

# Midline Effects of a Randomized Controlled Trial to Increase the Utilization of Financial Services by Women Business Owners in Rural Indonesia

**James C. Knowles**

## Abstract

This is the report of a midline evaluation of a randomized controlled trial to increase the utilization of saving and other financial services by women business owners in Indonesia. The trial was motivated by a recent law in Indonesia supporting the development of branchless banking services for a large unbanked rural population and by the results of several studies suggesting that it is possible to stimulate savings and improve a range of downstream outcomes with suitable interventions targeted to under-banked rural populations. The trial was conducted in 400 purposively selected rural and semi-urban villages in five districts of East Java province in which branchless banking services (including basic savings accounts accessible through mobile phones) were available. The randomized interventions supported by this trial include both supply-side treatments (higher agent incentives) and demand-side treatments (training and mentoring of female business owners). The data analyzed include both baseline and midline survey data on female and male business owners and branchless banking agents. Implementation of the trial was delayed due to difficulties in recruiting suitable agents in all 400 trial villages. Numerous supply-side problems, both technical and logistical, were also reported in the monitoring data. However, the midline results indicate that the interventions were successfully delivered, resulting in significant positive effects on key intermediate outcomes, including knowledge and use of mobile banking services and initial take up of a mobile basic savings account. Downstream effects indicate that the supply- and demand-side interventions, particularly in combination, increased women business owners' savings, empowerment, self-confidence, and economic welfare.

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## Preface

In 2015, the Center for Global Development (CGD) launched a collaboration with research and implementing partners to conduct two complementary field experiments. The randomized control trials test the impact of mobile savings and business training on women's businesses and incomes in Indonesia and Tanzania. This study, by James C. Knowles, analyzes short-term results of the Indonesia experiment on women entrepreneurs, using baseline data and short-term survey results for over 2,300 men and women business owners and 200 bank agents, constituting half of the baseline sample in East Java. The study is part of the empirical work informing CGD's *Evidence-based Report Series on Women's Economic Empowerment*.

The Government of Indonesia has encouraged the development of branchless banking services, but little is known about the actual impact on customers' savings and business growth—particularly women customers. Evidence on what works to increase uptake of mobile financial services is also slim. This analysis shows how differing incentives for bank agents affect uptake of the mobile product and how business training may bolster this effect. Importantly, the study demonstrates that the combination of both supply-side and demand-side treatments is the largest enhancer of women's total savings. It also increased women business-owners' self-confidence, economic welfare, and empowerment, the last measured by reported independence in household decision-making. Annex E (not included in the report's main body) shows that the empowerment effect was concentrated on women reporting low levels of empowerment at baseline. This suggests that the combined treatment has a real impact on women's agency. Testing the sustainability of these effects is underway: a follow-up measure for the full sample was completed early this year with financing from the World Bank East Asia and the Pacific Gender Innovation Lab, with results forthcoming later in the year.

This work was funded by a grant from the ExxonMobil Foundation to CGD. Partners include the World Bank African Gender Innovation Lab, the World Bank East Asia and Pacific Innovation Lab, Mercy Corps Indonesia, J-PAL South East Asia, Technoserve, Vodacom Tanzania, Arifu and researchers at Northwestern University, the University of Pompeu Fabra, and Australian National University. SurveyMeter Indonesia and Savannas Forever Tanzania undertook the field data collection. Our deep gratitude goes to the entrepreneurs in Indonesia and Tanzania who participated in the studies.

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# 1. Introduction

This is the midline report of an impact evaluation of a trial (Mobile Financial Services for Female Business owners) to increase the utilization of saving and other financial services among women business owners in 400 predominantly rural villages of five districts of East Java province, Indonesia.<sup>1</sup> The available evidence indicates that Indonesian women business owners are substantially under-banked relative to male business owners, and possibly as a consequence, have lower savings, fewer business assets and lower business incomes (World Bank 2016, Buvinic, Knowles and Witolear 2018). Savings are important not only as a source of funds for investment and growth of businesses but also because of their role in smoothing consumption spending over time and providing protection from shocks. Evidence from several studies suggests that improved access to savings accounts, through lowering transactions costs, leads to increased savings and, ultimately, to increased business investment and higher incomes among female business owners (Ashraf, Karlin and Yin 2006, Burgess and Pande 2005, Dupas, Green et al. 2012, De Mel, McIntosh and Woodruff 2013, Dupas and Robinson 2013, Schaner 2013, Prina 2015, Suri and Jack 2016). However, the literature also indicates that there are several important constraints to the use of financial services and savings, including both pecuniary and non-pecuniary transactions costs, lack of trust in financial institutions, regulatory barriers, information and knowledge gaps, social constraints and behavioral biases (Karlan, Ratan and Zinman 2014). Several of these constraints affect women in particular, who tend to have less free time and reduced mobility, less education, and whose financial resources are more vulnerable to competing demands from spouses. Although many women save, they are more likely to use informal channels, such as ROSCAs, or to save in the form of assets (e.g., jewelry, livestock) that provide lower returns and greater risks.

To promote financial inclusion, the Government of Indonesia has encouraged several large banks to develop branchless banking services, including basic savings accounts that are supported by village-based agents and that can be accessed using mobile phones. However, little is known about the most effective ways to promote branchless banking services. The trial evaluated here helps fill that gap by supporting both supply-side and demand-side interventions designed, initially, to increase access to, take up and use of formal savings accounts and, ultimately, to increase women business owners' savings and incomes. The interventions were randomized within an experimental design that makes it possible to assess the effectiveness and cost effectiveness of both the supply and demand-side interventions, both separately and in combination. Because the trial is limited to villages in which branchless banking services are available, the impact evaluation does not address the impact of establishing branchless banking services in villages in which they do not already exist.<sup>2</sup>

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<sup>1</sup> The districts include: Tuban, Bojonegoro, Ngawi, Lamongan and Gresik, with a combined 2010 population of 5.56 million.

<sup>2</sup> It was decided not to include a set of pure control villages because the Government had already established a law promoting branchless banking.

This midline report is based on data collected both at baseline and after 2-12 months of trial implementation in 200 of the 400 villages included in the trial. The report includes the following additional sections: background and justification, interventions, experimental design and random assignment, data, balance and sample attrition, analysis, discussion and conclusions.

## 2. Background and Justification

Indonesia has recently adopted a law to promote branchless banking as a means to increase access to financial services among its large presently unbanked population.<sup>3</sup> The Indonesian model of branchless banking (*Laku Pandai* or LP)<sup>4</sup> uses village-based agents and mobile telephones to provide basic banking services, including basic savings accounts, credit and financing for micro businesses, micro insurance and other government-approved financial products (Lytle 2018). The agents are mostly existing shop-owners who are authorized to accept cash deposits and make cash disbursements from customers' savings accounts, functions that are normally performed at branch offices or by ATMs. The LP basic savings accounts are free of account opening fees, have a maximum balance of Rp. 20 million (equivalent to roughly US\$1,400), a monthly maximum cash withdrawal or transfer of Rp. 5 million and are interest bearing. They are intended to supplement digital wallet (LKD)<sup>5</sup> products already offered by several banks and retail firms. Credit and financing for LP customers have a maximum loan period of one year and a maximum loan value of Rp. 20 million.

Indonesia's branchless banking system has the potential to reduce substantially both the pecuniary and non-pecuniary transactions costs of opening and using savings accounts.<sup>6</sup> Users are able to check balances and to make payments and transfers using their mobile phones, and they are able to use the expanding network of village agents to open accounts and to make cash deposits and withdrawals without having to travel to bank branches. Agents also assist users to prepare the paperwork necessary to open an account and are responsible for transmitting the completed paperwork to branch offices for processing. Only the account holders and their banks have access to account balances, which makes them less vulnerable to the demands of spouses and other social claimants.

Five large Indonesian banks have already been approved to provide branchless banking, and more are expected to be approved in the future. Although branchless banking services have been established in some areas, take up has been slow. Constraints to take up include: (1)

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<sup>3</sup> OJK Regulation No. 19/POJK.03/2014 dated 18 November 2014 ("*Laku Pandai* Regulation").

<sup>4</sup> "*Laku Pandai*" is an Indonesian acronym for the provision of banking and other financial services without branch offices.

<sup>5</sup> LKD is an acronym for *layanan keuangan digital*, Indonesian for "digital financial services," which is an electronic payment and transfer system already in wide use.

<sup>6</sup> A recent meta-analysis of the results of 13 randomized controlled experiments with interventions limited to reducing the transactions costs of opening and using basic savings accounts obtained a random-effects point estimate of the mean proportion of trial participants taking up an account of 0.46, with a 95 percent confidence interval of 0.26 to 0.65 (Knowles 2018).

poor and/or limited internet services in many rural areas, (2) the limited internet and financial skills of potential customers, and (3) insufficient training and lack of motivation of branchless banking agents. The trial whose midline effects are evaluated in this report is designed to increase the take up and utilization of basic savings accounts, particularly among currently under-banked women business owners in predominantly rural areas through mutually supportive supply- and demand-side interventions. On the supply side, the trial has provided training and mentoring to all branchless banking agents while varying randomly the level of their financial incentives from enrolling new clients in a basic savings account. On the demand side, the trial has provided training, mentoring and follow-up contacts to randomly-selected female business owners in the villages in which branchless banking services are available.

Incentive schemes that reward good performance (bonus, promotion based on performance) have been shown to be effective in many contexts. In Rwanda, for example, higher performance pay has been found to increase health workers' effort and performance (Basinga et al 2010, Gertler and Vermeesch 2012, de Walque et al. 2015). However, there have been very few trials testing the effectiveness of supply-side incentives in financial services. One exception is an RCT conducted in India that included a treatment arm providing a one-percent commission to agents enrolling customers in a long-run savings product (Basu and Bisht 2015). During initial piloting of the treatment, however, it was determined that agents would make no effort to promote the product in the absence of the one-percent commission. Accordingly, it was decided to provide the one percent commission to all agents, thereby eliminating the possibility of measuring its separate effect. The effectiveness of training is less well established (Karlin, Ratan and Zinman 2014). In an RCT conducted on the island of Java in Indonesia, for example, a carefully designed 2-hour financial literacy training had no significant effect on the take up of a basic savings account, whereas a small financial incentive (ranging from \$3 to \$14) had a large effect on the likelihood of opening an account (Cole, Sampson and Bia 2009).

### **3. Description of the Interventions**

#### **3.1 Supply-Side Interventions**

The supply-side interventions were randomly assigned to branchless banking agents in selected villages. The trial villages are rural or semi-urban villages in which the trial's partner bank planned to establish (or in some cases had already established) branchless banking services. The bank's branchless banking savings accounts earn an annual interest rate of 0.15 percent, which is substantially lower than that of a competing bank (4 percent). Accordingly, another criterion for village selection was that, to the extent possible, the competing bank was not providing branchless banking products in the village at the time. As previously mentioned, there is no control group in the trial for whom branchless banking services are not available.

In each sample village, the bank recruited a branchless banking agent using its standard selection criteria (the selected agents were in many cases clients with a good credit history).<sup>7</sup> The bank agreed to try to hire women agents whenever possible. It turned out that recruiting agents in the 400 trial villages and developing the managerial and supervisory capacity in the participating bank to support them was much more of a challenge than anticipated, and trial staff ended up having to assist the bank to recruit agents in many of the 400 villages.<sup>8</sup> It was originally planned to conduct the study in only three districts (Ngawi, Bojonegoro and Tuban), but two additional districts were added in order to achieve the targeted number of 400 villages. A total of 400 agents were recruited, trained and mentored in batches, 47 percent of whom were women.<sup>9</sup>

All agents were trained and mentored by Mercy Corps Indonesia (MCI), the first batch during the period December 2016 to July 2017 and the remaining agents during the period August 2017 to June 2018.<sup>10</sup> The agent training was provided in one personal (one-on-one) session that averaged about 3 hours in length (but that varied from 2.5 to 4 hours) in which the agent learned how to use the on-line branchless banking software and the features and relative advantages of the branchless banking products. These included the basic savings (LP) account as well as a digital wallet (LKD) account.<sup>11</sup> The agent training also included a module on marketing that emphasized the potential value of marketing to under-banked groups, particularly women. Following the agents' initial training, MCI and partner bank staff provided one-on-one mentoring in three subsequent visits during which monitoring data were also collected. The mentoring visits were intended to be provided at one-week intervals following the initial training. However, among the 94 percent of all agents completing the training and mentoring, only 19 percent completed it within 21 days, as planned, after having completed their initial training while 30 percent needed 43 or more days to complete it.<sup>12</sup> Due to the delays in recruiting and training the agents, 117 of the 200 agents in the midline sample completed their training and mentoring less than six months before the Midline Survey (February 2018).

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<sup>7</sup> The standard criteria are: (1) the owner is a previous borrower from the bank, (2) the business is in a central location in the village, (3) the owner is mostly present at the business premises, (4) the owner has a good reputation among villagers (as confirmed by the village chief), (5) the owner is able to demonstrate sufficient financial liquidity, (6) the owner is not an agent for another bank, and (6) the owner is willing to participate as an agent.

<sup>8</sup> Most of the assistance was provided by the staff of the organization providing the training and mentoring, i.e., Mercy Corps Indonesia (MCI), with additional assistance provided by staff of the Indonesia regional office of the Poverty Action Lab.

<sup>9</sup> 38 agents subsequently resigned, and one was terminated by the bank. Replacements were recruited during the period and subsequently trained and mentored.

<sup>10</sup> MCI monitoring data.

<sup>11</sup> Unregistered LKD accounts have a maximum balance of Rp. 1 million and can only be used for payments. However, when registered by an agent, the maximum balance is Rp. 5 million, and the account can also be used for transfers and withdrawals.

<sup>12</sup> In the midline sample, among the 100 percent of agents completing the third monitoring visit, only 13 percent completed it within 21 days, while 38 percent completed it within 43 days or more.



The duties of branchless banking agents include: (1) promoting the take up and use of branchless banking products in their villages, (2) identifying and enrolling new clients, and (3) supporting existing clients. Agents earn a fee for each new LP savings account client identified as well as a fee for each client's deposits and withdrawals. The standard agent fee for identifying a new LP client that deposits at least Rp. 20,000 (approximately US\$1.54) and who maintains an average savings balance of Rp. 20,000 over two weeks is Rp. 2,000 (about US\$0.15). This is the "low-incentive treatment" in the trial. The "high-incentive treatment" is Rp. 10,000 (about US\$0.77) for each new client identified. In addition, all agents earn Rp. 1,000 for each cash deposit of minimum Rp. 10,000 and Rp. 2,500 for cash withdrawals under Rp. 200,000 and Rp. 4,000 for cash withdrawals of Rp. 200,000 and above.

Because the level of incentives that agents receive may affect potential clients' perceptions of the product, the trial also provided an informational treatment (orthogonal to the main agent incentive treatment) about the level of incentives in randomly selected villages. Under the "private information treatment," potential customers were not explicitly informed about the level of the agent's compensation, whereas under the "public information treatment," potential customers were informed about the details of the agent's compensation. The information about the agent's compensation (under the "public information treatment") was provided at the end of the baseline survey, along with information about the products. The "private information treatment" group also received information about the products, but without any information about the agents' compensation. Due to the limited sample size of the Midline Survey, the effects of the public-private information treatment are not analyzed in this report.

According to the agent monitoring data collected by MCI during mentoring visits, agents reported a total of 544 problems in using the bank's mobile website at the time of the first mentoring visit, the most frequently reported of which were "unstable internet coverage" (125 reports), "cannot access LKD service upgrade" (106 reports) and "website slow when accessed by phone" (72 reports) (Table A-2). However, the number of reported problems decreased by 44 percent by the third mentoring visit. Many agents also reported that they had not mastered several website functions at the time of the first mentoring visit (Table A-3). However, such reports had decreased by 65 percent by the third mentoring visit. Agents reported several challenges in marketing the mobile banking products (Table A-4), including most frequently the absence of product branding, shortage of marketing materials (flyers and brochures), lack of customers' familiarity with and trust in the products, and preference for the products of another bank, with the number of reported challenges decreasing only by 15 percent between the first and third mentoring visits. Agents reported a total of 259 customer complaints at the time of the first mentoring visit (Table A-5), including most frequently not having received a brochure and inability to upgrade LKD service, with the number of client complaints decreasing by only 14 percent between the first and third mentoring visits. Despite these obstacles, agents reported steady increases in the number of clients and client transactions both for the LKD (digital wallet) and LP (basic savings account) products between the first and third mentoring visits, which were typically about two weeks apart (Table A-6). Unfortunately, it is not possible to compare these reported outcomes to similar outcomes reported in the Midline Survey because the time periods are not comparable.

## **3.2 Demand-Side Interventions**

The demand-side interventions were targeted to women business owners in each trial village. Seven women business owners were randomly selected in each village from a list of all business owners operating in the village, four of whom were randomly assigned to receive training and follow-up mentoring from Mercy Corps Indonesia (MCI) with the remaining three women business owners and five randomly selected male business owners not receiving any training or mentoring.<sup>13</sup> According to the MCI training manual, the training focused on personal financial management (tracking income and expenses, setting priorities, the importance of saving, financial planning), business financial management (basic bookkeeping, cash flow planning, record-keeping), and description of branchless banking products (LP and LKD). The initial training was conducted in village groups and lasted for about 3 hours (but ranging from 1 to 4 hours) and was followed up by three group mentoring sessions that focused on addressing any questions from the trainees and on actual practices using their own individual businesses as cases. Both the initial training and follow-up mentoring sessions were well attended, with the initial training attended by 91 percent of the randomly selected sample women business owners and with 80 percent completing all three mentoring sessions. However, only 15 percent of women business owners completed their training and mentoring within 21 days of having completed their initial training, as planned, while 29 percent needed 43 or more days to complete it.<sup>14</sup> In addition, follow-up “reinforcement” calls were made in two phases (20 December 2017-12 January 2018 and 17 April-19 May 2018) by JPAL staff to all 12 of the randomly selected female and male business owners in each village (as well as to a randomly selected sub-sample of the other female and male business owners who were identified in initial village listings of business owners). The purpose of these calls was to remind the business owners about the mobile financial services currently available in their villages, given that the products were initially unavailable in many villages due to technical problems.

## **4. Experimental Design and Random Assignment**

### **4.1 Experimental Design**

The main focus of the impact evaluation is on the effectiveness of the supply-side interventions, particularly on the effects of high versus low agent incentives. The inclusion of the demand-side intervention was mainly to see whether the anticipated supply-side effects are increased in the presence of the demand-side training and mentoring of business owners. In order to preserve the maximum power to estimate the effects of the supply-side incentives, it was decided to nest the demand-side intervention within each village. In doing

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<sup>13</sup> In addition to the 1,554 randomly assigned women business owners actually trained, 1,228 additional women business owners were trained and mentored by MCI, none of whom were among those randomly assigned not to receive the training and mentoring (i.e., the controls).

<sup>14</sup> In the midline sample, only 3 percent of women business owners completed their training and mentoring within 21 days, while 41 percent needed 43 or more days.

so, it was recognized that there was a risk of spillover effects from female business owners sharing their knowledge with sample female business owners who did not receive the trial-supplied training and mentoring.<sup>15</sup> However, this risk was considered acceptable, particularly because interest in the demand-side intervention was secondary, and because possible spillover could be monitored by collecting additional data. In fact, the analysis of the midline data on business owners shows clearly the effects of the demand-side training and mentoring on various intermediate outcomes (e.g., knowledge of mobile money, knowing the identity of the agent, initial take-up of the LP savings product), suggesting that any spillover effects of the training were small.

