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Measuring the True Cost of Digital Financial Services

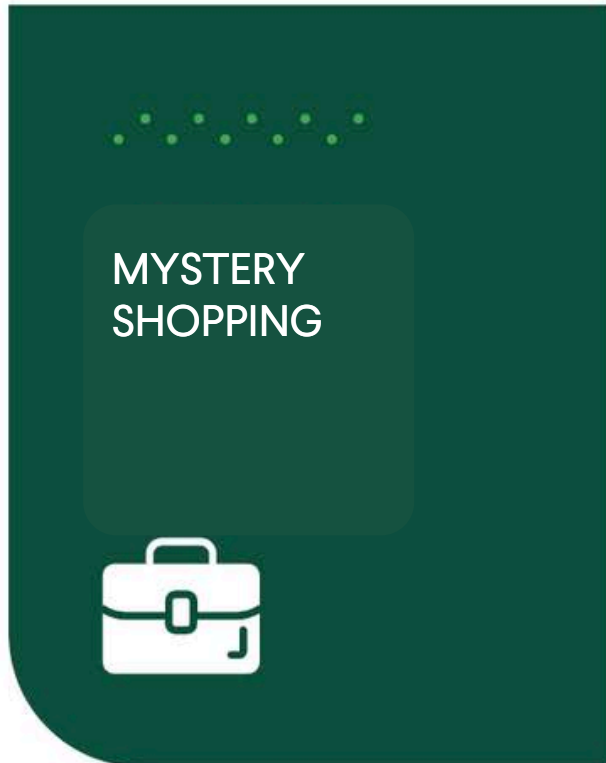
IN BANGLADESH
YEAR 2



Despite evidence that reducing the cost of mobile money and other services is key to improving financial inclusion, and that transparent pricing is a key feature of well-functioning markets, little has been done to systematically monitor the true cost of conducting digital financial service (DFS) transactions or the ease of accessing information about fees. A study by Innovations for Poverty Action (IPA) in Bangladesh, Tanzania, and Uganda focused on three main areas: price transparency, monetary costs, and reliability. The study was conducted over two years. In the first year of fieldwork, we piloted three different methods of data collection. The second year concentrated on a refined version of the best performing method, mystery shopping by local consumers, according to our metrics on affordability, adaptability, data quality, and observer effects.

This brief provides an overview of findings from the second year, focused on Bangladesh. Similar briefs for Tanzania and Uganda are available [here](#).

Methodology



Mystery shopping

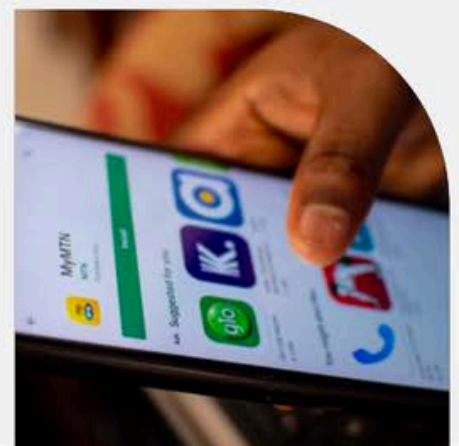
Fieldwork was conducted to capture costs beyond official fees (carried out in 2023). We worked with local consumers in Bangladesh, Tanzania, and Uganda, who visited agents in locations from major cities to small rural communities. The following activities were involved:



Local consumers were recruited through a household survey



The consumers carried out mystery shopping visits with agents close to their homes



Methodology

WORK IN BANGALDESH



Work in Bangladesh

Specifically for Bangladesh, we looked at the following:

2

mobile money providers:

- Nagad
- bKash

77

7 locations for fieldwork – 19 urban locations in Chittagong and Dhaka and 58 rural locations in Barisal and Dhaka with a total of 409 agents (207 in urban areas and 202 in rural areas)

1,322

mystery shopping visits

1,000

mystery shoppers attempted to make transactions of BDT 1000

Findings

Key findings are presented here for Bangladesh. First, we share descriptive statistics about mobile money markets in Bangladesh: specifically characteristics of agents, customers, and transactions. Next, we present findings related to price transparency, or lack thereof. The next section covers monetary costs, including the extent of overcharging by agents. Finally, we explore issues of reliability, including issues around agent presence and failed transactions.

