

Saving by Default: Evidence from a Field Experiment in Rural India - Online Appendix

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Appendix A: Study Area and Sampling Strategy

The study took place in three districts of Chhattisgarh, a Central-Eastern state of India. Figure 1 shows the location of Chhattisgarh in India, of the three districts in Chhattisgarh, and of the villages in the districts.

Figure 2 summarizes the intervention and randomization that took place in each village.

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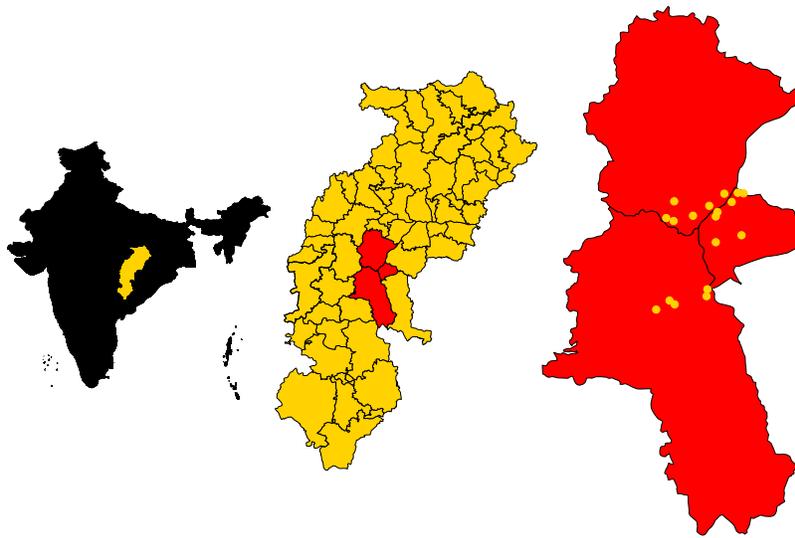


Figure 1: Map of the Study Area

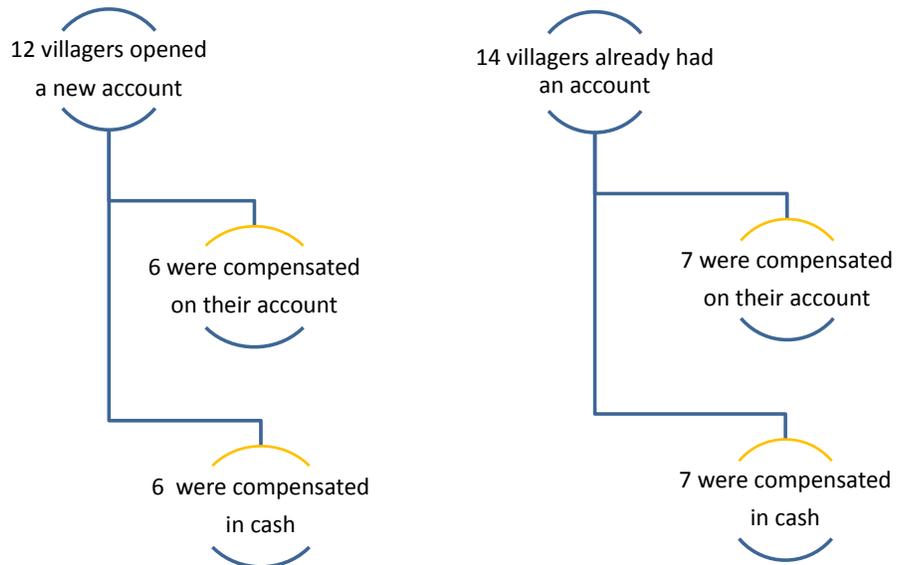


Figure 2: Sampling Strategy

Appendix B: Additional Results and Balance Checks

Additional Results

The Tables 1 and 2 provide the treatment effects that were presented in the Tables 2 and 3 of the paper, but for regressions without control variables.¹ There is one interesting difference, namely the significant impact on the conditional median of cash at home during Phase 1: the control save Rs 500 less in their BCSA account, but they consume Rs 310 more, and save Rs 100 more at home.

