CGAP

Advancing financial access for the world's poor

Agent Economics: M-PESA

May 2009

Dimensions of our research

- Analysis based on 19 agents, representing 125 M-PESA outlets typical of agents in locations where low-income Kenyans live, work and shop.
- Looked at M-PESA commissions, plus other lines of revenue (airtime, mobile handsets and accessories, groceries, video and music sales, pharmacy) to get complete profit and loss picture of agents' businesses.
- Agents drawn from 4 locations:
  1. Kibera in Nairobi (Africa's 2nd largest slum, with 1 million residents)
  2. Kisumu town in Western Kenya on Lake Victoria (Kenya's 3rd largest city, population 355,000)
  3. Market towns in Western Kenya such as Mbale & Ahero
  4. Rural villages (outside of Kisumu, Mbale, Ahero)
- Data collected from 2 periods: November 2008, January 2009, by CGAP's Ignacio Mas, Mark Pickens, Sarah Rotman and consultant Olga Morawczysnki. Ignacio Mas is now Deputy Director of the Financial Services for the Poor program at the Bill & Melinda Gates Foundation.
- Gathered via agent log books, interviews with agents, superagents and Safaricom
- High-level findings validated by Vodafone & Safaricom (N. Hughes Dec. 11, 2008, P. Vaughn Jan. 29, 2009, S. Lonie Feb. Mar. 2, 2009) and PEP Intermedius (Feb. 2009)

Research locations

Isulu (1)
(Rural village on dirt road with sizeable market center.)

Mbale (1)
(Market town on main road)

Bondo (1)
(Rural village on paved road with sizeable market center.)

Musoli (1)
(Rural village on dirt road. Many residents are subsistence farmers. 15 km from Kakamega.)

Luanda & Ahero (2)
(Town s on paved road)

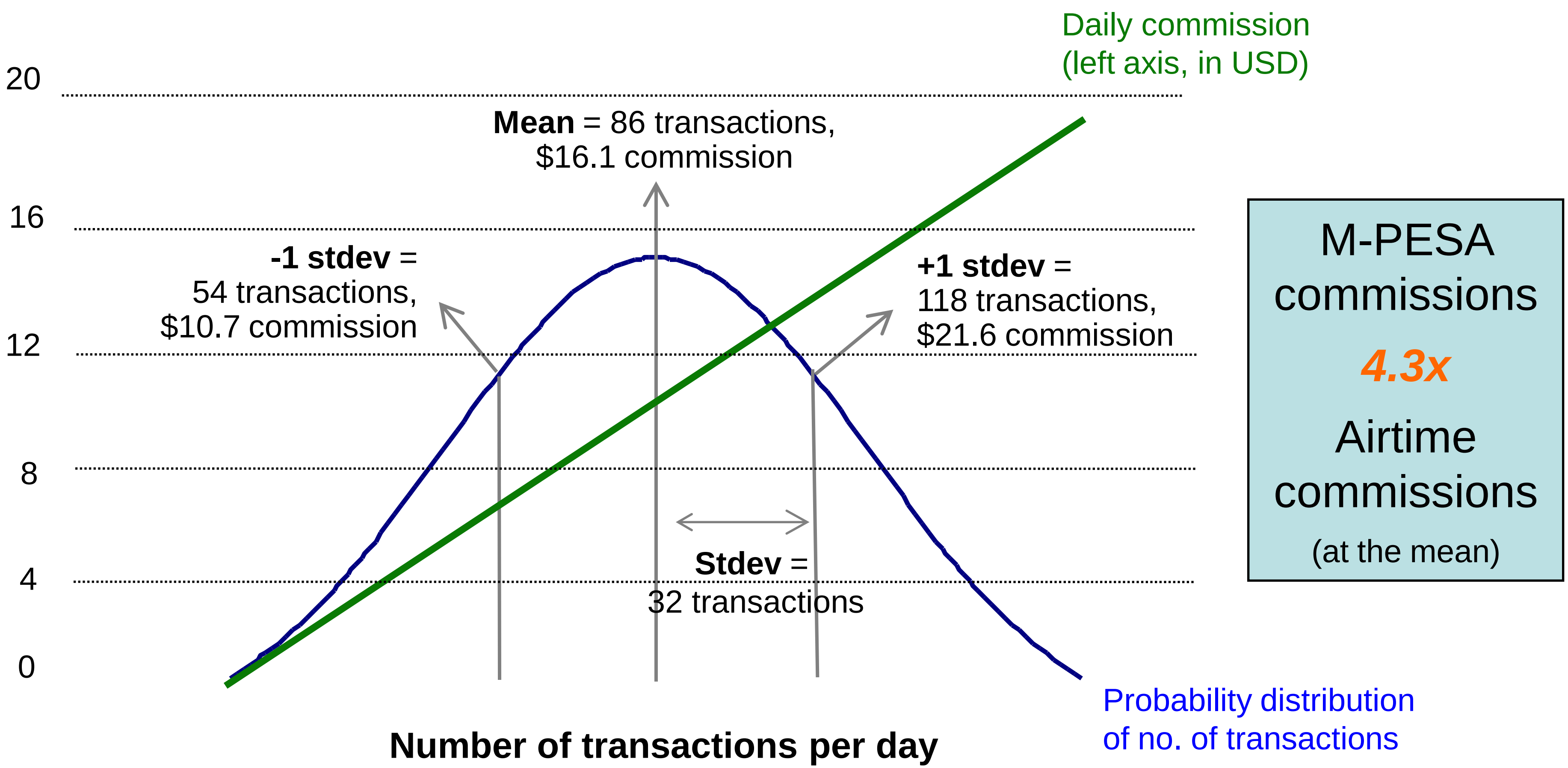
Lirhembe (1)
(Rural village off dirt road, which used to depend on mining. Now mines have closed and most residents are subsistence farmers.)