Agent characteristics

Table 1 displays a key set of agent characteristics. We disaggregate results by rural and urban agents as well as male and female agents.

Table 1: Agent characteristics

	Overall	Rural	Urban	Male Agents	Female Agents
Agent Characteristics					
Percent female	1.51	0.96	2.01		
Percent above 30 years old	63.62	80.03***	48.85***	64.29***	20.00***
Percent dedicated (no business besides providing agent services)	86.49	89.10**	83.83**	87.30	95.00
Percent exclusive (only serve one provider)	25.22	31.69***	18.63***	22.40*	45.00*
Agent appears to have many customers	60.10	60.10	Unavailable	58.44	50.00
Mean number of other agents within 200m	7.96	5.99***	9.97***	7.84	9.20
Presence rate	84.47	79.34***	89.69***	Unavailable	Unavailable
Success rate (conditional on presence)	88.88	89.62	88.22	88.79	95.00
Mean security score (1-10)	8.18	8.23	8.14	8.18	8.55
Mean privacy score (1-10)	8.08	8.06	8.11	8.08	8.45
Mean attitude score (1-10)	8.22	8.23	8.21	8.22	8.15

Stars used to indicate significance of differences between urban/rural and between male/female. The same significance stars are displayed for urban and rural columns, and for male and female columns. * p < 0.10, ** p < 0.05, *** p < 0.01

Market characteristics

Table 2 displays a set of characteristics of local consumers, including previous experience using mobile money. We disaggregate results by rural and urban customer as well as gender of the customer.

Table 2: Customer characteristics

	Overall	Rural	Urban	Male	Female
Customer Characteristics					
Percent female	37.83	35.96	43.42		
Age, median	26	26	26	26	26
Percent with some secondary education	90.46	87.72**	98.68**	89.42	92.17
Mean length of mobile money account ownership (years)	2.63	2.57	2.80	2.82**	2.31**
Percent who did an agent transaction in the last 7 days	47.04	36.40***	78.95***	48.15	45.22
Mean number of agent transactions made in the last 90 days [†]	6.36	3.47***	15.19***	6.00	6.95
Mean number of agents with whom typically transacts	1.96	1.80***	2.42***	2.02	1.85
Percent that can do a person-to-person transfer without the help of an agent	91.42	91.23	92.00	94.18*	86.84*
Percent that knows the price of a hypothetical cash-out transaction	74.83	90.54***	23.53***	81.11**	64.55**
Percent of payments (for goods, services, and bills) made using mobile money	20.33	18.11**	26.96**	20.50	20.03
Percent who experienced a significant challenge with a mobile money agent in the last 90 days	4.93	5.26	3.95	4.23	6.09
Percent with outstanding debt on mobile money account	0.00	0.00	0.00	0.00	0.00

Stars used to indicate significance of differences between urban/rural and between male/female. The same significance stars are displayed for urban and rural columns, and for male and female columns. * p < 0.10, ** p < 0.05, *** p < 0.01 † sum of all cash-in, cash-out, and account transfer transactions made with an agent

Transaction characteristics

Table 3 displays characteristics of the last successful transaction that the customer completed with an agent, disaggregated by rural and urban customer and gender of the customer.