Table 1: Treatment Effect on Savings and Expenditures (Phase 1) - Without Control Variables

	BCSA balance		Frequent consumption	Temptation goods	Cash at home	Total assets	
	Final	Average				without BCSA	including BCSA
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Panel A: Impact on the conditional mean</i>							
Paid into account	473.0*** (83.3)	315.3*** (59.5)	-400.5* (219.0)	23.4 (43.5)	-208.1 (490.4)	389.5 (462.4)	878.6* (450.1)
R^2	0.09	0.06	0.02	0.00	0.00	0.01	0.01
Mean dependent (control)	353	287	3328	663	1614	2436	2795
<i>Panel B: Impact on the conditional median</i>							
Paid into account	500.0*** (55.8)	378.9*** (35.2)	-310.0* (159.4)	-36.5 (56.5)	-100.0** (50.4)	-110.0 (126.8)	447.5*** (151.0)
Median dependent (control)	50	43	2661	470	300	990	1150
Controls	No	No	No	No	No	No	No
Observations	442	442	430	430	430	430	430

Panel A presents the impact on the conditional mean using ordinary least squares, and panel B on the conditional median using quantile regressions. In the columns (1) and (2) the dependent variables are different measures of the savings in the respondent's BCSA account; in column (3) and (4) it is the household's total expenditures on frequent consumption and temptation goods respectively; and in the columns (5)-(7), the respondent's financial assets, measured during the last weekly interview. We only control for the variables we stratified on (gender, and whether they had a bank account). All columns include village fixed effects. Bootstrapped standard errors are given in parenthesis. *** significant at 1 percent, ** significant at 5 percent, * significant at 10 percent.

¹The quantile regression did not converge for the difference in the balance in the BCSA account during Phase 2 (column (1) in Table 2).

Table 2: Treatment Effect on Savings and Expenditures (Phase 2) - Without Control Variables

	Change in balance BCSA (1)	Frequent consumption (2)	Temptation goods (3)	Change in cash at home (4)	Change in total assets without BCSA (5) including BCSA (6)	
<i>Panel A: Impact on the conditional mean</i>						
Paid into account during Phase 1	-43.5 (32.8)	5.0 (63.7)	-11.5 (14.7)	-157.0 (318.6)	-153.6 (329.6)	-202.1 (314.0)
R^2	0.01	0.00	0.01	0.01	0.01	0.00
Mean dependent (control)	35	973	212	105	55	93
<i>Panel B: Impact on the conditional median</i>						
Paid into account during Phase 1		39.0 (73.9)	-7.0 (16.4)	50.0 (58.9)	-0.0 (53.1)	-44.0 (66.2)
Median dependent (control)		805	170	0	-10	0
Controls	No	No	No	No	No	No
Observations	442	400	400	400	400	400

Panel A presents the impact on the conditional mean using ordinary least squares, and panel B on the conditional median using quantile regressions. The dependent variables are the difference in the respondent's balance in the BCSA account between the start and the end of Phase 2, the household's total expenditures on frequent consumption and temptation goods during Phase 2, and the change in financial assets between the start and the end of Phase 2. We only control for the variables we stratified on (gender, and whether they had a bank account). All columns include village fixed effects. Bootstrapped standard errors are given in parenthesis. *** significant at 1 percent, ** significant at 5 percent, * significant at 10 percent.

Table 3 presents the treatment effect for two extra expenditure categories: (1) non-frequent expenditures and (2) investment. Both outcome variables are measured as the total amount spent during Phase 1. The investment category includes investments on livestock, businesses, and agricultural tools and inputs, such as fertilizers. All irregular expenses are classified as non-frequent. It includes expenditures on durable goods, education, services, rent, water charges, house repair, clothes, footwear, bedding, kitchen utensils, and furniture. To categorize the remaining goods as frequent or non-frequent, we calculate how often households consume or spend on each category during the weekly household surveys. Frequent consumption includes all goods on which the average household spends at least once every three weeks, while the other goods - meat, toothpaste, and shaving articles - were added to the category of non-frequent goods.

The average respondent was interviewed 10 times, and received Rs 1,500 in total. We do not expect this amount to be sufficient to make a difference in terms of investments, or irregular expenses such as expenditures on durable goods. Indeed, the first two columns show that there are no systematic differences between the treated and control.

The columns (3) to (6) of Table 3 show details on the respondent's financial assets that we aggregated in Table 2 : (i) money in other accounts, (ii) balance with an agricultural cooperative, (iii) balance in a post office account, and (iv) savings with self-help groups (SHGs) or other informal neighborhood groups.² In Table 2 , we find that the treatment effect on total savings - measured as the sum over these four assets and cash at home - is not significant (column (6)). However, the treatment seems to have a positive effect on the mean balance with agricultural cooperatives. This is due to a small number of respondents who sold crops shortly before the last interview of Phase 1. If we exclude the top two values of balances with agricultural cooperatives for both the treated and control (0.9% in total), the treatment effect on balances with agricultural cooperatives is no longer significant, and the other results do not change substantially.³ Therefore, we conclude there is no significant impact on financial assets.⁴

²Only 5.5% of the control, and 7.5% of the treated have a positive balance with a post office. Therefore, the quantile regression did not converge.

