When Transparency Fails: Financial Incentives for Local Banking Agents in Indonesia

Erika Deserranno[1] Gianmarco León-Ciliotta[2] Firman Witoelar[3]

[1]Bocconi University

[2]Universitat Pompeu Fabra & BSE

[3]Australian National University

The Review of Economics and Statistics
107(6): 1537–1552, November 2025

Motivation

- Under-utilization of new technologies is a key constraint to economic growth (e.g., Caselli and Coleman 2011; Comin and Hobijn 2004)
  - e.g., deworming tabs, improved seeds, **financial products**
- New technologies are often promoted by local agents
- Motivating these local agents is central to boost technology adoption

Motivation

- Standard approach: raise agents' financial incentives (e.g., raise commission earned for each new user)
- Yet, various papers show that incentives are ineffective at increasing adoption (e.g., Ashraf et al. 2014; Ahmad et al. 2014; Gine et al. 2020)
- We test the hypothesis that incentives not only affect agent's effort but also demand-side perceptions
  - Test for the presence of **signaling effect of incentives** (Benabou and Tirole 2003; Sliwka 2007)

Supply vs. Demand Effects

With incomplete information about a new technology, agent's financial incentives can affect adoption...

1. directly, through more agent's effort (**supply effect**)

2. indirectly, through a signaling effect that impacts potential clients' perceptions (**demand effect**)

Supply vs. Demand Effects

With incomplete information about a new technology, agent's financial incentives can affect adoption...

1. directly, through more agent's effort (**supply effect**)

2. indirectly, through a signaling effect that impacts potential clients' perceptions (**demand effect**)

   - Signal that the agent is primarily motivated by money and more likely to take advantage of an uninformed consumer (attenuates or even reverts supply effect)
   - Signal that the agent is of high ability, or that the bank is successful (amplifies supply effect)

The Role of Transparency

If demand-side signaling effects are present, impact of agents' financial incentives depends on their **transparency** and how signal is interpreted.

- If incentives are **private**, raising their level $\uparrow$ adoption by prompting agents to exert more effort without triggering any demand-side effect
- If incentives are **public**, raising their level has no impact or even $\downarrow$ adoption if this deteriorates demand perceptions (negative signal)

This Paper

- Collaborating with a large bank in Indonesia, we evaluate the effects of changing the **level** and **transparency** of financial incentives for branchless banking agents on the product's take up and usage
- The experimental design allow us to separately identify the supply (effort) and demand (signaling) effects of higher financial incentives

Preview of the Results

1. Higher incentives and Private information $\rightarrow$ more than triple the product's take-up (from 0.6% to 2.7%) and increase usage by 18–20%
   $\rightarrow$ This is explained by higher effort by the agent (supply side effect of incentives)
2. Higher incentives and Public information $\rightarrow$ do not affect take-up or usage of the product

   - The demand-side effect of high incentives ($+$ public information) is negative, and about the same magnitude of the supply side effect
   - Potential clients who learn about the agent's high compensation perceive the agent, the bank and the product as less reliable and trustworthy

Related Literature

Trust and technology adoption in developing countries

- Increase the demand for and use of new technologies
  Dupas and Cohen (2010); Ashraf et al. (2010), Duflo et al. (2011), Conley and Udry (2010); Bryan et al. (2014); Bandiera and Rasul (2006); Cole and Fernando (2021); Breza et al. (2020); Bachas et al. (2021)
  → Focus on the role of agents, trust, and the design of incentives

Prices and wages as a signals:

- Milgrom and Roberts (1986), Benabou and Tirole (2003); Sliwka (2007); Bowles and Reyes (2009)
  → We focus on the signals sent by wages to *potential users*

Pay transparency and Disclosure norms

- Card, et al (2012); Mas (2016, 2017); Breza et al (2018); Cullen and Perez-Truglia (2018); Perez-Truglia (2019);
  → We focus on transparency outside the organization
- Bertrand and Morse (2011); Cain et al. (2005); Anagol et al. (2017); Mullainathan et al. (2012)
  → Disclosure of incentives affect the demand

Background

- Indonesia has a relatively low financial service penetration
  - In 2017, 49% of Indonesian adults had a bank account, vs. 71% in other non-high-income countries in Eastern Asia Pacific (Global Findex)
- To promote financial inclusion, the government adopted a law in 2014 establishing banking services without the need for branch offices: "branchless banking"
  - Model of operations is similar to other countries (e.g., Buri et al 2018; Jack and Suri 2014; Batista and Vicente 2019; Siedek, 2008; Mas and Kumar, 2008; Flaming et al., 2011)
- We collaborate with one of the largest banks in Indonesia in the expansion of their branchless operations

Background: Branchless Banking Agents

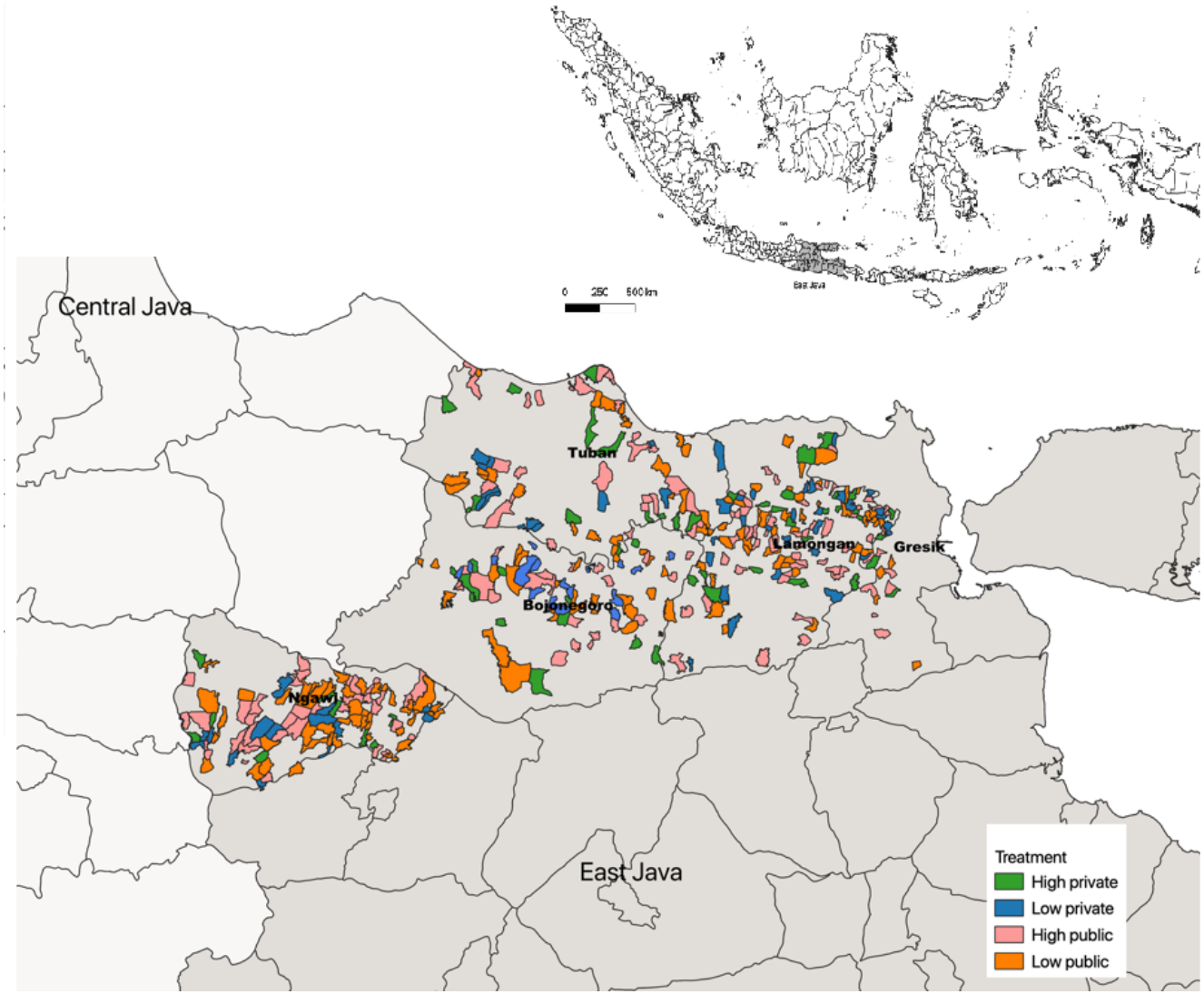
- Promote an interest-bearing savings account (and a digital wallet) and subsequently help customers deposit and withdraw money from the account
  - Eliminate need to travel to ATM or branch office + can reduce mistrust
- Usually, they are business owners with an established clientele, and are paid a commission for each new client and each subsequent transaction
- Similar to branchless banking in other countries (e.g., Flaming et al. 2011; Jack and Suri 2014; Batista and Vicente 2019)

Background: Setting

- The experiment takes place in 401 villages in five regencies (Tuban, Bojonegoro, Gresik, Ngawi, and Lamongan) of East Java, where the bank was expanding its branchless banking activities in 2016
- One branchless banking agent per village was recruited and trained between November 2016 and November 2017

Background: Setting

Figure: Map of the villages in each treatment arm



Background: Bankarization, Information and Transparency

The study area is highly unbanked, have low financial literacy and low information:

- Only 43% of the households surveyed at baseline had made a transaction with any bank in the month prior to the interview, and only 26% had a savings account
- Only 8% of households had ever heard about branchless banking
- 40% of respondents report having no trust in banks, and financial literacy is low

Background: Bankarization, Information and Transparency

The study area is highly unbanked, have low financial literacy and low information:

- Only 43% of the households surveyed at baseline had made a transaction with any bank in the month prior to the interview, and only 26% had a savings account
- Only 8% of households had ever heard about branchless banking
- 40% of respondents report having no trust in banks, and financial literacy is low

As in many other settings, information on other people's earnings and wealth are typically private information (e.g. Glassdoor 2016; PayScale 2018)

