

Savings



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Reasons to save



- Consumption smoothing
- Life-cycle
- Any others?

Constraints on savings



- **Efficient not to save**
 - Under what circumstances is this true?
- **Lack of income**
 - Under what circumstances is this a constraint?
- **Lack of access to savings accounts**
 - Why should this be true?
- **Challenges of saving at home**
 - Self-control issues
 - “Spouse-control” issues

How do the poor save: ROSCAs



- What are ROSCAs?
 - Fixed order ROSCAs
 - Bidding ROSCAs
 - ASCAs
- What are the advantages of ROSCAs?
 - ?
 - ?
- What are limitations of ROSCAs?
 - ?
 - ?

How do the poor save: 2



- **Brick by brick**
 - ✦ Potential limitations?
- **Financial savings**
 - Money-guards: What are they?
 - Savings collectors: What are they?
 - Self-help groups: What are they?
- **Potential limitations of these?**

How do the poor save: 3



- **Microcredit as a savings instrument**
 - How does that work?
 - What are its main advantages?
 - Does it make sense?

Why do we think its not efficient?



- Euler Equation

$$U'(c_t) = \delta(1+r)U'(c_{t+1})$$

- Assume

$$U(c) = c^{1-\sigma} / (1-\sigma)$$

- Therefore

$$(c_{t+1} / c_t)^\sigma = \delta(1+r)$$

- Or

- Then

$$c_{t+1} / c_t = (\delta(1+r))^{1/\sigma}$$

$$r=0.8, \delta=0.9, \sigma=3 \rightarrow c_{t+1} / c_t = 1.17$$

Basically



- The interest rates that the poor pay are so high that someone who borrows must expect a massive growth in consumption
- Poverty must be on the way out
- And has been for a long time.

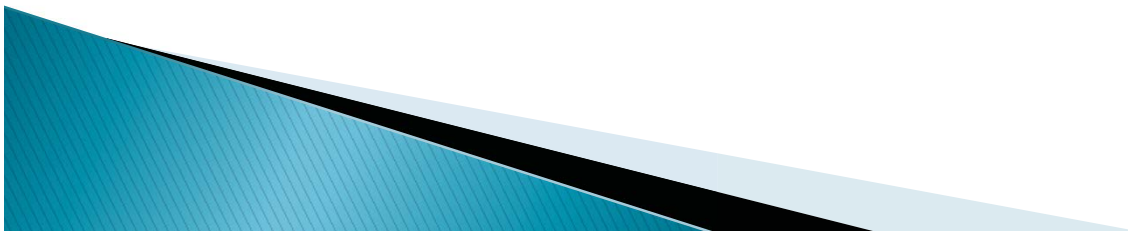
An experiment to understand borrowing



- Karlan and Mullainathan wanted to understand why borrowers do not save their way out of poverty
- Experiment with fruit/vegetable vendor in India and Philippines

Vendors

- ▶ Simple production function
 - Purchase fruit in the early morning
 - Sell through day
- ▶ Key features of this production function:
 - Continuous
 - Daily
 - Need for working capital
- ▶ How do they finance it?



Vendors

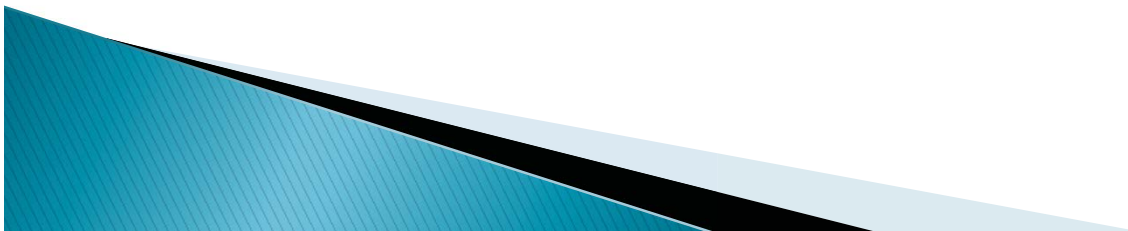
Table 1-Business Characteristics of sample population			
Detail	Percentage of respondents	Average amount purchased*	Profits per day*
1. One trip a day to the market- normal days	89.7%	Rs. 1075.3 (589.2)	Rs. 110.5 (54.7)
2. twice or more trips a day(total amount purchased per day)	8 %	Rs.707.5 (422.6)	Rs.95.6 (46.1)
3. once in two days trip to the market (amount purchased per trip)	2.3%	Rs. 1034.8 (515.8)	Rs.97.2 (44.3)
4. good days a week	98.9%	Rs. 1666.3 (834.3)	Rs. 186.6 (83.4)
5. festival days	91.5%	Rs. 2580.7 (1543.7)	Rs. 318.2 (187.3)

Vendors

1. % of sample size that takes daily loans	69.4%
2. % of sample size that takes daily loans for more than 15 days a month	65.7%
3. average number of days in a month that respondent takes a daily loan for working capital	25.8 days
4. average number of years of taking daily loans	9.5 years
5. average daily interest rate	4.9%
6. % of total meter loan borrowers who borrow from the same moneylender daily	67.7%
7. Average of maximum that can be borrowed as a daily loan	Rs. 4098.6
8. % of meter loan borrowers who feel there is no other way of doing business and the interest is unavoidable	63.8%