Bukura (1)
(Rural village in farming community with college and two agricultural research institutions. 20+ km from Kakamega, the nearest town. Residents pay 200 Ksh for return trip to town.

Kibera (8)
(Urban slum in Nairobi, population 1 million+. No formal financial institutions within Kibera.)

Kisumu (3)
(Provincial capital and third largest city in Kenya, population 350,000+.)

M-Pesa generates 4.3x gross revenue than airtime



Assumptions: *Agent transaction volumes abased on average transactions observed in selected agents. Commissions are after-tax, and assume: (i) equal number of deposits and withdrawals, and (ii) agent pays 30% of commissions to aggregator. Exchange rate used is 79 KSh/USD.*

CGAP

But revenue is only ½ the picture

- Business case incomplete without understanding costs, and drivers
- Factoring in typical expenses, the average agent makes USD 5.01 profit / day, or 3.2x more than selling airtime (see next slide)
- Liquidity management is #1 expense for agents (30% of all expenses). Major components include bank fees, transport to location where cash and e-float can be converted; paying 30% of M-PESA commissions to aggregators who advance funds immediately.
- Taxes substantial (#2 cost). Removed by Safaricom prior to pay out.
- Cost of capital also a major cost for agents, especially in first year (#3 largest expense category)
- Due to the higher costs – particularly liquidity management – ROI on M-PESA (97%) is actually lower than on airtime (373%)

M-PESA vs. Airtime

M-PESA vs Airtime (USD):
19 agents representing 125 M-PESA shops

	Airtime	M-PESA
Capital	129	1,605
REVENUE		
Gross revenue	3.77	16.11
# trans / day	163	87
Avg ticket size	0.46	16.95
Margin	5.0%	1.1%
EXPENSE	2.22	11.10
Liquidity mgmt	-	3.82
Space (rent + util)	0.73	0.73
Wages	1.21	1.21
Taxes	-	3.38
Cost of capital	0.28	1.95
PROFIT	1.55	5.01
ROI	373%	97%

M-PESA vs Airtime:

- Amount of K needed to finance an agent business is 12x greater (equal to Kenya's GDP per capita of US 1600)
- Cost to maintain liquidity is #1 expense (30% of total expenses)
- Although margin (1%) is lower than airtime (5%), agents are not fixated on the differential.
- Profit from M-PESA (USD 5.01 / day) is 3.2x greater than selling airtime