Table 1 shows the random assignment of 400 agents to one of four supply-side treatment groups in a 2x2 design: (a) low vs. high incentives, (b) public vs. private incentives.

**Table 1. Random assignment of agents to supply-side treatments**

Information about incentives	Agent incentives		Totals
	Low	High	
Private	68 (17.0%)	56 (14.0%)	124 (31.0%)
Public	137 (34.3%)	139 (34.7%)	276 (69.0%)
Totals	205 (51.3%)	195 (48.7%)	400 (100.0%)

Table 2 shows the random assignment of 4,797 female and male business owners to the demand and supply-side treatments.

**Table 2. Random assignment of business owners to treatments**

Demand-side treatments	Supply-side treatments				Totals
	Low, private	High, private	Low, public	High, public	
Female, treated	271 (5.7%)	224 (4.7%)	548 (11.4%)	556 (11.6%)	1,599 (33.3%)
Female, untreated	206 (4.3%)	175 (3.7%)	422 (8.8%)	431 (9.0%)	1,234 (25.7%)
Male, untreated	337 (7.0%)	273 (5.7%)	674 (14.0%)	680 (14.2%)	1,964 (40.9%)
Totals	814 (16.9%)	672 (14.0%)	1,644 (34.3%)	1,667 (34.8%)	4,797 (100.0%)

## 4.2 Random Assignment of Agents and Female Business Owners

Agents and female business owners were randomly assigned to their respective treatments prior to the corresponding baseline survey interviews in 23 steps as the agents were

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<sup>15</sup> According to the baseline survey data, almost 90 percent of the sample women business owners knew at least one of the seven other sample women business owners, while almost 40 percent knew four or more. About 70 percent of the women knowing one another reported that they saw each other at least once per month and about 20 percent talked about their business when they met.

recruited.<sup>16</sup> In the case of agents, the first step was to list the sample agents in strata defined on the basis of three criteria: (1) number of households in the village (based on 2011 PODES data), (2) distance of the village from the nearest bank branch (based on 2011 PODES data), (3) and the number of agent competitors in the village.<sup>17</sup> The agents were ranked within each stratum on the basis of the value of a random number generated for each agent from a uniform distribution (using Stata software) and were then assigned to the treatment cells in the proportions indicated in Table 1 above. Similarly, the women business owners were listed by village and ranked within each village on the basis of a similarly generated random number and assigned to the treatment cells in the proportions indicated in Table 2 within each village. No adjustments were made to the original random assignments. The balance achieved in the random assignment of both agents and women business owners is evaluated and discussed in Section 6.1.

## 5. Data

Two sources of survey data are used in this report: (1) baseline and midline survey data for the 7 female and 5 male business owners in each sample village; and (2) baseline and midline survey data for the branchless banking agents in each sample village.

### 5.1 Baseline Survey Data

Baseline data were collected for 4,828 business owners and 476 agents in a Baseline Survey that was conducted in two phases (during November 2016-February 2017 in 107 villages and during July-November 2017 in 294 villages).<sup>18</sup> The Baseline Survey collected extensive data on both business owners and agents. The business owner data were collected in a single household questionnaire that required about 1.5 hours to administer and that included modules on (1) location, (2) basic background characteristics (e.g., age, sex, education, marital status, number of children), (3) mobile phone usage, (4) connections (if any) with the village bank agents, (5) knowledge about other villagers' earnings, (6) trust in financial institutions, (7) knowledge and use of mobile and other financial services, (8) savings and credit, (9) non-farm businesses owned, (10) other economic activities, (11) voluntary activities, (12) connections with the seven sample women business owners, (13) housing

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<sup>16</sup> The first six random assignments of both agents and business women were done between November 3, 2016 and January 3, 2017, prior to the corresponding interviews during the first phase of the baseline survey (November 2016- February 2017), with the remaining 17 random assignments done between April 25, 2017 and November 10, 2017, prior to the corresponding interviews during the second phase of the baseline survey (July-November 2017).

<sup>17</sup> The actual strata were defined on the basis of the following three binary variables: (1) one if the distance of the agent's village to the nearest bank branch exceeded the median value for nearby villages, and zero otherwise, (2) one if the number of households in the village exceeded the median value for nearby villages, and zero otherwise, and (3) one if there were one or more competitors in the same village, and zero otherwise.

<sup>18</sup> The 476 surveyed agents included both "operating" and "registered" agents in the sample villages in which these functions were performed by different individuals. Only the "primary" agents (those actually doing the work) were trained and mentored. The baseline agent and household survey also included one agent/village in which the agent refused to participate in the survey. In this case, the village was replaced by another village.

characteristics, (14) consumer durable ownership, (15) business assets, (16) intra-household decision-making, (17) business practices, (18) risk aversion and time preference, (19) potential demand for a mobile savings product, (20) perceptions and expectations about the product in their village, (21) feelings about the agent, (22) attitudes about inequality and financial disclosure, and (23) and cognitive skills.

The sample means and standard deviations of baseline business owner characteristics both for the total sample and separately by the business owners' sex are presented in Table B-1 (Annex B). These data indicate that there are very sharp gender differentials favoring male business owners in household headship, having a bank account registered in one's name, the number of paid workers in the primary business, number of customers in the primary business, average monthly profit in the primary business, total average monthly earnings from all sources, total value of business assets, total savings in the last 12 months, and in any money borrowed during the past 12 months. There are also smaller gender differentials favoring males in willingness to take risks, ownership of a smart phone, use of a phone to access the internet, any voluntary activities during the past year, registration of the primary business, and in having a second business. The only indicators in which there are differentials favoring female business owners are number of unpaid workers in the primary business, any savings during the past year, and whether another person is involved in deciding how to spend business earnings.<sup>19</sup> Characteristics in which gender differentials are quite small include highest completed level of schooling, cognitive ability, currently married, household size, knows bank's mobile agent, trust in state-owned banks, safety of bank's mobile savings product, reliability of bank's mobile savings product, and spouse present in household.

The baseline agent data were collected in a similar-sized agent questionnaire that also required about 1.5 hours to administer and that included modules on (1) location, (2) basic background characteristics, (3) mobile phone usage, (4) work experience, (5) agent job expectations and perceptions, (6) attitudes about inequality and financial disclosure, (7) prosocial motivation and identity, (8) knowledge about villagers' earnings, (9) trust in financial institutions, (10) knowledge and use of mobile and other financial services, (11) savings and credit, (12) liquidity, (13) non-farm businesses owned, (14) other economic activities, (15) voluntary activities, (16) connections with other bank agents in nearby villages, (17) housing characteristics, (18) consumer durable ownership, (19) business assets, and (20) cognitive skills. The sample means and standard deviations both for the total sample and by the agent's sex are presented in Table B-2. These data show that even among agents there are large gender differentials favoring male agents in business assets, business revenue, number of paid workers, number of customers, amount of idle money and amount saved during the past 12 months. There are also smaller gender differentials favoring males in the use of mobile phones for banking, number of minutes of mobile phone use per typical day, internet access at the workplace, ever applied for a loan, number of currently outstanding loans, and in any voluntary activities conducted during the past year. The only large

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<sup>19</sup> See Buvinic, Knowles and Witolear (2018) for more information on gender differentials in the baseline data on business owners.

differential favoring female agents in the baseline agent data is the percentage of female customers (56 percent versus 45 percent male). Agent characteristics in which gender differences are quite small include highest level of schooling completed, cognitive ability, currently married, household size, owns smart phone, uses phone to access the internet, has store, expected performance in agent job, safety of bank's mobile savings product, reliability of bank's mobile savings product, preference for female boss, agent sees self as caring, any saving during past 12 months, has second business, number of hours worked in primary business on typical day, and number of unpaid workers in primary business in typical month.

## **5.2 Midline Survey Data**

The Midline Survey was conducted in 200 villages of Ngawi, Tuban and Bojonegoro districts in February 2018 in which the training and mentoring of agents and business owners and follow-up "reinforcement" calls had been completed. Data were collected for 2,319 business owners (1,344 females and 975 males) and for 215 agents from 189 of the 200 sample villages.<sup>20</sup> The target was to interview 2,399 business owners and 231 agents who had been interviewed in the Baseline Survey, but 93 business owners and 16 agents could not be re-interviewed for various reasons (sample attrition), including relocation, temporary absence, illness or persistent refusal to be re-interviewed. The characteristics of those not able to be re-interviewed are analyzed in Section 6.2.

Both the agent and household questionnaires used in the Midline Survey were significantly shorter than those used in the Baseline Survey, requiring only about one hour to administer. The midline agent questionnaire includes modules on (1) location, (2) detailed information about the job as agent (i.e., satisfaction, work activities and time use, job training and mentoring received, job expectations, perceptions of the bank's mobile savings product, number of customers, earnings from the agent job, motivation, trust in financial institutions), (3) prosocial motivation and identity, (4) trust in financial institutions, (5) voluntary activities, (6) risk taking and time preference, (7) personality traits, and (8) logical skills. The midline survey data on the branchless banking agents are analyzed in Section 7.1.

The midline household questionnaire administered to business owners includes modules on (1) location, (2) identification (age and ID card number), (3) mobile phone usage, (4) use of mobile and other financial services, (5) connections with the agent, (6) trust in financial institutions, (7) savings and credit, (8) non-farm businesses owned, (9) household income, (10) ownership of consumer durables, (11) business assets, (12) household decision making, (13) willingness to pay for the bank's mobile savings product, (14) perceptions and expectations about the bank's mobile savings product, (15) feelings about the agent, (16) subjective well-being, (17) assertiveness, and (18) persistence. The midline survey data on business owners are analyzed in Section 7.2.

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<sup>20</sup> 26 of the surveyed agents were "secondary" agents. See footnote 18.

## 6. Balance and Sample Attrition

### 6.1 Balance

Balance was assessed by simple linear regressions of the baseline values of large numbers of covariates for both business owners and agents on the randomly assigned treatments. The balance tests are done both for the random assignment of the total baseline sample and separately for the villages included in the midline sample and for the villages not included in the midline sample (i.e., the non-midline sample). Table B-3 reports the results of balance tests for the random assignment of female business owners to the training and mentoring treatment (columns 1-3) and to the high agent incentive treatment (columns 4-6). The overall results of the balance tests, based on the binomial distribution, are reported in the bottom rows of the table. They indicate that the numbers of statistically significant coefficients, both at the 0.05 and 0.01 levels, are not inconsistent with a null hypothesis that the coefficients are equal to zero at conventional levels of significance. Table B-4 reports the results of similar balance tests for the random assignment of agents to the high incentive treatment. The results indicate that the number of statistically significant coefficients are inconsistent with a null hypothesis that the coefficients are equal to zero in two cases: (1) for the total sample at the 0.05 level ( $p=0.026$ ) in column 1 and (2) for the non-midline sample at the 0.05 level ( $p=0.008$ ) in column 3. Accordingly, the regression models used in the analysis of agents reported in section 7.1 include baseline covariates to help control for possible bias in the random assignment of agents.

### 6.2 Sample Attrition

There was some sample attrition between the baseline and midline surveys in both the data on business owners and the data on agents, i.e., 93 of 2,399 business owners in the midline sample (3.88 percent) could not be re-interviewed in the Midline Survey, while 16 of 230 baseline agents in the midline sample (6.96 percent) could not be re-interviewed. Although such levels of attrition are relatively low, they nevertheless raise the possibility that the Midline Survey data might be a biased sub-sample of the Baseline Survey. This problem is potentially most serious with respect to the randomly assigned treatment variables because random assignment is used to control for both observed and unobserved variables.

Tables B-5 and B-6 report both simple regressions of an indicator of attrition (equal to one if the baseline observation was not re-surveyed in the midline, 0 otherwise) on dichotomous variables representing each of the randomized treatments (unadjusted models) and adjusted models including a broad range of covariates. The results indicate that there is no evidence of selective attrition with respect to the randomized treatment variable in either the unadjusted or adjusted models. There is also no evidence that agent attrition is related to any of the covariates, i.e., the single statistically significant covariate in the adjusted model reported in Table B-6 (the agent has a shop) could easily have occurred purely by chance ( $p=0.283$ , based on the binomial distribution). However, the three statistically significant covariates in the adjusted model for the female training and mentoring treatment (column 2 of Table B-5) and the two statistically significant covariates in the adjusted model for the

high agent incentives treatment (column 4 of Table B-5), both of which are significant at the 0.01 level, imply rejection of the null hypothesis that there is no attrition bias. Moreover, one of the covariates (the business owner knows the bank’s mobile agent) is significant at the 0.01 level in both columns 2 and 4 and is theoretically reasonable (i.e., business owners who know their agent are less likely to attrit). Accordingly, the regression models used in the analysis of business owners reported in section 7.2 include a rich set of baseline covariates (including the baseline values of the dependent variables when available) to control for any bias due to sample attrition.

## 7. Analysis

### 7.1 Agent Data Analysis

This sub-section of the report discusses the analysis of midline survey data for 214 branchless banking agents working in 189 villages of three districts (i.e., Ngawi, Bojonegoro and Tuban districts). The 214 agents include both “operating” and “registered” agents in the 25 sample villages in which these functions were performed by different individuals.<sup>21</sup> The data were collected as part of the Midline Survey conducted during February 2018. All but one of the surveyed agents are among the 230 agents from 199 villages for whom baseline data were previously collected. However, 16 of the agents from 9 villages included in the baseline survey could not be re-interviewed at midline, as previously discussed (section 6.2). The sample means and standard deviations of the agent outcomes by treatment category are presented in Table C-1 (Annex C). Several of the outcomes are winsorized (highest 2 percent of reported values) and/or transformed to inverse hyperbolic sine values, as indicated in the tables.

Midline effects on agent outcomes are hypothesized to result from the randomized treatment of high versus low agent incentives, i.e., randomly selected agents received higher incentives from enrolling new LP customers, with other agent fees (e.g., fees for processing customer withdrawals) the same for all agents. The following agent-level statistical model was estimated:

$$y = \beta_0 + \beta_1 T_1 + \beta_2 S + \sum \delta_i z_i + \epsilon \quad (1)$$

where  $y$  refers to a given agent outcome (e.g., the number of training visits received),  $T_1$  indicates the randomized treatment of high agent incentives,  $S$  indicates a female agent,  $\mathbf{z}$  is a vector of up to six additional covariates ( $\mathbf{z} = z_1, z_2, \dots, z_6$ ),  $\epsilon$  is a random disturbance term and  $\beta$  and  $\delta$  are vectors of fixed parameters.<sup>22</sup> One covariate of special interest is the agent’s sex

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<sup>21</sup> Most of the “operating” agents (agn\_no=”001”) are also “registered” agents, whereas most of the “registered” agents (agn\_no=”002”) are not also “operating” agents.

<sup>22</sup> If equation (1) included no covariates, the control value ( $T_1=0$ ) would be equal to the intercept ( $\beta_0$ ). However, with covariates (adjusted models), the control value is estimated as the average of the predicted values of  $y$  with  $T_1=0$  and with the observed values of  $S$  and  $\mathbf{z}$ .



(S). As part of the experimental design the participating bank agreed to make a special effort to recruit female agents, and indeed, 47 percent of the recruited agents are female (Table B-2). The outcomes of agents may vary by sex, especially given the fact that special efforts were made to recruit female agents. However, it would be inappropriate to give such differences a causal interpretation, given that female participation was not randomized. The other covariates include: the agent is the operating agent ( $z_1$ ), the agent's age ( $z_2$ ), the highest level of schooling completed by the agent ( $z_3$ ), indicators that internet services are available in the village ( $z_4$ ) and that the mobile signal in the village is strong ( $z_5$ ), and the baseline value of the dependent variable ( $z_6$ ), when available.

The model in equation (1) was estimated as a linear regression model for continuous or dichotomous outcomes, as a Poisson regression model for count outcomes (bounded at zero) or as an ordered logit model for ranked qualitative outcomes. Consistent estimates of the parameters of the linear regression models were obtained by applying OLS directly to equation (1), while consistent estimates of the parameters of the nonlinear Poisson and ordered logit models were obtained using maximum likelihood estimation. All estimates are intention-to-treat estimates.

Equation (1) is estimated and reported for a large number of agent outcomes that are grouped into the following categories: (i) general agent outcomes (Table C-2), (ii) agent time use (Table C-3), (iii) agent training and mentoring (Table C-4), (iv) LP demand and utilization (Table C-5), (v) agent earnings (Table C-6), (vi) agents' reasons for liking their agent jobs (Table C-7), (vii) agents' perceptions of how they are viewed by other people (Table C-8), (viii) agents' trust in financial institutions (Table C-9), and (ix) agents' prosocial outcomes (Table C-10). In addition to the estimated control values, the tables in Annex C report the estimated marginal effects ( $\delta y / \delta x$ ) of higher agent incentives and results of a test of the joint significance of the additional covariates ( $\xi$ ).<sup>23</sup> The tables C-2 to C-10 use a common format. The estimated control value of each outcome (the adjusted mean of the control group  $T_1=0$ ) is presented in the second row of each table (following the unadjusted control group mean).<sup>24</sup> The next row provides estimates of the average marginal effect of higher agent incentives ( $T_1=1$ ). The average marginal effect is shown instead of the estimated parameter ( $\beta_1$ ) because it is easier to interpret in the nonlinear Poisson and ordered logit models (the two are identical in the linear regression models).<sup>25</sup> The next six rows (seven, if the baseline value of the dependent variable is available) present the estimated marginal effects of the covariates (S and  $\mathbf{z}$ ). They are followed by the p-value of the joint test that the coefficients ( $\delta$ ) of the additional covariates ( $\mathbf{z}$ ) are equal to zero. The last two rows

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<sup>23</sup> The estimated marginal effects are estimates of  $\delta y / \delta x$  averaged over all observations (i.e., not estimates at the sample means) and are identical to the estimated coefficients in the linear regression models.

<sup>24</sup> The control value is estimated as the average predicted value of the outcome  $y$  with  $T_1$  equal to zero and using the actual values of the covariates (not their sample mean values).

<sup>25</sup> The estimated marginal effects of the ordered logit models refer to the estimated probability that a given observation is in the highest observed category of the dependent variable (e.g., 10 for a variable with observed values ranging from 1 to 10).

in the tables present estimates of the unadjusted R-squared (or pseudo R-squared, in the case of the nonlinear models) and the number of observations used to estimate each model.

Because there so many outcomes, it is useful to analyze summary indices of the outcomes in each category (the results for the individual outcomes are discussed below). For example, the category of general agent outcomes includes the following seven outcomes: number of months as agent, agent satisfaction (1-10), whether the agent’s spouse helps the agent (0-1), whether the agent visits households to promote LP (0-1), likelihoods that the agent will quit in the next three months (1-10) or in the next six months (1-10), and whether the agents think their agent job helps their main business (0-1). Use of a summary index based on these seven outcomes increases statistical power to detect effects that go in the same direction (i.e., positive or negative). To make this possible, in this example, it is necessary to change the definition of outcomes 5 and 6 so that they refer to the likelihoods that agents will *remain* in their jobs rather than leaving them. Following Kling, Leibman and Katz (2007), the summary index used is the equally weighted mean z-score of each outcome (re-defined, as in the preceding example, so that higher scores correspond to more beneficial outcomes). The z-scores are calculated by subtracting the control group mean and dividing by the control group standard deviation, so that each component of the index has mean zero and standard deviation of one for the control group.<sup>26</sup>

Table 3 shows the results of linear regressions of the z-score indices using the model in Equation (1). The results indicate that higher agent incentives do not have a significant effect on any of the agent outcomes. In a few cases, higher agent incentives have both positive and negative offsetting effects on the summary index. For example, in Table C-3, higher agent incentives have significant positive effects on the percentages of agents’ work time spent promoting LP in their shops (column 5) and assisting bank customers (column 7), but significant negative effects on the percentages of their work time spent promoting LP outside their shops (column 6) and doing other activities (column 8). Similarly offsetting positive and negative effects are also observed in Table C-4. Several of the additional covariates are also significant with some indices, particularly in the absence of baseline values of the dependent variable (for which they may be proxying).

