

THE EFFECTS OF FINANCIAL INCLUSION ON CHILDREN'S SCHOOLING, AND PARENTAL ASPIRATIONS AND EXPECTATIONS

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Abstract: We analyse the effects of offering access to a savings account to a sample of poor women on the educational attainment of their children and on the educational aspirations and expectations they have for them. Using data from a field experiment in Nepal that randomized access to savings accounts among a largely unbanked population, we provide evidence that financial access increased the schooling level of daughters and the educational aspirations and expectations parents have for them. Wealth and female empowerment do not seem to be behind our findings. Copyright © 2015 John Wiley & Sons, Ltd.

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1 INTRODUCTION

Much of the literature to date on the impact of financial inclusion of the poor has focused on its financial consequences (Karlan & Morduch, 2010). Nevertheless, the lives of the poor may change as a result of being financially included in ways that go beyond financial outcomes. The more expensive and/or less efficient the set of informal financial resources available to the poor, the harder it will be for them to successfully manage their finances. This may result in a lower sense of ability to control their financial future and that of their families. Hence, access to the financial system may affect individuals' aspirations and expectations. This may translate into changes in behaviour through different channels.

First, financial access may allow households to accumulate wealth. Second, being offered a savings account might make individuals feel or actually be more empowered. Via either of

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these two channels, individuals could feel (more) financially secure, their aspirations and expectations could rise and their behaviour could change. Third, financial inclusion may enable the poor to have greater cognitive resources for their everyday lives by helping to reduce the anxieties associated with not being able to efficiently manage their finances (McLoyd, 1998). Moreover, recent research suggests that financial inclusion may do more for the poor than simply help them achieve greater economic stability. It may provide them with greater cognitive resources, allowing them to focus on important and previously neglected life outcomes such as the education of their children (Mullainathan & Shafir, 2013).

We analyse the effects of offering access to a savings account to poor women on their children's schooling and on parental educational aspirations and expectations. We explore whether the effects we find are driven by wealth or empowerment effects and argue that our results may be consistent with the hypothesis that financial inclusion enables the poor to have greater cognitive resources for their everyday lives.

Our research contributes to the studies analysing aspirations and expectations (Beaman, Duflo, Pande, & Topalova, 2012; Bernard, Dercon, & Taffesse, 2011; Chiapa, Garrido, & Prina, 2012; Macours & Vakis, 2014; Ray, 2006; Wydick, Glewwe, & Rutledge, 2013), which, unlike ours, have focused on the effect of role models. We also add to the literature measuring how access to financial products shapes the lives of the poor (e.g. Dupas & Robinson, 2013; Prina, 2015).

2 EXPERIMENTAL DESIGN AND DATA

We use data from the field experiment run by Prina (2015), which gave access to savings accounts to a random sample of poor households in 19 slums surrounding Pokhara, Nepal. The savings account offered do not have any opening, maintenance or withdrawal fees and pay a 6% nominal yearly interest, similar to the average alternative in the Nepalese market (Nepal Rastra Bank, 2011). In addition, the savings accounts do not have a minimum balance requirement. Account holders can make transactions at the local bank branch offices in the slums, open twice a week for 3 h, or at the Good Neighbour Service Association (GONESA) bank's main office, located in downtown Pokhara, during regular business hours. There are no additional benefits from opening the savings account (e.g. customers with a savings account were not eligible for credit or lower interest rates on loans).

In May 2010, a baseline survey was conducted of female heads of household aged 18–55 years.¹ In total, 1236 households were surveyed. Separate public lotteries were held in each slum to assign half of the female household heads to the treatment group and half to the control group. After completing the baseline survey, the savings accounts were offered between the last two weeks of May and the first week of June 2010. One year after the start of the intervention, an end line survey was conducted.

