

# When is capital enough to get female microenterprises growing? Evidence from a randomized experiment in Ghana

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# Is Capital enough?

- ▶ Three recent randomized trials find no significant effect of increasing the availability of capital on the profits of microenterprises owned by women
  - De Mel et al. 2008 – grants in Sri Lanka
  - Banerjee et al. 2010 – loans in India
  - Karlan and Zinman 2010 – loans in the Philippines
- ▶ This contrasts with positive returns in male-owned enterprises in Sri Lanka and the Philippines (and in Mexico)

# Is it different in Africa?

- ▶ In much of Africa women much more integral to household income generation
  - Labor force participation rates of 35–54 aged women:
    - 43% in Sri Lanka and India
    - 87% in Ghana, 80% Kenya, 93% Mozambique
- ▶ But also view that in Africa in particular, external pressure to share positive income shocks, which could limit business growth (e.g. Platteau, 2000, Charlier, 1999, di Falco and Bulte, 2009, Baland et al, 2007).

# Our experiment in Ghana

- ▶ Randomly gave grants of 150 Ghanaian cedi (~\$120) to male and female-owned microenterprises
  - Half the grants given as unrestricted cash, and half in-kind (as business materials or equipment)

Experimental sample is 793 firms (479 female-owned, 314 male-owned) in Accra and Tema.






**Table 1: Characteristics of Microenterprises and Verification of Randomization**

	Control	Cash	In-Kind
<i>Variables Using to Stratify or Match</i>			
Monthly profits in January 2009	103	99	115
Female	0.62	0.62	0.62
Number of hours worked in last week	59.03	60.64	56.64
Total Capital Stock in January 2009	446	438	410
Inventories at end of January 2009	239	203	198
Uses a Susu Collector	0.49	0.46	0.51
Business operated out of home	0.77	0.78	0.83
Age of Firm	7.88	7.11	7.14
Ever had bank or microfinance loan	0.10	0.09	0.07
Business has a tax number	0.14	0.14	0.13
Owner's Years of Education	8.81	8.70	9.00
Owner's Digitspan Recall	5.07	5.10	4.99
Owner's Age	36.36	35.37	35.79

# In-kind grants

- ▶ Were selected by the firm owner and purchased directly by our research assistants with them
  - ▶ Majority chose
    - Inventories (e.g. beauty care products, electronic goods, alcohol, food) and
    - Raw materials (e.g. wood, sandpaper, cloth, cooking ingredients, shampoos)
  - ▶ Only 24% (33% males, 19% females) chose physical equipment – sewing and knitting machines, hair dryers, drills, carpentry equipment.
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# Main results I

