

## Replication report

### BANKING THE UNBANKED? EVIDENCE FROM THREE COUNTRIES

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#### 1. Original work

Dupas et al. (2018) contribute to the literature on financial inclusion. The authors intend to assess the impact of expanding access to basic bank accounts on savings and on a set of additional downstream outcomes (e.g. labour income, business inventory, expenditures, etc.). The study was conducted in some rural areas in Malawi, Uganda, and Chile. Censuses were realized to identify unbanked households at proximity of partner financial institutions in these areas. In each study site, baseline surveys were conducted in order to gather information on the selected households (e.g. demographics, socioeconomic status, savings, cognitive abilities, etc.). For each site, randomisation procedures were then followed to dispatch the qualified households equally between a treatment group and a control group. Households located in the treatment group received banking subsidies (i.e. a voucher to open basic saving accounts free of opening and maintenance costs in Malawi and Uganda, and help with account opening procedures paperwork in Chile). Among households who received a voucher, 42% in Uganda, 41% in Malawi and only 6% in Chile opened a bank account.

Three rounds of follow-up surveys (identical to the baseline surveys) were conducted in Malawi and Uganda. The strikingly low take-up rate of bank accounts in Chile led the authors to opt for qualitative follow-up surveys to understand the reasons of reluctance toward bank accounts rather than to analyse the impacts of the subsidies. The follow-up surveys revealed that in Uganda and Malawi, the main predictors of usage (or non-usage) of the vouchers were the distance to the bank branch, the education level, and the wealth of the households. In Chile, however, not opening an account appeared to be more a matter of choice rather than of constraints.

To evaluate the causal effects of waiving banking costs, the authors implemented a difference in differences strategy. Intent-to-treatment (i.e. including all households who received the treatment) and treatment on the treated (i.e. only considering households who effectively opened an account) causal effects were estimated for Malawi and Uganda. The analyses revealed evidence of crowd-out effects in savings (i.e. rechannelling of savings from informal systems to formal saving accounts) and increases in total savings. Moreover, positive treatment on the treated (ToT) effects were detected on food and health expenditures in Uganda and on total income and business inventories in Malawi. Nevertheless, these latter ToT effects appear to be imprecise and do not allow to draw conclusions on the impacts of bank subsidies on other downstream outcomes. Further analyses revealed increased trust in banks in Uganda.

#### 2. Replication

In this section, we replicate the main analyses of Dupas et al. (2018). We used the dataset provided by the authors on the journal's website. The dataset includes the results of the four rounds of surveys

and administrative data on households account usage provided the partner banks<sup>1</sup>. We also consulted the authors' Stata code do.files. Note that we opted for "R" software to perform the replication work.

The replication focuses on Malawi and Uganda and excludes Chile. This is because this latter is not part of the main analysis due to the low rate of account take-ups and to the impossibility to match surveys data with administrative data on account usage. We also excluded analyses on attitudes and beliefs toward savings and banks given that they are not part of the main research question and findings of the paper. Less anecdotally, analyses on the impacts of the treatment on other downstream outcomes have also been discarded from the replication. The main reason for that choice is that most of the variables used for that part of the analysis are not clearly defined by the authors either in the paper or in the online appendix and codes. This renders utterly tedious the task of identifying, among numerous variables, which variables should be used to compute each type of downstream outcome. Facing these issues, we decided to focus on the impacts of the treatment on savings. We reproduced the baseline summary statistics as it allows to assess the balance between treatment and treated groups. We also reproduced statistics on take-up levels and replicated the evaluation of determinants of take-up rates and impacts on savings. This corresponds to tables 1 to 4 of the original work.

Table 1 displays the results of the reproduction of baseline summary statistics only for indicators for which disparities with the paper were observed. In the case of Uganda, the reproduced statistics are identical to those presented in the paper. For Malawi, however, some slight differences are observed. Firstly, it appears from the replication that the average distance to the closest bank branch for control group households is 0.12 km longer than what is reported in the paper. Moreover, the difference between control and treated groups is 0.04 km wider in the replication than in the paper. Secondly, the average baseline labour income amounts to \$24.46 in the replication while it is equal to \$25.72 in the paper. The difference between treated and control group for that indicator is also larger, yet nonsignificant, in the replication. Eventually, we observe mismatches between the replication and the original work regarding the treatment group difference in the proportion of households who had ever received a formal or informal loan before the baseline survey. While the previous disparities can be attributed to some potential undocumented exclusion of outliers from the dataset, the latter seems to be a mistake from the authors in the presentation of the results. Indeed, the control group means seem to have been displayed twice in place of the treatment differences. Nevertheless, this mistake has no consequence on the comparability of the two groups given that the replication shows no significant treatment group differences for the concerned indicators.