**Table 3. OLS estimates of Equation (1) with the z-score indices representing the various categories of agent outcomes as the dependent variables (y)**

	General agent outcomes	Agent time use	Agent training and mentoring	LP demand and utilization	Agent earnings	Agents’ reasons for liking their jobs	Agents’ perception of how other people view them	Agents’ trust in financial institutions	Agents’ prosocial outcomes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CONTROL VALUES (low agent incentives)									
Unadjusted sample mean (T <sub>1</sub> =0)	0.072 (0.042)	0.130 (0.078)	0.061 (0.086)	0.159 (0.101)	-0.093 (0.054)	-0.035 (0.076)	-0.025 (0.042)	0.013 (0.050)	-0.090 (0.055)
	0.078	0.138	0.081	0.174	-0.089	-0.035	-0.013	0.015	-0.102

<sup>26</sup> The baseline values of the dependent variable, when available, are also converted to average z-scores. However, the other covariates do not vary across outcomes and are therefore not converted to z-scores.

Adjusted sample mean ( $T_1=0$ )	(0.048)	(0.065)	(0.070)	(0.093)	(0.072)	(0.071)	(0.042)	(0.047)	(0.048)
ESTIMATED MARGINAL EFFECTS									
High agent incentives ( $T_1=1$ )	0.058 (0.070)	-0.125 (0.096)	0.001 (0.104)	-0.058 (0.137)	-0.164 (0.106)	-0.045 (0.105)	-0.032 (0.062)	-0.076 (0.070)	-0.112 (0.070)
COVARIATES									
Female agent (S)	0.083 (0.071)	0.080 (0.097)	0.240** (0.105)	0.168 (0.139)	-0.041 (0.107)	0.030 (0.106)	0.112* (0.063)	0.028 (0.071)	-0.029 (0.071)
Operating agent ( $z_1$ )	-0.096 (0.112)	-0.133 (0.154)	0.439*** (0.166)	-0.062 (0.219)	0.027 (0.169)	0.044 (0.168)	0.204** (0.100)	0.061 (0.112)	-0.078 (0.112)
Age ( $z_2$ )	0.003 (0.004)	0.001 (0.005)	0.003 (0.006)	0.004 (0.008)	0.004 (0.006)	0.008 (0.006)	-0.002 (0.004)	0.005 (0.004)	0.006 (0.004)
Completed level of schooling ( $z_3$ )	0.006 (0.046)	0.061 (0.062)	0.005 (0.067)	0.057 (0.089)	0.046 (0.069)	-0.018 (0.068)	0.014 (0.040)	0.092** (0.045)	0.007 (0.046)
Internet available in village ( $z_4$ )	0.008 (0.085)	-0.029 (0.116)	0.030 (0.125)	0.145 (0.165)	-0.168 (0.127)	0.225* (0.127)	-0.170** (0.075)	0.037 (0.085)	-0.165* (0.085)
Mobile signal in village is strong ( $z_5$ )	0.111 (0.070)	0.201** (0.096)	0.052 (0.103)	0.308** (0.136)	-0.012 (0.105)	0.140 (0.105)	0.095 (0.062)	0.062 (0.070)	0.029 (0.070)
Baseline value of dependent variable ( $z_6$ )						0.238*** (0.059)		0.393*** (0.064)	0.429*** (0.070)
JOINT TESTS (p-values)									
Coefficients of the additional covariates ( $z$ ) are jointly equal to zero	0.518	0.344	0.177	0.236	0.745	0.000***	0.025**	0.000***	0.000***
R-squared	0.03	0.04	0.05	0.04	0.02	0.12	0.07	0.19	0.20
N	213	213	213	213	213	213	212	213	213

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors are in parentheses. The outcomes represented by the indices in columns 1-9 are the outcomes in the corresponding annex tables C-2 to C-10, with the outcomes in columns 5 and 6 of Table C-2 re-defined to be positive and with the outcomes in columns 1, 3 and 4 of Table C-3, in column 4 of Table C-6, and in columns 2, 4, 6 and 8 omitted from the corresponding indices.

Only 12 of the 65 estimated effects of  $T_1$  in Tables C-2 to C-10 are statistically significant at the 0.10 level or higher. However, several of the insignificant effects are also informative, as discussed below.

### General agent outcomes

None of the estimated effects of agent incentives on general agent outcomes in Table C-2 is statistically significant at even the 0.10 level, including the effects on agent satisfaction with their job (column 2), on whether the spouse helps the agent (column 3), on whether the agent visits households to promote LP (column 4), on the agent's reported likelihood of quitting in the next 3 or 6 months (columns 5 and 6), or on whether agents perceive that their agent jobs help to grow their main businesses (column 7). The fact that none of these agent outcomes were significantly affected by higher agent incentives is surprising.

### Agent time use

One might expect higher agent incentives to have a positive effect on the time spent working as an agent and that the effects of higher incentives on the percentages of agent working time spent in different activities would reflect agents' perceptions about which activities would be most effective in increasing their earnings. Although five of the eight estimated effects of agent incentives on agents' time use outcomes are statistically significant (Table C-3), the estimated effect of higher incentives on agents' hours worked as an agent is negative and statistically insignificant. The five statistically significant effects include offsetting positive and negative effects. Taken together, these results indicate that higher agent incentives did not affect the number of hours agents worked as agents but that higher

incentives did significantly affect the allocation of their work time across various agent activities.

The relationships between five of the eight outcomes and female agents are also statistically significant, including positive relationships with hours per day doing housework (column 4) and the percentages of agent work promoting the LP product outside the agent's shop (column 6) and doing other agent work (column 8) and negative relationships with the number of hours per day spent doing other work (column 3) and the percentage of agent work time spent promoting the LP in the agent's shop (column 5).

### **Agent training and mentoring**

The training and mentoring was to be provided equally to all agents. However, the results in Table C-4 indicate that the estimated effects of higher incentives are statistically significant in three cases, i.e., positively in the case of whether the agents received any mentoring from their partner bank employers and whether the agent was visited by a bank supervisor (8.5 percent and 8.6 percent more likely respectively but only significant at the 0.10 level in both cases) and negatively in the case of the number of mentoring visits received by the agent (1.6 fewer visits on average compared to the estimated adjusted control value of 6.0 visits with  $T_1=0$  and significant at the 0.01 level). The results also indicate that female agents received significantly more training visits, mentoring visits and bank supervisor visits, other factors equal (i.e., 0.8, 1.6 and 0.4 more on average respectively, compared to estimated adjusted control values of 2.6, 6.0 and 2.3 visits respectively).<sup>27</sup> In addition, the results indicate that the training and mentoring outcomes of operating agents are uniformly higher, as expected (and significantly so in 5 of 7 cases).

### **LP demand and utilization**

It was expected that the demand for and utilization of the LP product would be positively related to higher agent incentives (i.e., that agents facing higher incentives would work harder to increase the demand for the LP product). In fact, the results in Table C-5 indicate that the effect of higher incentives is significant (at only the 0.10 level) in only one case (i.e., the number of people opening and saving in LP accounts during the past month) and that the estimated effect is *negative*.<sup>28</sup> In particular, the estimated effect of higher incentives on the cumulative number of LP accounts opened is negative and statistically insignificant. Two of the six outcomes are significantly related to female agents, with one positive (the number of people opening and savings in LP accounts in the past month) and one negative (the expected number of LP account openings in the next year). The results in Table C-5 also provide some evidence that the demand for and utilization of LP accounts are positively related to internet access and to the strength of mobile signals in villages.

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<sup>27</sup> The estimated relationships with female agents were also positive in the case of 3 of the 4 remaining training and mentoring outcomes.

<sup>28</sup> Five of the six estimated effects of higher agent incentives on the LP demand and utilization outcomes are negative.

### **Agents' earnings**

It was expected that agent earnings would be positively related to higher agent incentives. However, the results in Table C-6 indicate that only one of the estimated effects of higher agent incentives on agent earnings outcomes is statistically significant (the minimum monthly earnings that would satisfy the agent, with the estimated effect negative). Although the estimated effect of higher agent incentives on agents' monthly earnings is positive (column 1), the estimated effect is quite small (+0.03 compared to the estimated adjusted control value of 2.72) and is not even marginally significant. The relationships between all four of the agent earnings outcomes and agent's sex (as well the agent's age and education) are statistically insignificant.

### **Agents' reasons for liking their jobs**

One might expect that higher agent incentives would have a positive effect on some of the reasons agent give for liking their jobs (e.g., "ability to earn more money"). However, the results in Table C-7 indicate that agent incentives have no effect on the stated importance of any of these reasons. Similarly, none of these outcomes vary significantly with the agents' sex.

### **Agents' perceptions about how they are viewed by others**

One might expect that higher agent incentives would affect some of their perceptions of how they are viewed by others (e.g., "more motivated by money"). However, the results in Table C-8 indicate that agent incentives have no significant effects on any of these perceptions, nor are any of them significantly related to the agent's sex.

### **Agents' trust in financial institutions**

One might expect that higher agent incentives might affect some aspects of agents' trust in financial institutions (e.g., "confidence that the agent's bank is a good employer"). However, the results in Table C-9 indicate that higher agent incentives have no effect on any of these outcomes. However, one of the outcomes (i.e., "the agent's partner bank employer mainly aims to promote financial inclusion") is significantly higher among female agents.

### **Agents' prosocial outcomes**

Expectations are that the effects of higher agent incentives on agents' prosocial outcomes are likely to be negative. Indeed, the results in Table C-10 indicate that 8 of the 9 estimated effects are negative, with two being statistically significant (i.e., agent sees self as caring at the 0.10 level and the number of hours volunteered by agents in a typical month at the 0.01 level). The latter estimated effect is substantial in magnitude (i.e., -3.3 hours compared to an estimated adjusted control value of 5.6 hours). The results also indicate that female agents are both significantly less likely to report any voluntary activity in the last year and to report 1.8 fewer hours volunteered in a typical month, other factors equal. Both internet availability and a strong mobile signal in an agent's village are negatively and significantly related to the number of hours volunteered in a typical month, whereas both education and age are positively related to the same outcome (as well as to the amount of money contributed).

### 7.3 Business owner data analysis

This sub-section of the report discusses the analysis of midline survey data on 2,319 business owners (1,344 females and 975 males) from 200 villages. Midline effects are assumed to result from two separate randomized treatments ( $T_1$  and  $T_2$ ), where  $T_1$  is the village-level treatment providing higher incentives to agents in randomly selected villages and  $T_2$  is the business-owner-level treatment providing training and mentoring to randomly selected women business owners in all sample villages. No male business owners received any training or mentoring, while all agents received training and mentoring. The following owner-level statistical model is used to estimate the trial's midline effects:

$$y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \sum \delta_j z_j + \epsilon \quad (2)$$

where  $y$  refers to an owner outcome (e.g., whether a savings account was opened),  $\mathbf{z}$  is a vector of  $K$  covariates ( $\mathbf{z} = z_1, z_2, \dots, z_K$ ),  $\epsilon$  is a random disturbance term,  $\beta$  and  $\delta$  are vectors of fixed parameters and  $\mathbf{x}$  is a vector of six treatment categories defined in Table 4 below.

**Table 4. Definition of treatment categories**

Treatment category	Sex	T <sub>1</sub> (higher agent incentives)	T <sub>2</sub> (business owner training and mentoring)	N
$x_0$	Female	0	0	300
$x_1$	Female	1	0	272
$x_2$	Female	0	1	411
$x_3$	Female	1	1	361
$x_4$	Male	0	0	514
$x_5$	Male	1	0	461
Total				2,319

The omitted category  $x_0$  in Table 4 represents the control value of  $y$  for a female business owner residing in a village with low agent incentives and not receiving any training or mentoring ( $T_1=T_2=0$ ).<sup>29</sup> The remaining elements of  $\beta$  ( $\beta_1, \beta_2, \dots, \beta_5$ ) are the marginal effects of the other treatment categories ( $\mathbf{x} = x_1, x_2, \dots, x_5$ ) relative to the control category ( $x_0$ ). Hypotheses concerning  $T_1$  and  $T_2$  involve differences in the elements of  $\beta$ . For example, the hypothesis that the agent incentive treatment ( $T_1$ ) has no effect is equivalent to the joint hypothesis  $(\beta_1 - \beta_0) = (\beta_3 - \beta_2) = (\beta_5 - \beta_4) = 0$ , the hypothesis that the female business owner training and mentoring treatment ( $T_2$ ) has no effect is equivalent to the joint hypothesis  $(\beta_2 - \beta_0) = (\beta_3 - \beta_1) = 0$ , the hypothesis that there is no interactive effect between  $T_1$  and  $T_2$  is equivalent to the hypothesis  $(\beta_3 - \beta_2) = 0$ , while the hypothesis that the effect of agent incentives ( $T_1$ ) does not differ between female and male business owners is equivalent to the joint hypothesis that  $(\beta_1 - \beta_0) = (\beta_3 - \beta_2) = (\beta_5 - \beta_4)$ .

<sup>29</sup> If equation (3) included no covariates, the control value would be equal to the intercept. However, with covariates specified (adjusted estimates), the adjusted control value is estimated as the average of the predicted values with  $x_1, x_2, \dots, x_5=0$  and with the observed values of  $\mathbf{z}$ .

The model in equation (2) is estimated as a linear regression model for continuous or dichotomous dependent variables, as a Poisson regression model for count dependent variables (e.g., 0, 1, 2, 3, ...) <sup>30</sup> and as an ordered logit model for dependent variables with ordered qualitative responses. OLS is used to estimate the parameters of the linear regression models, while maximum likelihood estimation is used to estimate the parameters of the nonlinear Poisson and ordered logit models. The covariates include the baseline value of the dependent variable (or a close substitute) when available as well as baseline values of business owner characteristics.<sup>31</sup> The sample means and standard deviations of the outcomes by treatment category are presented in Table D-1 (Annex D). Several of the outcomes are winsorized (including their corresponding baseline values) and in some cases transformed to inverse hyperbolic sine values, as indicated in the tables. All estimates are intention-to-treat estimates. The estimated standard errors are adjusted for clustering at the village level, reflecting the village-level treatment of agent incentives.

The estimation results for multiple outcomes (grouped into broad categories) are presented in Tables D-2 to D-15. The tables use a common format. The estimated control value of each outcome (the adjusted mean for the control group  $x_0$ ) is presented in the second row of each table (following the unadjusted control group mean).<sup>32</sup> The next five rows provide estimates of the average marginal effects of the five treatment categories ( $x_1 - x_5$ ) relative to the estimated control value ( $x_0$ ). The average marginal effects are shown instead of the estimated parameters ( $\beta$ ) because they are easier to interpret than the estimated parameters in the case of the nonlinear Poisson and ordered logit models (the two are identical in the linear regression models).<sup>33</sup> The next four rows of the table present the results of the hypotheses tests described above. The last two rows in the tables present estimates of the unadjusted R-squared (or pseudo R-squared, in the case of the nonlinear models) and the number of observations used to estimate each model. The estimated marginal effects of the covariates are not reported in tables D-2 to D-15 due to their large number.

As in section 7.2, there are multiple outcomes in each broad category. Summary indices of the outcomes in each category (i.e., average z-scores) are therefore analyzed before discussing the results for individual outcomes. Table 5 shows the results of linear regressions of the z-score indices of business owner outcomes using the model in Equation (2). In this

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<sup>30</sup> Poisson regression models, which are robust for bounded dependent variables, are also estimated in the case of a few continuous dependent variables that are bounded (e.g., the percentage of spouse earnings that are not known to the entrepreneur).

<sup>31</sup> The baseline values of near substitutes for the dependent variable are used in a few cases when baseline values are not available (e.g., any amount borrowed during the past 12 months for amount borrowed during the past 3 months). The covariates include the baseline values of the entrepreneur's age (7 categories), highest completed level of schooling (5 categories), number of the entrepreneur's children residing in the household, the entrepreneur's cognitive ability, willingness to take risk, indicators of whether the entrepreneur is married, is the head of the household, and resides in an urban area, household size, and the value of the household's asset index.

<sup>32</sup> The adjusted control value is estimated as the average predicted value of the outcome  $y$  with  $T_1$  and  $T_2$  equal to zero and using the actual values of the covariates (not their sample mean values).

<sup>33</sup> The estimated marginal effects of the ordered logit models refer to the probability that a given observation is in the highest observed category of the dependent variable (e.g., 10 for a variable with values ranging from 1 to 10).

case, the 14 categories of outcomes are mapped into nine summary indices.<sup>34</sup> The joint tests reported in Table 4 indicate that higher agent incentives ( $I_1$ ) have a significant positive effect on three of the summary indices (i.e., household decision-making, saving and general welfare), two of which are limited to female business owners.<sup>35</sup> Female business owner training and mentoring ( $I_2$ ) has a significant positive effect on six of the summary outcomes (knowledge of MM, relationships with MM agents, household decision-making, spousal roles, saving and general welfare). These estimated positive effects are also relatively large compared to control values. In addition, there are significant positive interaction effects between higher agent incentives (supply side) and female business owner training and mentoring (demand side) for two summary outcomes (household decision-making and saving), with four additional interaction effects being positive, but not significant (columns 1, 3, 5 and 9).

**Table 5. OLS estimates of the z-score indices representing business owner outcomes**

	Knowledge of mobile money (MM)	Relationships with MM agents	Demand for MM	Household decision-making	Spousal roles	Saving	Borrowing	Business outcomes	General welfare
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>CONTROL VALUES</b> (female, untreated with low agent incentives)									
Unadjusted sample mean ( $\bar{x}_0$ )	0.000 (0.024)	-0.012 (0.034)	-0.006 (0.036)	-0.000 (0.040)	0.019 (0.029)	0.002 (0.044)	0.000 (0.042)	0.005 (0.041)	0.001 (0.027)
Adjusted mean ( $\bar{x}_0$ )	0.010 (0.030)	-0.015 (0.032)	-0.009 (0.036)	0.136 (0.038)	0.013 (0.032)	0.024 (0.044)	0.058 (0.043)	0.064 (0.033)	0.044 (0.026)
<b>ESTIMATED MARGINAL EFFECTS</b>									
Female, untreated with high agent incentives ( $x_1$ )	0.090** (0.041)	-0.039 (0.041)	0.021 (0.048)	-0.043 (0.050)	-0.011 (0.042)	0.052 (0.053)	0.084 (0.067)	-0.050 (0.046)	0.105*** (0.035)
Female, treated with low agent incentives ( $x_2$ )	0.318*** (0.047)	0.117*** (0.035)	0.047 (0.043)	0.016 (0.043)	0.022 (0.039)	0.059 (0.048)	0.011 (0.052)	-0.033 (0.043)	0.124*** (0.027)
Female, treated with high agent incentives ( $x_3$ )	0.411*** (0.065)	0.116*** (0.042)	0.056 (0.044)	0.149*** (0.050)	0.073* (0.040)	0.227*** (0.083)	0.005 (0.056)	-0.010 (0.043)	0.139*** (0.031)
Male, low agent incentives ( $x_4$ )	0.130*** (0.049)	-0.026 (0.040)	0.063 (0.044)	0.022 (0.065)	0.039 (0.047)	-0.009 (0.063)	-0.016 (0.063)	0.058 (0.047)	0.148*** (0.038)
Male, high agent incentives ( $x_5$ )	0.131*** (0.049)	0.019 (0.044)	0.056 (0.051)	0.009 (0.065)	0.044 (0.049)	0.059 (0.068)	0.075 (0.072)	0.075 (0.050)	0.151*** (0.040)
<b>JOINT TESTS</b> (p-values)									
Joint test of the effect of high agent incentives ( $I_1$ ) on female and male business owners	0.134	0.281	0.955	0.020**	0.584	0.089*	0.299	0.659	0.030*
Joint test of the effect of female business owner training and mentoring ( $I_2$ )	0.000***	0.000***	0.318	0.000***	0.075*	0.046**	0.486	0.526	0.000***
Joint test of the interactive effect of high agent	0.221	0.975	0.817	0.000***	0.184	0.039**	0.909	0.587	0.625

<sup>34</sup> The correspondence of the summary indices in Table 5 to the outcomes listed in the tables in Annex D are as follows: Knowledge of MM (columns 1-7 of Table D-2, with column 4 re-defined to “lack of information not cited”); Relationship with MM agents (columns 1-7 of Table D-3, with column re-defined to “trust agent”); Demand for MM (columns 1-8 of Table D-4, with column 2 re-defined to “trust bank”); Household decision-making (columns 1-5 of Table D-5); Spousal roles (columns 1, 2, 5-7 of Table D-6 with column 1 re-defined to “earnings not known to the spouse” and column 2 re-defined to “household expenses not financed by spouse”); Saving (columns 1-4 of Table D-8, columns 1-2 of Table D-9, columns 1-2 of Table D-10, and columns 1-2 of Table D-11); Borrowing (columns 5-7 of Table D-8, column 1 of Table D-12, column 1 of Table D13, and column 1 of Table D-14); Business outcomes (columns 1-7 of Table D-7); and General welfare (columns 1-7 of Table D-15).

