



Mobile use by Micro and Small Enterprises (MSEs)

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Painting w/permission, by Sharmila Rathore, Udaipur, India

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<http://research.microsoft.com/research/tem/>



Computer-skills camp in Nakalabande,
Bangalore

Understand potential
technology users in
developing communities

Adapt, invent, or design
technology that
contributes to socio-
economic development
of poorer communities
worldwide

Interviews, Photo Visits and Surveys w/MSEs

- Kigali, Rwanda 2002-2004
- Bangalore and Hyderabad, India 2005-2007



Real impact :: A deeper look :: What's next

Innocent, neighborhood baker



- Makes samosas and cakes for clients around Kigali
- Doesn't own a stove, borrows one from a religious group nearby
- With the mobile, he has expanded outside Kigali
 - 30% of his clients are outside Kigali, and can only contact him using the mobile
- He has recently moved into a bigger house

“I want to be the McDonalds of Baking”

Afsa, Hair braider



- Moved to Kigali alone, after losing her family in the genocide
- Saved for months to buy the phone, so that clients could give her number to more prospects
- Mobile helped her business grow from 3 clients a week to 8-12 per week (each client pays \$10)
 - Plans to open her own salon
- Has an emergency fund saved in case mobile is stolen
- Also calls her cousins in Gyseni

“When I got the mobile, I began to see braiding as a business – as work – and could see a future”



Jensen, R. (2007) "The Digital Provide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector"

"the adoption of mobile phones by fishermen and wholesalers was associated with a **dramatic reduction in price dispersion**, the complete elimination of waste, and near-perfect adherence to the Law of One Price. Both consumer and producer welfare increased." (p. 879)

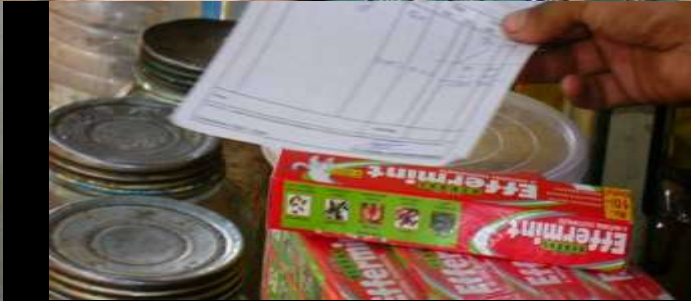
A range of enterprises

Cobbler
Snack cart
Retail stand
Street hawker
Clothing ironer
Bicycle repair
Locksmith
Gardener
Rickshaw driver
Tool sharpener

Convenience store
Printing press
Tailor
Video CD rental
Scrap dealer
Mechanic
Wood carver
Carpenter
Truck owner
Contractor
Petty Manufacturing

Barber
Food caterer
Day care
Music instrument
repair
Library
Wholesale rice
dealer
Xerox shop
Courier service
Accountant
Manufacture food
products

Lots of other ICTs



Communication at a distance fills a gap

Most transactions are local and face-to-face

- 60% had a mobile phone; 22% had a landline
- Customers were overwhelmingly walk-ins and referrals.
- Most customers were from nearby in the city
- Most have 10-50 regular customers, but don't track details about them
- 95% handled cash-only
- 50% kept no books of any kind



Molony, T. (2006). 'I Don't Trust the Phone; It Always Lies': Trust and Information and Communication Technologies in Tanzanian MSEs.