Table 2 shows disparities between the paper and the replication in the statistics of accounts take-up for some indicators. Total number, total amount and median size of deposits and withdrawal for all users appear to be greater in the replication than in the paper. Remarkably, by running the authors' Stata code, we obtained similar outputs than in our replication work. Moreover, the replication of take-up statistics for active users provides identical output than in the paper. Therefore, it seems likely that the replication produces more reliable outputs than the statistics displayed in the paper.

As highlighted for the first variable in table 3, the replicated coefficients of accounts take-up determinants for Uganda are close to the ones reported in the paper. The slight differences can be due to possible exclusion of outlier households not reported by the authors. In the case of Malawi, the

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<sup>1</sup> Chile bank did not provide households identifiers, making matching between administrative and survey data impossible for that study site.

replication produces identical coefficients than in the paper. However, clustered standard errors appear to be marginally different than in the paper. These disparities are likely due to differences in the computation of clustered standard errors in Stata and R software. Indeed, unlike R, Stata applies finite sample corrections when clustering in order to reduce potential downward bias.<sup>2</sup> We also spotted differences in the adjusted R-squared between the paper and the replication for both countries. Further investigations on these disparities led to the conclusion that the authors wrongly displayed the coefficient of correlation (R-squared) instead of the adjusted one as intended. Note that these observed differences do not change the essence of the main findings of the authors.

Table 4 displays the replication of intent-to-treatment (ITT) and treatment on the treated (ToT) effects of bank subsidies on savings. The results obtained by replication tend to differ slightly from the paper. These disparities are due to some incoherence in the number of households included in the estimations. Indeed, several datasets provided by the authors need to be merged before running the regressions. However, even following closely the authors' codes, the number of observations reported for some regressions differ from the numbers displayed in the paper. The lack of explanation on household exclusion and data cleaning either in the paper on the online appendix and authors' codes prevents us from adapting our replication work in order to fit better the authors' outputs. Nevertheless, despite these differences, the replication findings remain in the same spirit as those of the original work.

### 3. Extension

A close analysis of baseline summary statistics has revealed some significant differences between treatment and treated groups. In the case of Uganda, the percentage of households who hold savings at home and the percentage of those who would only rely on savings if they needed US\$25 are significantly between the two groups. In the case of Malawi, the average distance to the closest bank branch appears to be significantly different between control and treatment group. Although, as noted by the authors, the groups are balanced for most of the indicators, these observed differences concern some important predictors of accounts take-up. Therefore, such differences raise questions about the comparability of the groups.

As underlined by Angrist and Pischke (2008), difference-in-differences estimations lay on the assumption that the treatment and control group would have followed a common trend in the absence of treatment. The observed baseline differences tend to raise concerns about the veracity of this assumption in the analysed performed by Dupas et al. (2018). In the fashion of Besley & Burgess (2004), we assess whether the results of the replicated paper are robust to the inclusion of group trends.

The equations presented in the paper are thus modified. The equation corresponding to the ITT estimation is now as follows:

$$Y_{hst} = \alpha T_{hs} + \beta Y_{hs1} + \mu_s + \theta_t + \gamma(g_i * w_t) + \epsilon_{hst}.$$

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<sup>2</sup> <https://stats.stackexchange.com/q/359047>

The second stage of ToT estimation is modified as follows:

$$Y_{\{hst\}} = \alpha A_{\{hs\}} + \beta Y_{\{hs1\}} + \mu_{\{s\}} + \theta_{\{t\}} + \gamma(g_{\{i\}} * w_{\{t\}}) + \epsilon_{\{hst\}}.$$

These equations differ from the paper with the inclusion of  $(g_{\{i\}} * w_{\{t\}})$  which represents group specific trends.  $g_{\{i\}}$  refers either to control or treatment group and  $w_{\{t\}}$  to survey waves.

It appears from table 5 that the results obtained via the replication of the authors' analyses are not robust to the inclusion of linear group-specific trends. This tends to tell that the difference-in-difference strategy developed by the authors exhibits some identification flaws. Indeed, the hypothesis of common trend between control and treated groups does not seem to hold in this analysis. This is likely due to the baseline differences observed between treatment and control group.