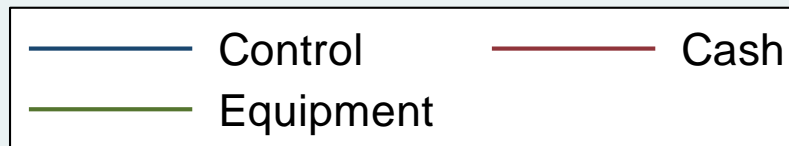
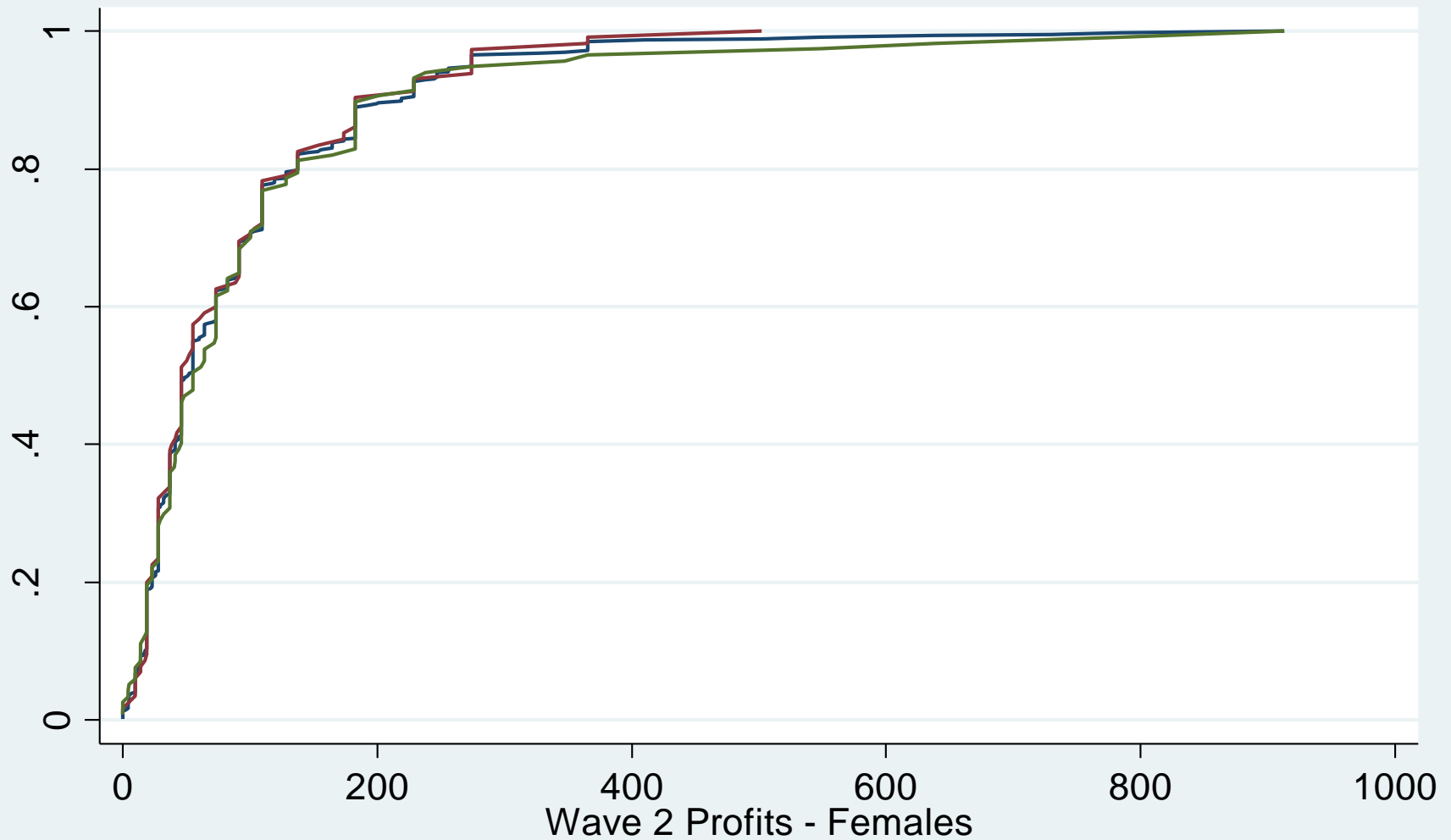
**Table 2: Main Treatment Effects**

Dependent Variable: Real Monthly Profits (Cedi)

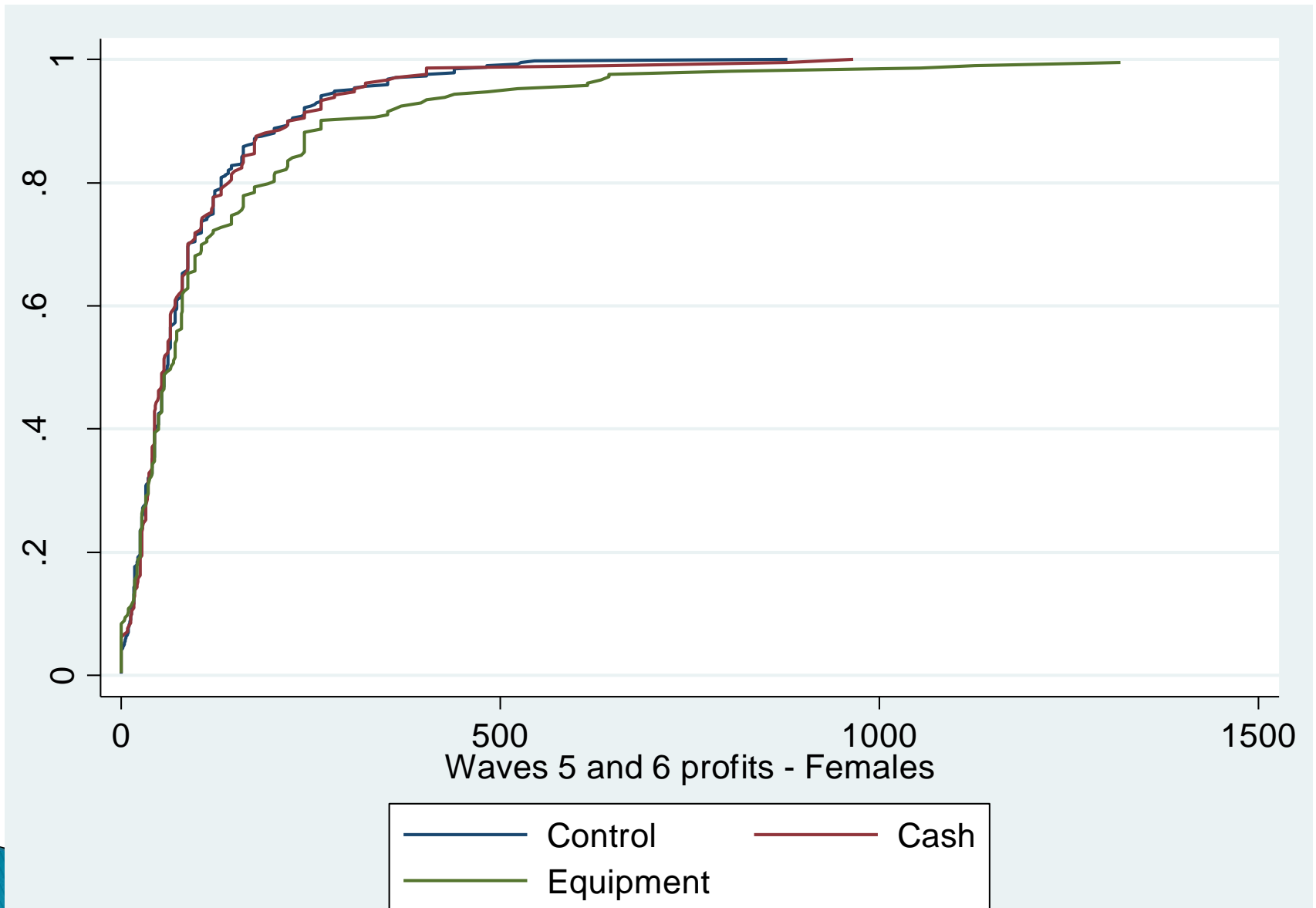
	Females			Males		
	OLS	FE	OLS wave5/6	OLS	FE	OLS wave5/6
Cash Treatment	5.17 (8.54)	-2.30 (8.77)	5.59 (11.62)	16.81 (13.25)	5.13 (16.10)	34.17** (15.51)
Equipment Treatment	37.65** (14.94)	32.87** (13.21)	49.92** (21.44)	35.45** (14.04)	27.83 (18.15)	50.61*** (17.66)