<sup>35</sup> The hypothesis that the effect of higher agent incentives is the same for female and male business owners is rejected for the two summary outcomes, household decision-making and general welfare (columns 4 and 9). In both cases, the estimated effects of higher agent incentives are larger for female business owners than for male business owners.



incentives and training on female business owners									
Joint test of equality in the effect of high agent incentives (T <sub>1</sub> ) on female and male business owners	0.161	0.188	0.856	0.009***	0.477	0.468	0.432	0.448	0.036**
R-squared	0.17	0.25	0.15	0.32	0.05	0.11	0.16	0.43	0.32
N	2317	2316	2316	2316	2316	2316	2316	2316	2317

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

The results for individual outcomes are discussed for the following groups of related outcomes: (i) knowledge and use of mobile money products, (ii) intra-household decision making and gender roles, (iii) business outcomes, (iv) saving and borrowing, and (v) indicators of general welfare. Estimates of the trial effects on 89 individual outcomes are presented. One general impression that emerges from the analysis of the individual outcomes is that the estimated effects of the demand-side treatments are more often statistically significant than are the estimated supply-side effects. Specifically, only 9 of 89 estimated supply-side effects are statistically significant at the 0.10 level or higher, compared to 22 of 89 estimated demand-side effects. However, the results also indicate that several of the demand-side effects are stronger in the presence of high agent incentives.

### 7.3.1 Knowledge and Use of Mobile Money Products

Table D-2 reports estimates of the effects of T<sub>1</sub> and T<sub>2</sub> on the following intermediate outcomes related to the knowledge and use of mobile money (MM): whether the business owner “knows about” (1) mobile money (0-1), (2) digital wallet products (LKD, 0-1), and (3) mobile saving products (LP, 0-1), (4) whether a business owner who has not yet signed up for a mobile savings product cites “lack of information” as one reason (0-1), and whether the business owners use their mobile phones (5) to access the internet (0-1), (6) for mobile money (0-1), and (7) for banking (0-1). The results in Table D-2 indicate that higher agent incentives had a marginally significant effect (positive) on only one of these outcomes: use of mobile phone for banking. However, the results indicate that T<sub>2</sub> had a significant positive effect on most outcomes related to knowledge of mobile money (MM).<sup>36</sup> For example, the results in Table D-2 (columns 1-3) indicate that the training and mentoring of women business owners (T<sub>2</sub>) had a highly significant positive effect on their knowledge of MM in general, and more specifically, of digital wallet (LKD) products and mobile saving (LP) products, suggesting that the training and mentoring of women business owners (T<sub>2</sub>) was effective. Although the estimated effects are small, they are large relative to the adjusted control values. For example, a woman business owner residing in a low (high) agent incentive village who received training and mentoring is 0.12 (0.16) more likely to report knowing about MM, 0.06 (0.05) more likely to know about digital wallet products, and 0.08 (0.11) more likely to know about mobile saving products, other factors equal, compared to the adjusted control values of 0.08, 0.00 and 0.00 respectively. Although the estimated

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<sup>36</sup> An exception is that neither T<sub>1</sub> nor T<sub>2</sub> had a significant effect on “lack of information” as a reason cited for not signing up (a negative outcome). A relatively high percentage of respondents (43.6 percent) cited “lack of information” as one of the reasons that they did not sign up. The only reason more frequently cited (by 52.8 percent of respondents) was “lack of money to save.”

effects of  $T_2$  are larger in combination with  $T_1$  in columns 1, 3 and 6, these interaction effects are not statistically significant.

Table D-3 reports estimates of the effects of  $T_1$  and  $T_2$  on the following intermediate outcomes related to the business owner's relationships with MM agents: (1) whether business owners know the agent's name when asked (unprompted, 0-1), (2) whether they know the agents when told their names (prompted, 0-1), (3) whether the agents provided information on LP products (0-1), (4) whether the business owner would be willing to lend money to the agent (0-1), (5) whether a business owner who has not yet signed up for a mobile savings product cites "lack of trust in agent" as one reason (0-1), (6) the agent's perceived level of effort in providing information about LP products (1-10, with 10="much effort"), and (7) the agent's perceived competence (1-10, with 10="highly competent"). The results in Table D-3 indicate that higher agent incentives did not significantly affect any of these outcomes. However, the results indicate that  $T_2$  had a significant positive effect on whether women business owners reported knowing the mobile money agent (columns 1 and 2) and whether the agent provided information on the mobile saving product (column 3). The estimated effects of  $T_2$  on knowing the agent (unprompted) are large ( $x_2$ : +0.26;  $x_3$ : +0.29) compared to the adjusted control value of 0.29, while the estimated effects of whether the agent provided information on the mobile saving product ( $x_2$ : +0.06;  $x_3$ : +0.04) are also relatively large compared to the adjusted control value of 0.03.

Table D-4 reports estimates of the effects of  $T_1$  and  $T_2$  on the following intermediate outcomes related to a business owner's demand for MM products: (1) whether the business owner obtained MM services from the agent (0-1), (2) whether a business owner who has not yet signed up for a mobile savings product cites "lack of trust in the bank" as one reason (0-1), (3) perceived popularity of the LP product (1-10, with 10="very popular"), (4) perceived safety of LP product (1-10, with 10="completely safe"), (5) perceived reliability of the LP product (1-10, with 10="completely reliable"), (6) degree of confidence in state-owned banks (1-5, with 5="extremely confident"), (7) degree of confidence in non-state-owned banks (1-5, with 5="extremely confident"), and (8) perceived potential number of LP customers. The results in Table D-4 indicate that higher agent incentives ( $T_1$ ) did not significantly affect any of these outcomes. However, the results indicate that the training and mentoring of female business owners ( $T_2$ ) had a significant positive effect on whether a female business owner obtained MM services from the agent (column 1) and the degree of trust in state-owned banks by female business owners (column 6). However, the estimated effect of  $T_2$  on actual use of MM agent services (column 1) is quite small ( $x_2$ : +0.02;  $x_3$ : +0.01), compared to the adjusted control value of 0.00. The estimated effect of  $T_2$  on trust in state-owned banks is larger ( $x_2$ : +0.07;  $x_3$ : +0.09) but is significant at the 0.10 level. When business owners who had not yet used the agent's services were asked why they had not, the results in Table D-4 (column 2) indicate that neither  $T_1$  nor  $T_2$  had a significant effect on the frequency with which "lack of trust in the bank" was cited as a reason for not signing up.

### **7.3.2 Intra-Household Decision Making and Gender Roles**

Table D-5 reports estimates of the effects of  $T_1$  and  $T_2$  on the following outcomes related to the business owner's role in making household decisions: (1) the business owner alone

decides whether to buy a new appliance (0-1), (2) the business owner alone decides whether to work outside the home (0-1), (3) the business owner alone decides whether to support other family members (0-1), (4) the business owner alone decides whether to save for the future (0-1), and (5) the business owner alone decides whether to sign up for a new banking product (0-1). The results in Table D-5 provide consistent evidence that both higher agent incentives ( $T_1$ ) and the training and mentoring of female business owners ( $T_2$ ) had a significant positive effect in combination on the likelihood that female business owners reported that they are the sole decision-maker in several household decisions. In the case of the decision whether to work outside the home, for example, the estimated positive effect of training/mentoring combined with high agent incentives is equal to 31 percent of the adjusted control value.

Table D-6 reports estimates of the effects of  $T_1$  and  $T_2$  on the following outcomes related to the roles of the business owner's spouse: (1) percent of business earnings known to the spouse (0-100), (2) percent of household expenses financed from the spouse's earnings (0-100), (3) whether the spouse has income (0-1), (4) whether the spouse has asked the business owner for money during the past 12 months (0-1), (5) whether the business owner has sole control over her/his earnings (0-1), (6) whether the business owner has sole control over the spending of some money (0-1), and (7) whether the business owner and spouse have equal say over the spending of the spouse's earnings (0-1).<sup>37</sup> The results in Table D-6 indicate that  $T_1$  and  $T_2$  had a positive effect in combination on whether a female business owner has sole control over her business earnings (column 5). In addition, the results indicate that the training and mentoring of female business owners ( $T_2$ ) had a significant negative effect on the percentage of business earnings known to the spouse (column 1). What is most striking about the results in Table D-6, however, is the sharp gender differences in most outcomes, independent of the treatments (the exception is responses to the statement "Business owner and spouse have equal say over spending of the spouse's earnings"), even with the baseline values of these outcomes specified,<sup>38</sup> suggesting that most of these gender differences (although unrelated to  $T_1$  or  $T_2$ ) increased in magnitude between the baseline and midline.

### 7.3.3 Business Outcomes

Table D-7 reports estimates of the effects of  $T_1$  and  $T_2$  on the following business outcomes: (1) whether the business owner has a second business (0-1), (2) the number of unpaid workers in a typical month in the business owner's primary and second business, (3) the number of paid workers in a typical month in the business owners' primary and second business, (4) the total current value of the business owner's business assets, (5) total average monthly reported profits in the last year in the business owner's primary and second businesses, (6) total average monthly profits in the last year in the business owner's primary and second businesses calculated from reported business revenue and itemized business expenses, and (7) total average monthly business revenue in the last year in the business

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<sup>37</sup> The outcomes related to the spouse (columns 1-4, and column 7) are not reported if the entrepreneur has no spouse (N=232).

<sup>38</sup> All of the baseline values of the spousal roles outcomes were highly significant ( $p=0.000$ , results not shown).

owner's primary and second businesses. The joint tests reported in Table D-7 indicate that neither  $T_1$  nor  $T_2$  had a significant effect on any of the individual business outcomes among female business owners. However, the estimated effects of high agent incentives and training and mentoring of female business owners in combination are positive for the number of paid workers, total business assets, and total reported business profits (columns 3, 4 and 5). The positive estimated combined effect of  $T_1$  and  $T_2$  (+0.05 compared to an adjusted control value of 1.16) is marginally significant ( $p=0.111$ ) for total reported business profits (column 5). The estimated effects of  $T_1$  and  $T_2$  on the number of unpaid workers are uniformly negative among female business owners. Sharp gender differences are again present in four of the outcomes (columns 2-5) even after adjusting for baseline differences, suggesting that these gender differences increased over time (although these increases were not significantly related to  $T_1$  or  $T_2$ ).

### 7.3.4 Saving and Borrowing

Table D-8 reports estimates of the effects of  $T_1$  and  $T_2$  on the following saving and borrowing outcomes: (1) any saving during the past 3 months (0-1), (2) amount of total savings during the past 3 months (including zero savings), (3) ratio of savings in the past 3 months to total average monthly profit during the past year, (4) total current savings balance, (5) any borrowing during the past 3 months (0-1), (6) amount borrowed during the past 3 months, and (7) amount of currently outstanding loans. The joint tests in Table D-8 indicate that  $T_1$  had a marginally significant positive effect on the reporting of any saving during the past three months (column 1). However, the positive estimated effect of  $T_1$  is mainly present among male business owners (i.e., the estimated marginal effect of  $x_5$  minus the estimated marginal effect of  $x_4$ ), as indicated by rejection of the joint test for equality between female and male business owners in the effect of  $T_1$ .  $T_1$  and  $T_2$  in combination had a large but only marginally significant positive effect on current savings balances (column 4), i.e., +0.25 compared to an adjusted control value of 2.13. It is also noteworthy that the effects of  $T_2$  on all four savings outcomes in Table D-8 are positive. Lastly, neither  $T_1$  nor  $T_2$  had any significant effects on any of the borrowing outcomes (columns 5-7).

Tables D-9 to D-11 report estimates of possible effects of the treatments on saving by source (i.e., in formal bank accounts, in e-savings products, savings at home, savings in a ROSCA, savings in the form of real assets, or savings in other forms).<sup>39</sup> The results in Table D-9 (columns 1 and 2) indicate that both  $T_1$  and  $T_2$  had positive effects on any formal savings and on any e-savings for women during the past three months as well as on the corresponding savings indicators in Tables D-10 and D-11. Although the estimated positive effects of  $T_2$  on e-savings (column 2) are individually statistically significant, they are not jointly significant at conventional levels ( $p=0.244$ ).  $T_1$  and  $T_2$  in combination had a marginally significant negative effect on any savings in real assets (column 5), suggesting that

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<sup>39</sup> Other forms of savings include informal saving networks, BMTs (Islamic financial institution), saving with other household members and all other forms of saving.

at least some of the reduction in any women's savings in real assets may have been re-channeled into e-savings.

The results in Tables D-10 and D-11 indicate that  $T_1$  and  $T_2$  in combination had a significant positive effect among female business owners on both the amount of savings at home during the past 3 months (Table D-10) and on the value of current savings balances at home (Table D-11).<sup>40</sup> In addition,  $T_2$  had a significant positive effect among female business owners both on the level of savings during the past 3 months in ROSCAs (Table D-10) and on the value of current savings balances in ROSCAs (Table D-11). In addition, the results in Table D-11 (column 2) indicate that  $T_1$  and  $T_2$  in combination had a significant positive effect on the value of women's current e-savings balances.

Tables D-12 to D-14 report estimates of possible effects of the treatments on borrowing by source (i.e., from a formal bank, from friends and family, from a cooperative, from a BMT, and from other sources).<sup>41</sup> The results in Tables D-12 and D-13 (column 1) indicate that  $T_1$  had a significant positive effect on reported borrowing from a bank among female business owners. None of the other borrowing outcomes were significantly affected by either  $T_1$  or  $T_2$ .

### 7.3.5 General Welfare

Table D-15 presents estimates of the effects of  $T_1$  and  $T_2$  on the following outcomes of business owners' general welfare: (1) whether they have a bank account in their name, (2) an index of their overall happiness (1-5, with 5="very happy"), (3) an index of satisfaction with their current jobs (1-5, with 5="very satisfied"), (4) an index of assertiveness (i.e., the sum of responses indicating degree of comfort while engaging in six potentially stressful activities, with the responses ranging from 1 to 5, with 5="yes, very comfortable"), (5) an index of positive attitudes (i.e., the sum of responses indicating degree of agreement with 10 statements relating to traits of persistence, determination and organization, with the responses ranging in value from 1 to 5, with 5="strongly agree"), (6) reported per capita total household income in the last month,<sup>42</sup> and (7) a household asset index.<sup>43</sup> The results in Table D-15 indicate that both  $T_1$  and  $T_2$  had generally positive effects on all these outcomes among female business owners (19 of the 21 estimated effects are positive, including 11 that are statistically significant).  $T_1$  and  $T_2$  in combination had a statistically significant estimated effect of +0.10 on job satisfaction (compared to an adjusted control values of 0.531) among female business owners (column 3). The positive effects of  $T_2$  on the assertiveness index and

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<sup>40</sup> The results in both Tables D-10 and D-11 indicate that  $T_1$  also had significant positive effects on both of these outcomes among male business owners.

<sup>41</sup> BMT's are Islamic financial institutions. However, no information was collected on the composition of other sources of loans.

<sup>42</sup> In cases where the entrepreneur could not provide a single estimate of household income (N=154) but was able to provide a low and high estimate (N=37), household income was assumed to be the average of the two.

<sup>43</sup> The household asset index is the first principal component of the *number* of 20 consumer durables owned by the household. The baseline household asset index is the first principal component of 0-1 indicators of the ownership of the same 20 consumer durables and of housing characteristics (no data on housing characteristics were collected in the Midline Survey).

the positive attitude index among female business owners are also jointly significant ( $p=0.031$  and  $p=0.025$  respectively).  $T_1$  and  $T_2$  in combination had a statistically significant estimated positive effect on household total income per capita of +0.03 among female business owners (compared to an adjusted control value of 0.407). Lastly, both  $T_1$  and  $T_2$  had strongly positive and highly significant effects on the household asset index (e.g., +0.24 in combination, compared to an adjusted control value of -0.23 and a standard deviation of 1.47).

## **8. Discussion**

The task of identifying and “fielding” 400 agents took far longer than expected. Consequently, more than half of the agents in the midline sample had been in their jobs for less than six months at the time of the Midline Survey. In addition, the monitoring reports from agent mentoring visits indicate that there were many technical and logistical problems involved in establishing branchless banking services in the sample villages (although the monitoring data also indicate that rapid progress was being made toward reducing most of these problems). Though similarly delayed, the demand-side interventions were successfully implemented. Participation in the business owner training and mentoring was above 90 percent (with a completion rate of 80 percent). Analysis of the midline data indicates that the demand-side treatment, particularly in combination with the supply-side treatment, positively and significantly affected key intermediate outcomes among female business owners, including knowledge of mobile money, knowledge of the participating bank’s mobile products, provision of product information by agents, knowledge of the identity of the mobile banking agent, use of mobile phones for banking, and initial uptake of the basic mobile savings account. Differences in these outcomes between those who received the demand-side treatment and those who did not (including male business owners) are quite sharp, suggesting that possible spillover effects between women business owners who received training/mentoring and those who did not receive it were not present at midline.

The report also finds evidence that both the demand-side and supply-side treatments, particularly in combination, had a uniformly positive estimated effect on total savings for women that was largest and statistically significant (+0.25, compared to an adjusted control value of 2.13) in the case of the total current savings balance. The report also finds consistent evidence of a positive and statistically significant effect of the demand- and supply-side treatments in combination on women’s e-savings. However, the estimated effects on e-savings are too small to account alone for the large estimated effect on the total current savings balance. Instead, the results suggest that women business owners increased their savings mainly in formal savings accounts, ROSCAs and real assets.

The report also finds consistent evidence of positive effects of both demand-side and supply-side treatments, particularly in combination, on female empowerment. For example, the results show consistently positive and significant effects of the demand-side and supply-side treatments in combination on the likelihood that a female business owner is the sole decision maker in decisions about work outside the home, whether to support other family members, whether to save for the future or whether to sign up for a new banking product. The analysis also finds significant positive effects of the demand-side treatment on women

business owner’s self-confidence, as measured by indices of women business owners’ assertiveness and positive attitudes.