As Prina (2015) documents, while at baseline, 15% of the control and treatment groups had a bank account, a year later, 84% of the treatment group had a savings account. The treatment group actively used the savings account, making on average of 0.8 deposits a week and one withdrawal every 3 months. Despite the high take-up and usage rates, Prina (2015) does not find an increase in assets for treatment households. Nevertheless, access to a savings account seems to help poor households to manage their resources better—prioritizing education and food expenditures—and to feel more in control of their financial

¹Female head of household is defined here as the female member taking care of the household.

situation. Tables A1–A3 show the impact on assets and liabilities (Table A1), expenditures (Table A2) and self-reported financial situation (Table A3) for the sample studied. The estimates confirm the findings of Prina (2015).

The sample used in this paper comprises 661 children 11–16 years of age at end line and their corresponding 510 households. Focusing on this age range is relevant given Nepal's educational system characteristics. In Nepal, children begin school at the age of six, entering first grade. Primary education covers grades 1–5 and secondary education grades 6–10. UNESCO's (2011) national statistics for Nepal show that for the 2010–2011 school year, net enrollment rates were above 94% for children ages 6–10 years, who should be attending primary school (95.3% and 93.6% for boys and girls, respectively), but drop to 69% for children ages 11–16 years, who should be attending secondary school (70% and 68.5% for boys and girls, respectively). Hence, focusing on children ages 11–16 years allows us to analyse a period during which many children drop out of school.

Tables 1 and 2 report *baseline* descriptive statistics for our sample. Table 1 shows that the male and female heads of household in the sample are, on average, 42 and 37 years old, respectively. Both have low levels of education. However, male household heads have, on average, twice the years of schooling of female household heads (4.6 vs 2.3, respectively). On average, households have five members with 1.4 children 10–15 years old at baseline. These children have already completed more years of schooling than their parents. Girls 10–15 years old have on average 6.7 years of schooling, while boys 10–15 years old have on average 5.8 years of schooling. However, girls are on average older than boys.

As shown in Table 2, households have a weekly average income of Nepalese Rs. 1500 (~\$US 21) and Rs. 9000 (~\$US 129) in total net worth (assets minus liabilities). This means that these households are, on average, living with less than a dollar per person per day. Furthermore, most of these households are out of the formal financial system. Only 15% of households had a bank account at baseline. However, they do report the use of a number of financial products to manage their financial lives. Most households save informally, via microfinance institutions, storing cash at home and participating in Rotating Savings and Credit Associations (ROSCAs).² Also, 91% of them had at least one outstanding loan (most loans are taken from ROSCAs, Microfinance Institutions (MFIs) and family and friends). Finally, the sample population seems highly vulnerable to shocks: 44% of the households indicated having experienced a negative external income shock during the month previous to the baseline survey.³

Randomization led to balance in all but one variable: amount of assets.⁴ A comparison of the descriptive statistics shown in these two tables for our sample with the statistics reported by Prina (2015) for the original sample shows that the two samples are very similar. Hence, it is not surprising that take-up and usage rates and impact on household welfare are also very similar.

²A ROSCA is a savings group formed by individuals who decide to make regular cyclical contributions to a fund in order to build a joint pool of money, which then rotates among group members, being given as a lump sum to one member in each cycle.

³Shocks include health shocks, lost job, livestock loss, broken/damaged/stolen goods or equipment, low demand for business, decrease in the wage rate and death of a household member.

⁴The imbalance is caused by two outliers in the treatment group who have the highest level of assets in the sample. Dropping them, we achieve balance in all variables presented in Tables 1 and 2, and the results reported in the paper do not change. Results are available upon request.