- 67%, 83% and 78% of respondents don't know how much their close friends/family, friend, and acquaintance earn, respectively

Experimental Design

Incentives	Private	Public
High	T1 (57 villages)	T2 (139 villages)
Low	T3 (68 villages)	T4 (137 villages)

Experimental Design

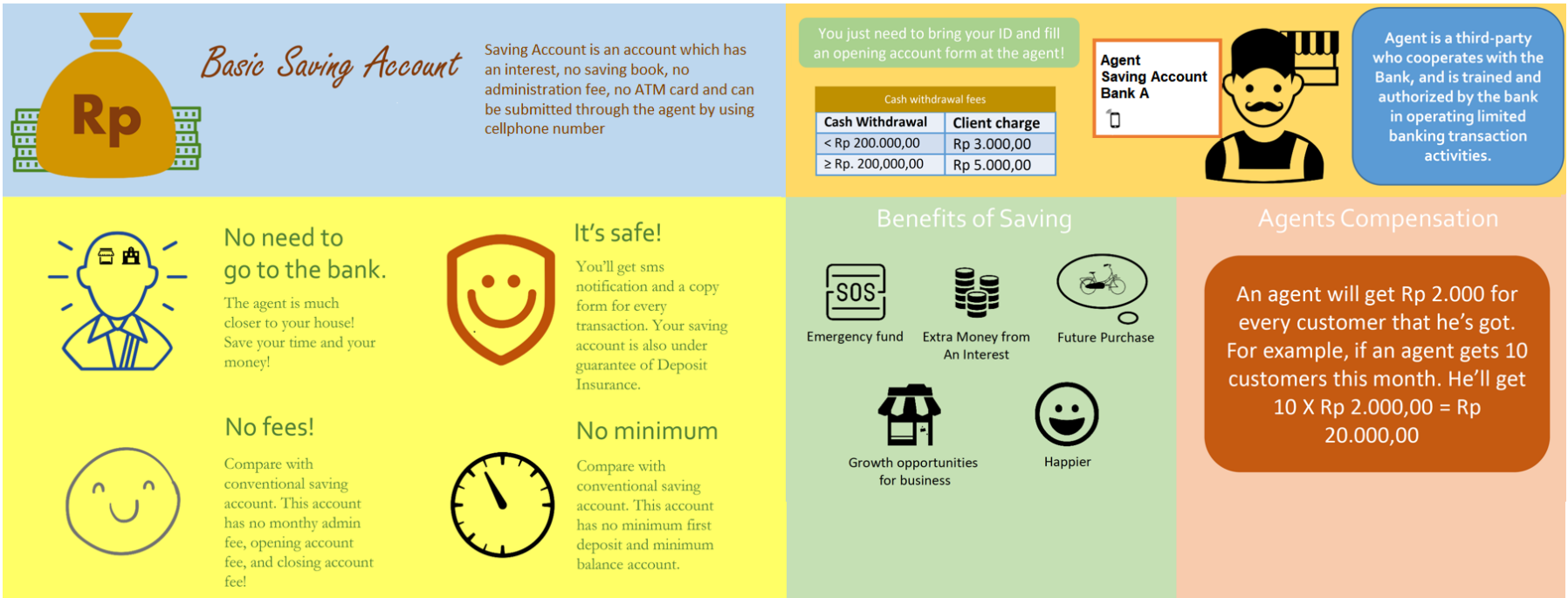
Incentives	Private	Public
High	T1 (57 villages)	T2 (139 villages)
Low	T3 (68 villages)	T4 (137 villages)

- High (Low) Incentives: agent receives 10k IDR $\approx$ .71 USD (2k IDR $\approx$ .14 USD, the status quo) for each new customer who signs up for a savings account
- Public (Private) Incentives: incentives are disclosed (not disclosed) to the community

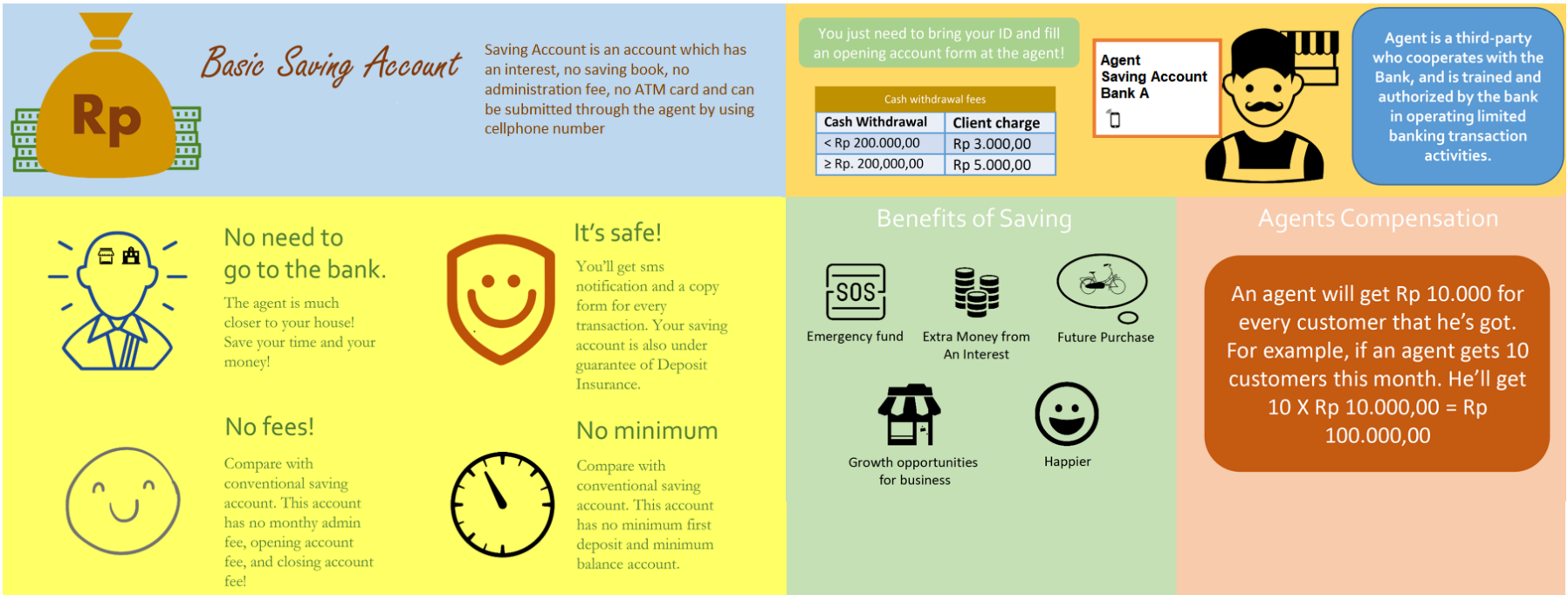
Private Incentives



Low Public Incentives



High Public Incentives



Experimental Design

Incentives	Private	Public
High	T1 (57 villages)	T2 (139 villages)
Low	T3 (68 villages)	T4 (137 villages)

- T1-T3 = Supply (effort) effect
- T2-T4 = Supply (effort) effect + demand (perceptions) effect
- (T2-T4) - (T1-T3) = Demand (perceptions) effect

Important Features of the Design

1. Salary taboo: Villagers don't talk about each other's pay unless revealed by an outsider
2. No informal taxation: Agents are residual claimants of their effort across all treatments

   $\rightarrow$ only 3% of respondents report ever sharing the proceeds of a successful business with other villagers
3. No selection effects: Level of incentives revealed to agents after recruitment. Transparency never revealed.

Timeline of the Intervention

1. Agent recruitment (Nov. '16 - Nov. '17)
   - 1.1 Agents recruited (no information about commissions)
   - 1.2 Baseline survey (+ public / private information about the agent compensation)
   - 1.3 Agent training (+ revelation of their compensation and commission)
2. Endline survey (Nov. '18 - Jan. '19): 14 to 21 months after products introduced
3. Long-term administrative data (Jan. - Oct. '21): 38 to 50 months after the intervention

Data

1. Baseline and endline household surveys (2016 and 2018) (N=4,828, attrition of only 16 households):
   - take-up and usage of the saving account
   - perceptions and trust in the agent/product/bank
   - number of times saving account was advertised by the agent
2. Baseline and endline agent survey (2016 and 2018) (N=400)
3. Bank's administrative data: transactions of clients included in the survey
4. Long-term bank administrative data (Jan.-Oct. 2021): village-level take-up, transactions, balances and payments