Benefits of Savings

- ▶ Hard to comprehend what 5% a day actually *means*
- ▶ Consider the following strategy
 - Drink one less cup of tea every day (or some thing else small).
 - Reinvest this money back into business
 - Compounding implies: in **30 days** will have doubled **income.**



Possible explanations

- ▶ Artifacts:
 - Mismeasuring ‘true cost’ of the loan
 - Desire to keep relationship with money lender
 - Default rates high
 - Can’t borrow a little less
- ▶ Conceptual explanations
 - Inability to cut back on consumption (Stone–Geary)
 - Vendors discount the future *a lot*
 - Vendors don’t understand compounding
 - Vendors don’t have access to savings
 - Vendors face within family conflicts that lower returns to savings
 - Vendors face self–control problems



Testing these Hypotheses

- ▶ Our Experiment
 - Buyout the debt
 - Provide literacy

		Financial Literacy	
		No	Yes
Debt Buyout	No	1/4	1/4
	Yes	1/4	1/4



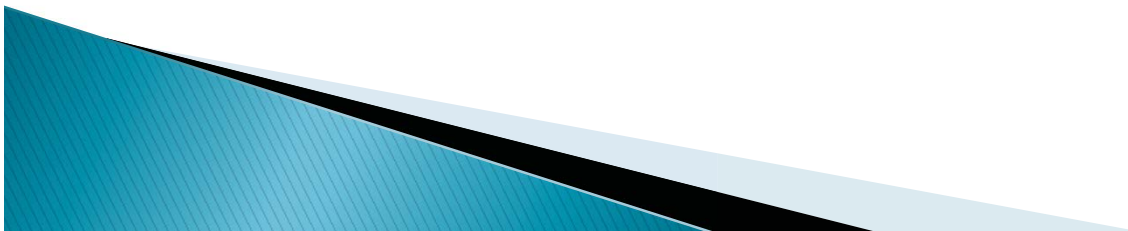
Interventions

▶ Buyout

- Give a cash grant enough for individuals to buyout their debt
- Working capital on a good day (gotten from the baseline survey). As high as 3000Rs.

▶ Training

- Half day class where we:
 - Worked out how much they've spent in total on interest rate
 - Benefits of cutting down: illustration
 - Discussed what they could have done with the money
 - Brainstorm on ways to cut down



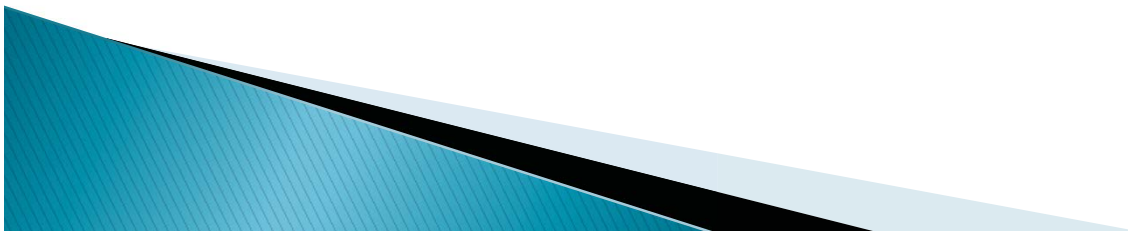
Test of Possible explanations

- ▶ Artifacts:
 - ~~Mismeasuring 'true cost' of the loan~~
 - ~~Can't borrow a little less~~
- ▶ Conceptual explanations
 - ~~Inability to cut back on consumption—Stone Geary~~
 - Vendors discount the future *a lot*
 - Do vendors fall back *very fast*?
 - Vendors don't understand compounding
 - Training
 - Vendors don't have access to savings
 - Vendors face within family conflicts that lower returns to savings
 - Do vendors fall back *fast*? What causes vendors to fall back?
 - Vendors face self-control problems
 - Do vendors fall back *at all or slowly*?
 - What causes vendors to fall back?



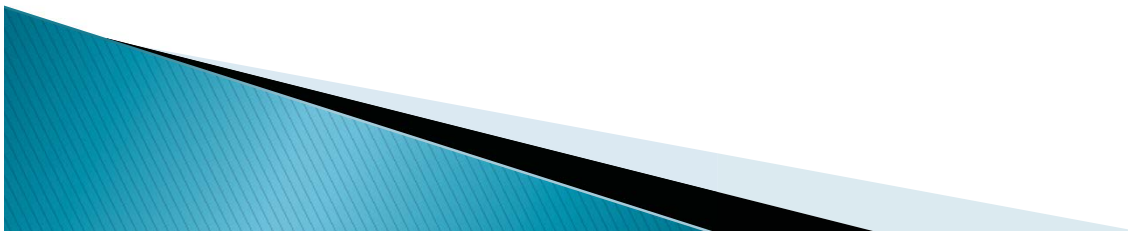
Sites

- ▶ Philippines: Follow up surveys occur
 - 2 weeks
 - 6 weeks
 - 10 weeks
- ▶ India: Follow up surveys occur
 - 3 months
 - 6 months
 - 12 months