Table 3: Transaction characteristics

	Overall	Rural	Urban	Male	Female
Transaction Characteristics					
Of last successful transaction:					
Median transaction amount	1000	1000	1000	1000	1000
Transaction Type					
Cash-in	12.83	10.09*	21.05*	13.76	11.30
Cash-out	75.66	76.75	72.37	73.54	79.13
Over-the-counter transfer	0.00	0.00	0.00	0.00	0.00
Account-to-account transfer (agent assisted)	9.87	11.40	5.26	10.58	8.70
Other	1.32	1.32	1.32	2.12	0.00
Provider used for the transaction					
bKash	83.22	82.46	85.53	88.89***	73.91***
Nagad	16.78	17.54	14.47	11.11***	26.09***

Stars used to indicate significance of differences between urban/rural and between male/female. The same significance stars are displayed for urban and rural columns, and for male and female columns. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$



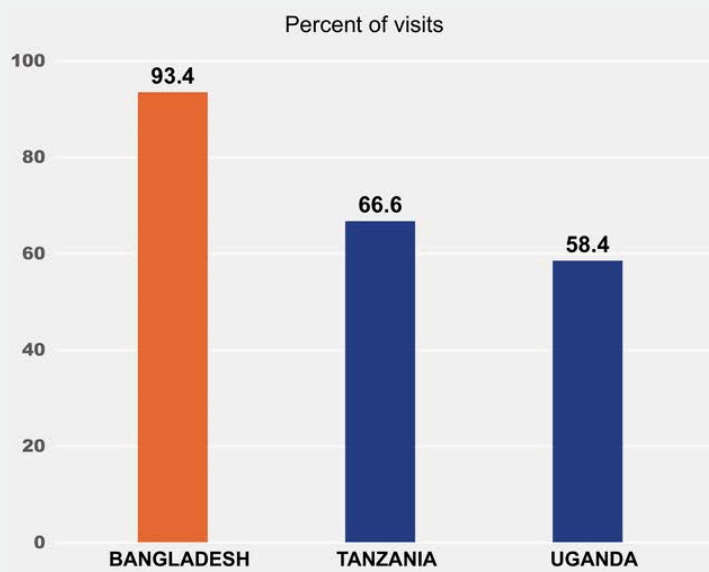
Price Transparency

Easy access to pricing information helps consumers make informed decisions and is key to a well-functioning mobile money market. Evidence from our second year of field work suggest a persisting significant variation between providers and individual agents in terms of the pricing information they disclose to customers.

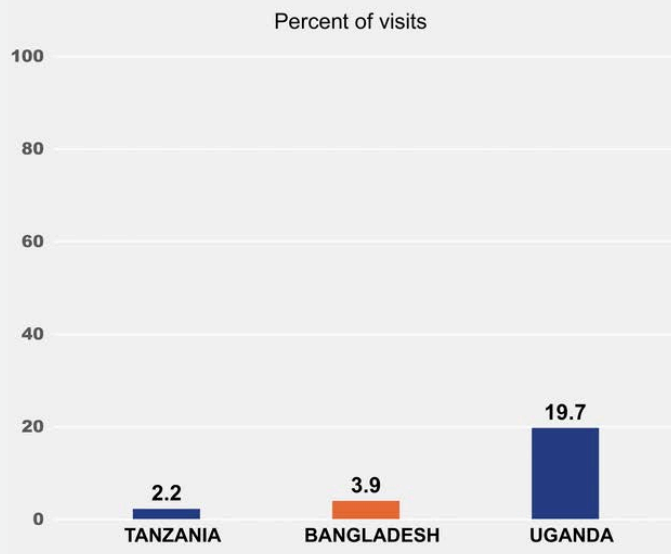
Online availability of listed prices:

- ✔ Price lists were displayed at agent location 93 percent of visits, the by far highest rate across all countries
- ✘ Agents rarely informed customers about the fee: just about 4 percent of times, significantly less often than in Uganda