Table 1. Descriptive statistics by treatment status

	Obs.	Mean		T-stat ^a
		Sample	Treatment	
Characteristics of the female head of the household				
Age	510	37.35 (6.68)	37.25 (6.52)	37.45 (6.86)
Years of education	416	2.26 (2.55)	2.31 (2.64)	2.21 (2.45)
Characteristics of the spouse				
Age	467	42.27 (8.22)	42.49 (8.50)	42.03 (7.91)
Years of education	459	4.67 (3.40)	4.81 (3.52)	4.51 (3.25)
Household demographic characteristics				
Household size	510	5.03 (1.63)	4.99 (1.63)	5.07 (1.64)
Number of children 10–15 years old	493	1.36 (0.70)	1.36 (0.72)	1.37 (0.67)
Number of female children 10–15 years old	493	0.70 (0.70)	0.67 (0.69)	0.73 (0.72)
Number of male children 10–15 years old	493	0.66 (0.67)	0.68 (0.68)	0.64 (0.65)
Characteristics of children 10–15 years old at baseline				
Average age of children 10–15 years old	672	12.50 (1.66)	12.48 (1.68)	12.53 (1.64)
Average age of female children 10–15 years old	346	12.62 (1.70)	12.62 (1.71)	12.63 (1.69)
Average age of male children 10–15 years old	326	12.38 (1.61)	12.35 (1.65)	12.41 (1.57)
Average level of education of children 10–15 years old	667	6.26 (2.19)	6.22 (2.29)	6.30 (2.09)
Average level of education of female children 10–15 years old	345	6.66 (2.04)	6.70 (2.16)	6.62 (1.91)
Average level of education of male children 10–15 years old	322	5.83 (2.27)	5.74 (2.31)	5.93 (2.22)

Note: Standard deviations are reported in parentheses.

^aThe *t*-statistics for the characteristics of the head of the household and his or her spouse and for the household demographic and financial characteristics are calculated clustering at the slum level. The *t*-statistics for the characteristics of children 10–15 years old at baseline are calculated clustering at the household level.

Table 2. Descriptive statistics by treatment status

	Obs.	Mean		T-stat ^a
		Sample	Treatment	
Household financial characteristics				
Total income last week ^b	510	1503.87 (5011.10)	1372.60 (4736.28)	-0.64
Total net worth (assets-liabilities) ^b	510	9013.73 (136 656.40)	12 153.91 (119 703.30)	0.74
Assets ^b	510	48 698.86 (61 039.01)	54 102.00 (71 862.33)	1.76*
Liabilities ^b	510	39 685.13 (121 916.80)	41 948.09 (102 369.90)	0.50
Proportion of households with money in a bank	510	0.15 (0.36)	0.15 (0.36)	0.19
Proportion of households with money in a ROSCA	510	0.19 (0.39)	0.20 (0.40)	0.21
Proportion of households with money in an MFI	510	0.56 (0.50)	0.54 (0.50)	-0.71
Proportion of households with cash at home	510	0.96 (0.21)	0.95 (0.22)	-0.99
Proportion of households with outstanding loans	510	0.91 (0.29)	0.91 (0.28)	0.27
Proportion of households who experienced a negative income shock	510	0.44 (0.50)	0.46 (0.50)	1.11

Note: Standard deviations are reported in parentheses.

^aThe *t*-statistics for the characteristics of the head of the household and his or her spouse and for the household demographic and financial characteristics are calculated clustering at the slum level. The *t*-statistics for the characteristics of children 10–15 years old at baseline are calculated clustering at the household level.

^bVariables expressed in Nepalese rupees (the exchange rate was roughly Rs. 70 to \$US 1 during the study period).

*Indicates that the distribution is significantly different for treatment and control groups at the 10% level.

3 EMPIRICAL STRATEGY

We estimate the average effect of having been assigned to the treatment group, or intent-to-treat effect (ITT), a year after offering the savings account using this specification:⁵

$$Y_i = \alpha_0 + \alpha_1 ITT_i + X_i' \alpha_2 + \lambda_s + \varepsilon_i \quad (1)$$

where Y_i refers to the outcome variable of child i ; ITT_i is an indicator variable for assignment into the treatment group of the household of child i ; X_i is a vector of baseline characteristics;⁶ λ_s are slum-fixed effects, as the randomization was carried out within slums; and ε_i is an error term. Standard errors are clustered at the household level. The coefficient of interest is α_1 , which estimates the ITT effect.⁷

4 RESULTS

Table 3 shows the estimates of regression (1) at the child level for children's school completion (Panel A) and parental educational aspirations and expectations (Panels B and C). Results are reported for all children 11–16 years old (columns 1–3), for sons (columns 4–6) and for daughters (columns 7–9). We estimate the ITT effects without controls in columns (1), (4) and (7) and include controls in columns (2), (5) and (8). Finally, in columns (3), (6) and (9), we include as a control the mother's educational level in years.