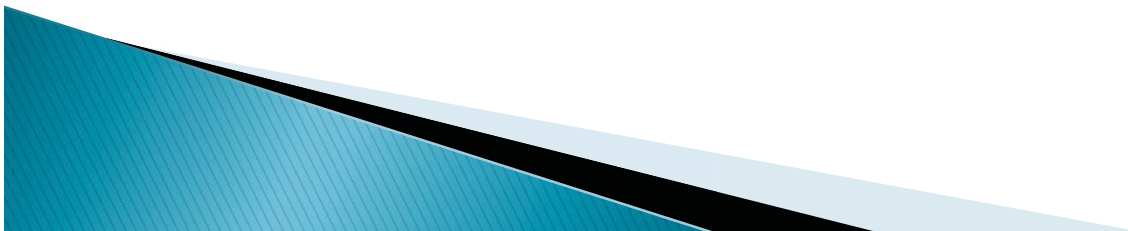
Some Open Questions

- ▶ Is the movement on intensive margin telling us about heterogeneity?
- ▶ What characteristics are interesting?



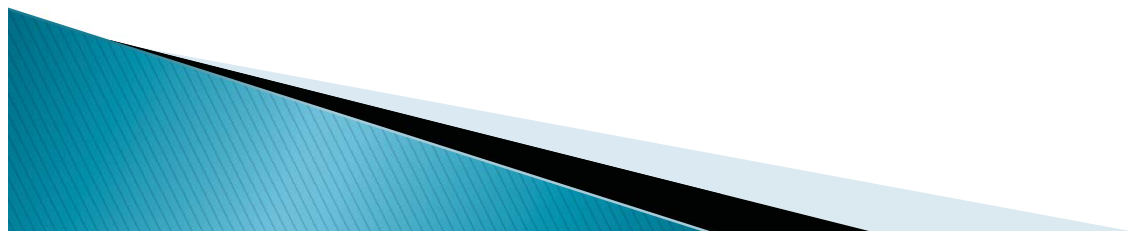
How are people slipping?

- ▶ What drives the long term fall?
- ▶ In India we see the biggest fall
- ▶ We have some *very preliminary* evidence
 - Question: How did you cope with shocks last month?



Results – Coping With Shocks by..

Dependent Variable	Followup 1 only			
	Savings	Loan	Any Loan	Savings or Non-Loan Source
	(1)	(2)	(3)	(4)
Post x Training	-0.027 (0.020)	-0.033 (0.035)	-0.055 (0.042)	0.002 (0.036)
Post x Debt pay off	0.074** (0.034)	-0.081** (0.033)	-0.060 (0.042)	0.083** (0.040)
Observations	2000	2000	2000	2000
R-squared	0.078	0.010	0.005	0.015
Dep. Var. Mean	0.081	0.220	0.375	0.195

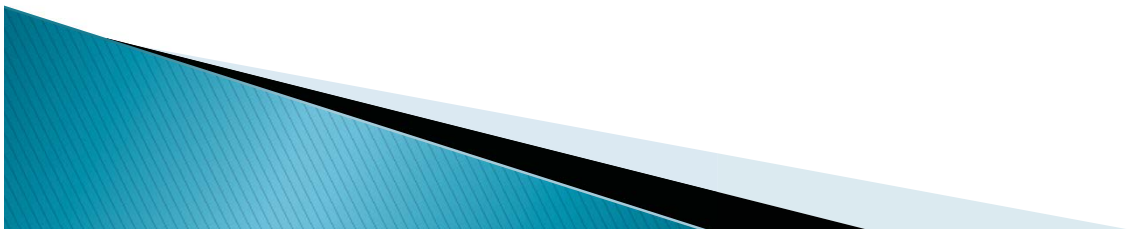


Results– Coping with Shocks by...

	Followup 2 only			
Specification				
Dependent Variable	Savings	Loan	Any Loan	Savings or Non-Loan Source
	(5)	(6)	(7)	(8)
Post x Training	-0.016 (0.018)	-0.058* (0.034)	-0.050 (0.042)	0.005 (0.032)
Post x Debt pay off	0.019 (0.024)	-0.035 (0.036)	0.011 (0.044)	0.043 (0.035)
Observations	2000	2000	2000	2000
R-squared	0.035	0.011	0.003	0.002
Dep. Var. Mean	0.058	0.226	0.381	0.150

Interpretation of Findings

- ▶ Vendors appear to fall back down
 - But it takes a long time
 - Inconsistent with
 - Very high discount rates
 - Inability to save
 - Need a water torture model of self-control
 - Shocks play a key role. Interact with temptation?
- ▶ Little effect of training
 - No complementarity with debt either
 - Compounding alone may not have been the problem?
 - How do you “train” someone to resist the urge to deal with a shock by eating into savings?



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14.73 The Challenge of World Poverty
Spring 2011

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