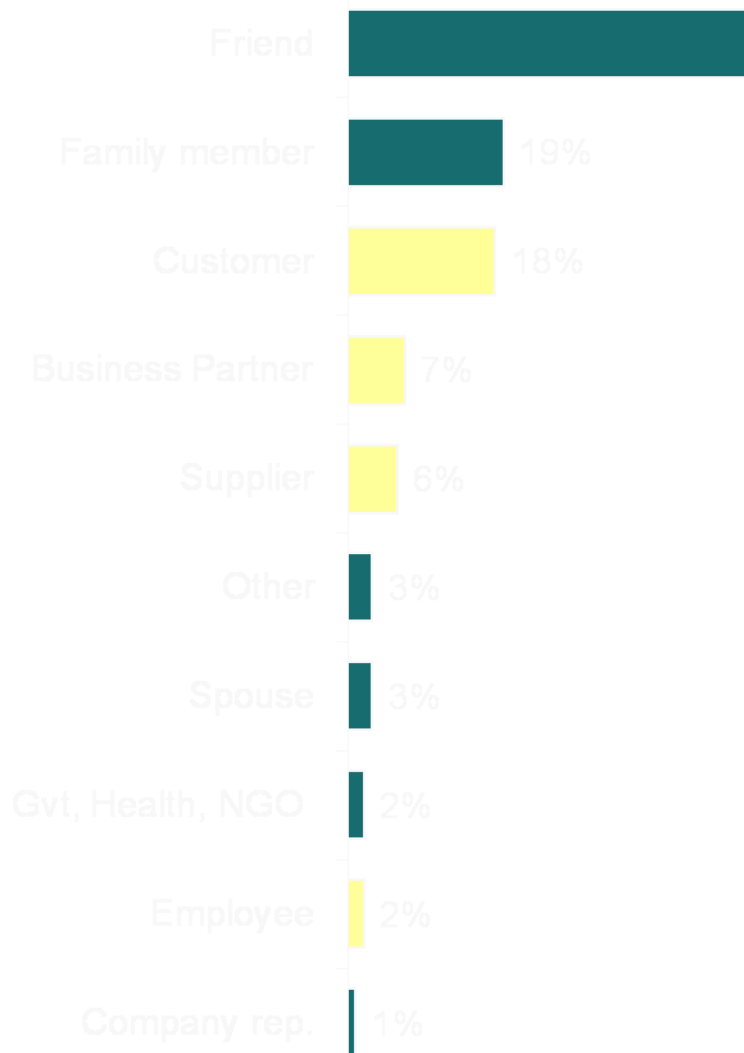


“on prices in particular, reliable information relies on trust and this usually requires a face-to-face relationship, even when ICT is employed to relay the information...”