Further downstream, the report finds evidence of significant positive effects of the demand- and supply-side treatments in combination on both women’s household total income per capita (+0.03 compared to an adjusted control value of 0.41 and a standard deviation of 0.24) and more strongly on the household asset index (ranging from +0.20 to +0.24, compared to an adjusted control value of -0.23 and a standard deviation of 1.47). Total household income is based on a single question and is therefore unlikely to yield reliable data in a predominantly rural setting.<sup>44</sup> However, the household asset index is usually considered to be a robust measure of household welfare. The midline household asset index is the first principal component of the number of twenty different household durables owned by the household.<sup>45</sup> The data in Table 6 indicate that ownership of most items (shaded) follows a similar pattern among female business owners as the overall index in Table D-15 (column 7).

**Table 6. Mean numbers of household durable items owned by households by treatment category at midline**

Item	Factor loading <sup>a</sup>	Female, untreated with low agent incentives	Female, untreated with high agent incentives	Female, treated with low agent incentives	Female, treated with high agent incentives	Male, untreated with low agent incentives	Male, untreated with high agent incentives
<i>TV</i>	0.143	0.973	0.993	0.985	0.986	0.978	0.978
<i>DVD and similar</i>	0.216	0.573	0.629	0.630	0.620	0.607	0.607
<i>TV satellite dish</i>	0.252	0.120	0.235	0.168	0.219	0.246	0.246
Microwave oven	0.199	0.033	0.044	0.024	0.036	0.033	0.033
<i>Refrigerator</i>	0.292	0.653	0.743	0.684	0.712	0.685	0.685
Gas cylinder	0.116	0.960	0.974	0.951	0.961	0.954	0.954
Washing machine	0.366	0.337	0.368	0.331	0.313	0.337	0.337
<i>Air conditioner</i>	0.208	0.013	0.026	0.022	0.022	0.015	0.015
Telephone	0.091	0.003	0.000	0.002	0.000	0.000	0.000
Simple cell phone	-0.077	0.850	0.842	0.859	0.848	0.843	0.843
<i>Smart cell phone</i>	0.276	0.803	0.816	0.818	0.853	0.846	0.846
<i>Computer/ laptop</i>	0.356	0.230	0.210	0.246	0.285	0.278	0.278
<i>Tablet</i>	0.188	0.197	0.199	0.217	0.216	0.198	0.198
<i>Handycam/ camera</i>	0.264	0.040	0.070	0.044	0.064	0.065	0.065
<i>Water heater</i>	0.118	0.007	0.011	0.012	0.011	0.017	0.017
Electric pump	0.149	0.683	0.632	0.725	0.648	0.709	0.709
Generator	0.216	0.060	0.059	0.039	0.064	0.072	0.072
<i>Car</i>	0.351	0.110	0.143	0.117	0.144	0.139	0.139
Boat/motor boat	0.049	0.013	0.000	0.002	0.003	0.002	0.002
<i>Motorcycle</i>	0.154	0.923	0.923	0.937	0.950	0.902	0.902

<sup>a</sup> Factor loadings refer to the correlation coefficient between the index and the individual durable items.

<sup>44</sup> No baseline value for total household income per capita is available. The top 2 percent of values of the household income variable were winsorized and that the variable was converted to inverse hyperbolic sine values.

<sup>45</sup> The household asset index was also winsorized (top and bottom 2 percent of values). In addition, the baseline value was based on several additional housing characteristics for which data were not collected in the Midline Survey.

These results could be explained by a causal chain running from the treatments (i.e., training and mentoring of female business owners and higher agent incentives) to increased knowledge and improved business practices among female business owners and to improved performance of MM agents, leading in turn to increased saving and profitability of the female-owned businesses and ultimately to enhanced female empowerment and increased household incomes and assets. However, the analysis finds only weak support for a positive effect of the treatments on the profitability of female-owned businesses.<sup>46</sup> Although the combined effects of the training and mentoring and higher agent incentives had modest positive effects on the number of paid workers, the total value of business assets and reported profits, the estimated effects are not statistically significant. However, a direct causal link between increased saving and household assets, rather than an indirect effect mediated by increased business profits, may explain the strong positive effect of the treatments on women's household assets. Many sample business owners report that they accumulate household assets as a way of saving for emergencies.<sup>47</sup> The increased savings resulting from the treatments may have enabled some households to avoid having to sell assets to meet emergencies. The changes in female empowerment may also be directly linked to the reported increases in saving.

It is tempting to conclude that the reinforcing role of the supply-side treatments in these results was due to agents being motivated to target traditionally under-served female clients with more information and attention. However, the evidence in support of this interpretation is mixed. Although women business owners receiving training/mentoring were more likely to know about mobile money and the two mobile money products (LKD and LP) in villages with high agent incentives (Table D-2, columns 1-3), they did not report a higher perceived level of effort by agents to provide information about LP (Table D-3, column 6). Agents themselves receiving higher incentives were not more likely to report that they visited households to promote LP (Table C-2, column 4), that they worked more hours per day as agents (Table C-3, column 2), that their customers had opened more LP accounts either in total or during the past month (Table C-5, columns 2 and 4) or even that their earnings as agents were higher (Table C-6, column 1). However, many of the agents surveyed at midline had only been in their jobs for a few months and faced numerous technical and logistical problems initially with the branchless banking services.

## 9. Conclusions

At the time the Midline Survey data on which this report is based were collected both the supply-side and demand-side treatments had only recently been completed in many of the villages included in the midline sample, and the process of resolving technical and logistical constraints on the supply side was still a work in progress. Moreover, uptake of a new

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<sup>46</sup> Unfortunately, no data were collected on business practices in the Midline Survey, so no evidence is available on the effects of the treatments on this important intermediate outcome.

<sup>47</sup> Thirteen percent of respondents in the Baseline Survey cited "acquiring assets for sale" as a primary way of saving for emergencies, exceeded only by "using a hiding place at home" (26 percent) and by saving in a "formal bank account" (17 percent).



product such as mobile banking in a rural setting would be expected to require some time. Accordingly, it is appropriate to view the findings in this report as preliminary.

Subject to this qualification, the analysis and monitoring data indicate that the demand-side interventions were effectively implemented and that, though nested within villages, there is no evidence at midline of a spillover effect from women business owners who were treated to those in the same village who were not. The analysis of the business owner data finds consistent evidence of short-term effects on key intermediate outcomes, particularly when demand-side treatments (training/mentoring of women business owners) were combined with supply-side treatments (high agent incentives). The analysis also finds consistent evidence of the combined positive effects of demand and supply-side treatments on business owners' reported savings, on female empowerment in household decision making and in measures of self-confidence, and on household asset ownership. Although the report finds only weak evidence of positive effects of the treatments on key business outcomes, including the number of paid workers, the total value of business assets, total business profits and total business revenue, the strong downstream effects on female empowerment and household assets may be directly linked to the observed increases in savings. However, the mechanisms by which these effects were produced as well as whether or not they are likely to endure over time is unclear at this time and can only be more thoroughly understood after the planned endline data have been analyzed.

One important issue which this report does not address is the trial's external validity. First, the considerable time and resources required to recruit the agents and to develop the necessary bank support systems suggests that the treatments, even if found to be ultimately effective, could not be easily rolled out on a broader scale. Second, the villages participating in the trial were not randomly selected. The trial villages are instead those in which it was possible, after considerable effort, to identify agents meeting the bank's criteria as well as some special criteria imposed by the impact evaluation (e.g., that to the extent possible, the village should not have any competing branchless banking agents). Under these circumstances, it might be problematic to infer from this trial the likely effects of a rollout of the same interventions to a representative sample of rural Indonesian villages.

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## Annex A. Monitoring Data

**Table A-1. Agent training and mentoring**

	Training	Mentoring I	Mentoring II	Mentoring III
Batch 1 (March to December 2017)	100	99	96	95
Batch 2 (October 2017 to March 2018)	283	282	281	281
Batch 3 (April to May 2018)	17	17	16	15
Totals	400	398	393	391
% of total (N=400)	100.0	99.3	98.0	97.5

Source: MCI monitoring reports

**Table A-2. Agents' reported problems using mobile banking website by mentoring visit**

	Mentoring I	Mentoring II	Mentoring III
Unstable internet coverage	125	95	89
Cannot access LKD service upgrade	106	69	63
Website slow when accessed by phone	72	64	51
Website unstable	55	49	39
Website inaccessible	54	42	23
Problems processing cash in transactions	52	32	12
Problems logging in	32	15	8
Problems processing cash out transactions	30	9	3
Other problems	18	20	15
Totals	544	395	303
Number of agents reporting	398	393	391

Source: MCI monitoring reports

**Table A-3. Website functions not yet mastered by agents by mentoring visit**

	Mentoring I	Mentoring II	Mentoring III
Website login	17	9	9
LKD service upgrade	41	22	15
Cash deposit	9	9	10
Cash withdrawal	24	21	22
Agent profile	31	19	11
Clients update	65	32	20
Agent transactions record	35	19	20
Agent report	71	42	13
Agent password change	72	50	13
Deposit settlement	86	39	25
Search for registered clients	61	42	19
Totals	512	304	177
Number of agents reporting	398	393	391

Source: MCI monitoring reports

**Table A-4. Agents' reported challenges in marketing the mobile products by mentoring visit**

	Mentoring I	Mentoring II	Mentoring III
Unstable website	72	52	41
Failed transaction	30	25	19
No flyers/brochures	139	134	118
Absence of product branding	231	212	193
Low awareness of the importance of saving	83	100	89
Limited time and financial capacity	68	67	68
Preference for another bank	100	107	101
Lack of trust in products	127	106	98
Lack of familiarity with products	149	148	128
Other challenges	11	7	6
Totals	1010	958	861
Number of agents reporting	398	393	391

Source: MCI monitoring reports

**Table A-5. Client complaints reported to agents by mentoring visit**

	Mentoring I	Mentoring II	Mentoring III
Cannot upgrade LKD service	59	39	35
Registration process too long	27	21	17
Not received yet SMS banking software	24	26	30
Forgot PIN	6	4	3
Poor system performance lengthens transaction time	43	26	30
Transactions require a lot of phone credits	22	35	25
Fee for cash out is expensive	12	15	12
Not yet received brochure	63	67	66
Other client complaints	3	4	4
Totals	259	237	222
Number of agents reporting	398	393	391

Source: MCI monitoring reports

**Table A-6. Number of clients and transactions reported by agents during mentoring visits**

	Mentoring I	Mentoring II	Mentoring III
All clients			
Number of registered clients, LKD	317	454	549
Number of clients with cash-in transactions, LKD	180	223	266
Number of cash-in transactions, LKD	250	304	400
Number of clients with cash-out transactions, LKD	166	190	203
Number of cash-out transactions, LKD	247	264	278
Number of registered clients, LP	142	284	419
Number of clients with cash-in transactions, LP	180	223	128
Number of cash-in transactions, LP	40	274	376
Number of clients with cash-out transactions, LP	13	12	21
Number of cash-out transactions, LP	18	17	28
Female business owners			
Number of registered clients, LKD	37	48	400
Number of clients with cash-in transactions, LKD	27	38	58
Number of clients with cash-out transactions, LKD	18	24	36
Number of registered clients, LP	18	56	110
Number of clients with cash-in transactions, LP	8	23	57
Number of clients with cash-out transactions, LP	3	0	10

Source: MCI monitoring reports

## Annex B. Baseline data

Table B-1. Sample means and standard deviations (in parentheses) of baseline business owner characteristics by sex

	Total sample	Sample size	Female business owners	Male business owners
Female business owner	0.591 (0.492)	4,828	1.000 (0.000)	0.000 (0.000)
Age	38.300 (8.060)	4,828	37.560 (7.823)	39.368 (8.277)
Highest completed level of schooling (0-4)	2.234 (0.888)	4,828	2.189 (0.875)	2.299 (0.904)
Willing to take risks	4.322 (2.598)	4,817	3.993 (2.419)	4.797 (2.769)
Index of cognitive ability (0-4)	3.082 (0.881)	4,828	3.066 (0.868)	3.105 (0.900)
Currently married	0.908 (0.289)	4,828	0.913 (0.282)	0.901 (0.298)
Number of children	1.466 (0.897)	4,828	1.506 (0.869)	1.409 (0.934)
Household size	4.292 (1.430)	4,825	4.273 (1.425)	4.319 (1.437)
Urban resident	0.117 (0.321)	4,828	0.116 (0.320)	0.118 (0.323)
Household head	0.397 (0.489)	4,828	0.075 (0.264)	0.862 (0.345)
Household asset index <sup>a</sup>	-0.000 (1.836)	4,822	0.049 (1.786)	-0.071 (1.904)
Has smart phone	0.400 (0.490)	4,827	0.369 (0.483)	0.445 (0.497)
Uses phone to access internet	0.285 (0.451)	4,828	0.229 (0.420)	0.366 (0.482)
Uses phone for banking	0.048 (0.214)	4,828	0.034 (0.182)	0.068 (0.251)
Days of partial cell phone coverage	1.057 (2.020)	4,824	1.095 (2.026)	1.003 (2.010)
Days no cell phone coverage	0.207 (0.900)	4,828	0.207 (0.910)	0.206 (0.886)
Knows bank's mobile agent	0.595 (0.491)	4,828	0.592 (0.492)	0.600 (0.490)
Any voluntary activities in past 12 months	0.160 (0.367)	4,824	0.131 (0.337)	0.202 (0.402)
Trust in state-owned banks (1-5)	3.923 (1.251)	4,828	3.933 (1.209)	3.909 (1.308)
Trust in nonstate-owned banks (1-5)	3.207 (1.349)	4,828	3.249 (1.315)	3.147 (1.394)
Has bank account registered in own name	0.532 (0.499)	4,826	0.476 (0.500)	0.613 (0.487)
Knows about mobile money	0.079 (0.270)	4,827	0.074 (0.261)	0.087 (0.282)
Safety of bank's mobile savings product (1-10)	6.556 (2.628)	4,815	6.536 (2.641)	6.583 (2.608)
Reliability of bank's mobile savings product (1-10)	6.507 (2.492)	4,815	6.550 (2.507)	6.444 (2.470)
Agent's competence (1-10)	7.194 (2.162)	4,813	7.309 (2.125)	7.030 (2.205)
Primary business registered	0.131 (0.338)	4,825	0.107 (0.310)	0.166 (0.372)
Primary business started more than 5 years ago	0.612	4,825	0.596	0.636

	Total sample	Sample size	Female business owners	Male business owners
	(0.487)		(0.491)	(0.481)
Years worked in primary business	8.255	4,825	8.098	8.481
	(7.231)		(7.210)	(7.257)
Number of unpaid workers in primary business in a typical month	2.025	4,825	2.130	1.872
	(1.152)		(1.317)	(0.838)
Number of paid workers in primary business in a typical month	0.436	4,825	0.192	0.788
	(1.952)		(1.211)	(2.642)
Number of customers in primary business in a typical month	251.834	4,819	220.961	296.407
	(562.176)		(452.381)	(688.246)
Average monthly profit in primary business during past year (Rp. millions)	2.059	4,804	1.550	2.792
	(3.959)		(3.014)	(4.926)
Index of adherence to recommended business practices (0-8)	2.091	4,820	2.015	2.201
	(1.442)		(1.363)	(1.541)
Has second business	0.170	4,824	0.156	0.191
	(0.376)		(0.362)	(0.393)
Total average monthly earnings from all sources during past year (Rp. millions)	2.784	4,802	1.913	4.039
	(5.126)		(3.290)	(6.775)
Value of total business assets (Rp. millions)	36.924	4,822	20.897	60.028
	(124.781)		(72.004)	(172.183)
Any savings in last 12 months	0.778	4,826	0.837	0.692
	(0.416)		(0.369)	(0.462)
Total savings in last 12 months (Rp. millions)	8.104	4,814	6.093	10.998
	(29.038)		(13.236)	(42.316)
Any money borrowed in last 12 months	0.308	4,826	0.234	0.415
	(0.462)		(0.424)	(0.493)
Index of business owner's intra-household decision-making power (0-5)	1.983	4,820	2.014	1.939
	(1.824)		(1.847)	(1.789)
Spouse is present in household	0.908	4,820	0.913	0.901
	(0.289)		(0.282)	(0.298)
Other person is involved in deciding how to spend business earnings	0.350	4,820	0.290	0.438
	(0.477)		(0.454)	(0.496)
Has sole control over some money	0.472	4,820	0.500	0.431
	(0.499)		(0.500)	(0.495)
N	4,828		2,852	1,976

Note: The indicators in this table have their reported values (i.e., no winsorization or inverse hyperbolic sine transformations)

<sup>a</sup> First principal component of a large number of indicators of housing characteristics and consumer durable ownership.