Column 1 in Panels A, B and C indicates that children in the control group have completed on average 6.8 years of schooling and that their parents aspire for them to complete 14.7 years of schooling but expect them to complete only 13.4 years. This makes economic sense as aspirations are the unrestricted desire to reach a certain goal, while expectations might take into account the restrictions an individual faces.⁸

When considering either all children 11–16 years old or solely sons, being offered the savings account does not appear to affect schooling, parental aspirations or expectations. When considering daughters, however, our results show quite strong effects.

Access to a savings account causes a statistically significant increase in schooling of more than half a year (0.6) for daughters (Panel A). Including controls decreases the coefficient to 0.4 years of schooling. The magnitude of the coefficient in column (9) indicates that, *ceteris paribus*, the effect of the intervention on daughters' schooling is

⁵We do not analyse the average effect for those who actively used the account because, among those who opened an account, only 5 per cent did not actively use it.

⁶These baseline characteristics are age and years of education of the account holder; number of children 16 years old or less; number of household members; and baseline household income, three dummies for the main source of household income at baseline (income from an entrepreneurial activity, as a salaried worker and as a casual worker. The omitted category is other sources of income), amount borrowed and village dummies. Regressions with controls also include indicators for whether the years of education of the female head of the household, or the number of children, or the main source of household income were unavailable.

⁷Assuming that being offered the savings account does not have any other direct effect on savings other than motivating an individual to use the account, it is possible to estimate the treatment-on-the-treated effect by dividing the ITT by the take-up rate.

⁸Specifically, the question we asked in order to elicit parental educational aspirations is 'What is the highest education level that you would like your child to complete?' The question we asked to elicit parental educational expectations is: 'Given your child's ability and your household's economic condition, what is the highest education level that you think your child will actually complete?'

Table 3. Children's school completion, and parental educational aspirations and expectations

	All Children			Sons			Daughters		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: children's school completion									
ITT: offered the savings account	0.133 (0.181)	0.103 -0.172	0.131 (0.180) 0.061 (0.041)	-0.355 (0.231)	-0.329 (0.232)	-0.353 (0.230) 0.011 (0.056)	0.569** (0.265)	0.397* (0.231)	0.563** (0.263) 0.122** (0.054)
Mother's education									
Constant	6.830*** (0.136)	4.647*** (0.891)	7.041*** (0.248)	6.918*** (0.166)	4.854*** (1.270)	7.216*** (0.316)	6.750*** (0.207)	4.798*** -1.315	6.892*** (0.375)
Controls	No	Yes	No	No	Yes	No	No	Yes	No
Obs.	661	661	661	312	312	312	349	349	349
R ² (overall)	0.001	0.127	0.009	0.008	0.145	0.014	0.016	0.197	0.035
Panel B: parental educational aspirations									
ITT: offered the savings account	0.404 (0.339)	0.436 (0.301)	0.390 (0.338) 0.149** (0.072)	-0.361 (0.428)	-0.234 (0.396)	-0.379 (0.424) 0.164 (0.100)	1.089** (0.448)	1.109*** (0.376)	1.080** (0.448) 0.124 (0.084)
Mother's education									
Constant	14.656*** (0.245)	18.306*** (1.624)	14.585*** (0.446)	15.306*** (0.302)	16.574*** (2.511)	15.178*** (0.552)	14.073*** (0.333)	19.830*** (1.928)	14.047*** (0.646)
Controls	No	Yes	No	No	Yes	No	No	Yes	No
Obs.	661	661	661	312	312	312	349	349	349
R ² (overall)	0.003	0.242	0.013	0.003	0.265	0.016	0.022	0.320	0.028
Panel C: parental educational expectations									
ITT: offered the savings account	0.229 (0.324)	0.219 (0.305)	0.212 (0.321) 0.226*** (0.070)	-0.566 (0.436)	-0.387 (0.399)	-0.589 (0.427) 0.234** (0.101)	0.942** (0.410)	0.687* (0.377)	0.929** (0.408) 0.204** (0.084)
Mother's education									
Constant	13.431*** (0.241)	15.878*** (1.409)	13.570*** (0.464)	14.190*** (0.322)	16.446*** (2.187)	14.416*** (0.596)	12.750*** (0.303)	15.271*** (1.755)	12.784*** (0.654)