- Large average impact of in-kind grants for men and women
- No impact of cash for women
- Mixed evidence on impact of cash for men.

# Pre-treatment Profits Distribution for Women

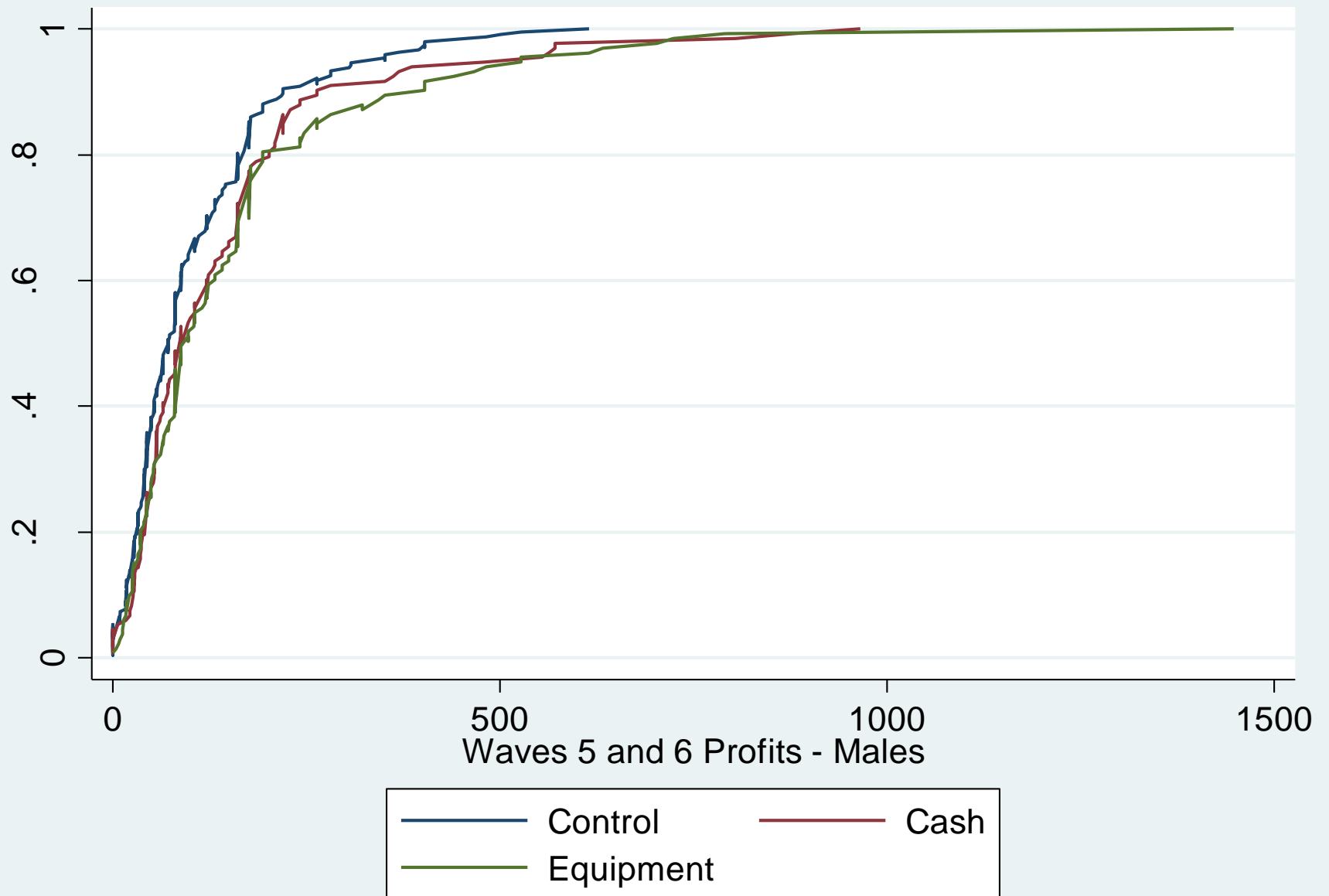


# Post-treatment Profits Distribution for Women





## Post-treatment Profits for Men



# When is capital enough?

- ▶ We find the in-kind grant only has an effect on increasing profits for the women whose businesses were initially in the top 40% in terms of baseline profits.
- ▶ Randomization was stratified on initial size.

	Men	Low Initial Profit Women	High Initial Profits Women	Sri Lankan Women
Monthly profits in January 2009 (Cedi)				
Mean	130	38	173***	28
Median	91	37	137***	20
Age of Owner	35.4	35.9	37.0	41.1
Ever had a formal loan	0.07	0.08	0.15**	0.23
Keeps accounts	0.45	0.31	0.44**	0.29
Years of Education	10.04	7.80	8.63**	9.44
Household Asset index	0.29	-0.40	0.14***	n.a.
Household has a Cellphone	0.94	0.88	0.91	0.22
<b>Sample Size</b>	<b>290</b>	<b>296</b>	<b>179</b>	<b>190</b>

# Explaining the results

1. Where do the grants go if not in the business?
  - See in-kind grants increase capital stock more, but little increase in capital stock for women with initially low profits
  - Grants appear to have been spent on household items, with a little bit going to transfers to others



# Explaining the results

## 2. Why does the impact of cash and in-kind vary?

- Main difference is what is first done with the grant. Since majority of in-kind grants used to purchase inventories and raw materials, should be relatively easy to de-capitalize if owners want
- Differences are then really:
  - Earmarking for a specific purpose
  - Initial liquidity
- Literature suggests two possible reasons why effects may then differ:
  - Self-control
  - External pressure to share

# Self-control vs External pressure

Interaction Category:	Used a Susu at Baseline	Said they Save regularly	Discount rate above median	Hyperbolic Discounter	Lacks Self-control
Cash Treatment	-5.117 (11.05)	-34.97** (14.58)	13.26 (13.92)	6.219 (10.33)	2.768 (8.579)
Equipment Treatment	25.24 (15.34)	-4.260 (9.341)	13.97 (11.20)	40.35*** (14.49)	29.80*** (10.81)
Cash Treatment * Interaction	14.54 (16.70)	50.95*** (17.69)	-21.97 (17.15)	-18.70 (16.82)	-16.13** (8.102)
Equipment Treatment * Interaction	10.35 (20.80)	49.41*** (17.91)	31.00 (20.66)	-38.88** (18.09)	-6.587 (6.273)
p-value for testing interactions jointly zero	0.6355	0.001	0.1024	0.0708	0.0983

- Some evidence that cash treatment has greater effects for those with self-control and who save regularly.
- No relationship with any of our measures of external pressure

# Implications for Microfinance

- 1) Urban male microenterprise owners are underserved – in every country we've looked they have large returns to capital, and microfinance products typically not tailored to them.
- 2) Capital doesn't seem to be enough to get subsistence female-owned businesses to grow.
- 3) We do find a group of women whose profits increase a lot when given in-kind transfers
  - Not the poorest of the poor
  - While there are many such somewhat successful female entrepreneurs in Africa to target, a lot fewer in South Asia.