³The results are available upon request.

⁴We provide details for financial assets only, as we consider it most likely that those would be influenced by our weekly payments. However, for completeness, we also tested the impact on other assets, namely on food grain, livestock, and jewelry. We also compared the control and treated's ownership of a long list of assets

Table 3: Treatment Effect on Other Consumption and Total Savings

	Non-frequent expenditures	Investments	Balance in other accounts	Balance with cooperative	Balance with post office	Savings with SHGs
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: Impact on the conditional mean</i>						
Paid into account	-303.5 (897.9)	321.5 (960.5)	39.1 (61.1)	352.8* (185.5)	10.3 (18.0)	238.0 (190.9)
R^2	0.10	0.11	0.07	0.14	0.07	0.20
Mean dependent (control)	5185	2789	171	193	42	416
<i>Panel C: Impact on the conditional median</i>						
Paid into account	-301.3 (327.1)	-47.1 (151.6)	0.0 (0.1)	0.0 (9.1)		-0.0 (0.0)
Median dependent (control)	2451	300	0	0		0
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	430	430	430	430	430	430

Panel A presents the impact on the conditional mean using ordinary least squares, and panel B on the conditional median using quantile regressions. The dependent variables are the household's total expenditures on non-frequent goods and investments, and the respondent's financial assets, measured during the last weekly interview of Phase 1. We include the same baseline characteristics as in Table 2, and village fixed effects. Bootstrapped standard errors are given in parenthesis. *** significant at 1 percent, ** significant at 5 percent, * significant at 10 percent.

Figure 3 pictures the evolution of cumulative consumption during Phase 1 and Phase 2. The horizontal axis shows the number of weeks since the start of the experiment, and the vertical axis the cumulative consumption by treatment group.

Figure 4 pictures the distribution of the final balances. The treated respondents are much less likely to have a zero balance, and both their mean and median balances are higher.

measured in the endline survey (for example electronics such as radio or television, cattle, bicycle, ...). There was no significant impact on any of those either.

