)	Female Empowerment	Philippines	Same as above	Same as above	Same as above
N. Ashraf, D. Karlan, W. Yin (2006)	Further Evidence	Philippines	Same as above	Same as above	Same as above
N. Ashraf, D. Karlan, W. Yin (2008)	Challenges of Sustaining Commitment	Philippines	Same as above	Same as above	Same as above

Authors	Short title	Country	Sample	Intervention	Reason for exclusion
N. Ashraf, D. Karlan, W. Yin (2010)	Female Empowerment	Philippines	Same as above	Same as above	Same as above
N. Ashraf, D. Aycinena, C. Martinez, D. Yang (2015)	El Salvador migrants	El Salvador	US-based migrants from El Salvador residing in the Washington DC area who sent remittances during the last 12 months.	Migrants were randomly assigned to 1 of 3 treatment groups with 25% probability (and 25% for comparison group), using stratified randomization.	All treated migrants have to open account for someone else in El Salvador.
J. Atkinson, A. de Janvry, C. McIntosh, E. Sadoulet (2010)	Incentives to Save	Guatemala	1,375 new borrowers from 20 microfinance branches.	Savings account with low transactions costs with different degrees of unenforceable commitments. The accounts yielded a 4% interest rate for 3 months, compared to the standard rate of 1.5% at the time.	Subsidized interest rate used as incentive.
K. Atalay. F. Bakhtiar, S. Cheung, R. Slonim (2012)	Prize-linked savings accounts	USA	No information provided (participants recruited over the internet)	This is a behavioral experiment to see whether there is a demand for savings accounts that include a lottery.	Online experiment. No actual savings accounts involved.
K. Basu and S. Bisht (2015)	Long-term Savings	India	Low-income semi-rural households in Maharashtra with active savings accounts.	Second intervention focused on agent incentives to get around low commissions on long-term savings products. The product is a long-term savings product	Participants already have active savings accounts. The account offered is intended for long-term saving.
S. Beverly, M. Clancy, J. Huang, M. Sherraden (2015)	Oklahoma SEED accounts	USA (Oklahoma)	Children ages 7-8 randomly assigned to receive a SEED account.	Account received an initial deposit of \$1,000. Accounts are owned by state of Oklahoma and balance may only be used to pay for post-secondary schooling.	Accounts not owned by individuals and purpose is limited to schooling.
L. Beaman, D. Karlan, B. Thuysbaert (2014)	Saving for a Rainy Day	Mali	Members of village savings groups. Similar to ROSCAs	Random assignment to a village savings group treatment (T1) and control.	No actual savings accounts offered

Authors	Short title	Country	Sample	Intervention	Reason for exclusion
G. Chowa et al (2015)	Ghana YouthSave	Ghana	Low-income youth ages 12-18.	School-based saving program for 25 schools (T1) and marketing outreach program for 25 schools (T2). Withdrawals are restricted during first 3 months and could only be made with an adult.	Students only, with limited income. Accounts restricted.
S. Cole, T. Sampson, B. Zia (2009)	Financial Literacy	Indonesia	1,173 unbanked HHs from Java	There is no information in the study about use of the accounts. Incentive (\$3 to \$14) to open savings account. Financial literacy training provided.	Financial incentives provided to open account.
C. Delavallade, F. Dizon, R.V. Hill, J.P. Petraud (2015)	Managing Risk with Insurance and Savings	Senegal, Burkina Faso	806 members of farmers groups (all male in Senegal) or of ROSCAs (all female) from 40 villages.	Farmers were endowed with \$12 and permitted to invest all or part of the endowment in 1 of 4 alternative products, two of which were earmarked one-month savings accounts managed by ROSCA/farmer group. The interest rate varied randomly by experimental session for the two saving products.	Short-term earmarked savings accounts only with varying interest rates.
E. Duflo, W. Gale, J. Liebman, P. Orszag, E. Saez (2006)	H&R Block Experiment	USA	Persons assisted in their tax form preparation by H&R Block Company in St Louis, Missouri	Treatments involved different matching rates for IRA savings accounts opened with H&R Block. H&R Block provided the funds for matching. T1=20% match, T2=50% match, T3=control.	IRA retirement accounts, not savings accounts, with matching of savings.
Dupas, P. and J. Robinson (2012)	Health Savings Experiments	Kenya			
A. Fiorillo, L. Potok, J. Wright (2014)	Applying Behavioral Economics	Philippines	Individuals already planning to open a savings account.	Clients opening a savings account were randomly assigned to a treatment designed to increase their savings	Participants are already interested in opening a savings account.
P. Gertler, A. Scott, E. Seira (2017)	Long Term Effects	Mexico	110 branches of a bank (deleting the highest and lowest 25% of branches in terms of account numbers) in 19 of 32 Mexican states.	Account holders and potential account holders at 110 branches of a government bank. Both existing and new account holders were eligible for lottery tickets linked to their savings. Customers self-select into treatments.	No data on take up or utilization. Outcomes only measured at the branch level.