Descriptive Statistics and Balance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Obs.	Mean	Std. Dev.	p-value F-stat Joint	p-value (High-Low)× Private	p-value (High-Low)× Public	p-value (Public-Private)× High	p-value (Public-Private)× Low
Panel A: Village Characteristics								
Village Size	401	964.5	592.2	0.252	0.424	0.084*	0.974	0.543
Distance to Nearest Bank Branch (in km)	401	12.32	6.944	0.951	0.890	0.862	0.692	0.706
Internet Coverage	401	0.673	0.470	0.519	0.606	0.367	0.172	0.832
Panel B: Agent Characteristics								
Female	401	0.434	0.496	0.371	0.517	0.162	0.638	0.403
Highest Degree=Primary School	401	0.052	0.223	0.362	0.796	0.355	0.159	0.595
Highest Degree=High School	401	0.524	0.500	0.237	0.075*	0.502	0.057*	0.500
Highest Degree=Tertiary Education	401	0.416	0.494	0.355	0.073*	0.936	0.215	0.358
Main Occupation=Non Farm Business	400	0.838	0.369	0.947	0.718	0.926	0.604	0.840
Main Occupation=Agriculture or Other	400	0.175	0.380	0.811	0.414	0.933	0.351	0.962
Volunteered in the Past Year	400	0.330	0.471	0.613	0.859	0.689	0.408	0.319
Has a Mobile Phone	401	1.000	0.000	.	.	.	.	.
Has a Laptop	401	0.521	0.500	0.259	0.970	0.224	0.112	0.515
Panel C: Household Characteristics								
Female	4828	0.591	0.492	0.030	0.109	0.724	0.618	0.082*
Highest Degree=Primary School	4828	0.234	0.424	0.585	0.229	0.541	0.476	0.850
Highest Degree=High School	4828	0.633	0.482	0.511	0.214	0.679	0.271	0.926
Highest Degree=Tertiary Education	4828	0.117	0.321	0.987	0.730	0.905	0.826	0.788
Main Occupation=Non Farm Business	4825	0.951	0.215	0.286	0.974	0.836	0.129	0.228
Main Occupation=Agriculture or Other	4824	0.056	0.231	0.409	0.658	0.672	0.284	0.273
Volunteered in the Past Year	4824	0.160	0.367	0.307	0.809	0.099*	0.152	0.976
Has a Mobile Phone	4828	0.931	0.253	0.560	0.368	0.508	0.849	0.408
Has a Laptop	4822	0.266	0.442	0.807	0.581	0.813	0.889	0.335
Made a Bank Transaction in the Last Month	4826	0.434	0.496	0.465	0.131	0.650	0.494	0.476
Has a Bank Saving Account	4827	0.550	0.498	0.103	0.108	0.123	0.881	0.329
Trust in State Banks (1 to 5)	4828	3.923	1.251	0.790	0.973	0.310	0.681	0.699
Trust in Non State Banks (1 to 5)	4828	3.207	1.349	0.696	0.455	0.393	0.629	0.284
Knows about Branchless Banking	4827	0.079	0.270	0.097	0.069*	0.336	0.751	0.169
Knows the Agent	4828	0.595	0.491	0.121	0.261	0.033**	0.844	0.932
Friend or Family of the Agent	4828	0.257	0.437	0.415	0.200	0.337	0.400	0.993

▸ Summary Statistics by Treatment

Main Model

The supply and demand effects of financial incentives will be estimated with the following model:

$$y_{ij} = \beta_0 + \beta_1 High_j \times Private_j + \beta_2 High_j \times Public_j + \beta_3 Low_j \times Public_j + Z_j'\gamma + \epsilon_{ij} \quad (1)$$

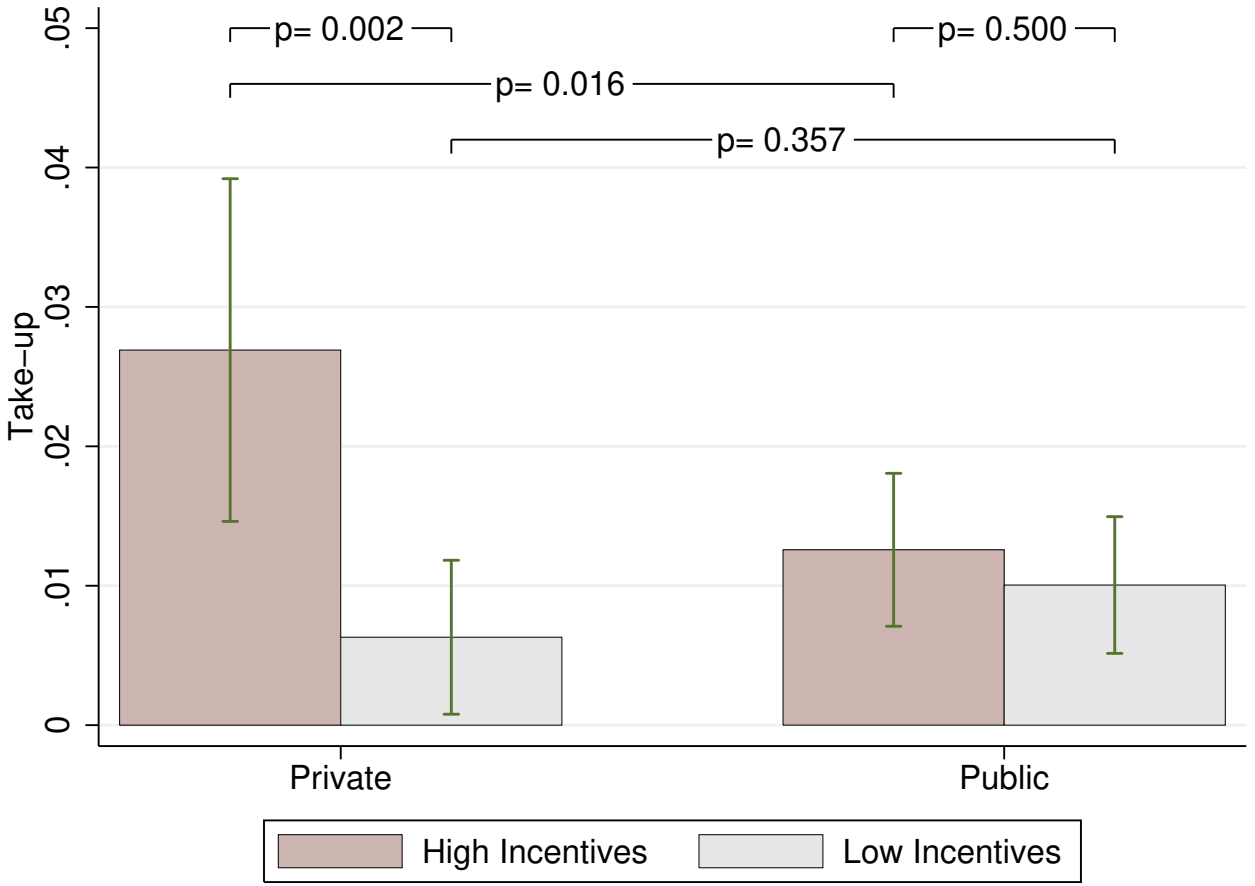
- y_{ij} outcome for individual i in village j
- $High_j$ (Low_j) and $Private_j$ ($Public_j$) are indicators for whether village (agent) j received high (low) incentives and information about her compensation is private (public)
- Z_j are the village-level stratification variables
- ϵ_{ij} error term, clustered at the village level

Identification assumptions

The identification of the supply- and demand-side effects of financial incentives rely on two important assumptions:

1. Potential clients have limited information on agents' incentives in the private treatment arm
2. Agents are equally likely to be the residual claimants of their effort across all treatment groups

Take-up


p= 0.002
p= 0.500
p= 0.016
p= 0.357
Take–up
0
.01
.02
.03
.04
.05
Private
Public
High Incentives
Low Incentives

Take-up and Usage

	(1)	(2)	(3)	(4)
	Take-up	Transactions Amount (IHS)	Balance (IHS)	Saving (IHS)
(High - Low) × Private	0.021^{***}	0.184^{**}	0.196^{**}	0.191^{**}
	(0.008)	(0.078)	(0.078)	(0.078)
(High - Low) × Public	0.003	0.036	0.003	0.001
	(0.004)	(0.023)	(0.027)	(0.025)
(High - Low) × (Public - Private)	-0.018^{**}	-0.148^{*}	-0.193^{**}	-0.190^{**}
	(0.009)	(0.081)	(0.082)	(0.081)
High × Private	0.021^{***}	0.184^{**}	0.196^{**}	0.191^{**}
	(0.008)	(0.078)	(0.078)	(0.078)
High × Public	0.006	0.049^{**}	0.039^{*}	0.029
	(0.005)	(0.022)	(0.020)	(0.024)
Low × Public	0.002	0.013	0.036^{*}	0.029
	(0.004)	(0.010)	(0.019)	(0.022)
Observations	4644	4828	4828	4613
R-squared	0.006	0.008	0.007	0.007
Mean Dep. Var.	0.013	0.046	0.055	0.060
Mean Dep. Var. for Low × Private	0.006	0.000	0.000	0.014
p-value High × Private - High × Public	0.048	0.094	0.049	0.041
p-value High × Private - Low × Public	0.016	0.029	0.045	0.041

Results: Take-up and Usage

- Higher financial incentives more than triple take-up (+2 pp., from 0.6% to 2.7%), but this is only true under a private information regime
- High (private) incentives boost the usage of the products: the total amount of deposits/withdrawals, account balance, and savings increase by 15-17%
- Increase in savings does not come at the expense of lower savings in other banking products
- Similar effects for savings account and mobile wallet