#### **4. Conclusion**

In general, Dupas et al. (2018) analyses were hardly replicable. Although the authors' provided all their data and codes, not enough technical information was provided in the available resources. Indeed, many variables were not clearly defined either in the paper or in the online appendix and codes. This rendered tedious some estimations. Moreover, only few information is provided on the randomization procedures followed by the authors and on potential data cleaning manipulations. Given this lack of clarity, many of the replication output differ from the paper. However, these differences appear to be minor and do not seem to compromise the main findings of the authors.

Nevertheless, we observed some issues in the difference-in-differences (DID) strategy implemented by the authors. Some baseline differences between control and treated groups raised concerns about the comparability of the groups. Therefore, we implemented a robustness check to verify whether the DID hypothesis of common trend between the two groups held. It appears that the results of the estimated effects are not robust to the inclusion of group-specific trends. This tends to confirm that the baseline differences between treatment and control groups were not neglectable. The results presented in the paper may, thus, appear to be biased.

## 5. Appendices

Table 1. Baseline summary statistics

	Uganda				Malawi			
	Paper		Replication		Paper		Replication	
	Control mean (SD)	Treatment difference (SE)	Control mean (SD)	Treatment difference (SE)	Control mean (SD)	Treatment difference (SE)	Control mean (SD)	Treatment difference (SE)
Distance to bank branch in kilometers	2.68 (2.03)	-0.09 (0.09)	2.68 (2.03)	-0.09 (0.09)	<b>6.03</b> <b>(3.22)</b>	<b>-0.32</b> (0.14)	<b>6.15</b> <b>(3.25)</b>	<b>-0.36</b> (0.14)
Labor income (last month)	32.48 (95.45)	-5.88 (4.38)	32.48 (95.45)	-5.88 (4.38)	<b>25.72</b> <b>(67.27)</b>	<b>2.79</b> <b>(3.77)</b>	<b>24.46</b> <b>(69.13)</b>	<b>4.73</b> <b>(4.11)</b>
Ever received a formal loan	0.04 (0.18)	-0.01 (0.01)	0.04 (0.18)	-0.01 (0.01)	0.05 (0.22)	<b>0.05</b> <b>(0.22)</b>	0.05 (0.22)	<b>0.00</b> <b>(0.01)</b>
Ever received an informal loan	0.05 (0.22)	0.01 (0.01)	0.05 (0.22)	0.01 (0.01)	0.03 (0.18)	<b>0.03</b> <b>(0.18)</b>	0.03 (0.18)	<b>0.01</b> <b>(0.01)</b>
Observations	2,159		2,159		2,107		2,107	

Table 2. Take-up of sponsored bank account among assigned to treatment

	Uganda				Malawi			
	Paper		Replication		Paper		Replication	
	All	Active users only	All	Active users only	All	Active users only	All	Active users only
Opened account	0.54	1.00	0.54	1.00	0.69	1.00	0.69	1.00
Ever used account (at least 1 deposit)	0.42	1.00	0.42	1.00	0.41	1.00	0.41	1.00
Made at least 2 deposits within first 2 years	0.32	1.00	0.32	1.00	0.25	1.00	0.25	1.00
Active user (made at least 5 deposits within first 2 years)	0.17	1.00	0.17	1.00	0.10	1.00	0.10	1.00
Long-term user (at least 1 deposit in the second year)	0.19	0.77	0.19	0.77	0.12	0.83	0.12	0.83
Total number of deposits	<b>2.68</b>	12.81	<b>4.92</b>	12.81	<b>1.78</b>	12.06	<b>2.59</b>	12.06
Total number of withdrawals	<b>1.45</b>	6.86	<b>2.66</b>	6.86	<b>1.42</b>	10.95	<b>2.07</b>	10.95
Total value of deposits	<b>106.72</b>	527.32	<b>196.17</b>	527.32	<b>74.56</b>	647.64	<b>108.60</b>	647.64
Total value of withdrawals	<b>90.06</b>	444.78	<b>165.41</b>	444.78	<b>70.47</b>	623.80	<b>102.63</b>	623.80
If ever deposited, median deposit size	<b>13.12</b>	29.38	<b>27.28</b>	29.38	<b>11.44</b>	29.23	<b>20.23</b>	29.23
If ever withdrew, median withdrawal size	<b>20.00</b>	54.46	<b>49.90</b>	54.46	<b>10.29</b>	33.57	<b>22.03</b>	33.57
Total savings at baseline from survey data	26.45	29.26	26.45	29.22	12.42	34.28	12.42	34.28
Number of observations	1,080	181	1,080	181	1,053	106	1,053	106