(Continues)

Table 3. (Continued)

	All Children			Sons		Daughters			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Controls	No	Yes	No	No	Yes	No	No	Yes	No
Obs.	661	661	661	312	312	312	349	349	349
R ² (overall)	0.001	0.180	0.027	0.006	0.247	0.037	0.019	0.229	0.038

Note: Robust standard errors, clustered at the household level, are reported in parentheses. Controls include age and years of education of the female head of the household, number of children 16 years old or younger, number of household members, baseline household income, three dummies for the main source of household income at baseline (income from an entrepreneurial activity, as a salaried worker and as a casual worker. The omitted category is other sources of income.), amount borrowed and village dummies. Regressions with controls also include indicators for whether the years of education of the female head of the household, or the number of children, or the main source of household income were unavailable. These households are assigned the median values at the slum level of these variables.

*Statistically significant coefficient at 10%;

**Statistically significant coefficients at 5%;

***Statistically significant coefficients at 1%.

comparable with that associated with mothers having over *four* extra years of schooling ($0.563/0.122=4.61$). This effect is quite sizeable, at twice the average education of mothers in our sample (2.3 years as shown in Table 1).

Financial access is also associated with a statistically significant increase in parental educational aspirations of more than 1 year of schooling for daughters (Panel B). Including controls increases the precision of the coefficient. Likewise, being offered a savings account is associated with a statistically significant increase in educational expectations for daughters (Panel C).

These results are consistent with previous research showing that aspirations and expectations are positively correlated with schooling achievement (Beaman *et al.*, 2012; Chiapa *et al.*, 2012; Goodman & Gregg, 2010; Gregg & Washbrook, 2009; Gutman & Akerman, 2008a, 2008b; Wydick *et al.*, 2013).

Furthermore, the positive effects we find on parental educational aspirations and expectations seem to help to close the gender gap in these variables. As Table 3 shows, parents' educational aspirations (expectations) for their sons in the control group are for 15.3 (14.2) years of schooling (column 4), while for their daughters are for 14.1 (12.8) years of schooling (column 7). Hence, there is a gender gap in aspirations (expectations) of more than 1 year, statistically significant at the 1% level. Running a difference-in-differences specification, we find that being offered the savings account closes this gap in both educational aspirations and expectations. Moreover, data on schooling completion suggest that daughters in treatment households are indeed obtaining more schooling than boys as a result of the treatment.⁹

5 DISCUSSION AND CONCLUSION

What is the mechanism behind our results? Is it simply *being offered the savings account* what matters? Or is the offer triggering something else, and is this something else what is actually causing our results? We conducted a number of checks trying to answer these questions. We reject the hypothesis that household wealth and perceived improvements in the household's financial situation are mediating our results. Also, female empowerment—proxied by the difference in years of education between husbands and wives—does not seem to be correlated with either educational aspirations or expectations. Hence, even if the offer of the savings accounts is empowering women, it seems unlikely that this empowerment is behind our results.¹⁰ Thus, the mechanism(s) driving our results remains a puzzle.

The results we obtain, however, seem to be consistent with the hypothesis that access to a savings account helps treatment households overcome some scarcity issues. As shown in Table 2, our sample was facing scarcity in a number of key dimensions at baseline: scarcity of economic resources, of formal financial alternatives to manage them and, probably, of cognitive resources for general tasks in life. The offer of the savings accounts may have alleviated the scarcity of formal financial alternatives and this, in turn, may have helped alleviate the scarcity of economic resources for some households (Table A2 shows that treatment households spend more on meat and fish).