**Table B-2. Sample means and standard deviations (in parentheses) of baseline agent characteristics by sex**

	Total sample	Sample size	Female agents	Male agents
Female agent	0.472 (0.500)	475	1.000 (0.000)	0.000 (0.000)
Age	34.966 (9.013)	475	33.143 (8.612)	36.594 (9.068)
Highest level of schooling completed (1-4)	3.164 (0.786)	475	3.143 (0.808)	3.183 (0.768)
Index of cognitive ability (0-4)	3.116 (0.848)	475	3.112 (0.889)	3.120 (0.811)
Currently married	0.888 (0.315)	475	0.902 (0.298)	0.876 (0.330)
Household size	4.415 (1.408)	475	4.455 (1.388)	4.378 (1.427)
Urban resident	0.114 (0.318)	475	0.112 (0.316)	0.116 (0.320)
Owens smart phone	2.164 (0.632)	475	2.174 (0.607)	2.155 (0.654)
Uses phone to access the internet	0.798 (0.402)	475	0.817 (0.388)	0.781 (0.414)
Uses phone for banking	0.221 (0.415)	475	0.152 (0.360)	0.283 (0.451)
Number of minutes using phone on typical day	220.200 (216.704)	475	168.098 (166.335)	266.697 (244.449)
Number of days per week phone has partial coverage	0.897 (1.845)	474	1.090 (1.934)	0.725 (1.748)
Has laptop computer	0.509 (0.500)	475	0.455 (0.499)	0.558 (0.498)
Has internet access at workplace	0.229 (0.421)	475	0.170 (0.376)	0.283 (0.451)
Has store	0.787 (0.410)	475	0.772 (0.420)	0.801 (0.400)
Lowest monthly earnings to be satisfied with agent job (Rp. millions)	0.665 (2.450)	469	0.647 (3.350)	0.682 (1.120)
Agent's expected performance in agent job (1-10)	6.886 (1.714)	474	6.821 (1.669)	6.944 (1.755)
Safety of bank's mobile savings product (1-10)	3.084 (2.282)	474	3.063 (2.154)	3.104 (2.394)
Reliability of bank's mobile savings product (1-10)	7.198 (1.841)	474	7.192 (1.790)	7.204 (1.889)
No need for spouse to work if husband is working (1-5)	2.318 (1.003)	475	2.049 (0.799)	2.558 (1.103)
Preference for female boss (1-5)	2.362 (0.911)	475	2.487 (0.980)	2.251 (0.832)
Agent sees self as caring (1-7)	5.867 (1.305)	475	5.817 (1.227)	5.912 (1.371)
Agent sees self as generous (1-7)	5.533 (1.392)	475	5.549 (1.304)	5.518 (1.468)
Agent sees self as helpful	5.581 (1.276)	475	5.473 (1.288)	5.677 (1.260)
Has bank account in own name	0.931 (0.255)	475	0.866 (0.341)	0.988 (0.109)
Distance to nearest bank branch more than 5 kilometers	0.299 (0.458)	475	0.326 (0.470)	0.275 (0.447)
Any saving during past 12 months	0.817 (0.387)	475	0.821 (0.384)	0.813 (0.391)
Total savings in last 12 months (Rp. millions)	19.484 (44.155)	475	13.035 (27.611)	25.340 (54.363)

	Total sample	Sample size	Female agents	Male agents
Ever borrowed money	0.699 (0.459)	475	0.621 (0.486)	0.769 (0.422)
Number of currently outstanding loans	0.893 (0.846)	475	0.772 (0.796)	1.000 (0.876)
Any idle money	0.832 (0.375)	475	0.795 (0.405)	0.865 (0.343)
Amount of idle money (Rp. millions)	6.648 (13.918)	476	3.521 (7.057)	9.465 (17.514)
Has second business	0.265 (0.442)	475	0.254 (0.437)	0.275 (0.447)
Primary business registered	0.468 (0.500)	468	0.402 (0.491)	0.526 (0.500)
Primary business started more than 5 years ago	0.643 (0.480)	468	0.594 (0.492)	0.687 (0.465)
Number of hours worked in primary business on typical day	7.094 (3.755)	468	7.160 (3.720)	7.036 (3.792)
Number of unpaid workers in primary business in typical month	2.438 (1.073)	468	2.434 (1.009)	2.442 (1.128)
Number of paid workers in primary business in typical month	0.908 (2.113)	468	0.680 (1.642)	1.108 (2.440)
Number of customers in primary business in typical month	320.261 (635.142)	468	258.315 (388.443)	374.743 (787.804)
Percent female customers	49.962 (27.190)	468	55.890 (28.336)	44.748 (25.061)
Average monthly revenue in primary business (Rp. millions)	25.665 (108.922)	415	13.374 (29.036)	36.773 (147.010)
Total value of business assets (Rp. millions)	144.524 (299.970)	461	93.921 (208.477)	189.528 (356.907)
Household asset index <sup>a</sup>	-0.000 (1.783)	475	0.111 (1.793)	-0.099 (1.772)
Any voluntary activities in past 12 months	0.312 (0.464)	475	0.219 (0.414)	0.394 (0.490)
Motivation index (8-80)	24.772 (4.039)	474	24.254 (4.306)	25.236 (3.733)
Index of prosocial attitudes (12-84)	78.718 (7.384)	475	77.938 (8.183)	79.414 (6.528)
	475		224	251

Note: The indicators in this table have their reported values (i.e., no winsorization or inverse hyperbolic sine transformations)

<sup>a</sup> First principal component of a large number of indicators of housing characteristics and consumer durable ownership

**Table B-3. Assessment of balance in the random assignments of business owners to treatments: simple regressions of both randomized treatments on individual business owner covariates (t-statistics in parentheses)**

	Dependent variable: female business owner treatment (training/mentoring)			Dependent variable: agent treatment (high incentives)		
	Total sample	Midline sample	Non-midline sample	Total sample	Midline sample	Non-midline sample
	(1)	(2)	(3)	(4)	(5)	(6)
Female business owner				0.004 (0.97)	0.000 (1.00)	0.007 (0.83)
Age	-0.130 (-0.44)	-0.105 (-0.25)	-0.149 (-0.36)	-0.320 (-1.20)	-0.069 (-0.18)	-0.596 (-1.58)
Highest completed level of schooling (0-4)	-0.039 (-1.17)	-0.016 (-0.34)	-0.054 (-1.20)	-0.008 (-0.24)	-0.019 (-0.41)	-0.014 (-0.35)
Willing to take risks	-0.061 (-0.67)	-0.092 (-0.70)	-0.028 (-0.22)	-0.137 (-1.70)	-0.211 (-1.81)	-0.071 (-0.65)
Index of cognitive ability (0-4)	0.004 (0.12)	0.043 (0.95)	-0.030 (-0.68)	0.033 (0.99)	0.061 (1.44)	-0.005 (-0.10)
Currently married	-0.004 (-0.35)	-0.016 (-1.08)	0.008 (0.54)	-0.010 (-1.19)	0.002 (0.15)	-0.023 (-1.88)
Number of children	-0.003 (-0.10)	-0.045 (-1.03)	0.040 (0.82)	0.002 (0.08)	0.016 (0.42)	-0.020 (-0.48)
Household size	0.018 (0.34)	-0.015 (-0.21)	0.059 (0.73)	0.044 (0.92)	0.065 (1.29)	-0.004 (-0.06)
Urban resident	0.002 (0.15)	-0.001 (-0.07)	0.004 (0.27)	-0.070 (-2.21)*	-0.055 (-1.20)	-0.084 (-1.91)
Household head	-0.002 (-0.19)	0.003 (0.20)	-0.007 (-0.50)	-0.016 (-1.59)	-0.008 (-0.61)	-0.021 (-1.51)
Household asset index <sup>3</sup>	-0.041 (-0.61)	-0.063 (-0.63)	-0.003 (-0.03)	0.043 (0.50)	0.013 (0.12)	0.023 (0.20)
Has smart phone	-0.005 (-0.27)	-0.002 (-0.09)	-0.007 (-0.27)	0.016 (1.05)	0.012 (0.54)	0.019 (0.90)
Uses phone to access internet	-0.004 (-0.22)	0.017 (0.78)	-0.023 (-1.01)	0.002 (0.12)	-0.004 (-0.19)	0.006 (0.29)
Uses phone for banking	0.014 (2.01)*	0.023 (2.35)*	0.005 (0.49)	-0.008 (-1.19)	-0.015 (-1.52)	0.000 (0.02)
Days of partial cell phone coverage	-0.035 (-0.46)	-0.012 (-0.10)	-0.072 (-0.75)	-0.089 (-0.95)	-0.260 (-1.81)	0.112 (1.01)
Days no cell phone coverage	0.014 (0.41)	0.069 (1.39)	-0.039 (-0.81)	0.025 (0.90)	-0.025 (-0.58)	0.077 (2.12)*
Knows bank's mobile agent	-0.016 (-0.88)	0.003 (0.10)	-0.034 (-1.32)	0.036 (1.34)	0.025 (0.62)	0.048 (1.28)
Any voluntary activities in past 12 months	0.003 (0.23)	0.017 (1.01)	-0.010 (-0.55)	0.020 (1.63)	0.005 (0.26)	0.033 (1.93)
Trust in state-owned banks (1-5)	-0.006 (-0.14)	0.026 (0.39)	-0.037 (-0.59)	0.022 (0.44)	0.012 (0.18)	0.032 (0.43)
Trust in nonstate-owned banks (1-5)	0.036 (0.72)	0.026 (0.35)	0.047 (0.69)	-0.021 (-0.43)	-0.004 (-0.05)	-0.039 (-0.55)
Has bank account registered in own name	-0.015 (-0.78)	-0.029 (-1.06)	-0.002 (-0.06)	0.028 (1.82)	0.056 (2.57)*	0.000 (0.02)
Knows about mobile money	0.011 (1.08)	0.028 (2.05)*	-0.005 (-0.35)	0.012 (1.37)	0.006 (0.56)	0.017 (1.18)
Safety of bank's mobile savings product (1-10)	-0.046 (-0.46)	-0.178 (-1.24)	0.070 (0.50)	-0.043 (-0.52)	0.031 (0.26)	-0.091 (-0.78)
Reliability of bank's mobile savings product (1-10)	-0.065 (-0.68)	-0.026 (-0.19)	-0.111 (-0.84)	-0.043 (-0.54)	-0.014 (-0.13)	-0.049 (-0.43)
Agent's competence (1-10)	0.033 (0.41)	0.029 (0.25)	0.033 (0.29)	-0.045 (-0.65)	-0.010 (-0.10)	-0.073 (-0.73)
Primary business registered	-0.005	-0.016	0.006	-0.020	-0.036	-0.002

	Dependent variable: female business owner treatment (training/mentoring)			Dependent variable: agent treatment (high incentives)		
	Total sample	Midline sample	Non-midline sample	Total sample	Midline sample	Non-midline sample
	(-0.39)	(-0.93)	(0.39)	(-1.89)	(-2.26)*	(-0.15)
Primary business started more than 5 years ago	-0.013	-0.012	-0.012	0.025	0.060	-0.012
	(-0.69)	(-0.46)	(-0.48)	(1.66)	(2.77)**	(-0.56)
Years worked in primary business	0.140	0.223	0.060	0.249	0.432	0.066
	(0.51)	(0.56)	(0.16)	(1.11)	(1.29)	(0.22)
Number of unpaid workers in primary business in a typical month	0.047	0.022	0.069	0.024	-0.006	0.056
	(0.94)	(0.28)	(1.12)	(0.70)	(-0.12)	(1.29)
Number of paid workers in primary business in a typical month	0.038	0.017	0.057	0.018	-0.032	0.074
	(0.84)	(0.33)	(0.77)	(0.31)	(-0.42)	(0.84)
Number of customers in primary business in a typical month	12.681	29.725	-8.115	-56.440	-78.997	-22.713
	(0.74)	(1.01)	(-0.48)	(-1.99)*	(-1.74)	(-0.75)
Average monthly profit in primary business during past year (Rp. millions)	0.027	-0.094	0.149	-0.162	-0.216	-0.122
	(0.23)	(-0.77)	(0.78)	(-1.34)	(-1.18)	(-0.79)
Index of adherence to recommended business practices (0-8)	0.027	-0.046	0.095	-0.041	-0.087	0.011
	(0.52)	(-0.60)	(1.37)	(-0.92)	(-1.35)	(0.18)
Has second business	0.002	-0.010	0.013	0.005	-0.006	0.016
	(0.11)	(-0.52)	(0.66)	(0.46)	(-0.36)	(0.94)
Total average monthly earnings from all sources during past year (Rp. millions)	-0.007	-0.184	0.169	-0.162	-0.267	-0.072
	(-0.05)	(-1.27)	(0.84)	(-1.07)	(-1.19)	(-0.36)
Value of total business assets (Rp. millions)	-1.450	1.121	-4.136	-0.197	-1.357	1.224
	(-0.53)	(0.25)	(-1.32)	(-0.05)	(-0.24)	(0.20)
Any savings in last 12 months	0.026	0.017	0.035	0.001	-0.007	0.008
	(1.87)	(0.83)	(1.83)	(0.10)	(-0.33)	(0.42)
Total savings in last 12 months (Rp. millions)	0.323	-0.190	0.782	-1.586	-2.491	-0.634
	(0.64)	(-0.24)	(1.29)	(-1.86)	(-1.88)	(-0.61)
Any money borrowed in last 12 months	-0.024	-0.041	-0.007	0.030	0.033	0.026
	(-1.47)	(-1.78)	(-0.32)	(2.14)*	(1.65)	(1.34)
Index of business owner's intra-household decision-making power (0-5)	-0.047	-0.001	-0.093	0.206	0.012	0.405
	(-0.67)	(-0.01)	(-0.95)	(2.96)**	(0.13)	(4.05)**
Spouse is present	-0.004	-0.016	0.008	-0.010	0.002	-0.023
	(-0.35)	(-1.08)	(0.54)	(-1.20)	(0.15)	(-1.89)
Other person is involved in deciding how to spend business earnings	0.005	-0.008	0.018	-0.002	0.012	-0.017
	(0.29)	(-0.31)	(0.72)	(-0.13)	(0.56)	(-0.80)
Business owner has sole control over some money	-0.021	-0.030	-0.013	0.030	0.042	0.020
	(-1.10)	(-1.12)	(-0.48)	(1.77)	(1.71)	(0.86)
N	2,840	1,398	1,442	4,828	2,399	2,429
Tests of statistical significance:						
Number of estimates	42	42	42	43	43	43
Number of significant estimates (0.05)	1	2	0	4	3	2
p	0.628	0.351	0.884	0.062	0.167	0.365
Number of significant estimates (0.01)	0	0	0	1	1	1
p	0.334	0.334	0.334	0.069	0.069	0.069

\* statistically significant at the 0.05 level, \*\* statistically significant at the 0.01 level

<sup>a</sup> First principal component of a large number of indicators of housing characteristics and consumer durable ownership

**Table B-4. Assessment of balance in the random assignment of agents to high incentive treatment: simple regressions of the randomized agent treatment on individual agent covariates (t-statistics in parentheses)**

	Dependent variable: High incentive treatment		
	Total sample	Midline sample	Non-midline sample
Female agent	0.089 (1.95)	0.045 (0.68)	0.129 (2.02)*
Age	-0.280 (-0.34)	1.038 (0.88)	-1.624 (-1.40)
Highest level of schooling completed (1-4)	0.058 (0.81)	-0.017 (-0.17)	0.127 (1.26)
Index of cognitive ability (0-4)	-0.117 (-1.50)	-0.102 (-0.90)	-0.132 (-1.23)
Currently married	0.007 (0.26)	0.059 (1.46)	-0.041 (-1.00)
Household size	-0.061 (-0.47)	-0.009 (-0.05)	-0.114 (-0.64)
Urban resident	-0.079 (-2.73)**	-0.074 (-1.70)	-0.082 (-2.11)*
Owns smart phone	-0.026 (-0.45)	0.041 (0.50)	-0.085 (-1.03)
Uses phone to access the internet	-0.009 (-0.25)	-0.019 (-0.39)	0.010 (0.18)
Uses phone for banking	0.031 (0.82)	0.067 (1.20)	0.001 (0.02)
Number of minutes using phone on typical day	0.645 (0.03)	-27.963 (-0.95)	32.056 (1.19)
Number of days per week phone has partial coverage	0.034 (0.20)	-0.022 (-0.09)	0.081 (0.34)
Has laptop computer	-0.027 (-0.59)	-0.014 (-0.22)	-0.037 (-0.58)
Has internet access at workplace	-0.010 (-0.27)	0.009 (0.17)	-0.035 (-0.63)
Has store	0.011 (0.30)	-0.022 (-0.39)	0.040 (0.77)
Lowest monthly earnings to be satisfied with agent job (Rp. millions)	-0.223 (-0.98)	0.121 (0.84)	-0.556 (-1.33)
Agent's expected performance in agent job (1-10)	-0.317 (-2.02)*	-0.383 (-1.83)	-0.243 (-1.03)
Safety of bank's mobile savings product (1-10)	0.130 (0.62)	0.055 (0.18)	0.223 (0.77)
Reliability of bank's mobile savings product (1-10)	-0.186 (-1.10)	-0.174 (-0.76)	-0.211 (-0.85)
No need for spouse to work if husband is working (1-5)	-0.040 (-0.43)	-0.050 (-0.39)	-0.044 (-0.33)
Preference for female boss (1-5)	-0.126 (-1.51)	-0.030 (-0.24)	-0.216 (-1.98)*
Agent sees self as caring (1-7)	-0.280 (-2.35)*	-0.280 (-1.64)	-0.313 (-1.89)
Agent sees self as generous (1-7)	-0.148 (-1.16)	-0.058 (-0.30)	-0.286 (-1.72)
Agent sees self as helpful	-0.293 (-2.52)*	-0.188 (-1.06)	-0.446 (-3.01)**
Has bank account in own name	0.018 (0.76)	0.034 (1.11)	0.006 (0.17)
Distance to nearest bank branch more than 5 kilometers	0.031 (0.73)	0.053 (0.92)	-0.001 (-0.01)
Any saving during past 12 months	0.072 (2.02)*	0.046 (0.90)	0.096 (1.95)
Total savings in last 12 months (Rp. millions)	5.672 (1.40)	7.992 (1.91)	2.923 (0.43)
Ever borrowed money	-0.027 (-0.63)	0.022 (0.36)	-0.067 (-1.10)
Number of currently outstanding loans	-0.018	0.050	-0.071

	Dependent variable: High incentive treatment		
	Total sample	Midline sample	Non-midline sample
	(-0.23)	(0.45)	(-0.65)
Any idle money	-0.050	0.027	-0.118
	(-1.45)	(0.57)	(-2.36)*
Amount of idle money (Rp. millions)	0.555	-1.334	2.170
	(0.43)	(-0.83)	(1.10)
Has second business	0.021	0.027	0.024
	(0.51)	(0.44)	(0.45)
Primary business registered	0.041	0.126	-0.040
	(0.90)	(1.90)	(-0.61)
Primary business started more than 5 years ago	0.066	-0.024	0.157
	(1.49)	(-0.37)	(2.52)*
Number of hours worked in primary business on typical day	-0.458	-1.059	0.073
	(-1.32)	(-2.17)*	(0.15)
Number of unpaid workers in primary business in typical month	0.126	0.025	0.210
	(1.27)	(0.19)	(1.43)
Number of paid workers in primary business in typical month	0.180	0.018	0.333
	(0.92)	(0.07)	(1.10)
Number of customers in primary business in typical month	23.022	32.152	46.022
	(0.39)	(0.29)	(1.05)
Percent female customers	-3.590	-0.868	-6.391
	(-1.43)	(-0.24)	(-1.83)
Average monthly revenue in primary business (Rp. millions)	7.571	-3.069	17.122
	(0.71)	(-0.41)	(0.86)
Total value of business assets (Rp. millions)	1.598	-9.016	13.210
	(0.06)	(-0.23)	(0.33)
Household asset index <sup>a</sup>	0.010	-0.001	-0.092
	(0.06)	(-0.01)	(-0.45)
Any voluntary activities in past 12 months	-0.019	0.044	-0.070
	(-0.45)	(0.70)	(-1.22)
Motivation index (8-80)	-0.584	-0.321	-0.893
	(-1.58)	(-0.56)	(-1.89)
Index of prosocial attitudes (12-84)	-0.232	-0.045	-0.677
	(-0.34)	(-0.04)	(-0.82)
N	475	232	243
Tests of statistical significance:			
Number of estimates	46	46	46
Number of significant estimates (0.05)	5*	1	6**
p	0.026	0.677	0.008
Number of significant estimates (0.01)	1	0	1
p	0.078	0.370	0.078

\* statistically significant at the 0.05 level, \*\* statistically significant at the 0.01 level

<sup>a</sup> First principal component of a large number of indicators of housing characteristics and consumer durable ownership

**Table B-5. Analysis of sample attrition between baseline and midline: Business owners (t-statistics in parentheses)**

	Dependent variable: sample attrition of business owners			
	Treatments			
	Female training and mentoring		High agent incentives	
	Unadjusted	Adjusted	Unadjusted	Adjusted
	(1)	(2)	(3)	(4)
Randomized female training and mentoring	-0.010	-0.008		
	(-0.88)	(-0.75)		
Randomized high agent incentives			0.000	0.004
			(0.05)	(0.51)
Female business owner				-0.008
				(-0.52)
Age (years)		0.002		0.001
		(1.97)*		(1.12)
Highest level of completed schooling (0-4)		0.005		0.001
		(0.74)		(0.15)
Currently married		-0.008		-0.006
		(-0.25)		(-0.38)
Number of children living in household		-0.011		-0.005
		(-1.38)		(-0.73)
Cognitive ability score		-0.005		-0.005
		(-0.76)		(-1.03)
Willingness to take risk		0.003		0.002
		(1.52)		(1.57)
Index of business owner's intra-household decision-making power (0-5)		-0.002		-0.002
		(-0.78)		(-0.71)
Has smart phone		-0.016		-0.020
		(-1.06)		(-2.70)**
Uses mobile phone to access the internet		0.025		0.026
		(1.35)		(2.35)*
Days per week when is there no signal coverage		0.002		0.000
		(0.93)		(0.25)
Days per week when there is not internet access		-0.005		-0.006
		(-0.85)		(-1.96)
Knows bank's mobile agent		-0.033		-0.024
		(-2.98)**		(-2.89)**
Has registered bank account in own name		0.004		-0.007
		(0.31)		(-0.84)
Knows about mobile money		0.004		-0.001
		(0.19)		(-0.09)
Any voluntary activities in last year		0.003		-0.007
		(0.18)		(-0.64)
Household size		-0.005		-0.006
		(-0.99)		(-1.67)
Urban resident		0.013		0.016
		(0.78)		(1.02)
Household head		-0.026		-0.028
		(-0.82)		(-1.88)
Household asset index		0.000		0.003
		(0.09)		(1.02)
Total value of business assets (Rp. millions)		0.000		0.000
		(2.16)*		(0.26)
Has second business		-0.010		-0.005
		(-0.66)		(-0.49)
Primary business is registered		-0.005		-0.009
		(-0.31)		(-0.78)
Number of unpaid workers in primary		0.001		0.001