Table 3. Correlates of take-up among those in treatment group: regression analysis

	Uganda						Malawi					
	Paper			Replication			Paper			Replication		
	Active	Deposits (inverse hyperbolic sine transformation)		Active	Deposits (inverse hyperbolic sine transformation)		Active	Deposits (inverse hyperbolic sine transformation)		Active	Deposits (inverse hyperbolic sine transformation)	
<b>Panel A. Demographics</b>												
Female	0.046 (0.029)	-0.211 (0.209)	-0.256 (0.212)	0.045 (0.029)	-0.213 (0.196)	-0.257 (0.200)	-0.004 (0.024)	0.305 (0.179)	0.343 (0.178)	-0.004 (0.024)	0.305 (0.174)	0.343 (0.174)
Not married	0.096 (0.105)	0.453 (0.693)	0.524 (0.696)	0.096 (0.102)	0.447 (0.685)	0.519 (0.684)	0.004 (0.128)	-0.325 (0.789)	-0.319 (0.794)	0.004 (0.108)	-0.325 (0.768)	-0.319 (0.764)
Female x not married	-0.093 (0.108)	-0.459 (0.711)	-0.527 (0.715)	-0.093 (0.106)	-0.457 (0.709)	-0.526 (0.709)	0.017 (0.130)	0.551 (0.805)	0.515 (0.810)	0.017 (0.110)	0.551 (0.785)	0.515 (0.782)
Household size	0.010 (0.006)	0.097 (0.038)	0.102 (0.038)	0.010 (0.005)	0.097 (0.037)	0.102 (0.037)	-0.002 (0.006)	0.048 (0.042)	0.048 (0.042)	-0.002 (0.005)	0.048 (0.039)	0.048 (0.039)
Age (1/10s of years)	0.073 (0.064)	0.745 (0.457)	0.698 (0.458)	0.075 (0.060)	0.755 (0.404)	0.707 (0.403)	0.093 (0.031)	0.775 (0.230)	0.788 (0.227)	0.093 (0.035)	0.775 (0.252)	0.788 (0.252)
Age squared	-0.004 (0.008)	-0.051 (0.056)	-0.045 (0.056)	-0.004 (0.007)	-0.051 (0.048)	-0.046 (0.048)	-0.009 (0.003)	-0.069 (0.024)	-0.069 (0.023)	-0.009 (0.004)	-0.069 (0.026)	-0.069 (0.026)
Entrepreneur	0.058 (0.049)	0.578 (0.333)	0.494 (0.336)	0.058 (0.055)	0.574 (0.371)	0.491 (0.371)	0.029 (0.033)	0.344 (0.241)	0.284 (0.241)	0.029 (0.034)	0.344 (0.244)	0.284 (0.244)
Farmer	-0.017 (0.050)	0.211 (0.339)	0.162 (0.340)	-0.019 (0.057)	0.198 (0.383)	0.150 (0.382)	0.009 (0.030)	0.286 (0.237)	0.298 (0.237)	0.009 (0.035)	0.286 (0.250)	0.298 (0.249)
Employee	0.067 (0.055)	0.382 (0.370)	0.277 (0.373)	0.066 (0.060)	0.380 (0.406)	0.276 (0.406)	-0.001 (0.029)	0.055 (0.223)	0.060 (0.223)	-0.001 (0.035)	0.055 (0.246)	0.060 (0.245)