⁹Results available upon request.

¹⁰All these results are available upon request.

In addition, the savings accounts offered seem to be less taxing than savings at home and savings in other banking institutions. With respect to saving in cash at home, saving in a bank is more secure because the money saved will not be in constant danger of being stolen nor will it be at (such a high) risk of being used by one's self (for a purpose different than the reason one is saving), the husband, relatives or neighbours. Additionally, saving in the savings accounts offered should be less taxing than saving in a savings account at another bank because of the high transaction costs involved in saving at other banks (e.g. high fees, distance to the banks, travel costs and forgone wages to travel to the bank). As we have mentioned, the savings account offered—in contrast with other formal savings accounts in Pokhara's market—does not charge any fees. Furthermore, while other banks are located only in downtown Pokhara, GONESA bank is characterized by its close proximity to its account holders and its convenient operating hours: local bank branches open twice a week for 3 h directly in each slum.

Saving in a ROSCA or an MFI may also be more taxing than saving in the savings account offered because of the (strong) commitment features associated with saving in these institutions. In the case of a ROSCA, participants commit publicly to saving into a common fund via contributions that happen with a certain regular frequency (Gugerty, 2007). Something similar occurs with savings in an MFI. When an individual starts borrowing from an MFI, a savings account is set up. Every time the individual pays an instalment, he or she is also forced to make a deposit into his or her savings account. The money deposited in the account acts as additional collateral, and the savings account ceases to exist once the full amount of the loan is repaid. Nevertheless, precisely because of these (strong) commitment features, saving in a ROSCA, an MFI or the savings account offered cannot be considered substitute saving mechanisms. In fact, there seems to be a trade-off between commitment and cognitive taxation. Individuals might want to save in a ROSCA or MFI because of their commitment features even though doing so may be cognitively taxing.

Overall, this suggests that the cognitive resources of treatment households might be getting freed up to focus on other aspects of life, such as worrying about children's education—particularly that of girls, challenging the *status quo* in a society where men usually have a higher level of education than women.¹¹ On the other hand, the fact that schooling and parental expectations and aspirations increase significantly for daughters, but decrease for sons (although not significantly), could suggest that, to some degree, daughters' gains come at the expense of sons'. To the extent that schooling is costly and households are budget constrained, this is consistent with the fact that access to bank accounts did not increase financial resources. Hence, access to savings accounts might have increased cognitive resources and that might have led parents to shift the allocation of resources across children.

Indeed, recent research shows that scarcity changes how people allocate attention and leads them to engage more deeply in some problems while neglecting others (Shah, Mullainathan, & Shafir, 2012) and that poverty impedes cognitive function (Mani, Mullainathan, Shafir, & Zhao, 2013). Testing this hypothesis is a promising path for future research.

¹¹Increased cognitive resources may result not only in changes in children's education but also in changes in other outcomes associated with better parenting, investments in preventative health care, investments in productivity and improved management of one's finances (Mani et al. 2013, Mullainathan and Datta 2012).