Authors	Short title	Country	Sample	Intervention	Reason for exclusion
B. Grayson, S. Dowdle, A. Beck, K. Khatami (2013)	Microsavings in Uganda	Uganda	Individuals residing in and near Kampala.	Individuals were randomly offered (T1) an instant bonus account or a normal savings account (T2).	No accounts were actually opened
J. Jamison, D. Karlan, J. Zinman (2014)	Ugandan Youth Clubs	Uganda	2,680 working-age youth (mean age 24.5 years) from 240 church youth groups.	60 groups randomly allocated to a 15-hour financial education treatment, 60 groups allocated to access to a basic savings account (one per group), 60 groups to both, and 60 groups to control.	No individual accounts. Accounts held by groups.
D. Karlan, M. McConnell, S. Mullainathan, J. Zinman (2011)	Top of Mind	Philippines, Peru, Bolivia	Individuals with commitment savings accounts	Participants were randomly allocated to reminder options	Participants already have commitment savings accounts
D. Karlan and L. Linden (2014)	Saving for Education	Uganda	Students in grades 5-7 (mean student age was 12).	School-based commitment savings accounts to finance schooling expenses. T1 funds could only be withdrawn at the end of the term and could only be used for school expenses. T2 funds could only be withdrawn at the end of the term (but balances could be used for any purpose). Savings accounts were managed by the schools.	Commitment savings accounts managed by schools
D. Karlan, and J. Zinman (2016)	Price and Control Elasticities	Philippines	9,992 individuals in rural areas and small towns	One-third of potential customers were randomly assigned to three different savings products, each with a different interest rate and/or commitment level	Interest rates varied across products
F. Kast and D. Pomeranz (2014)	Saving More to Borrow Less	Chile	3,500 low-income mostly urban self- employed members of 307 microfinance groups.	Making virtually free savings accounts (\$2 to open) randomly available to two-thirds of the groups. No maintenance fees or minimum balances. Treatment group was also assisted with forms, etc. to open accounts. 25% were given a 5% interest rate for 2 years, compared to 0.3%. 50% were exposed to a peer support treatment for 2 years.	25% of the treatment group were given a 5% interest rate instead of the base 0.3% rate. Peer support provided to 50% of treatment group.

Authors	Short title	Country	Sample	Intervention	Reason for exclusion
F. Kast, S. Meier and D. Pomeranz (2012)	Under-Savers Anonymous	Chile	2,687 micro-entrepreneur members of 196 microfinance groups (i.e., the treatment group in the preceding study).	Groups were randomly assigned to T3 (basic savings account, 25%), T1 (basic account plus peer group self-help, 50%) or T2 (a high interest account, 25%). Accounts had \$2 opening deposit, but no minimum balance of maintenance fee.	Incentives provided with some sub-treatments. Outcomes for sub- treatments are not separately reported.
M. Lipscomb and L. Schechter (2017)	Mobile Payment Systems	Senegal	Households in peri-urban Dakar	Intervention is designed to promote saving for a latrine desludging service. There are three treatment arms: (T1) full advance payment, (T2) payment with timing as desired, and (T3) periodic payment with reminders (although they can pay as they choose).	Special purpose saving account (i.e., desludging latrines)
S. de Mel, D. Herath, C. McIntosh, C. Woodruff (2012)	Linking Savings Accounts to Mobile Phones	Sri Lanka	Self-employed or workers paid on a daily or weekly basis in urban or semi- urban areas of central Sri Lanka, plus some rural HHs. HHs not willing to open an interest-bearing savings account excluded from the sample.	Randomly assigned to discounts on mobile charges (largest group pays nothing) and to receive 500 LKR to open bank account and a phone and SIM card.	Free phones provided by the experiment to participants are an incentive. Eligible participants must be already willing to open a savings account.
L.M. Salas (2014)	Public vs Private	Colombia	Low-income members of newly formed savings and loan associations (similar to ROSCAs). No savings accounts are involved.	T1 is private labeling treatment group in which savings were earmarked for a particular purpose with savings accumulation targets. T2 is public labeling treatment group in which savings goals were publicly shared with other members of their savings group.	No savings accounts are involved, only lock boxes managed by groups
S. Schaner (2013)	The Cost of Convenience	Kenya	Holders of 1,114 newly opened bank accounts owned by 749 married couples.	Couples were offered the possibility of opening 3 accounts (individual accounts and one joint account). All couples were given \$1.25 opening deposit for each account opened. ATM cards were randomly allocated (1 per couple). Withdrawal fees were reduced by 50% (to \$0.38). All study accounts were also assigned a randomly varying interest rate between 0 and 20% valid for 6 months.	Subsidized interest rates used as incentive.
S. Schaner (2016)	Persistent Power	Kenya	Same as above	Same as above. Study reports on a follow-up survey.	Same as above.
S. Schaner (2015)	Opposites attract	Kenya	Same as above	Same as above	Same as above.

Authors	Short title	Country	Sample	Intervention	Reason for exclusion
V. Somville and L. Vandewalle (2016)	Saving by Default	India	18 villages in Chhattisgarh state. The villages constituted a convenience sample. 26 study participants were selected from each village (14 with a bank account and 12 without).	T1 weekly payments allocated to a bank account or paid in cash (control). The 12 without an account were assisted to open accounts.	All participants either have or were assisted to obtain a bank account in order to participate in the experiment.