6 key factors determining agent profit

Profit = f[aggregator cost, Vol. of trans, liquidity cost, K cost, staff cost, % of trans >KSh 2500]

6 main factors:

1. Aggregator cost: Does the agent have adequate K to wait 3 days for Safaricom reimbursements? If not, then must use aggregator at cost of 30% of commissions. Must also have a bank account. If not, can use a simple aggregator who advances no funds but "rents" his bank account for 10%.
2. Volume of transactions, which itself is a function of latent demand in locale, and also can be limited by agent capital if insufficient to meet demand (caps # of transactions and thus revenue) and must be revolved more frequently (increases frequency of trips to convert cash/e-float).
3. Cost to maintain liquidity, including bank fees, transport costs which tend to be proportional to distance to location to convert cash/e-float, aggravated by need to revolve K more frequently due to limited K and/or imbalance of deposits and withdrawals

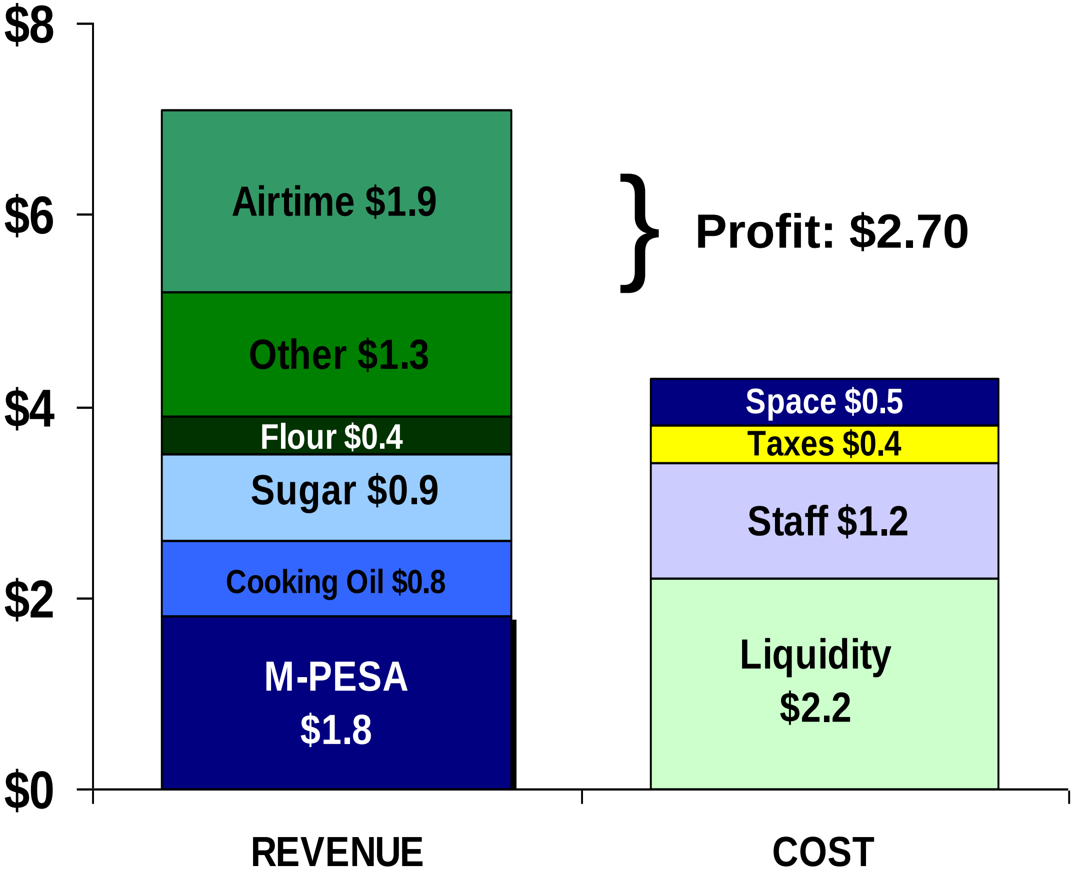
6 key factors (cont)