▸ Take-up and Usage by Product

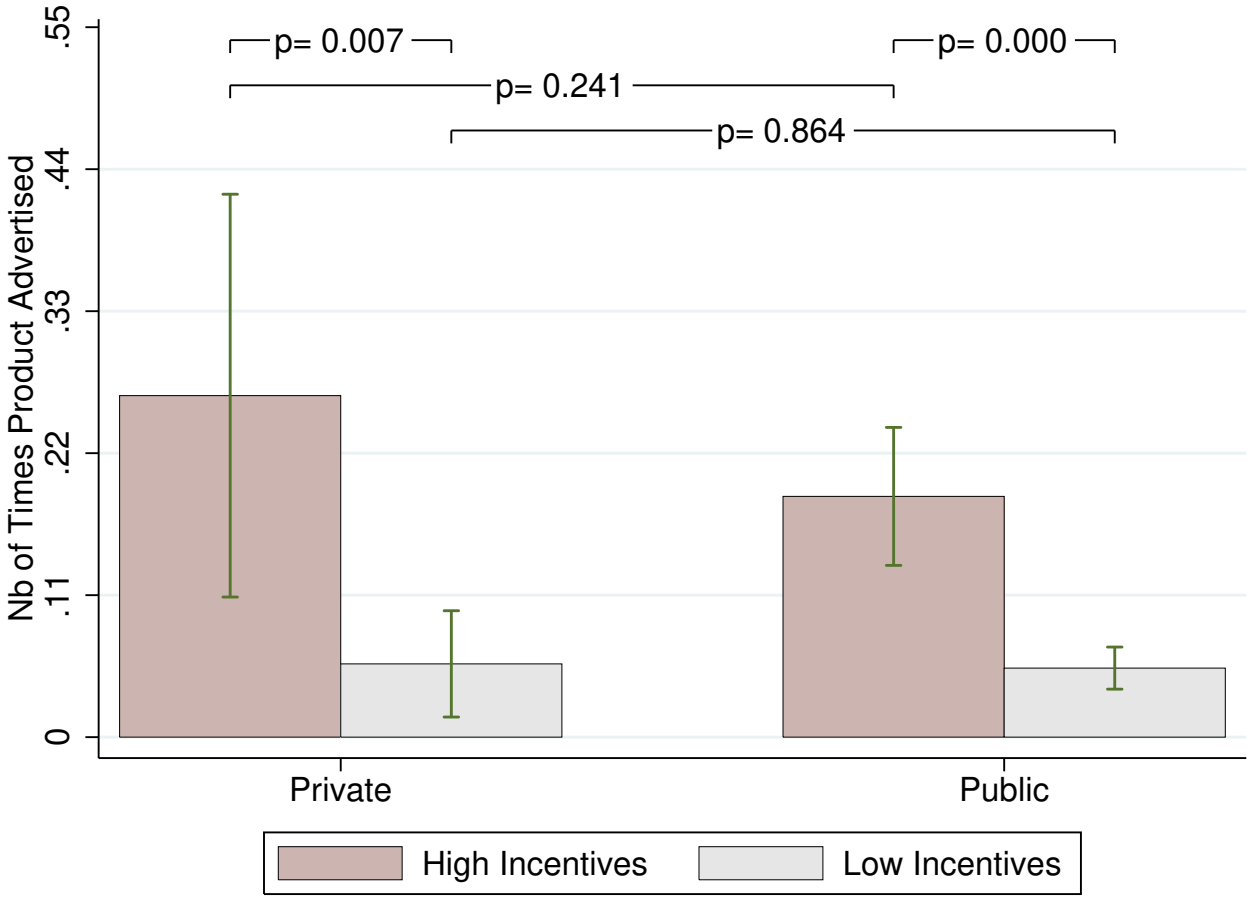
- No effects on products offered by other banks ▸ Take-up: Other Products
- Robust to multiple hypothesis testing, extra controls, re-weighting

▸ Robustness

Mechanisms: Agent Effort

- Higher financial incentives are expected to increase agent's effort to introduce new financial products
  - Lazear and Sha (2007); Bandiera et al (2011); Wagner et al (2020)
- Effort can be measured in multiple ways. We focus on two (none self reported): Advertisement and information, and Sales Strategy.
  - Agent effort is highly positively correlated with take-up and usage ▸ Correlations

Mechanisms: Agent Effort



Mechanisms: Agent Effort

	(1)	(2)	(3)	(4)	(5)	(6)
	Agent Effort			Agent Sales Strategy		
	Number of Times Products are Advertised	Learned about Products from Agent	Agent Effort (PC)	Products Offered by Agent	Agent Pro-Actively Promoted Products	Agent Sales Strategy (PC)
(High - Low) × Private	0.203**	0.015*	0.006**	0.038***	0.033***	0.035***
	(0.083)	(0.008)	(0.003)	(0.010)	(0.010)	(0.010)
(High - Low) × Public	0.129***	0.015***	0.005***	0.025***	0.018***	0.022***
	(0.028)	(0.004)	(0.001)	(0.007)	(0.006)	(0.006)
(High - Low) × (Public - Private)	-0.074	-0.000	-0.001	-0.013	-0.015	-0.014
	(0.089)	(0.009)	(0.003)	(0.012)	(0.011)	(0.012)
High × Private	0.203**	0.015*	0.006**	0.038***	0.033***	0.035***
	(0.083)	(0.008)	(0.003)	(0.010)	(0.010)	(0.010)
High × Public	0.130***	0.005	0.003***	0.034***	0.028***	0.031***
	(0.033)	(0.005)	(0.001)	(0.007)	(0.006)	(0.007)
Low × Public	0.001	−0.010**	−0.002**	0.009	0.010*	0.009*
	(0.022)	(0.004)	(0.001)	(0.006)	(0.006)	(0.006)
Observations	4638	4639	4638	4639	4639	4639
R-squared	0.008	0.009	0.011	0.009	0.008	0.008
Mean Dep. Var.	0.130	0.013	0.004	0.033	0.031	0.032
Mean Dep. Var. for Low × Private	0.057	0.013	0.003	0.014	0.014	0.014
p-value High × Private - High × Public	0.390	0.203	0.245	0.706	0.625	0.663
p-value High × Private - Low × Public	0.011	0.001	0.001	0.005	0.015	0.008

Mechanisms: Agent Effort

- High $\times$ private incentives prompt agents to advertise the products 4.6 times more often; households are 2.2 times more likely to have learned about the products from the agent, and 2.7 times more likely to have been offered them
- Higher agent effort is present in both, the public and the private treatments
  - Slightly higher in the private treatment, but not significant
- Agents also reallocate tasks (more promotion, sign-up support) and invest in more reliable internet access ▸ Tasks ▸ Investments
- No differential targeting of wealthy or financially literate households ▸ Targeting

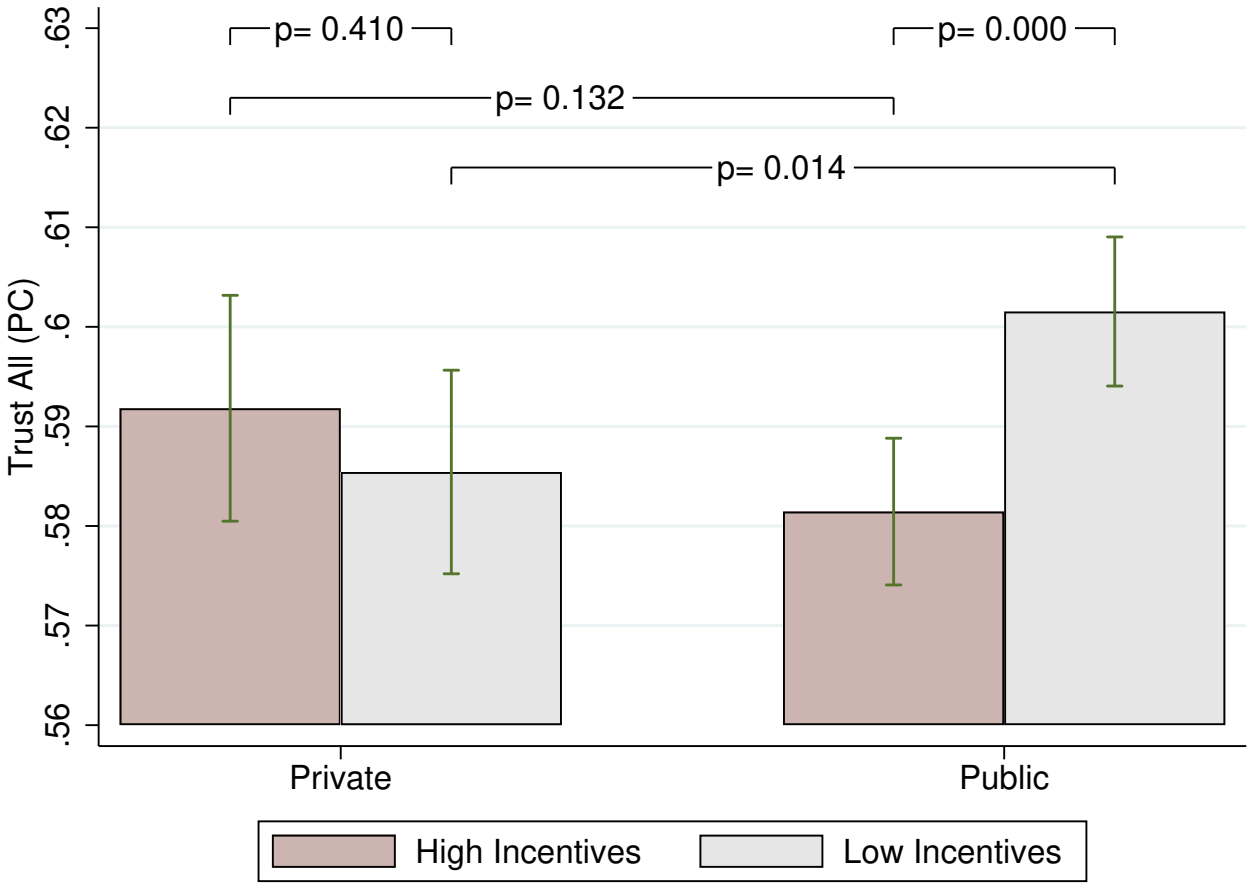
$\Rightarrow$ In sum, agents respond strongly to higher incentive levels, but only marginally respond to the transparency of these incentives.