	Dependent variable: sample attrition of business owners			
	Treatments			
	Female training and mentoring		High agent incentives	
	Unadjusted	Adjusted	Unadjusted	Adjusted
	(1)	(2)	(3)	(4)
business in typical month				
		(0.26)		(0.45)
Number of paid workers in primary business in typical month		0.006		0.004
		(1.03)		(1.03)
Constant	0.048	0.038	0.039	0.088
	(5.84)**	(0.68)	(6.88)**	(2.20)*
R <sup>2</sup>	0.00	0.03	0.00	0.02
N	1,398	1,394	2,399	2,393

\* statistically significant at the 0.05 level, \*\* statistically significant at the 0.01 level



**Table B-6. Analysis of sample attrition between baseline and midline: Agents (t-statistics in parentheses)**

	Dependent variable: sample attrition of agents	
	Unadjusted model	Adjusted model
	(1)	(2)
Randomly assigned high agent incentives	-0.024 (-0.71)	0.000 (0.01)
Female agent		0.024 (0.59)
Age (years)		0.000 (0.13)
Currently married		-0.030 (-0.51)
Highest level of completed schooling (0-4)		0.015 (0.62)
Cognitive score (0-4)		0.015 (0.72)
Urban resident		0.097 (1.75)
Uses mobile phone to access the internet		0.002 (0.04)
Uses mobile phone for banking		0.005 (0.12)
Has a shop		0.087 (2.05)*
Safety of bank's savings product (1-10)		-0.008 (-0.98)
Reliability of bank's savings product (1-10)		0.018 (1.66)
If husband is already working, spouse/partner does not need to work		0.013 (0.66)
If working, I prefer my boss to be a woman		0.016 (0.91)
Has bank account registered in own name		-0.029 (-0.35)
Distance to nearest bank branch more than 5 kilometers		-0.028 (-0.69)
Amount of idle money (Rp. millions)		0.003 (1.67)
Has second business		-0.073 (-1.96)
Household asset index		0.000 (0.04)
Any voluntary activities in last year		-0.063 (-1.68)
Motivation index (8-80)		0.002 (0.55)
Index of prosocial attitudes (12-84)		-0.003 (-1.27)
Constant	0.081 (3.52)**	-0.033 (-0.13)
R <sup>2</sup>	0.00	0.11
N	230	230

\* statistically significant at the 0.05 level, \*\* statistically significant at the 0.01 level

## Annex C. Analysis of Midline Agent Survey Data

Table C-1. Sample means and standard deviations (in parentheses) of midline agent outcomes by treatment

	Total sample		Treatment	
	Mean (standard deviation)	Sample size	Lower agent incentives	Higher agent incentives
Number of months as agent	8.645 (5.375)	214	8.386 (5.593)	8.940 (5.126)
Agent satisfaction (1-10)	4.995 (2.198)	214	5.000 (2.009)	4.990 (2.406)
Spouse helps agent	0.364 (0.482)	214	0.351 (0.479)	0.380 (0.488)
Agent visits households to promote LP	0.350 (0.478)	214	0.368 (0.485)	0.330 (0.473)
Agent likely to quit in next 3 months (1-10)	4.855 (2.870)	214	5.105 (2.946)	4.570 (2.768)
Agent likely to quit in next 6 months (1-10)	5.215 (3.064)	214	5.386 (3.136)	5.020 (2.985)
Job helps grow agent's business	0.397 (0.490)	214	0.377 (0.487)	0.420 (0.496)
Hours per day spent sleeping	6.607 (1.883)	214	6.781 (1.818)	6.410 (1.944)
Hours per day working as agent	2.051 (1.545)	214	2.167 (1.754)	1.920 (1.261)
Hours per day doing other work	7.967 (3.512)	214	8.026 (3.508)	7.900 (3.532)
Hours per day doing housework	3.439 (2.971)	214	3.588 (3.203)	3.270 (2.689)
% of agent work time promoting LP product in shop	44.817 (29.316)	208	43.200 (27.983)	46.633 (30.787)
% of agent work time promoting LP product outside shop	41.043 (29.530)	208	42.927 (28.335)	38.929 (30.824)
% of agent work time assisting bank customers	12.587 (15.522)	208	11.891 (14.782)	13.367 (16.353)
% of agent work time doing other bank activities	1.553 (9.426)	208	1.982 (11.824)	1.071 (5.665)
Agent has received some training	0.664 (0.474)	214	0.649 (0.479)	0.680 (0.469)
Number of training visits received	2.579 (2.358)	214	2.544 (2.421)	2.620 (2.295)
Agent has received bank supervisor mentoring	0.860 (0.348)	214	0.816 (0.389)	0.910 (0.288)
Agent has received MCI mentoring	0.790 (0.408)	214	0.798 (0.403)	0.780 (0.416)
Number of mentoring visits received	5.234 (10.297)	214	5.746 (13.907)	4.650 (2.591)
Agent visited by bank supervisor	0.860 (0.348)	214	0.816 (0.389)	0.910 (0.288)
Number of bank supervisor visits <sup>a</sup>	2.336 (1.644)	214	2.246 (1.798)	2.440 (1.452)
Agent's perception of LP popularity (1-10)	3.854 (2.012)	213	3.832 (1.964)	3.880 (2.076)
Number of LP accounts opened <sup>a</sup>	2.559 (4.238)	213	2.605 (4.665)	2.505 (3.710)
Expected number of LP accounts opened next year	11.854 (16.518)	213	12.158 (15.405)	11.505 (17.786)
Number of customers opening and saving in LP accounts in past month	0.873 (3.146)	213	0.930 (3.589)	0.808 (2.558)

	Total sample		Treatment	
	Mean (standard deviation)	Sample size	Lower agent incentives	Higher agent incentives
Amount of typical LP deposit (Rp.) <sup>b</sup>	3.384	212	3.395	3.371
	(5.275)		(5.404)	(5.150)
Agent has enrolled in LP	0.257	214	0.228	0.290
	(0.438)		(0.421)	(0.456)
Agent's monthly earnings from agent job (Rp.) <sup>b</sup>	2.718	175	2.615	2.839
	(4.838)		(4.802)	(4.907)
Agent is satisfied with monthly agent earnings	0.196	214	0.211	0.180
	(0.398)		(0.409)	(0.386)
Expected monthly agent earnings next year (Rp.) <sup>b</sup>	10.998	208	11.116	10.863
	(4.406)		(4.203)	(4.645)
Minimum monthly agent earnings to be satisfied (Rp.) <sup>b</sup>	12.916	212	13.171	12.625
	(1.990)		(1.169)	(2.608)
Reason for liking job: good future career opportunities (1-10)	6.136	214	6.228	6.030
	(2.011)		(1.987)	(2.042)
Reason for liking job: able to earn more money (1-10)	5.902	214	5.904	5.900
	(2.054)		(2.013)	(2.111)
Reason for liking job: job is interesting (1-10)	6.369	214	6.395	6.340
	(2.032)		(2.180)	(1.860)
Reason for liking job: can acquire useful skills (1-10)	6.958	214	6.991	6.920
	(1.819)		(1.916)	(1.710)
Reason for liking job: able to serve the community (1-10)	7.313	214	7.263	7.370
	(2.035)		(2.112)	(1.952)
Reason for liking job: able to earn respect from community (1-10)	5.341	214	5.386	5.290
	(2.128)		(2.196)	(2.056)
Reason for liking job: able to use prior experience (1-10)	6.603	214	6.632	6.570
	(1.898)		(1.911)	(1.892)
Reason for liking job: provides stable income (1-10)	5.570	214	5.596	5.540
	(2.005)		(1.981)	(2.042)
People's perception of agent in job: more honest	0.432	213	0.447	0.414
	(0.497)		(0.499)	(0.495)
People's perception of agent in job: less honest	0.009	213	0.009	0.010
	(0.097)		(0.094)	(0.101)
People's perception of agent in job: more competent	0.343	213	0.351	0.333
	(0.476)		(0.479)	(0.474)
People's perception of agent in job: less competent	0.014	213	0.009	0.020
	(0.118)		(0.094)	(0.141)
People's perception of agent in job: more prosocial	0.629	213	0.605	0.657
	(0.484)		(0.491)	(0.477)
People's perception of agent in job: less prosocial	0.014	213	0.009	0.020
	(0.118)		(0.094)	(0.141)
People's perception of agent in job: more motivated by money	0.150	213	0.149	0.152
	(0.358)		(0.358)	(0.360)
People's perception of agent in job: less motivated by money	0.019	213	0.026	0.010
	(0.136)		(0.161)	(0.101)
Agent's bank mainly aims to promote financial inclusion (1-10)	6.841	214	6.816	6.870
	(2.040)		(2.063)	(2.023)
Safety of LP product (1-10)	3.430	214	3.535	3.310
	(2.219)		(2.258)	(2.177)
Reliability of LP product (1-10)	6.140	214	6.149	6.130
	(1.904)		(1.947)	(1.862)
Confidence agent's bank will honor contracts (1-5)	4.252	214	4.307	4.190
	(1.026)		(0.942)	(1.116)
Confidence agent's bank will be good employer (1-5)	4.547	214	4.553	4.540
	(0.735)		(0.754)	(0.717)
Confidence contracts between banks in general and customers will be enforced (1-5)	4.141	213	4.177	4.100
	(1.072)		(0.975)	(1.176)
Confidence contracts between state-owned banks and customers will be enforced (1-5)	4.230	213	4.319	4.130
	(1.004)		(0.899)	(1.107)

	Total sample		Treatment	
	Mean (standard deviation)	Sample size	Lower agent incentives	Higher agent incentives
Confidence that a customer depositing money in a bank savings account will get money back (1-10)	8.770 (1.718)	213	8.699 (1.752)	8.850 (1.684)
Index of agent's prosocial motivation (1-84)	75.009 (8.531)	214	75.535 (8.328)	74.410 (8.761)
Agent sees self as caring (1-7)	5.533 (1.197)	214	5.658 (1.211)	5.390 (1.171)
Agent sees self as generous (1-7)	5.308 (1.274)	214	5.421 (1.289)	5.180 (1.250)
Agent sees self as helping others (1-7)	5.121 (1.291)	214	5.123 (1.358)	5.120 (1.217)
Agent's bank is caring (1-7)	5.607 (1.220)	214	5.632 (1.278)	5.580 (1.156)
Agent's bank is generous (1-7)	5.332 (1.285)	214	5.377 (1.353)	5.280 (1.207)
Any volunteer activity in past year	0.451 (0.499)	213	0.478 (0.502)	0.420 (0.496)
Number of months volunteered	4.085 (9.511)	213	5.628 (12.010)	2.340 (4.973)
Amount of money contributed to social institutions or organization last year (Rp.) c	7.986 (6.822)	207	8.409 (6.743)	7.488 (6.915)
Total sample size		214	114	100

<sup>a</sup> Highest 2 percent of values winsorized

<sup>b</sup> Variable transformed to inverse hyperbolic sine values

<sup>c</sup> Highest 2 percent of values winsorized and resulting variable transformed to inverse hyperbolic sine values

**Table C-2. General agent outcomes**

	Number of months as agent	Agent satisfaction (1-10)	Spouse helps agent	Agent visits households to promote LP	Agent likely to quit in next 3 months (1-10)	Agent likely to quit in next 6 months (1-10)	Job helps grow agent's business
Statistical model →	Poisson regression	Ordered logit	Linear regression	Linear regression	Ordered logit	Ordered logit	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
CONTROL VALUES (low agent incentives)							
Unadjusted sample mean (T <sub>1</sub> =0)	8.386 (0.524)	0.024 (0.014)	0.351 (0.045)	0.368 (0.045)	0.129 (0.030)	0.161 (0.033)	0.377 (0.045)
Adjusted sample mean (T <sub>1</sub> =0)	8.495 (0.276)	0.040 (0.014)	0.340 (0.044)	0.373 (0.045)	0.110 (0.025)	0.157 (0.029)	0.375 (0.046)
ESTIMATED MARGINAL EFFECTS							
High agent incentives (T <sub>1</sub> =1)	0.364 (0.410)	-0.004 (0.009)	0.057 (0.065)	-0.045 (0.067)	-0.024 (0.022)	-0.025 (0.030)	0.041 (0.068)
COVARIATES							
Female agent (S)	0.997** (0.414)	0.009 (0.010)	-0.075 (0.066)	0.064 (0.068)	0.009 (0.022)	-0.010 (0.031)	0.100 (0.069)
Operating agent (z <sub>1</sub> )	-0.727 (0.627)	0.020 (0.016)	-0.208** (0.104)	0.113 (0.107)	0.029 (0.035)	0.048 (0.051)	-0.098 (0.109)
Age (z <sub>2</sub> )	0.081*** (0.023)	0.000 (0.001)	-0.014*** (0.004)	0.003 (0.004)	-0.002 (0.001)	-0.002 (0.002)	0.001 (0.004)
Completed level of schooling (z <sub>3</sub> )	-0.530** (0.255)	0.002 (0.006)	0.045 (0.042)	0.069 (0.043)	0.001 (0.014)	-0.000 (0.019)	-0.042 (0.044)
Internet available in village (z <sub>4</sub> )	-1.633*** (0.475)	0.015 (0.012)	-0.025 (0.078)	0.094 (0.080)	0.002 (0.027)	0.008 (0.036)	0.090 (0.082)
Mobile signal in village is strong (z <sub>5</sub> )	0.598 (0.407)	0.013 (0.010)	0.133** (0.064)	-0.010 (0.066)	-0.022 (0.022)	-0.029 (0.030)	-0.038 (0.068)
JOINT TESTS (p-values)							
Coefficients of the additional covariates (z) are jointly equal to zero	0.000**	0.263	0.001***	0.285	0.521	0.622	0.551
R-squared	0.03 <sup>a</sup>	0.01 <sup>a</sup>	0.10	0.03	0.01 <sup>a</sup>	0.00 <sup>a</sup>	0.03
N	213	213	213	213	213	213	213

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors are in parentheses. No baseline data available are available for these outcomes

<sup>a</sup> Pseudo R-squared

**Table C-3. Agents' time use**

	Hours per day sleeping	Hours per day working as agent	Hours per day doing other work	Hours per day doing housework	% of agent work time promoting the LP product in shop	% of agent work time promoting the LP product outside shop	% of agent work time assisting bank customers	% of agent work time doing other agent activities
Statistical model →	Poisson regression	Poisson regression	Poisson regression	Poisson regression	Poisson regression	Poisson regression	Poisson regression	Poisson regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CONTROL VALUES (low agent incentives)								
Unadjusted sample mean ( $T_1=0$ )	6.781 (0.170)	2.167 (0.164)	8.026 (0.329)	3.588 (0.300)	41.991 (2.656)	41.684 (2.687)	11.868 (1.403)	1.912 (1.088)
Adjusted sample mean ( $T_1=0$ )	6.785 (0.246)	2.141 (0.137)	8.038 (0.268)	3.647 (0.181)	41.680 (0.606)	42.119 (0.616)	11.872 (0.325)	2.124 (0.147)
ESTIMATED MARGINAL EFFECTS								
High agent incentives ( $T_1=1$ )	-0.365 (0.358)	-0.185 (0.200)	-0.153 (0.393)	-0.424* (0.257)	4.575*** (0.926)	-4.436*** (0.879)	1.053** (0.491)	-1.172*** (0.176)
COVARIATES								
Female agent ( $S$ )	0.444 (0.362)	-0.275 (0.205)	-1.219*** (0.403)	1.609*** (0.269)	-2.833*** (0.938)	3.495*** (0.891)	-0.665 (0.496)	0.514*** (0.173)
Operating agent ( $z_1$ )	-0.188 (0.568)	-0.438 (0.307)	-0.348 (0.625)	0.549 (0.427)	-3.350** (1.448)	9.662*** (1.513)	5.475*** (0.921)	-1.676*** (0.218)
Age ( $z_2$ )	-0.001 (0.020)	-0.005 (0.011)	0.013 (0.022)	-0.015 (0.015)	-0.407*** (0.054)	0.362*** (0.049)	-0.093*** (0.028)	0.037*** (0.009)
Completed level of schooling ( $z_3$ )	0.342 (0.236)	0.368*** (0.139)	-0.152 (0.253)	0.201 (0.172)	-0.408 (0.595)	-1.638*** (0.567)	-1.098*** (0.324)	0.512*** (0.117)
Internet available in village ( $z_4$ )	-0.306 (0.425)	0.137 (0.245)	-1.692*** (0.453)	0.415 (0.319)	-10.191*** (1.046)	4.248*** (1.096)	4.724*** (0.665)	0.302 (0.240)
Mobile signal in village is strong ( $z_5$ )	-0.190 (0.356)	-0.046 (0.199)	0.353 (0.390)	0.483* (0.258)	-2.176** (0.918)	-2.402*** (0.875)	0.945* (0.487)	3.582*** (0.350)
JOINT TESTS (p-values)								
Coefficients of the additional covariates ( $z$ ) are jointly equal to zero	0.663	0.124	0.009***	0.077*	0.000***	0.000***	0.000***	0.000***
R-squared	0.01	0.02	0.02	0.05	0.03	0.02	0.02	0.17
N	213	213	213	213	213	213	213	213

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors are in parentheses. No baseline data available are available for these outcomes

**Table C-4. Agent training and mentoring**

	Agent has received some training	Number of training visits agent received	Agent has received bank mentoring	Agent has received MCI mentoring	Number of mentoring visits received	Agent visited by bank supervisor	Number of bank supervisor visits <sup>b</sup>
Statistical model →	Linear regression	Poisson regression	Linear regression	Linear regression	Poisson regression	Linear regression	Poisson regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
CONTROL VALUES (low agent incentives)							
Unadjusted sample mean ( $T_1=0$ )	0.649 (0.045)	2.544 (0.277)	0.816 (0.036)	0.798 (0.038)	5.746 (1.302)	0.816 (0.036)	2.246 (0.168)
Adjusted sample mean ( $T_1=0$ )	0.647 (0.045)	2.570 (0.152)	0.819 (0.033)	0.804 (0.038)	6.027 (0.237)	0.819 (0.032)	2.270 (0.143)
ESTIMATED MARGINAL EFFECTS							
High agent incentives ( $T_1=1$ )	0.042 (0.066)	0.045 (0.224)	0.085* (0.048)	-0.032 (0.056)	-1.608*** (0.317)	0.086* (0.048)	0.125 (0.212)
COVARIATES							
Female agent ( $S$ )	0.092 (0.067)	0.843*** (0.229)	0.050 (0.049)	-0.008 (0.057)	1.618*** (0.323)	0.069 (0.049)	0.379* (0.215)
Operating agent ( $z_i$ )	0.087 (0.105)	1.265*** (0.431)	0.159** (0.077)	0.247*** (0.090)	2.688*** (0.598)	0.167** (0.077)	0.278 (0.352)
Age ( $z_2$ )	-0.004 (0.004)	-0.019 (0.013)	-0.001 (0.003)	-0.002 (0.003)	0.126*** (0.018)	-0.001 (0.003)	0.002 (0.012)
Completed level of schooling ( $z_3$ )	-0.016 (0.043)	0.145 (0.151)	-0.014 (0.031)	0.027 (0.037)	0.100 (0.211)	-0.022 (0.031)	-0.007 (0.136)
Internet available in village ( $z_4$ )	0.068 (0.079)	0.520* (0.283)	-0.053 (0.058)	0.071 (0.068)	0.593 (0.399)	-0.023 (0.058)	-0.465* (0.243)
Mobile signal in village is strong ( $z_5$ )	-0.057 (0.065)	-0.092 (0.223)	-0.043 (0.048)	0.067 (0.056)	1.649*** (0.323)	-0.045 (0.048)	0.035 (0.211)
JOINT TESTS (p-values)							
Coefficients of the additional covariates ( $z$ ) are jointly equal to zero	0.614	0.004***	0.270	0.031**	0.000***	0.283	0.484
R-squared	0.03	0.03 <sup>a</sup>	0.05	0.06	0.07 <sup>a</sup>	0.06	0.01 <sup>a</sup>
N	213	213	213	213	213	213	213

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors are in parentheses. No baseline data available are available for these outcomes.