Profit = f[aggregator cost, Vol. of trans, liquidity cost, K cost, staff cost, % of trans >KSh 2500]

4. Cost of start-up capital, which is likely to be greater for agents who do not have another business which generates retained earnings or from which they can move K by reducing stock
5. Staffing cost, driven by whether outlet is owner operated, or wage staff required; wage levels exogenous and determined by prevailing rates.
6. Proportion of transactions >KSh 2500 in size, as these attract a substantially higher commission from Safaricom (up to 66% higher)

Having additional source of revenue is critical in the beginning as volume grows. Maurice and Japhet use airtime sales, groceries, and/or handset sales. Registrations, which bring KSh 80 (USD 1), are valuable early on as well.

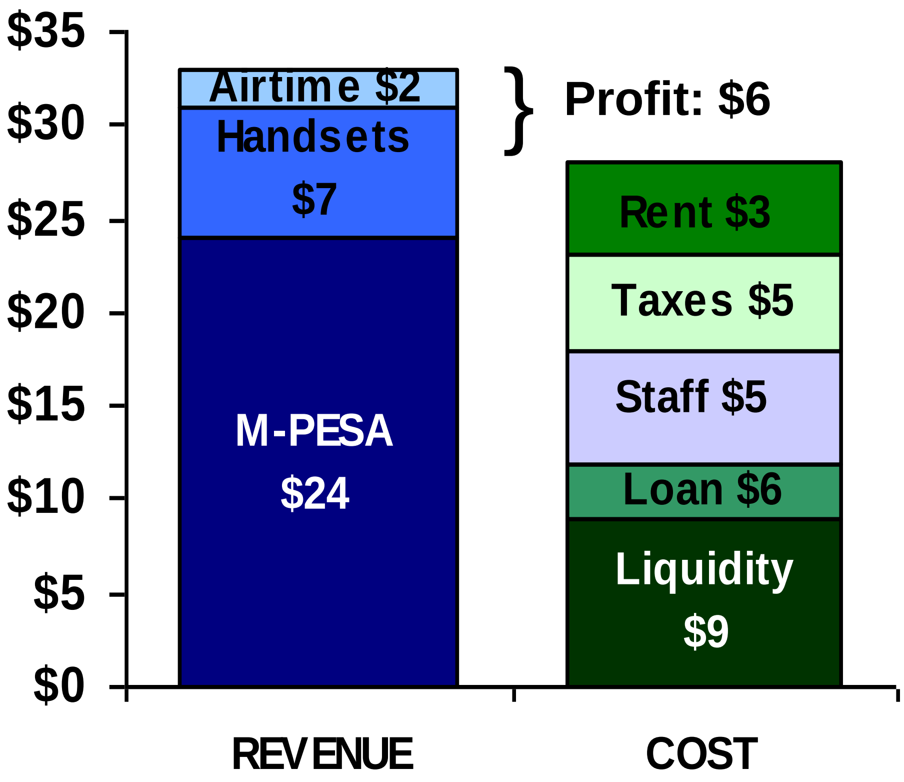
Worst Case: Japhet - Musoli



M-PESA unprofitable:

- Revenue from M-PESA = $1.80
- Cost of M-PESA = $2.20
- Liquidity management is 50% of his total expenses due to long distance to exchange cash and e-float