<b>Panel B. Access to bank</b>												
Distance to closest branch in kilometers	-0.017 (0.005)	-0.129 (0.038)	-0.123 (0.038)	-0.017 (0.006)	-0.129 (0.039)	-0.123 (0.039)	-0.005 (0.004)	-0.073 (0.027)	-0.066 (0.027)	-0.005 (0.004)	-0.073 (0.025)	-0.066 (0.025)
<b>Panel C. Asset holdings and education</b>												
log value of household and agricultural assets	0.021 (0.013)	0.165 (0.090)	0.134 (0.091)	0.021 (0.012)	0.161 (0.081)	0.130 (0.084)	0.019 (0.009)	0.202 (0.063)	0.166 (0.062)	0.019 (0.009)	0.202 (0.063)	0.166 (0.064)
Years of education (dummy for more than primary in Chile)	0.008 (0.004)	0.069 (0.027)	0.065 (0.027)	0.008 (0.004)	0.068 (0.028)	0.064 (0.028)	0.010 (0.004)	0.114 (0.027)	0.112 (0.027)	0.010 (0.003)	0.114 (0.025)	0.112 (0.025)
<b>Panel D. Cognitive ability/financial literacy</b>												
Raven's score (standardized)	0.011 (0.012)	0.143 (0.083)	0.143 (0.082)	0.012 (0.012)	0.145 (0.082)	0.145 (0.082)	0.007 (0.010)	0.038 (0.076)	0.035 (0.076)	0.007 (0.010)	0.038 (0.073)	0.035 (0.073)
Financial literacy/numeracy index (standardized)	-0.009 (0.012)	-0.030 (0.080)	-0.033 (0.079)	-0.009 (0.012)	-0.028 (0.080)	-0.031 (0.080)	-0.007 (0.009)	0.116 (0.062)	0.118 (0.062)	-0.007 (0.010)	0.116 (0.071)	0.118 (0.071)
<b>Panel E. Baseline savings activity</b>												
Stock saved in cash at home (2010 US dollars)			-0.001 (0.001)			-0.001 (0.001)			0.005 (0.001)			0.005 (0.001)
Stock saved at ROSCA (2010 US dollars)			0.013 (0.006)			0.013 (0.004)			0.024 (0.017)			0.024 (0.017)
Stock saved with friends/family (2010 US dollars, 1/100 US dollars for Chile)			0.000 (0.003)			0.000 (0.003)			0.003 (0.004)			0.003 (0.004)
Adjusted R <sup>2</sup>	0.055	0.087	0.096	0.038	0.070	0.076	0.047	0.099	0.110	0.026	0.079	0.087
Observations	1,080	1,080	1,080	1,080	1,080	1,080	1,053	1,053	1,053	1,053	1,053	1,053
Mean of dependent variable	0.168	1.593	1.593	0.168	1.593	1.593	0.101	1.479	1.479	0.101	1.479	1.479