Mechanisms: Potential Clients' Perceptions and Trust

Perceptions variables:

- Trust/quality of the product: Reliability of the bank's products, fees are reasonable, safety of the products
- Trust in the bank: confidence in the bank, confidence in state banks, confidence in the enforcement of contracts
- Trust in the agent: Trust in the agent, agent's competence, agent's honesty, agent's prosocial motivation

Mechanisms: Potential Clients' Perceptions and Trust



Mechanisms: Potential Clients' Perceptions and Trust

	(1)	(2)	(3)	(4)	(5)
	Perceived Agent Earnings	Trust in Product (PC)	Trust in Bank (PC)	Trust in Agent (PC)	Trust All (PC)
(High - Low) × Private	-0.030	0.009	-0.006	0.003	0.004
	(0.028)	(0.010)	(0.014)	(0.011)	(0.009)
(High - Low) × Public	0.049^{***}	-0.018^{**}	-0.024^{**}	-0.019^{***}	-0.021^{***}
	(0.018)	(0.007)	(0.010)	(0.007)	(0.006)
(High - Low) × (Public - Private)	0.078^{**}	-0.026^{**}	-0.018	-0.021	-0.024^{**}
	(0.033)	(0.013)	(0.017)	(0.013)	(0.011)
High × Private	-0.030	0.009	-0.006	0.003	0.004
	(0.028)	(0.010)	(0.014)	(0.011)	(0.009)
High × Public	0.017	0.003	-0.004	-0.006	-0.001
	(0.022)	(0.009)	(0.012)	(0.009)	(0.008)
Low × Public	-0.032	0.020^{**}	0.020	0.013	0.019^{**}
	(0.021)	(0.009)	(0.012)	(0.009)	(0.008)
Observations	4606	4636	4636	4638	4638
R-squared	0.004	0.010	0.024	0.005	0.018
Mean Dep. Var.	0.574	0.504	0.767	0.708	0.591
Mean Dep. Var. for Low × Private	0.580	0.496	0.765	0.705	0.585
p-value High × Private - High × Public	0.071	0.478	0.896	0.354	0.488
p-value High × Private - Low × Public	0.930	0.189	0.049	0.298	0.039

▸ All individual variables

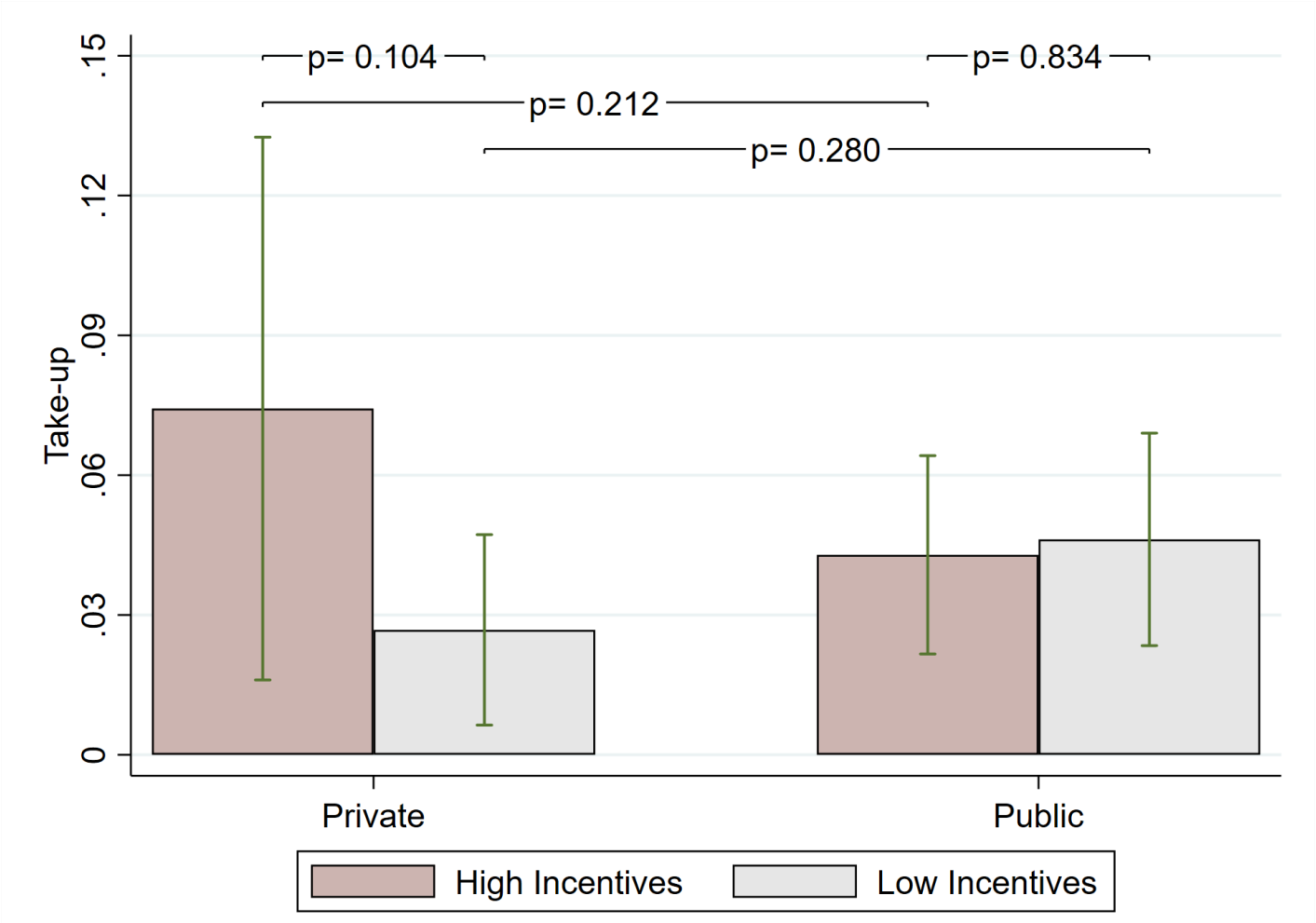
Heterogeneous Effects by Client Trust and Knowledge

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Trust All (PC)	Agent Effort (PC)	Agent Sales Strategy (PC)	Trust All (PC)	Agent Effort (PC)	Agent Sales Strategy (PC)	Trust All (PC)	Agent Effort (PC)	Agent Sales Strategy (PC)
Panel A Sample:	Friends or Family of the Agent			Trust the Agent's Financial Advices			Know Branchless Banking		
(High - Low) × (Public - Private)	0.001	0.003	-0.012	-0.006	-0.015	0.052	-0.013	-0.020	-0.089
	(0.019)	(0.004)	(0.030)	(0.038)	(0.018)	(0.046)	(0.036)	(0.023)	(0.057)
Panel B Sample:	Not Friends or Family of the Agent			Do Not Trust the Agent's Financial Advices			Do Not Know Branchless Banking		
(High - Low) × (Public - Private)	-0.033^{***}	-0.003	-0.014	-0.025^{**}	0.001	-0.019	-0.025^{**}	0.001	-0.008
	(0.012)	(0.004)	(0.012)	(0.011)	(0.002)	(0.012)	(0.011)	(0.002)	(0.011)
Observations	4638	4638	4639	4638	4638	4639	4638	4638	4639
% Observations in Panel A	25.61	25.64	25.63	8.41	8.41	8.41	8.09	8.09	8.08
R-squared	0.941	0.037	0.052	0.941	0.053	0.050	0.940	0.051	0.051
Mean Dep. Var.	0.591	0.004	0.032	0.591	0.004	0.032	0.591	0.004	0.032
Mean Dep. Var. for Low × Private	0.585	0.003	0.014	0.585	0.003	0.014	0.585	0.003	0.014
p-value Panel A=Panel B	0.117	0.240	0.965	0.629	0.371	0.134	0.741	0.386	0.150

Mechanisms: Client Perceptions and Trust

- Potential customers use cues to inform themselves about the qualities/intentions of the agent, the trustworthiness of the bank and the products offered
- Informing them about the agent's high (or low) incentives reduces (increases) their levels of trust in the product, the agent and the bank, therefore reducing (boosting) their demand
- These effects are stronger among customers who have less information about the agent and the product, and who update their perceptions the most

Long-Term Effects: Take-up



Long-term bank administrative data (Jan.-Oct. 2021), re-scaled to be representative of entrepreneurs ▸ Take-up in context

Long-Term Effects: Take-up and Usage

	(1)	(2)	(3)	(4)
	Take-Up Rate	Transaction Frequency	Balance (IHS)	Payments (IHS)
(High - Low) × Private	0.045**	100.781***	1.095*	2.955***
	(0.020)	(33.578)	(0.599)	(0.979)
(High - Low) × Public	-0.001	12.460	-0.165	-0.196
	(0.015)	(29.800)	(0.431)	(0.654)
(High - Low) × (Public - Private)	−0.046*	−88.321**	−1.260*	−3.151***
	(0.025)	(44.613)	(0.735)	(1.167)
High × Private	0.045**	100.781***	1.095*	2.955***
	(0.020)	(33.578)	(0.599)	(0.979)
High × Public	0.024**	60.018**	0.629	1.412**
	(0.012)	(27.265)	(0.445)	(0.611)
Low × Public	0.025**	47.558***	0.794*	1.608**
	(0.012)	(16.355)	(0.460)	(0.640)
Observations	401	401	401	401
R-squared	0.051	0.041	0.037	0.075
Mean Dep. Var.	0.036	66.668	2.243	3.095
Mean Dep. Var. for Low × Private	0.013	15.939	1.612	1.643
p-value High × Private - High × Public	0.338	0.328	0.419	0.114
p-value High × Private - Low × Public	0.374	0.137	0.612	0.181

Long-Term Effects: Results

- Take-up nearly triples in all treatments two years after the endline: from 1.3% to 3.6% on average, and from 2.7% to 7.4% in the high $\times$ private treatment
  - Consistent with branchless banking taking time to be adopted, as observed for mobile money around the world
- Higher private incentives increase the frequency of transactions (+632%), the account balance (+68%), and the volume of payments (+179%)
- Higher public incentives still have no effect on adoption

$\Rightarrow$ Short-term effects persist and are magnified in the long term: fostering trust when products are introduced contributes to long-term adoption and usage

Optimal Policy Choices

- **Bank's profits** are maximized with high $\times$ private incentives
  - Net revenues per village/year: 819k IDR (high $\times$ private), 553k (high $\times$ public), 512k (low $\times$ public), 131k (low $\times$ private)
  - The bank recovers the cost of the incentive payouts in less than three months in all treatments
- **Customers' welfare** is also likely maximized with high $\times$ private incentives (highest take-up and usage of a weakly beneficial product)
- **Agents**: low $\times$ public dominates low $\times$ private and high $\times$ public; ranking vs. high $\times$ private depends on transactions per client and cost of effort
- If the bank only controls transparency: hide high incentives, publicize low ones. If it only controls the level: high incentives when pay is private, low when public.