Middle Case: Maurice – 5 stores



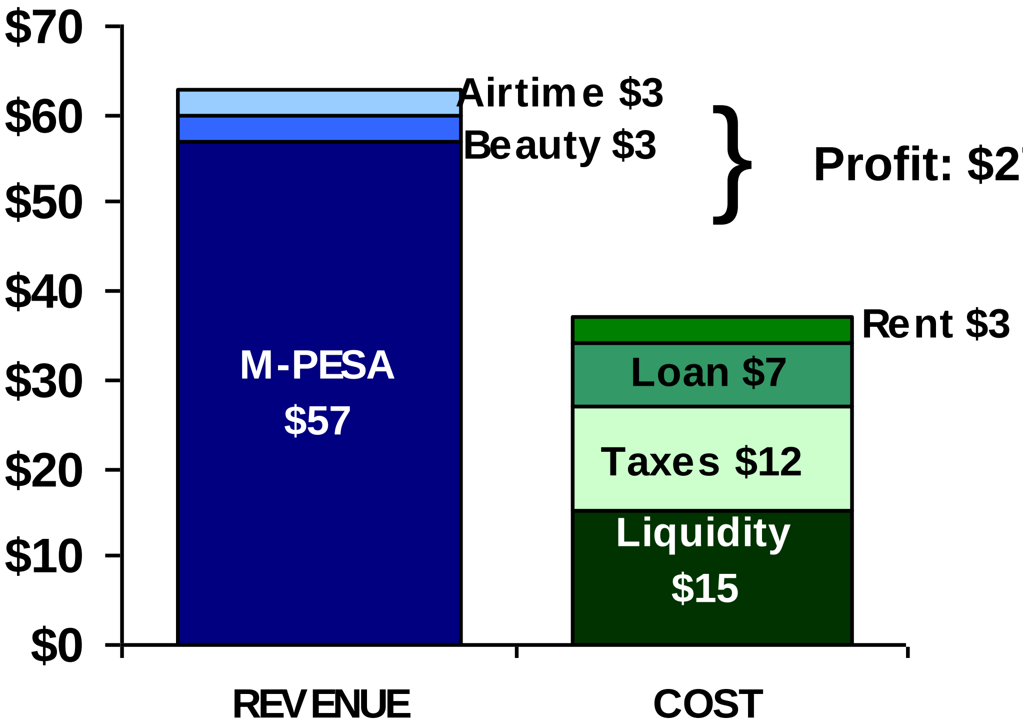
M-PESA not profitable, yet:

• Limited K increases cost of liquidity: what he has in cash and e-float is only 1/3 total value of M-PESA transactions. So he employs someone to revolve capital 3x/day.

• M-PESA will become profitable after he finishes paying off start-up loan

CGAP

Best Case: Jack - Kisumu



M-PESA is extremely profitable:

• Location is key → large volume of transactions. He does 3x # of trans/day than average agent → 256 trans/day

• Was a lawyer previously, but lost job during election crisis in 2008; makes more money now as M-PESA agent

CGAP

Improving the business case

- Volume of transactions is important, obviously, but largely exogenously determined. Agents are forced to accept the existing demand in their locale, as well as the possible imbalance of deposits and withdrawals.
- For example, agents in Kibera in Nairobi can often do 100+ transactions per day, mostly cash-in from residents sending money home to family and friends in the countryside.
- Japhet sees a different picture in Musoli, a rural village on a dirt road where many residents are subsistence farmers who primarily receive remittances via M-PESA. Japhet might see a maximum of 40 transactions per day, and nearly all cash-out, requiring him to bring cash frequently from the bank 1 hour by bus in Kakamega.
- However, there are elements of liquidity cost and capital which CAN be affected.
- There are actions which can be taken to improve the business case for smaller agents who serve rural and poorer areas.

Improving the business case (cont)

1. Eliminate the 3 day waiting period to settle exchanges of e-float/cash. In the absence of this delay, agents would no longer be forced to either pay 30% of their commission to an aggregator or see 1/3 of their capital tied up. The operator would need to open accounts in most major banks to facilitate same-day settling. Alternatively, develop denser networks of aggregators willing to make the conversion with their own funds, and competition will press down the price of this service.

2. Work with banks and MFIs to provide cheaper financing to agents. The availability and price of start-up capital is a major constraint for smaller entrepreneurs looking to start M-PESA as a stand-alone business, or shop-owners adding it as another line of business. Such loans could be secured by the agent commissions, making them very low risk for the financial institution. Once acquired, agents could become loyal small business clients of the bank, as most will subsequently want working capital loans to expand the M-PESA business.

CGAP

Advancing financial access for the world's poor

www.cgap.org

www.microfinancegateway.org