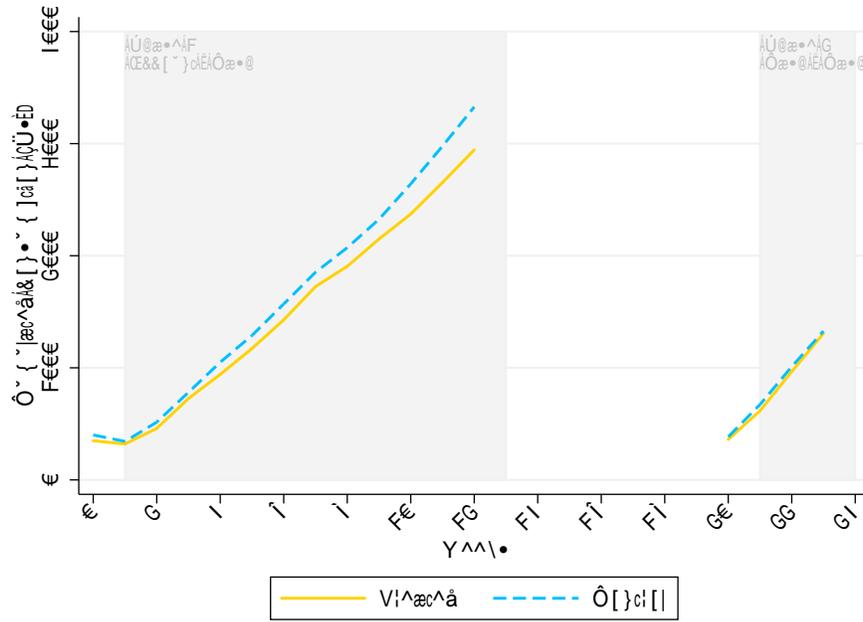


Figure 3: Evolution of Cumulative Consumption of the Treated and Control

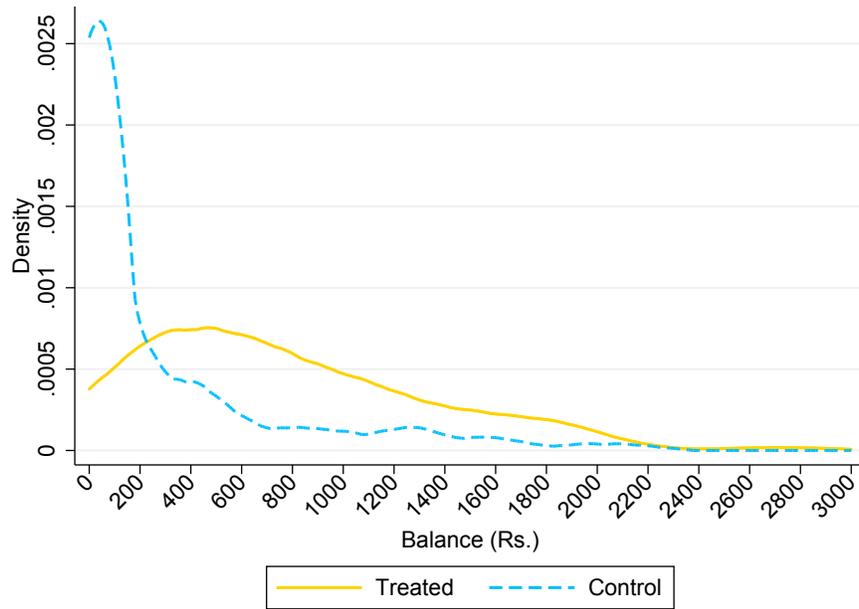


Figure 4: Distribution of the Final Balance

Balance Check of Outcome Variables and Restricted Samples

In Table 4 the first two columns provide a balance check for the respondents who joined the weekly interviews (Section II), and the last two columns for the participants in the lab-in-

the-field games (Section III). The odd columns provide the sample mean and the standard deviation, and the even columns present the coefficient estimates (and standard errors) of the difference between the baseline means in the treatment and control groups. All the coefficient estimates are small and not significantly different from zero, suggesting that the treatment is orthogonal to observed baseline characteristics in the restricted samples as well.

Table 4: Summary Statistics and Balance Check for Restricted Samples

	Weekly interviews		Lab	
	Mean (Std. dev.)	Coefficient on <i>Paid into account</i> (Std. errors)	Mean (Std. dev.)	Coefficient on <i>Paid into account</i> (Std. errors)
	(1)	(2)	(3)	(4)
Paid into account (%)	49.53 (50.06)		47.24 (49.99)	
New account (%)	46.98 (49.97)	-0.00 (0.05)	45.67 (49.88)	-0.02 (0.05)
Woman (%)	50.23 (50.06)	0.00 (0.05)	51.44 (50.04)	0.00 (0.05)
Caste category: ST (%)	12.79 (33.44)	-0.00 (0.03)	12.86 (33.52)	-0.00 (0.03)
Caste category: SC (%)	11.86 (32.37)	-0.00 (0.03)	11.55 (32.00)	-0.01 (0.03)
Caste category: OBC (%)	74.65 (43.55)	-0.00 (0.04)	74.80 (43.47)	0.00 (0.04)
Caste category: FC (%)	0.70 (8.33)	0.00 (0.01)	0.79 (8.85)	0.01 (0.01)
Literate (%)	47.44 (49.99)	-0.01 (0.05)	46.98 (49.97)	0.00 (0.05)
Married (%)	88.14 (32.37)	0.01 (0.03)	87.40 (33.23)	-0.00 (0.03)
Age	43.22 (12.60)	0.51 (1.22)	43.57 (12.69)	0.07 (1.30)
Wage labor in agriculture (%)	29.77 (45.78)	0.01 (0.04)	29.40 (45.62)	0.01 (0.05)
Wage labor outside agriculture (%)	13.26 (33.95)	0.02 (0.03)	14.17 (34.92)	0.04 (0.04)
Self-employed in agriculture (%)	45.81 (49.88)	-0.01 (0.05)	44.36 (49.75)	-0.04 (0.05)
Self-employed outside agriculture (%)	3.95 (19.51)	-0.00 (0.02)	4.20 (20.08)	-0.01 (0.02)
Land (acres)	1.18 (1.76)	-0.05 (0.17)	1.19 (1.81)	-0.03 (0.19)
Dwelling type: katcha (%)	52.56 (49.99)	0.00 (0.05)	52.49 (50.00)	0.01 (0.05)
Accounts held (#)	1.17 (0.60)	0.00 (0.06)	1.17 (0.59)	-0.00 (0.06)
Savings groups (#)	0.16 (0.38)	-0.01 (0.04)	0.17 (0.39)	-0.01 (0.04)
Takes savings decision at home (%)	84.65 (36.09)	0.03 (0.03)	84.25 (36.47)	0.02 (0.04)
Trusts the BCSA and banks (%)	73.26 (44.31)	0.02 (0.04)	72.70 (44.61)	0.01 (0.05)
Impatient (%)	41.86 (49.39)	0.05 (0.05)	43.31 (49.62)	0.03 (0.05)
Distance to the BCSA (km)	0.28 (0.21)	-0.02 (0.02)	0.28 (0.20)	-0.02 (0.02)
Balance in BCSA account before start weekly surveys (Rs)	112.19 (654.22)	-20.34 (63.17)	116.87 (687.21)	-29.50 (70.60)
Weeks interviewed (#)	10.00 (2.65)	-0.28 (0.26)	10.18 (2.52)	-0.33 (0.26)
Observations	430	430	381	381