Summary

- Higher incentives boost take-up and usage of a new savings account when incentives are *not* disclosed to potential clients.
  - Effects persist and are magnified in the long term (38-50 months): fostering trust at introduction contributes to long-term adoption
- When disclosed, effect of higher incentives is completely muted
  - Not explained by agents providing less effort: higher incentives still prompt higher effort, but it does not translate into take-up
  - Explained by a negative demand-side signalling effect: clients who learn about high incentives trust the product, the agent and the bank less
  - Symmetrically, disclosing *low* incentives conveys a positive signal and increases trust
- Public high incentives waste the organization's resources, as well as agents' time and effort in promoting the products

Discussion and Policy Implications

- Important for organizations to pay attention to the transparency of financial incentives along with their level
  - Transparency might be cheap to change
  - To maximize take-up: raise incentives, but keep them private
  - To maximize trust: purposely pay low incentives and make them public
- Our results put into question the common idea that transparency is always welfare improving (and that consumer protection should enforce it)
- Yet, consumers are not always better off when less informed
  - Disclosure can curb mis-selling: bank staff rarely offer the highest-yielding product when incentivized to sell more profitable ones (Giné and Mazer 2022)
  - Disclosing incentives paid to pharmaceutical promoters or doctors is necessary from an ethical standpoint
- Open question: how to balance consumer protection with the adoption of beneficial technologies

Appendix

Summary Statistics by Treatment (Baseline)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	High × Private			Low × Private			High × Public			Low × Public		
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Panel A: Village Characteristics												
Village Size	57	811.7	404.7	68	957.9	614.8	139	932.3	558.7	137	1,063.9	663.5
Distance to Nearest Bank Branch (in km)	57	13.07	5.793	68	12.06	6.760	139	12.78	7.153	137	11.68	7.258
Internet Coverage	57	0.702	0.462	68	0.691	0.465	139	0.633	0.484	137	0.693	0.463
Panel B: Agent Characteristics												
Female	57	0.509	0.504	68	0.441	0.500	139	0.460	0.500	137	0.372	0.485
Highest Degree=Primary School	57	0.088	0.285	68	0.074	0.263	139	0.029	0.168	137	0.051	0.221
Highest Degree=High School	57	0.404	0.495	68	0.559	0.500	139	0.561	0.498	137	0.518	0.502
Highest Degree=Tertiary Education	57	0.509	0.504	68	0.353	0.481	139	0.410	0.494	137	0.416	0.495
Main Occupation=Non Farm Business	57	0.807	0.398	68	0.838	0.371	138	0.841	0.367	137	0.847	0.362
Main Occupation=Agriculture or Other	57	0.228	0.423	68	0.162	0.371	138	0.167	0.374	137	0.168	0.375
Volunteered in the Past Year	57	0.351	0.481	68	0.353	0.481	138	0.326	0.470	137	0.314	0.466
Has a Mobile Phone	57	1.000	0.000	68	1.000	0.000	139	1.000	0.000	137	1.000	0.000
Has a Laptop	57	0.439	0.501	68	0.456	0.502	139	0.590	0.494	137	0.518	0.502
Panel C: Household Characteristics												
Female	687	0.597	0.491	816	0.583	0.493	1,674	0.593	0.491	1,651	0.590	0.492
Highest Degree=Primary School	687	0.220	0.414	816	0.249	0.433	1,674	0.226	0.419	1,651	0.241	0.428
Highest Degree=High School	687	0.649	0.478	816	0.619	0.486	1,674	0.637	0.481	1,651	0.629	0.483
Highest Degree=Tertiary Education	687	0.125	0.331	816	0.114	0.318	1,674	0.117	0.322	1,651	0.114	0.318
Main Occupation=Non Farm Business	686	0.958	0.201	816	0.958	0.200	1,673	0.947	0.223	1,650	0.949	0.220
Main Occupation=Agriculture or Other	686	0.054	0.226	816	0.048	0.213	1,672	0.061	0.239	1,650	0.057	0.232
Volunteered in the Past Year	686	0.147	0.355	816	0.152	0.359	1,672	0.177	0.382	1,650	0.153	0.360
Has a Mobile Phone	687	0.932	0.253	816	0.920	0.271	1,674	0.936	0.245	1,651	0.931	0.254
Has a Laptop	686	0.270	0.444	816	0.279	0.449	1,672	0.266	0.442	1,648	0.258	0.438
Made a Bank Transaction in the Last Month	687	0.444	0.497	816	0.408	0.492	1,673	0.442	0.497	1,650	0.434	0.496
Has a Bank Saving Account	687	0.557	0.497	816	0.512	0.500	1,674	0.571	0.495	1,650	0.543	0.498
Trust in State Banks (1 to 5)	687	3.943	1.228	816	3.929	1.228	1,674	3.950	1.228	1,651	3.884	1.293
Trust in Non State Banks (1 to 5)	687	3.204	1.339	816	3.254	1.335	1,674	3.226	1.354	1,651	3.167	1.354
Knows about Branchless Banking	687	0.089	0.285	816	0.060	0.238	1,674	0.087	0.282	1,650	0.077	0.267
Knows the Agent	687	0.633	0.482	816	0.569	0.496	1,674	0.628	0.483	1,651	0.560	0.497
Friend or Family of the Agent	687	0.300	0.459	816	0.250	0.433	1,674	0.260	0.439	1,651	0.240	0.427

◂ Descriptive Statistics and Balance

Take-Up and Usage by Product

	(1)	(2)	(3)	(4)	(5)	(6)
Product:	Savings Account			Mobile Wallet		
	Take-up	Transactions Amount (IHS)	Balance (IHS)	Take-up	Transactions Amount (IHS)	Balance (IHS)
(High - Low) × Private	0.011**	0.102**	0.098**	0.017***	0.109*	0.125*
	(0.006)	(0.051)	(0.049)	(0.006)	(0.066)	(0.067)
(High - Low) × Public	0.000	0.013	0.002	0.004	0.032	0.009
	(0.002)	(0.014)	(0.022)	(0.004)	(0.019)	(0.019)
(High - Low) × (Public - Private)	−0.011*	−0.090*	−0.096*	−0.013*	-0.077	−0.116*
	(0.006)	(0.054)	(0.054)	(0.008)	(0.067)	(0.069)
Regression Coefficients						
High × Private	0.011**	0.102**	0.098**	0.017***	0.109*	0.125*
	(0.006)	(0.051)	(0.049)	(0.006)	(0.066)	(0.067)
High × Public	-0.002	0.014	0.017	0.008**	0.043**	0.030**
	(0.002)	(0.015)	(0.015)	(0.004)	(0.018)	(0.015)
Low × Public	-0.002	0.002	0.015	0.004	0.011	0.021*
	(0.003)	(0.004)	(0.015)	(0.004)	(0.009)	(0.012)
Observations	4644	4828	4828	4644	4828	4828
R-squared	0.006	0.006	0.005	0.006	0.005	0.004
Mean Dep. Var.	0.004	0.020	0.026	0.010	0.033	0.035
Mean Dep. Var. for Low × Private	0.004	0.000	0.000	0.003	0.000	0.000
p-value High × Private - High × Public	0.016	0.102	0.115	0.175	0.328	0.163
p-value High × Private - Low × Public	0.018	0.048	0.104	0.049	0.144	0.127

◂ Take-up and Usage

Take-up: Other Products

	(1)	(2)	(3)	(4)
	Take-up of Branchless Banking Products from Other Banks	Take-up of Other Financial Products	Has a Bank Account in Any Bank	Total Saving in Any Bank (IHS)
(High - Low) × Private	0.013	0.010	0.014	-0.107
	(0.008)	(0.027)	(0.027)	(0.436)
(High - Low) × Public	0.003	0.036**	0.034*	0.320
	(0.007)	(0.018)	(0.018)	(0.298)
(High - Low) × (Public - Private)	-0.010	0.026	0.019	0.428
	(0.010)	(0.032)	(0.032)	(0.527)
Regression Coefficients				
High × Private	0.013	0.010	0.014	-0.107
	(0.008)	(0.027)	(0.027)	(0.436)
High × Public	0.017**	0.034*	0.041**	0.290
	(0.007)	(0.020)	(0.021)	(0.338)
Low × Public	0.015**	-0.002	0.007	-0.031
	(0.007)	(0.021)	(0.022)	(0.360)
Observations	4639	4639	4639	4417
R-squared	0.006	0.004	0.003	0.005
Mean Dep. Var.	0.034	0.621	0.590	8.586
Mean Dep. Var. for Low × Private	0.021	0.605	0.570	8.468
p-value High × Private - High × Public	0.546	0.308	0.257	0.302
p-value High × Private - Low × Public	0.791	0.645	0.787	0.851

◂ Take-up and Usage

Robustness: Multiple Hypothesis Testing (p-values)

	(1)	(2)	(3)
	(High - Low) × Private	(High - Low) × Public	(High - Low) × (Public - Private)
Panel A. Take-up			
Take-up	0.079	0.683	0.134
Panel B. Agent Effort			
Number of Times Products are Advertised	0.050	0.010	0.437
Learned about Products from Agent	0.050	0.010	1.000
Agent Effort (PC)	0.050	0.010	0.796
Panel C. Agent Sales Strategy			
Products Offered by Agent	0.010	0.010	0.388
Agent Pro-Actively Promoted Products	0.010	0.010	0.340
Agent Sales Strategy (PC)	0.010	0.010	0.369
Panel D: Perceptions			
Perceived Agent Earnings	0.366	0.010	0.011
Trust in Product (PC)	0.515	0.010	0.022
Trust in Bank (PC)	0.812	0.010	0.088
Trust in Agent (PC)	0.812	0.010	0.022
Trust All (PC)	0.812	0.010	0.011