REFERENCES

- Beaman L, Duflo E, Pande R, Topalova P. 2012. Female leadership raises aspirations and educational attainment for girls: a policy experiment in India. *Science* **335**(6068): 582–586.
- Bernard T, Dercon S, Taffesse AS. 2011. Beyond fatalism – an empirical exploration of self-efficacy and aspirations failure in Ethiopia. Centre for the Study of African Economies Working Paper, WPS/2011-03.
- Chiapa C, Garrido JL, Prina S. 2012. The effect of social programs and exposure to professionals on the educational aspirations of the poor. *Economics of Education Review* **31**(5): 778–798.
- Dupas P, Robinson J. 2013. Savings constraints and microenterprise development: evidence from a field experiment in Kenya. *American Economic Journal: Applied Economics* **5**(1): 163–192.
- Goodman A, Gregg P. 2010. Children’s educational outcomes: the role of attitudes and behaviours, from early childhood to late adolescence, final report for the Joseph Rowntree Foundation. Centre for Market and Public Organisation, University of Bristol, and Institute for Fiscal Studies.
- Gregg P, Washbrook E. 2009. The socioeconomic gradient in child outcomes: the role of attitudes, behaviours and beliefs. The primary school years, report for the Joseph Rowntree Foundation. Centre for Market and Public Organisation, University of Bristol.
- Gugerty MK. 2007. You can’t save alone: commitment in Rotating Savings and Credit Associations in Kenya. *Economic Development and Cultural Change* **55**(2): 251–282.
- Gutman LM, Akerman R. 2008a. Aspirations and attainment: a review for the social exclusion taskforce. Centre for Research on the Wider Benefits of Learning, Institute of Education, University of London.
- Gutman LM, Akerman R. 2008b. Determinants of aspirations. Centre for Research on the Wider Benefits of Learning, Institute of Education, University of London, Research Report No. 27.
- Karlan D, Morduch J. 2010. Access to Finance. In *Handbook of Development Economics* Vol. **5**, Rodrik D, Rosenzweig M (eds). Elsevier Science: Amsterdam.
- Macours K, Vakis R. 2014. Changing households’ investment behavior through social interactions with local leaders: evidence from a randomized transfer program. *Economic Journal* **124**(576): 607–633.
- Mani A, Mullainathan S, Shafir E, Zhao J. 2013. Poverty impedes cognitive function. *Science* **341**(6149): 976–980.
- McLoyd VC. 1998. Socioeconomic disadvantage and child development. *American Psychologist* **53**(2): 185–204.
- Mullainathan S, Datta S. 2012. Stress impacts good parenting. The behavioral economists perspective, 2012 Will Keith Kellogg Foundation Annual Report.
- Mullainathan S, Shafir E. 2013. *Scarcity: Why Having Too Little Means So Much*. Times Books: New York, NY.
- NR Bank. 2011. Quarterly economic bulletin – mid October 2011.
- Prina S. 2015. Banking the poor via savings accounts: evidence from a field experiment. *Journal of Development Economics* **115**(4): 16–31.
- Ray D. 2006. Aspirations, poverty, and economic change. In *Understanding Poverty*, Banerjee AV, Benabou R, Mookherjee D (eds). Oxford University Press: New York; 409–421.
- Shah AK, Mullainathan S, Shafir E. 2012. Some consequences of having too little. *Science* **338**(6107): 682–685.
- UNESCO. 2011. School level educational statistics of Nepal. Consolidated Report 2068.
- Wydick B, Glewwe P, Rutledge L. 2013. Does international child sponsorship work? A six-country study of impacts on adult life outcomes. *Journal of Political Economy* **121**(2): 393–436.

APPENDIX

Table A1. Effects on assets and liabilities

	Monetary assets		Non-monetary assets		Total assets		Liabilities	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ITT: offered the savings account	-120.43 (3486.81) Yes	61.88 (3492.72) Yes	2945.41 (2273.00) Yes	4480.39 (2734.62) Yes	2430.17 (4448.94) Yes	-124.21 (4026.01) Yes	-15 644.61* (9125.32) Yes	-14 668.33 (9073.69) Yes
Controlling for baseline values	No	Yes	No	Yes	No	Yes	No	Yes
Additional controls								
Dep. var. (control group)								
Mean	18 231.01		33 283.11		51 514.12		55 804.10	
Standard deviation	(50 384.01)		(30 114.16)		(65 163.62)		(120 778.80)	
Obs.	510	510	510	510	510	510	510	510
R ² (overall)	0.46	0.48	0.43	0.19	0.49	0.42	0.21	0.24

Note: Robust standard errors are reported in parentheses. Dependent variables expressed in Nepalese rupees (the exchange rate was roughly Rs. 70 to \$US 1 during the study period). Additional controls include age, literacy, marital status, number of household members, baseline household income, three dummies for the main source of household income at baseline (income from an entrepreneurial activity, as a salaried worker and as a casual worker). The omitted category is other sources of income.) and village dummies. The marital status and literacy variables have been modified so that missing values are replaced by the village averages.