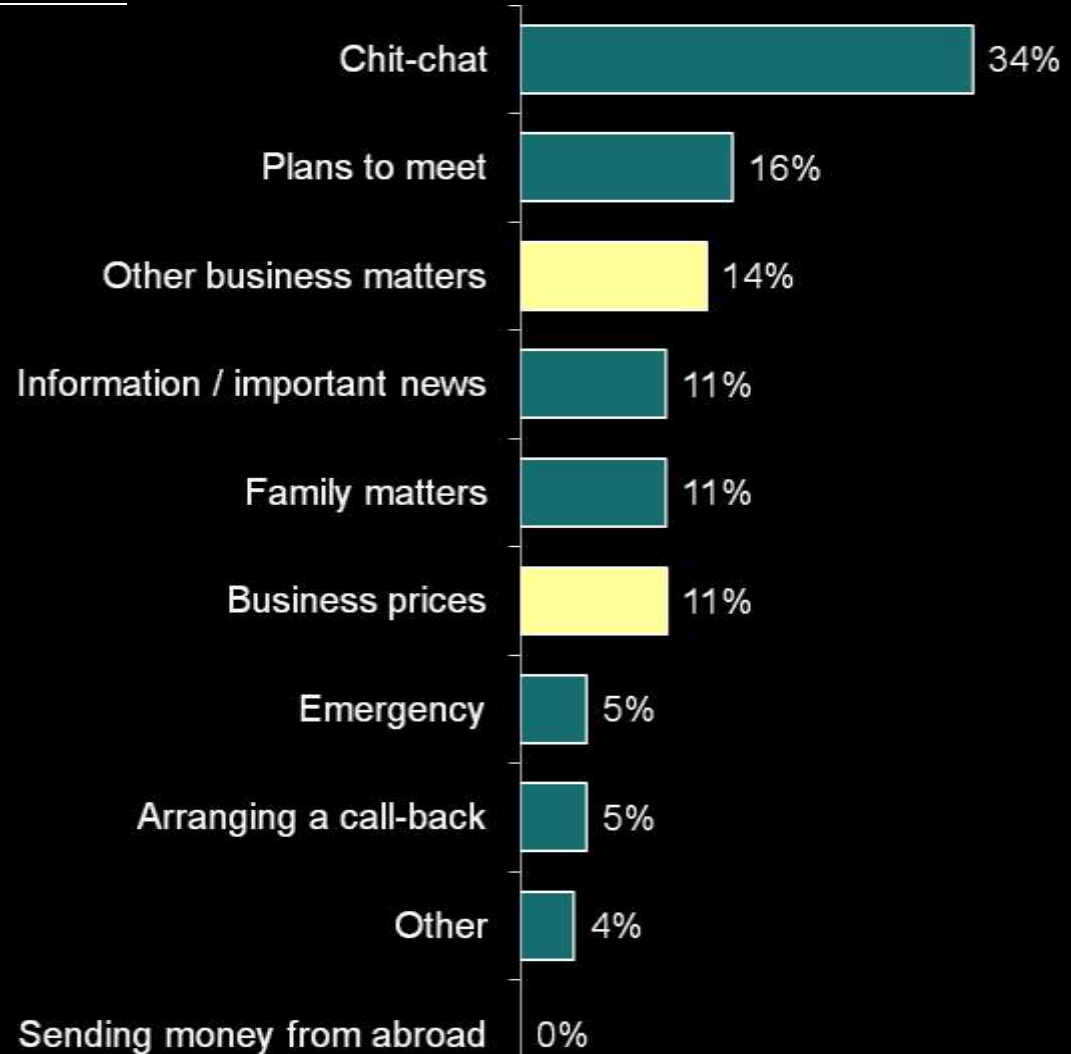
In this respect, mobile phones can be seen as a **facilitating technology for existing, trust-based relationships.**” (p. 77)

Small business owners in Rwanda use the mobile more for personal than for business

Call partners (n=1817)



Call Content (n=1755)



Summary -- Voice the current killer app

Mobiles help tiny businesses....



- ✓ Serve existing customers
 - ✓ Get price information
 - ✓ Coordinate with partners
(and only *sometimes*)
- Find new customers
Cut out middlemen
Start new businesses

So far, benefits of mobile use accrue mostly—though not exclusively—to existing enterprises, in ways which **amplify and accelerate material and informational flows**, rather than fundamentally transforming them.

What's next? Business applications for MSEs

External communication will trump internal information processing



1. M-Banking/M-Transactions is a possible breakout application
2. Inventory managers will bring MSEs closer to formal-sector suppliers
3. Location and the mobile web can put MSEs on the digital map
4. Digital marketplaces may appeal to some segments before becoming widely generalizable

Possible barriers

F2F vs. mediated communication in informal credit

"...it is not right to use SMS to remind customers about payments because it is too *impersonal*... it is just *not polite* to when it comes to monetary matters." - *Sandeep*

"... The issue of credit is mostly dealt with *in person*, although I prefer to ask customers over the phone or SMS because it gets very *awkward for me* to ask them for money when we are *face to face*." - *Meera*



"We use SMS extensively for the food and chemical products section of the business, but I would also like to find a way to manage and update my client accounts while I am away travelling..." - *Raju*

"...I use SMS to keep my clients informed about little things in order to not disturb them..." - *Srinivas*

Warana Unwired

Rajesh Veeraraghavan



Warana Unwired/SMS Toolkit



<http://www.codeplex.com/smstoolkit>

<http://research.microsoft.com/~rajeshv/warana.htm>

Thank you

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www.research.microsoft.com/~jdonner/

<http://research.microsoft.com/research/tem/>