Table 4. Impacts on saving stocks in 2010 USD

	Formal financial institutions	Rep.	Mobile money	Rep.	Cash at home or in secret place	Rep.	ROSCA/VSLA	Rep.	Friends/family	Rep.	Other cash savings	Rep.	Total monetary savings	Rep.	Received formal loan	Rep.
<b>Panel A. Uganda</b>																
ITT	8.780	8.398	-0.387	-0.373	-2.743	-2.421	-0.349	-0.313	-0.813	-0.701	0.003	0.003	4.980	5.195	0.007	0.007
	(1.270)	(1.196)	(0.188)	(0.177)	(1.544)	(1.464)	(0.79)	(0.754)	(0.65)	(0.613)	(0.01)	(0.006)	(2.440)	(2.330)	(0.01)	(0.006)
TOT	20.117	21.820	-0.882	-0.300	-6.250	-5.047	-0.795	0.878	-1.849	-2.443	0.007	0.010	11.380	15.356	0.016	0.028
	(2.795)	(2.214)	(0.428)	(0.265)	(3.503)	(2.082)	(1.78)	(1.219)	(1.47)	(0.846)	(0.02)	(0.011)	(5.530)	(3.771)	(0.02)	(0.011)
Long-term TOT	43.146	46.789	-1.893	-0.643	-13.441	-10.851	-1.706	1.884	-3.971	-5.245	0.016	0.021	24.524	33.066	0.033	0.059
	(6.089)	(4.914)	(0.923)	(0.569)	(7.560)	(4.509)	(3.82)	(2.618)	(3.16)	(1.834)	(0.04)	(0.023)	(11.903)	(8.125)	(0.03)	(0.023)
Dep. var. mean in control group	5.03	4.739	1.10	1.046	21.61	20.566	8.54	8.160	4.63	4.364	0.02	0.020	40.94	38.896	0.04	0.037
Standard deviation	31.60	30.408	6.97	6.767	55.40	53.619	25.00	24.485	22.67	21.730	0.26	0.230	80.26	77.912	0.19	0.188
Treatment complier mean (TCM)	26.26	25.747	0.76	0.739	15.46	15.143	9.87	9.722	2.08	2.027	0.03	0.030	54.51	53.435	0.06	0.064
Control complier mean (CCM)	6.14	3.926	1.65	1.038	21.71	20.190	10.66	8.844	3.93	4.470	0.03	0.021	43.13	38.079	0.05	0.036
Long-term treat. complier mean (LTTCM)	34.92	34.592	0.74	0.725	14.46	14.336	8.98	8.932	1.52	1.490	0.03	0.028	60.77	60.220	0.05	0.050
Long-term control complier mean (LTCCM)	-8.23	-12.197	2.63	1.368	27.90	25.187	10.68	7.047	5.49	6.735	0.01	0.007	36.25	27.154	0.02	-0.009
Observations	6,007	6,282	6,027	6,302	6,022	6,297	6,028	6,303	6,030	6,305	6,017	6,292	5,978	6,253	6,033	6,003
<b>Panel B. Malawi</b>																
ITT	3.883	3.885	—	—	-1.951	-1.956	-0.438	-0.441	-0.034	-0.033	—	—	1.391	1.659	0.005	0.005
	(0.605)	(0.604)	—	—	(0.671)	(0.671)	(0.236)	(0.237)	(0.019)	(0.019)	—	—	(0.98)	(0.940)	(0.00)	(0.004)
TOT	9.403	9.403	—	—	-4.727	-4.740	-1.059	-1.069	-0.081	-0.080	—	—	3.372	4.030	0.012	0.012
	(1.424)	(1.433)	—	—	(1.619)	(1.630)	(0.570)	(0.574)	(0.047)	(0.047)	—	—	(2.36)	(2.273)	(0.01)	(0.010)
Long-term TOT	32.482	32.412	—	—	-16.330	-16.385	-3.653	-3.683	-0.280	-0.277	—	—	11.676	13.793	0.040	0.040
	(4.866)	(4.885)	—	—	(5.696)	(5.738)	(1.992)	(2.008)	(0.163)	(0.164)	—	—	(8.08)	(7.665)	(0.03)	(0.034)
Dep. var. mean in control group	2.15	2.141	—	—	9.20	9.199	2.45	2.451	0.10	0.099	—	—	13.87	12.687	0.02	0.020
Standard deviation	15.08	15.069	—	—	26.15	26.147	8.63	8.629	0.82	0.815	—	—	32.57	25.643	0.14	0.139
Treatment complier mean (TCM)	11.18	11.166	—	—	7.18	7.181	2.19	2.189	0.05	0.052	—	—	20.55	19.366	0.03	0.030
Control complier mean (CCM)	1.78	1.763	—	—	11.91	11.922	3.25	3.257	0.13	0.132	—	—	17.18	15.336	0.02	0.019
Long-term treat. complier mean (LTTCM)	24.18	24.106	—	—	7.78	7.778	2.81	2.814	0.02	0.015	—	—	34.81	35.463	0.04	0.037
Long-term control complier mean (LTCCM)	-8.30	-8.306	—	—	24.11	24.163	6.47	6.498	0.30	0.292	—	—	23.13	21.670	0.00	-0.004
Observations	5,901	5,901	—	—	5,905	5,905	5,906	5,906	5,907	5,907	—	—	5,898	3,922	5,889	5,889

Table 5. Impacts on saving stocks in 2010 USD including linear group specific trends