*Statistically significant coefficient at 10%; **Statistically significant coefficient at 5%; ***Statistically significant coefficient at 1%.

Table A2. Effects on household expenditures categories (last 30 days)

	Total expenditure		Health		Education		Meat and fish		Festivals and ceremonies		Dowries		Other expenditures	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
ITT: offered the savings Account	213.03 (1079.59)	40.61 (1065.24)	-256.55 (416.40)	-204.46 (418.41)	492.80 (340.15)	394.44 (322.91)	242.39* (131.74)	266.42** (123.75)	318.75* (186.01)	288.76 (182.69)	-397.06 (412.47)	-480.24 (477.25)	-187.31 (723.83)	-224.30 (685.56)
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Dep. var. (control group)	8402.91		1503.59		2705.66		995.88		61.81		486.21		2649.75	
Mean	(12.366,55)		(4507.98)		(3688.78)		(1362.18)		(255.12)		(6416.68)		(7619.86)	
Standard deviation	510	510	510	510	510	510	510	510	510	510	510	510	510	510
Obs.	0.00	0.14	0.00	0.07	0.00	0.21	0.01	0.11	0.01	0.07	0.00	0.07	0.00	0.12
R ² (overall)														

Note: Robust standard errors are reported in parentheses. Dependent variables expressed in Nepalese rupees (the exchange rate was roughly Rs. 70 to \$US 1 during the study period). Controls include age, literacy, marital status, number of household members, baseline household income, three dummies for the main source of household income at baseline (income from an entrepreneurial activity, as a salaried worker and as a casual worker. The omitted category is other sources of income.), liabilities at baseline, having a bank account at baseline, belonging to an MFI at baseline, belonging to a ROSCA at baseline and village dummies. The marital status and literacy variables have been modified so that missing values are replaced by the village averages.

*Statistically significant coefficient at 10%; **Statistically significant coefficient at 5%; ***Statistically significant coefficient at 1%.

Table A3. Effects on the household self-reported financial situation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	How would you describe your household's financial situation?		How financially stretched your household is, month to month?		On the whole, I feel secure with the financial situation of my household		Self-reported financial situation index	
	1 if 'live comfortably' or 'meet basic expenses with little left for extras'	0 if 'just meet basic expenses' or 'don't even have enough to meet basic expenses'	1 if 'not very stretched' or 'not at all stretched'	0 if 'stretched to the absolute limit', 'very stretched' or 'somewhat stretched'	1 if 'strongly agree' or 'agree'	0 if 'feel neutral', 'disagree' or 'strongly disagree'		
ITT: offered the savings account	0.09** (0.04)	0.10*** (0.04)	0.11*** (0.04)	0.10*** (0.03)	0.02 (0.04)	0.02 (0.03)	0.05 (0.08)	0.05 (0.07)
Additional controls	No	Yes	No	Yes	No	Yes	No	Yes
Dep. var. (control group)								
Mean		0.27		0.23		0.21		0.00
Standard deviation.		(0.44)		(0.42)		(0.41)		(0.86)
Obs.	510	510	510	510	510	510	510	510
R ² (overall)	0.01	0.27	0.01	0.32	0.00	0.19	0.00	0.28

Note: Robust standard errors are reported in parentheses. Controls include age, literacy, marital status, number of household members, baseline household income, three dummies for the main source of household income at baseline (income from an entrepreneurial activity, as a salaried worker and as a casual worker. The omitted category is other sources of income.), liabilities at baseline, having a bank account at baseline, belonging to an MFI at baseline, belonging to a ROSCA at baseline and village dummies. The marital status and literacy variables have been modified so that missing values are replaced by the village averages.

*Statistically significant coefficient at 10%; **Statistically significant coefficient at 5%; ***Statistically significant coefficient at 1%.
 The self-reported financial situation index is built as follows. First, each of the three outcome variables reported in the previous columns is standardized into a z-score. Then, the three new outcome variables are combined into one by taking the average of equally weighted standardized components.