▸ Extra Controls ▸ Weighted ◂ Take-up and Usage

Robustness: Extra Controls

	(1)	(2)	(3)
	(High - Low) × Private	(High - Low) × Public	(High - Low) × (Public - Private)
Panel A. Take-up			
Take-up	0.020^{***}	0.002	-0.018^{**}
	(0.008)	(0.004)	(0.009)
Panel B. Agent Effort			
Number of Times Products are Advertised	0.189^{**}	0.116^{***}	-0.073
	(0.077)	(0.027)	(0.085)
Learned about Products from Agent	0.015^{*}	0.014^{***}	-0.001
	(0.008)	(0.004)	(0.009)
Agent Effort (PC)	0.006^{**}	0.004^{***}	-0.001
	(0.002)	(0.001)	(0.003)
Panel C. Agent Sales Strategy			
Products Offered by Agent	0.035^{***}	0.022^{***}	-0.013
	(0.010)	(0.007)	(0.012)
Agent Pro-Actively Promoted Products	0.030^{***}	0.015^{**}	-0.015
	(0.010)	(0.006)	(0.012)
Agent Sales Strategy (PC)	0.033^{***}	0.019^{***}	-0.014
	(0.010)	(0.006)	(0.012)
Panel D. Perceptions			
Perceived Agent Earnings	-0.029	0.049^{***}	0.078^{**}
	(0.029)	(0.018)	(0.033)
Trust in Product (PC)	0.007	-0.019^{**}	-0.026^{**}
	(0.010)	(0.007)	(0.013)
Trust in Bank (PC)	-0.006	-0.026^{***}	-0.019
	(0.014)	(0.010)	(0.017)
Trust in Agent (PC)	0.002	-0.021^{***}	-0.023^{*}
	(0.011)	(0.007)	(0.013)
Trust All (PC)	0.003	-0.022^{***}	-0.025^{**}
	(0.009)	(0.006)	(0.011)

◂ Take-up and Usage

Robustness: Weighted

	(1) (High - Low) × Private	(2) (High - Low) × Public	(3) (High - Low) × (Public - Private)
Panel A. Take-up			
Take-up	0.019^{**}	0.001	-0.018^{*}
	(0.008)	(0.004)	(0.009)
Panel B. Agent Effort			
Number of Times Products are Advertised	0.189^{***}	0.114^{***}	-0.076
	(0.066)	(0.023)	(0.070)
Learned about Products from Agent	0.009	0.013^{***}	0.005
	(0.008)	(0.005)	(0.009)
Agent Effort (PC)	0.005^{**}	0.004^{***}	-0.000
	(0.002)	(0.001)	(0.002)
Panel C. Agent Sales Strategy			
Products Offered by Agent	0.033^{***}	0.025^{***}	-0.008
	(0.010)	(0.007)	(0.013)
Agent Pro-Actively Promoted Products	0.028^{***}	0.016^{***}	-0.012
	(0.009)	(0.006)	(0.011)
Agent Sales Strategy (PC)	0.031^{***}	0.021^{***}	-0.010
	(0.010)	(0.007)	(0.012)
Panel D. Perceptions			
Perceived Agent Earnings	-0.027	0.069^{***}	0.096^{**}
	(0.032)	(0.023)	(0.038)
Trust in Product (PC)	0.008	-0.015	-0.023
	(0.012)	(0.010)	(0.016)
Trust in Bank (PC)	-0.004	-0.019	-0.015
	(0.018)	(0.012)	(0.021)
Trust in Agent (PC)	0.004	-0.013^{*}	-0.017
	(0.013)	(0.008)	(0.015)
Trust All (PC)	0.005	-0.017^{**}	-0.021
	(0.011)	(0.008)	(0.013)

◂ Take-up and Usage

Agent Tasks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Involved in Following Activity:						
	Promoting at Shop	Promoting Outside Shop	Supporting with Client Sign-ups	Dealing with Client Complaints	Providing Cash for Client's Transaction	Assisting Clients with Product Usage	Any Activity
(High - Low) × Private	0.205**	0.215***	0.192**	-0.045	-0.012	0.114	0.198***
	(0.082)	(0.074)	(0.083)	(0.062)	(0.068)	(0.082)	(0.065)
(High - Low) × Public	0.128**	0.083	0.082	0.059	0.148***	0.015	0.054
	(0.053)	(0.050)	(0.057)	(0.045)	(0.052)	(0.056)	(0.044)
(High - Low) × (Public - Private)	-0.077	-0.133	-0.111	0.104	0.160*	-0.099	−0.144*
	(0.097)	(0.089)	(0.100)	(0.076)	(0.085)	(0.099)	(0.078)
Regression Coefficients							
High × Private	0.205**	0.215***	0.192**	-0.045	-0.012	0.114	0.198***
	(0.082)	(0.074)	(0.083)	(0.062)	(0.068)	(0.082)	(0.065)
High × Public	0.230***	0.153**	0.124*	0.032	0.129**	0.027	0.147**
	(0.069)	(0.066)	(0.067)	(0.057)	(0.062)	(0.063)	(0.061)
Low × Public	0.102	0.071	0.043	-0.027	-0.019	0.012	0.092
	(0.071)	(0.067)	(0.065)	(0.054)	(0.059)	(0.064)	(0.062)
Observations	401	401	401	401	401	401	401
R-squared	0.060	0.073	0.052	0.026	0.069	0.070	0.078
Mean Dep. Var.	0.716	0.761	0.337	0.157	0.232	0.329	0.830
Mean Dep. Var. for Low × Private	0.574	0.647	0.250	0.162	0.191	0.294	0.721
p-value High × Private - High × Public	0.710	0.295	0.379	0.151	0.024	0.254	0.286
p-value High × Private - Low × Public	0.144	0.019	0.051	0.725	0.915	0.187	0.037

◂ Mechanisms: Agent Effort

Agent Investments

	(1)	(2)	(3)	(4)	(5)	(6)
	Invested in:					
	Bought/ Upgraded Computers	Bought a New Device with Better Internet Signal	Bought Data Plan	Made Banners/ Leaflets	Hired an Extra Employee	Other
(High - Low) × Private	0.024	0.038	0.175**	0.092	0.005	0.199**
	(0.029)	(0.057)	(0.077)	(0.062)	(0.033)	(0.088)
(High - Low) × Public	0.023	0.022	0.028	0.025	0.022	0.066
	(0.021)	(0.036)	(0.049)	(0.046)	(0.021)	(0.060)
(High - Low) × (Public - Private)	-0.001	-0.016	-0.147	-0.067	0.016	-0.132
	(0.035)	(0.067)	(0.091)	(0.076)	(0.040)	(0.106)
Regression Coefficients						
High × Private	0.024	0.038	0.175**	0.092	0.005	0.199**
	(0.029)	(0.057)	(0.077)	(0.062)	(0.033)	(0.088)
High × Public	0.025	0.014	0.076	0.091*	0.015	0.113
	(0.023)	(0.044)	(0.057)	(0.048)	(0.026)	(0.071)
Low × Public	0.002	-0.008	0.048	0.066	-0.007	0.046
	(0.018)	(0.042)	(0.056)	(0.047)	(0.024)	(0.071)
Observations	401	401	401	401	401	401
R-squared	0.041	0.027	0.040	0.042	0.022	0.036
Mean Dep. Var.	0.030	0.100	0.219	0.160	0.032	0.431
Mean Dep. Var. for Low × Private	0.015	0.088	0.162	0.088	0.029	0.353
p-value High × Private - High × Public	0.964	0.633	0.172	0.983	0.756	0.278
p-value High × Private - Low × Public	0.418	0.370	0.077	0.668	0.673	0.055