	Formal financial institutions	Including trends	Mobile money	Including trends	Cash at home or in secret place	Including trends	ROSCA/VSLA	Including trends	Friends/family	Including trends	Other cash savings	Including trends	Total monetary savings	Including trends	Received formal loan	Including trends
<b>Panel A. Uganda</b>																
ITT	8.398	9.256	-0.373	1.066	-2.421	-3.458	-0.313	-1.546	-0.701	-2.512	0.003	0.009	5.195	3.889	0.007	-0.015
	(1.196)	(2.511)	(0.177)	(0.438)	(1.464)	(3.577)	(0.754)	(1.624)	(0.613)	(1.737)	(0.006)	(0.032)	(2.330)	(5.109)	(0.006)	(0.014)
TOT	21.820	29.105	-0.300	1.312	-5.047	-0.789	0.878	-2.124	-2.443	-3.798	0.010	0.059	15.356	24.661	0.028	-0.016
	(2.214)	(4.817)	(0.265)	(0.689)	(2.082)	(5.659)	(1.219)	(2.546)	(0.846)	(2.596)	(0.011)	(0.057)	(3.771)	(8.572)	(0.011)	(0.024)
Long-term TOT	46.789	63.333	-0.643	2.880	-10.851	-1.749	1.884	-4.661	-5.245	-8.341	0.021	0.130	33.066	54.817	0.059	-0.034
	(4.914)	(10.977)	(0.569)	(1.516)	(4.509)	(12.550)	(2.618)	(5.596)	(1.894)	(5.722)	(0.023)	(0.124)	(8.125)	(19.144)	(0.023)	(0.052)
Dep. var. mean in control group	4.739	4.739	1.046	1.046	20.566	20.566	8.160	8.160	4.364	4.364	0.020	0.020	38.896	38.896	0.037	0.037
Standard deviation	30.408	30.408	6.767	6.767	53.619	53.619	24.485	24.485	21.730	21.730	0.230	0.230	77.912	77.912	0.188	0.188
Treatment complier mean (TCM)	25.747	25.747	0.739	0.739	15.143	15.143	9.722	9.722	2.027	2.027	0.030	0.030	53.435	53.435	0.064	0.064
Control complier mean (CCM)	3.926	3.926	1.038	1.038	20.190	20.190	8.844	8.844	4.470	4.470	0.021	0.021	38.079	38.079	0.036	0.036
Long-term treat. complier mean (LTTCM)	34.592	34.592	0.725	0.725	14.336	14.336	8.932	8.932	1.490	1.490	0.028	0.028	60.220	60.220	0.050	0.050
Long-term control complier mean (LTCCM)	-12.197	-12.197	1.368	1.368	25.187	25.187	7.047	7.047	6.735	6.735	0.007	0.007	27.154	27.154	-0.009	-0.009
Observations	6,282	6,282	6,302	6,302	6,297	6,297	6,303	6,303	6,305	6,305	6,292	6,292	6,253	6,253	6,003	6,003
<b>Panel B. Malawi</b>																
ITT	3.885	6.871	—	—	-1.956	-8.724	-0.441	0.437	-0.033	0.049	—	—	1.659	-6.322	0.005	0.008
	(0.604)	(1.750)	—	—	(0.671)	(2.549)	(0.237)	(0.547)	(0.019)	(0.068)	—	—	(0.940)	(4.257)	(0.004)	(0.019)
TOT	9.403	16.468	—	—	-4.740	-21.049	-1.069	1.056	-0.080	0.119	—	—	4.030	-15.696	0.012	0.018
	(1.433)	(4.150)	—	—	(1.630)	(6.172)	(0.574)	(1.321)	(0.047)	(0.163)	—	—	(2.273)	(10.588)	(0.010)	(0.046)
Long-term TOT	32.412	59.959	—	—	-16.385	-76.614	-3.683	3.811	-0.277	0.434	—	—	13.793	-55.542	0.040	0.066
	(4.885)	(15.467)	—	—	(5.738)	(23.169)	(2.008)	(4.785)	(0.164)	(0.593)	—	—	(7.665)	(38.184)	(0.034)	(0.165)
Dep. var. mean in control group	2.141	2.142	—	—	9.199	9.200	2.451	2.452	0.099	0.099	—	—	12.687	12.688	0.020	0.020
Standard deviation	15.069	15.070	—	—	26.147	26.148	8.629	8.630	0.815	0.815	—	—	25.643	25.644	0.139	0.139
Treatment complier mean (TCM)	11.166	11.167	—	—	7.181	7.182	2.189	2.190	0.052	0.052	—	—	19.366	19.367	0.030	0.030
Control complier mean (CCM)	1.763	1.764	—	—	11.922	11.923	3.257	3.258	0.132	0.132	—	—	15.336	15.337	0.019	0.019
Long-term treat. complier mean (LTTCM)	24.106	24.107	—	—	7.778	7.779	2.814	2.815	0.015	0.015	—	—	35.463	35.464	0.037	0.037
Long-term control complier mean (LTCCM)	-8.306	-8.307	—	—	24.163	24.164	6.498	6.499	0.292	0.292	—	—	21.670	21.671	-0.004	-0.005
Observations	5,901	6,901	—	—	5,905	6,905	5,906	6,906	5,907	6,907	—	—	3,922	4,922	5,889	6,889

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