PRICE LIST DISPLAYED IN BANGLADESH

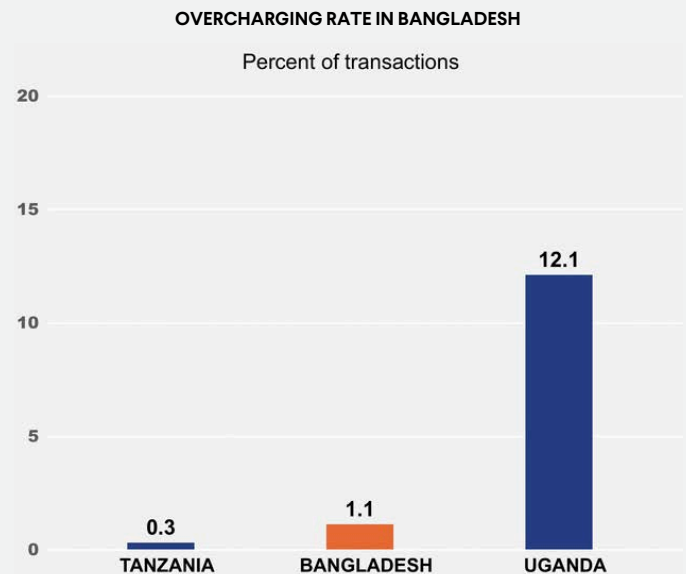
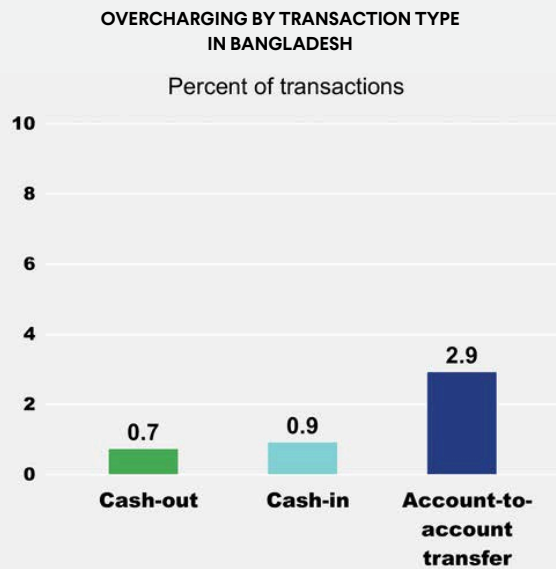


VERBAL DISCLOSURE OF PRICE IN BANGLADESH



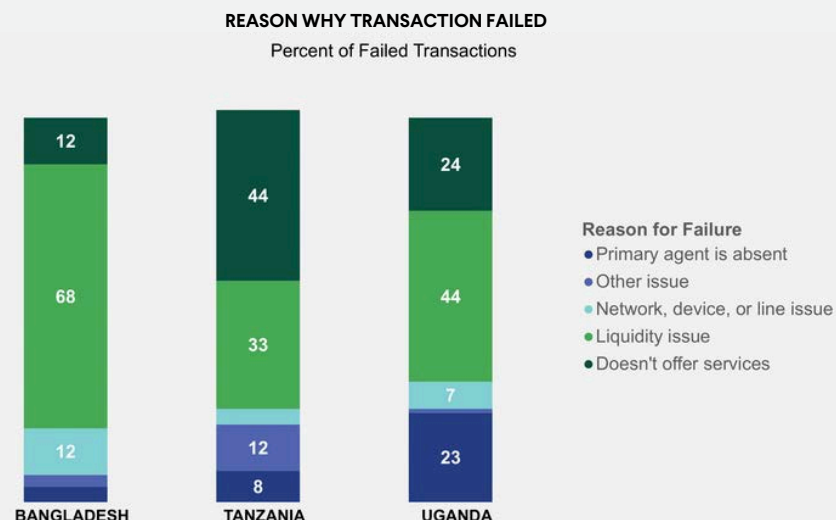
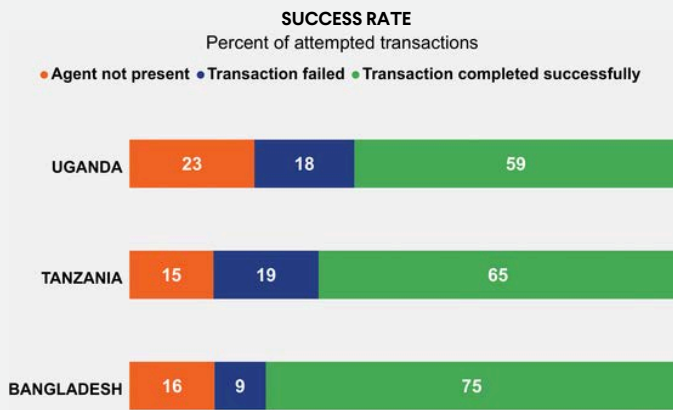
Overcharging