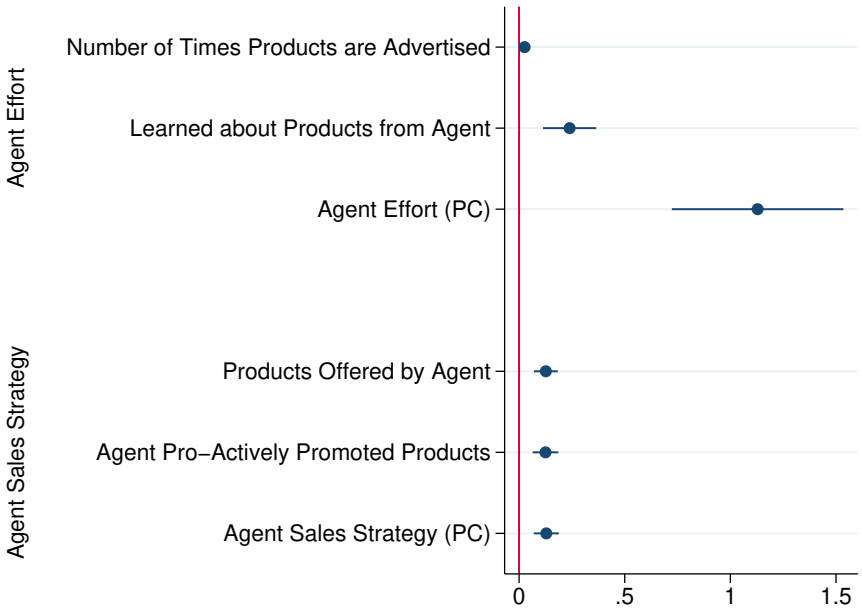
◂ Mechanisms: Agent Effort

Agent Household Targeting

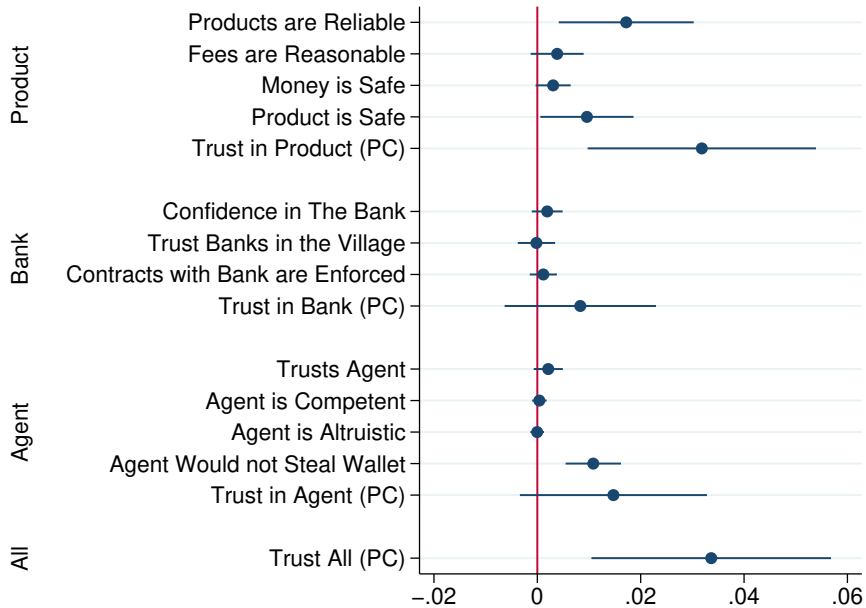
	(1)	(2)	(3)	(4)	(5)	(6)
	Take-up	Agent Effort (PC)	Agent Sales Strategy (PC)	Take-up	Agent Effort (PC)	Agent Sales Strategy (PC)
Panel A Sample:		Wealthy Households			Financially Literate Households	
(High - Low) × Private	0.021*	0.004**	0.033***	0.026**	0.007*	0.045***
	(0.011)	(0.002)	(0.013)	(0.010)	(0.004)	(0.016)
(High - Low) × Public	0.011	0.006***	0.030***	0.002	0.005***	0.027***
	(0.007)	(0.001)	(0.009)	(0.006)	(0.001)	(0.009)
(High - Low) × (Public - Private)	-0.010	0.001	-0.002	−0.024**	-0.001	-0.018
	(0.013)	(0.002)	(0.015)	(0.012)	(0.004)	(0.018)
Panel B Sample:		Non-Wealthy Households			Financially Illiterate Households	
(High - Low) × Private	0.019**	0.008*	0.036**	0.015*	0.005**	0.025**
	(0.009)	(0.005)	(0.015)	(0.008)	(0.002)	(0.011)
(High - Low) × Public	-0.005	0.004***	0.013	0.003	0.004***	0.014*
	(0.005)	(0.001)	(0.009)	(0.006)	(0.001)	(0.008)
(High - Low) × (Public - Private)	−0.024**	-0.004	-0.023	-0.012	-0.001	-0.011
	(0.010)	(0.005)	(0.017)	(0.010)	(0.003)	(0.014)
Observations	4644	4638	4639	4644	4638	4639
% Observations in Panel A	50.09	50.09	50.08	54.44	54.44	54.45
R-squared	0.024	0.035	0.043	0.021	0.033	0.043
Mean Dep. Var.	0.013	0.004	0.032	0.013	0.004	0.032
Mean Dep. Var. for Low × Private	0.006	0.003	0.014	0.006	0.003	0.014
p-value [(High - Low) x Private] Panel A = Panel B	0.891	0.471	0.838	0.314	0.700	0.310
p-value [(High - Low) x Public] Panel A = Panel B	0.047	0.273	0.160	0.907	0.467	0.277
p-value [(High - Low) x (Public - Private)] Panel A = Panel B	0.359	0.310	0.344	0.373	0.967	0.764

◂ Mechanisms: Agent Effort

Correlation of Take-up with Agent Effort and Perceptions



(a) Take-up and Agent Effort



(b) Take-up and Perceptions

◂ Mechanisms: Agent Effort

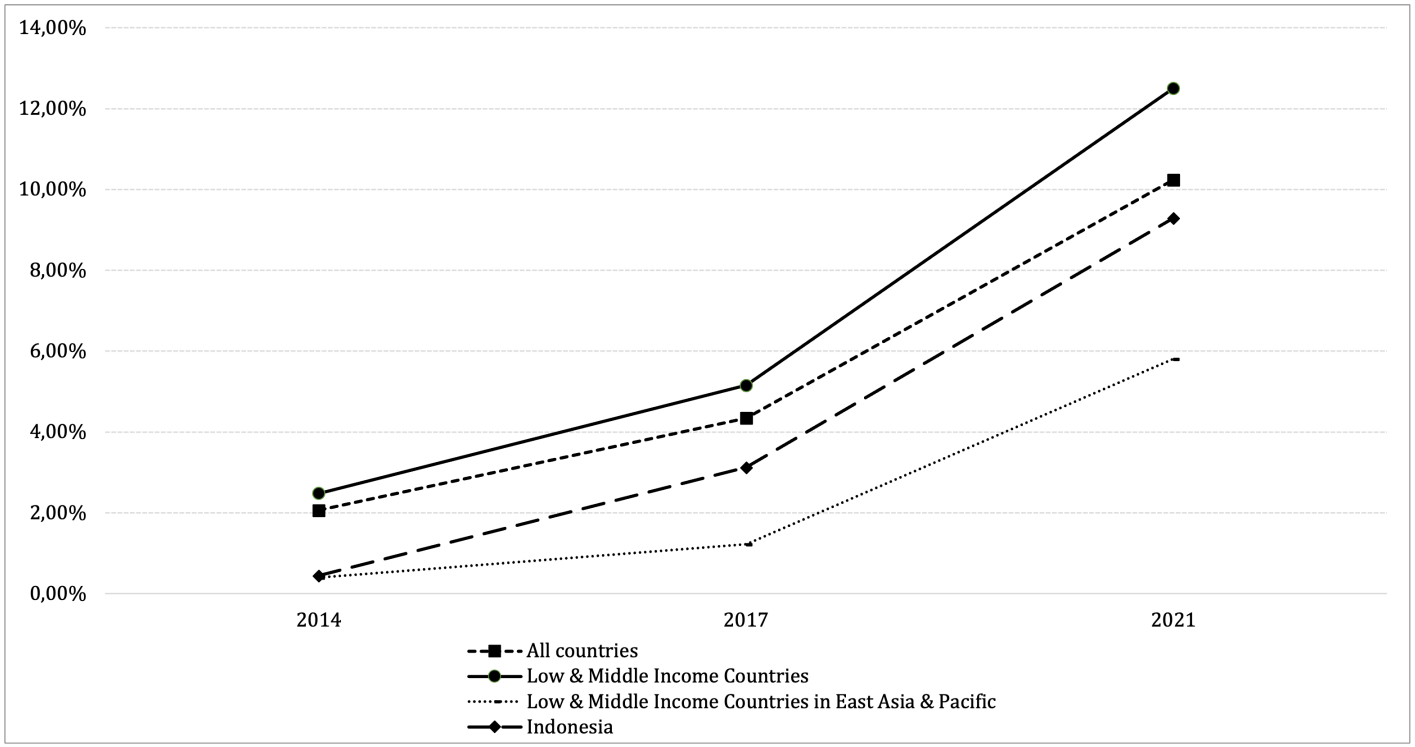
Perceptions of Potential Clients: Individual Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Product					Bank			Agent			
	Agent Pay is Commission-Based	Products are Reliable	Fees are Reasonable	Money is Safe	Product is Safe	Confidence in The Bank	Trust Banks in the Village	Contracts with Bank are Enforced	Trusts Agent	Agent is Competent	Agent is Altruistic	Agent Would not Steal Wallet
(High - Low) × Private	0.060	0.021	0.075*	0.075	-0.016	0.009	0.014	-0.069	-0.005	0.048	-0.101	0.026
	(0.051)	(0.019)	(0.043)	(0.055)	(0.023)	(0.069)	(0.042)	(0.073)	(0.071)	(0.125)	(0.148)	(0.025)
(High - Low) × Public	0.032	−0.025*	-0.024	-0.054	−0.033**	−0.109**	-0.035	−0.102**	−0.193***	-0.065	-0.147	-0.014
	(0.034)	(0.014)	(0.027)	(0.036)	(0.016)	(0.049)	(0.034)	(0.048)	(0.046)	(0.087)	(0.098)	(0.016)
(High - Low) × (Public - Private)	-0.028	−0.046*	−0.100**	−0.129*	-0.017	-0.119	-0.050	-0.033	−0.188**	-0.113	-0.047	-0.040
	(0.061)	(0.023)	(0.051)	(0.066)	(0.028)	(0.084)	(0.054)	(0.087)	(0.084)	(0.152)	(0.177)	(0.030)
Regression Coefficients												
High × Private	0.060	0.021	0.075*	0.075	-0.016	0.009	0.014	-0.069	-0.005	0.048	-0.101	0.026
	(0.051)	(0.019)	(0.043)	(0.055)	(0.023)	(0.069)	(0.042)	(0.073)	(0.071)	(0.125)	(0.148)	(0.025)
High × Public	0.066	0.013	0.064*	0.009	-0.019	-0.000	-0.057	-0.018	-0.070	0.052	-0.098	-0.010
	(0.042)	(0.016)	(0.039)	(0.049)	(0.021)	(0.060)	(0.038)	(0.057)	(0.057)	(0.110)	(0.122)	(0.023)
Low × Public	0.034	0.038**	0.089**	0.063	0.015	0.109*	-0.022	0.084	0.123**	0.117	0.049	0.004
	(0.042)	(0.017)	(0.037)	(0.048)	(0.021)	(0.061)	(0.039)	(0.060)	(0.056)	(0.111)	(0.121)	(0.023)
Observations	4828	4633	3883	4151	4633	4636	4617	4636	4639	4636	4638	4638
R-squared	0.016	0.006	0.007	0.008	0.007	0.026	0.004	0.019	0.008	0.003	0.005	0.009
Mean Dep. Var.	0.463	0.160	3.898	3.907	0.215	4.122	3.746	4.132	3.229	7.186	7.931	0.862
Mean Dep. Var. for Low × Private	0.415	0.143	3.834	3.873	0.223	4.096	3.764	4.137	3.206	7.124	7.963	0.857
p-value High × Private - High × Public	0.896	0.622	0.753	0.149	0.888	0.872	0.065	0.432	0.303	0.971	0.985	0.066
p-value High × Private - Low × Public	0.574	0.338	0.684	0.789	0.111	0.095	0.360	0.024	0.045	0.521	0.253	0.263

Perceived agent earnings shift towards "fair or generous" (+5 pp., only when public); trust in the product, the bank and the agent all decline with high public incentives

◂ Client Perceptions and Trust

Take-up of Mobile Money Products Around the World



Source: Global Findex Database. Adoption in this study is comparable to mobile money adoption in low- and middle-income countries in East Asia and Pacific (1% in 2017, 5% in 2021)

◂ Long-Term Effects