The first and third column report means (and standard deviations), and the second and fourth column show the coefficient estimates (and standard errors) of the difference between the means in the treatment and control groups. *** significant at 1 percent, ** significant at 5 percent, * significant at 10 percent

Table 5 provides a balance check for the baseline value of the outcome variables that

are presented throughout the paper. The only significant difference between the treated and control, is their balance with the post office. However, this is driven by a very small number of participants who have a positive balance (9 control, and 13 treated respondents). Therefore, we conclude that the sample is not only balanced for baseline characteristics, but also for outcome variables.

Table 5: Summary Statistics and Balance Check of Outcome Variables at Baseline

	Mean (Std. dev.)	Coefficient on <i>Paid into account</i> (Std. errors)
	(1)	(2)
Balance in BCSA account before start weekly surveys (Rs.)	112.2 (654.2)	-20.3 (63.2)
Frequent expenditures over past week	451.1 (325.4)	-3.3 (31.4)
Temptation good expenditures over past week	80.5 (86.4)	5.9 (8.3)
Non-frequent expenditures over past week	366.5 (1016.4)	-112.2 (98.0)
Investments over past week	760.4 (1902.9)	-14.3 (183.8)
Cash at home	554.8 (1432.7)	84.1 (138.3)
Balance in other accounts	92.8 (522.0)	4.4 (50.4)
Balance with cooperatives	292.3 (1804.9)	268.6 (173.8)
Balance with post office	19.5 (167.8)	35.6** (16.1)
Savings with SHGs	342.6 (1443.3)	-4.4 (139.4)
Total assets (excluding BCSA savings)	1302.0 (2717.0)	388.3 (261.7)
Total assets (including BCSA savings)	1414.2 (2787.4)	368.0 (268.6)
Observations	430	430

The first column reports means (and standard deviations), and the second column shows the coefficient estimates (and standard errors) of the difference between the means in the treatment and control groups. *** significant at 1 percent, ** significant at 5 percent, * significant at 10 percent

Appendix C: Pre-specified and exploratory analysis

We registered a pre-analysis plan with the American Economic Association. It has the identification number AEARCTR-0000387 and can be consulted on www.socialscisearch.org. The main results come from the pre-planned analysis. Some tables provide additional analyses that we decided upon after the pre-analysis plan was registered, but that we believe the paper benefits from. This is for example the case for the long-term effect on the balances, or the comparison of the transactions made by the control and treated groups. In the pre-analysis plan we only discussed OLS estimators. However, we also show quantile regressions, as part of our robustness checks.

We make three important deviations from the initial pre-plan. First, we pre-specified that the standard errors would be clustered at the village level. Given the low number of clusters (17), there is the risk to artificially reduce the standard errors. This might indeed be the case, as the standard errors are smaller when they are clustered. We therefore decided to present nonparametric bootstrapped standard errors. The level of significance of the impact is not affected by this deviation from the initial plan, and the results are available upon request.

Second, the pre-analysis plan includes two extra outcome variables, namely the *positive balance*, which is the ratio between the number of days with a positive balance and the total number of days, from the day after the first till the day after the last weekly interview in the village; and *maximum balance*, which is the maximum balance that was recorded in the account. We graphically summarize the impact on *positive balance* in Figure 4. *Maximum balance* did not add much to the analysis, and we therefore did not include it in the paper. The results for both variables are available upon request.

Finally, the pre-analysis plan includes the description of a third group of villagers: those who do not have an account, and were not asked to open one. We do not include the analysis of that group, and the related outcome variables (Y2, Y3 and Y4) in this paper. We are writing a separate paper that specifically looks at Y2, Y3 and Y4 for people without an account, and people with a new account.