- Fieldwork data found that 1.1 percent of transactions in Bangladesh resulted in overcharging by the agent, above the rate in Tanzania but far below that in Uganda
- Agents were most likely to request an informal fee for account-to-account transfers



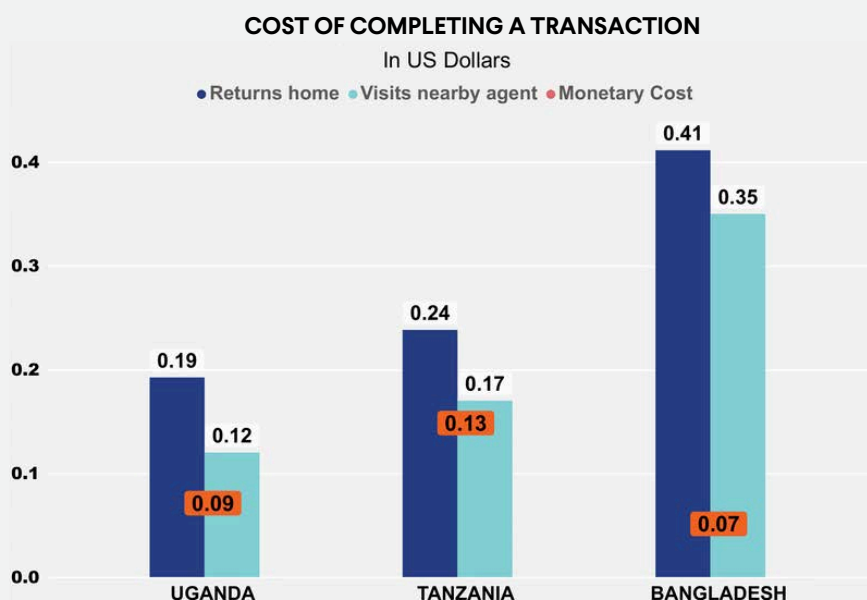
Reliability

- Local consumers with knowledge of the market found agents present in 84 percent of attempted visits, similar to Tanzania but significantly more often than in Uganda
- Overall, 9 percent of transactions failed despite an agent being present, the lowest rate across countries. Liquidity constraints of the agent was the most common reason why a transaction could not be completed



Time cost

- Fieldwork suggests that consumers in Bangladesh spend an average of between 13 to 24 minutes to complete a successful transaction (depending on whether customers are assumed to visit another agent when a transaction fails, or go home and re-attempt at the same agent at another occasion). Using local wage rates to convert this time cost to monetary terms suggests that the time cost is 5 to 6 times higher than the monetary cost of completing a transaction.



	Uganda	Tanzania	Bangladesh
Time cost			
Average time cost			
Returns home	26 minutes	21 minutes	24 minutes
Visits nearby agent	8 minutes	10 minutes	13 minutes
Average time Cost (USD)*			
Returns home	\$0.19	\$0.24	\$0.41
Visits nearby agent	\$0.12	\$0.17	\$0.35
Average monetary cost	\$0.09	\$0.13	\$0.07

* Time cost converted to monetary terms using average low skill wage rates