<sup>a</sup> Pseudo R-squared

<sup>b</sup> Highest 2 percent of values winsorized

**Table C-5. LP demand and utilization**

	Agent's perception of LP popularity (1-10)	Number of LP accounts opened <sup>b</sup>	Expected number of LP account openings next year	Number of people opening and saving in LP accounts in past month	Amount of typical deposit (Rp.) <sup>c</sup>	Agent has enrolled in LP
Statistical model →	Ordered logit	Poisson regression	Poisson regression	Poisson regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)
CONTROL VALUES (low agent incentives)						
Unadjusted sample mean (T <sub>1</sub> =0)	0.008 (0.008)	2.605 (0.437)	12.158 (1.443)	0.930 (0.336)	3.395 (0.506)	0.228 (0.039)
Adjusted sample mean (T <sub>1</sub> =0)	0.010 (0.007)	2.661 (0.155)	12.018 (0.326)	1.003 (0.099)	3.495 (0.501)	0.228 (0.041)
ESTIMATED MARGINAL EFFECTS						
High agent incentives (T <sub>1</sub> =1)	-0.000 (0.002)	-0.191 (0.223)	-0.288 (0.486)	-0.251* (0.132)	-0.207 (0.746)	0.065 (0.061)
COVARIATES						
Female agent (S)	0.005 (0.004)	0.417* (0.225)	-2.378*** (0.496)	0.676*** (0.143)	0.804 (0.754)	-0.083 (0.062)
Operating agent (z <sub>1</sub> )	-0.004 (0.005)	0.181 (0.363)	-3.141*** (0.741)	-0.374** (0.179)	1.463 (1.230)	0.018 (0.098)
Age (z <sub>2</sub> )	-0.000 (0.000)	0.005 (0.013)	-0.124*** (0.028)	0.029*** (0.007)	0.006 (0.042)	-0.002 (0.003)
Completed level of schooling (z <sub>3</sub> )	-0.003 (0.003)	-0.089 (0.144)	3.137*** (0.354)	0.210** (0.088)	0.414 (0.481)	0.028 (0.040)
Internet available in village (z <sub>4</sub> )	0.005 (0.004)	-0.137 (0.267)	7.323*** (0.721)	0.493** (0.197)	0.301 (0.891)	-0.086 (0.074)
Mobile signal in village is strong (z <sub>5</sub> )	0.004 (0.003)	1.097*** (0.231)	2.283*** (0.485)	0.881*** (0.158)	0.873 (0.737)	0.037 (0.061)
JOINT TESTS (p-values)						
Coefficients of the additional covariates (z) are jointly equal to zero	0.017**	0.000***	0.000***	0.000***	0.531	0.738
R-squared	0.02 <sup>a</sup>	0.06 <sup>a</sup>	0.07 <sup>a</sup>	0.11 <sup>a</sup>	0.02	0.03
N	212	212	212	212	211	213

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors are in parentheses. No baseline data available are available for these outcomes.

<sup>a</sup> Pseudo R-squared

<sup>b</sup> Highest 2 percent of values winsorized

<sup>c</sup> Variables transformed to an inverse hyperbolic sine value



**Table C-6. Agent earnings**

	Agent's monthly earnings from agent job (Rp.) <sup>a</sup>	Agent is satisfied with monthly earnings	Expected monthly earnings next year (Rp.) <sup>a</sup>	Minimum monthly earnings to be satisfied (Rp.) <sup>a</sup>
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)
<b>CONTROL VALUES</b> (low agent incentives)				
Unadjusted sample mean (T <sub>1</sub> =0)	2.615 (0.495)	0.211 (0.038)	11.116 (0.424)	13.171 (0.110)
Adjusted sample mean (T <sub>1</sub> =0)	2.722 (0.511)	0.212 (0.038)	11.019 (0.424)	13.195 (0.186)
<b>ESTIMATED MARGINAL EFFECTS</b>				
High agent incentives (T <sub>1</sub> =1)	0.026 (0.763)	-0.042 (0.056)	-0.058 (0.627)	-0.602** (0.275)
<b>COVARIATES</b>				
Female agent (S)	0.580 (0.762)	0.029 (0.056)	-0.430 (0.637)	-0.244 (0.278)
Operating agent (z <sub>1</sub> )	1.111 (1.268)	-0.034 (0.089)	-0.994 (1.063)	0.233 (0.449)
Age (z <sub>2</sub> )	0.028 (0.045)	0.001 (0.003)	-0.049 (0.036)	0.025 (0.016)
Completed level of schooling (z <sub>3</sub> )	0.269 (0.492)	-0.008 (0.036)	0.006 (0.412)	0.139 (0.180)
Internet available in village (z <sub>4</sub> )	-0.727 (0.900)	0.018 (0.067)	0.605 (0.747)	-0.766** (0.330)
Mobile signal in village is strong (z <sub>5</sub> )	0.759 (0.757)	0.015 (0.055)	-0.690 (0.623)	-0.018 (0.273)
<b>JOINT TESTS</b> (p-values)				
Coefficients of the additional covariates (z) are jointly equal to zero	0.710	0.979	0.489	0.139
R-squared	0.02	0.01	0.02	0.06
N	174	213	207	211

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors are in parentheses. No baseline data are available for these outcomes.

<sup>a</sup> Variable transformed to an inverse hyperbolic sine value

**Table C-7. Agents' reasons for liking their jobs**

	Good future career opportunities (1-10)	Able to earn more money (1-10)	Job is interesting (1-10)	Can acquire useful skills (1-10)	Able to serve the community (1-10)	Able to earn respect from community (1-10)	Able to use prior experience (1-10)	Job provides stable income (1-10)
Statistical model →	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CONTROL VALUES (low agent incentives)								
Unadjusted sample mean (T <sub>1</sub> =0)	0.073 (0.023)	0.048 (0.019)	0.073 (0.023)	0.089 (0.026)	0.145 (0.032)	0.032 (0.016)	0.065 (0.022)	0.032 (0.016)
Adjusted sample mean (T <sub>1</sub> =0)	0.068 (0.019)	0.058 (0.017)	0.066 (0.018)	0.082 (0.020)	0.158 (0.029)	0.032 (0.013)	0.060 (0.017)	0.034 (0.013)
ESTIMATED MARGINAL EFFECTS								
High agent incentives (T <sub>1</sub> =1)	-0.010 (0.014)	-0.004 (0.013)	-0.012 (0.013)	-0.007 (0.018)	-0.005 (0.031)	-0.007 (0.007)	0.000 (0.014)	-0.003 (0.008)
COVARIATES								
Female agent (S)	-0.002 (0.014)	0.002 (0.013)	0.000 (0.014)	-0.006 (0.018)	0.021 (0.033)	0.004 (0.007)	0.001 (0.014)	0.001 (0.008)
Operating agent (z <sub>1</sub> )	-0.041 (0.026)	-0.005 (0.021)	-0.007 (0.021)	0.011 (0.030)	0.038 (0.051)	0.011 (0.011)	0.008 (0.023)	0.006 (0.012)
Age (z <sub>2</sub> )	0.002* (0.001)	0.001 (0.001)	0.001* (0.001)	0.001 (0.001)	0.002 (0.002)	0.000 (0.000)	0.000 (0.001)	0.001* (0.001)
Completed level of schooling (z <sub>3</sub> )	-0.001 (0.009)	0.003 (0.008)	-0.007 (0.009)	-0.005 (0.012)	-0.001 (0.021)	-0.000 (0.004)	0.002 (0.009)	-0.005 (0.005)
Internet available in village (z <sub>4</sub> )	0.020 (0.018)	0.017 (0.016)	0.016 (0.017)	0.025 (0.022)	0.025 (0.039)	0.016 (0.010)	0.049** (0.021)	0.020* (0.012)
Mobile signal in village is strong (z <sub>5</sub> )	0.020 (0.015)	0.031** (0.015)	0.013 (0.014)	0.013 (0.018)	0.019 (0.031)	-0.002 (0.007)	0.017 (0.014)	0.004 (0.008)
Baseline value of the dependent variable (z <sub>6</sub> )	0.016*** (0.006)	0.009** (0.004)	0.017*** (0.006)	0.027*** (0.008)	0.035*** (0.012)	0.009** (0.004)	0.014** (0.006)	0.007** (0.003)
JOINT TESTS (p-values)								
Coefficients of the additional covariates (z) are jointly equal to zero	0.001***	0.008***	0.000***	0.000***	0.027**	0.000***	0.002***	0.001***
Pseudo R-squared	0.03	0.02	0.03	0.04	0.02	0.04	0.03	0.03
N	213	213	213	213	213	213	213	213

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors are in parentheses.

**Table C-8. Agents' perceptions of how they are viewed by other people since taking up their jobs**

	Honesty		Competence		Altruism		Pecuniary motivation	
	More	Less	More	Less	More	Less	More	Less
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CONTROL VALUES (low agent incentives)								
Unadjusted sample mean ( $T_1=0$ )	0.447 (0.047)	0.009 (0.009)	0.351 (0.045)	0.009 (0.009)	0.605 (0.046)	0.009 (0.009)	0.149 (0.034)	0.026 (0.015)
Adjusted sample mean ( $T_1=0$ )	0.445 (0.046)	0.009 (0.009)	0.361 (0.044)	0.010 (0.011)	0.612 (0.045)	0.009 (0.011)	0.154 (0.034)	0.027 (0.013)
ESTIMATED MARGINAL EFFECTS								
High agent incentives ( $T_1=1$ )	-0.034 (0.068)	0.001 (0.014)	-0.047 (0.065)	0.010 (0.016)	0.032 (0.067)	0.012 (0.017)	-0.007 (0.050)	-0.017 (0.019)
COVARIATES								
Female agent ( $S$ )	0.057 (0.069)	-0.016 (0.014)	0.079 (0.066)	-0.024 (0.017)	0.007 (0.068)	0.007 (0.017)	0.052 (0.051)	-0.015 (0.019)
Operating agent ( $z_1$ )	-0.085 (0.109)	0.005 (0.022)	0.184* (0.104)	0.009 (0.026)	0.125 (0.107)	-0.027 (0.026)	0.118 (0.080)	0.018 (0.031)
Age ( $z_2$ )	-0.005 (0.004)	0.000 (0.001)	-0.000 (0.004)	0.001 (0.001)	0.002 (0.004)	-0.000 (0.001)	0.000 (0.003)	-0.000 (0.001)
Completed level of schooling ( $z_3$ )	-0.052 (0.044)	0.004 (0.009)	0.045 (0.042)	0.003 (0.011)	0.087** (0.043)	-0.009 (0.011)	-0.045 (0.033)	-0.000 (0.012)
Internet available in village ( $z_4$ )	-0.222*** (0.082)	-0.017 (0.016)	-0.168** (0.079)	-0.039** (0.020)	0.107 (0.080)	-0.037* (0.020)	-0.027 (0.061)	-0.032 (0.023)
Mobile signal in village is strong ( $z_5$ )	-0.037 (0.068)	0.001 (0.014)	0.055 (0.065)	-0.009 (0.016)	0.131** (0.066)	-0.009 (0.016)	0.024 (0.050)	0.003 (0.019)
JOINT TESTS (p-values)								
Coefficients of the additional covariates ( $z$ ) are jointly equal to zero	0.043**	0.910	0.054*	0.309	0.038**	0.322	0.579	0.759
R-squared	0.06	0.02	0.06	0.04	0.06	0.03	0.02	0.02
N	212	212	212	212	212	212	212	212

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors are in parentheses. No baseline data are available for these outcomes.

**Table C-9. Agents' trust in financial institutions**

	Agent's bank mainly aims to promote financial inclusion (1-10)	Safety of LP product (1-10)	Reliability of LP product (1-10)	Confidence that agent's bank will honor contracts (1-5)	Confidence that agent's bank will be good employer (1-5)	Confidence that contracts between banks in general and customers will be enforced (1-5)	Confidence that contracts between state-owned banks and customers will be enforced (1-5)	Confidence that a customer depositing money in a bank savings account will get money back (1-10)
Statistical model →	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CONTROL VALUES (low agent incentives)								
Unadjusted sample mean (T <sub>1</sub> =0)	0.121 (0.029)	0.024 (0.014)	0.040 (0.018)	0.476 (0.045)	0.266 (0.040)	0.403 (0.044)	0.460 (0.045)	0.161 (0.033)
Adjusted sample mean (T <sub>1</sub> =0)	0.136 (0.025)	0.021 (0.010)	0.047 (0.015)	0.531 (0.045)	0.680 (0.042)	0.460 (0.042)	0.515 (0.044)	0.471 (0.042)
ESTIMATED MARGINAL EFFECTS								
High agent incentives (T <sub>1</sub> =1)	0.006 (0.027)	-0.003 (0.005)	0.003 (0.011)	-0.050 (0.065)	-0.048 (0.063)	0.020 (0.062)	-0.066 (0.064)	0.020 (0.058)
COVARIATES								
Female agent (S)	0.093*** (0.031)	-0.000 (0.005)	-0.005 (0.012)	-0.062 (0.066)	-0.049 (0.063)	0.007 (0.062)	-0.006 (0.065)	-0.025 (0.060)
Operating agent (z <sub>1</sub> )	-0.053 (0.046)	0.007 (0.009)	-0.028 (0.020)	0.073 (0.102)	0.069 (0.093)	0.053 (0.100)	0.024 (0.103)	0.031 (0.094)
Age (z <sub>2</sub> )	0.001 (0.002)	-0.000 (0.000)	0.001 (0.001)	0.006 (0.004)	0.006 (0.004)	0.003 (0.003)	0.005 (0.004)	0.006* (0.003)
Completed level of schooling (z <sub>3</sub> )	-0.019 (0.017)	0.001 (0.003)	0.008 (0.008)	0.014 (0.043)	-0.020 (0.042)	0.098** (0.038)	0.076* (0.041)	0.026 (0.036)
Internet available in village (z <sub>4</sub> )	0.074** (0.034)	-0.003 (0.006)	0.004 (0.014)	-0.038 (0.079)	-0.005 (0.075)	0.026 (0.073)	-0.086 (0.078)	-0.087 (0.073)
Mobile signal in village is strong (z <sub>5</sub> )	0.011 (0.027)	0.003 (0.005)	-0.003 (0.011)	0.021 (0.065)	-0.058 (0.062)	-0.020 (0.061)	-0.018 (0.063)	-0.019 (0.057)
Baseline values of the dependent variable (z <sub>6</sub> )	0.037*** (0.009)	0.002 (0.001)	0.015*** (0.005)	0.057 (0.038)	0.129*** (0.039)	0.113*** (0.030)	0.081** (0.035)	0.104*** (0.018)
JOINT TESTS (p-values)								
Coefficients of the additional covariates (z) are jointly equal to zero	0.001***	0.242	0.001***	0.464	0.045**	0.007***	0.071*	0.000***
Pseudo R-squared	0.05	0.01	0.03	0.02	0.04	0.04	0.03	0.06
N	213	213	213	213	213	212	212	212

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors are in parentheses.

**Table C-10. Agents' prosocial outcomes**

	Index of agent's prosocial motivation (1-84)	Agent sees self as caring (1-7)	Agent sees self as generous (1-7)	Agent sees self as helping others (1-7)	Agent's bank is caring (1-7)	Agent's bank is generous (1-7)	Any volunteer activity in past year	Number of hours volunteered in a typical month	Amount of money contributed to social institutions or organizations last year (Rp.) <sup>b</sup>
Statistical model →	Poisson regression	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Ordered logit	Linear regression	Poisson regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CONTROL VALUES (low agent incentives)									
Unadjusted sample mean (T <sub>1</sub> =0)	75.535 (0.780)	0.290 (0.041)	0.234 (0.038)	0.161 (0.038)	0.226 (0.038)	0.226 (0.038)	0.478 (0.047)	5.628 (1.130)	8.409 (0.637)
Adjusted sample mean (T <sub>1</sub> =0)	75.529 (0.820)	0.284 (0.036)	0.247 (0.034)	0.152 (0.027)	0.303 (0.037)	0.217 (0.032)	0.489 (0.045)	5.586 (0.225)	8.351 (0.653)
ESTIMATED MARGINAL EFFECTS									
High agent incentives (T <sub>1</sub> =1)	-1.189 (1.208)	-0.073* (0.043)	-0.057 (0.039)	0.010 (0.030)	-0.042 (0.046)	-0.049 (0.034)	-0.088 (0.066)	-3.284*** (0.275)	-0.726 (0.971)
COVARIATES									
Female agent (S)	-0.630 (1.221)	0.013 (0.044)	0.007 (0.040)	-0.014 (0.030)	0.010 (0.047)	-0.013 (0.036)	-0.120* (0.068)	-1.812*** (0.308)	-0.730 (0.978)
Operating agent (z <sub>1</sub> )	-0.347 (1.948)	0.005 (0.071)	-0.043 (0.064)	-0.073 (0.049)	0.001 (0.077)	0.000 (0.055)	0.106 (0.105)	1.772*** (0.596)	-2.840* (1.637)
Age (z <sub>2</sub> )	0.049 (0.069)	0.001 (0.002)	0.003 (0.002)	0.004** (0.002)	0.002 (0.003)	0.001 (0.002)	0.004 (0.004)	0.045*** (0.017)	0.093* (0.055)
Completed level of schooling (z <sub>3</sub> )	0.715 (0.789)	-0.026 (0.028)	0.008 (0.025)	0.006 (0.020)	-0.032 (0.030)	-0.021 (0.022)	0.005 (0.043)	1.814*** (0.229)	1.068* (0.622)
Internet available in village (z <sub>4</sub> )	1.374 (1.462)	-0.072 (0.052)	-0.036 (0.046)	-0.032 (0.036)	-0.078 (0.056)	-0.018 (0.042)	-0.150* (0.080)	-2.666*** (0.314)	-1.570 (1.138)
Mobile signal in village is strong (z <sub>5</sub> )	0.239 (1.199)	0.026 (0.043)	0.060 (0.039)	0.020 (0.030)	-0.021 (0.046)	-0.007 (0.034)	-0.036 (0.065)	-1.030*** (0.290)	0.677 (0.956)
Baseline values of the dependent variable (z <sub>6</sub> )	0.567*** (0.078)	0.102*** (0.018)	0.077*** (0.016)	0.075*** (0.015)	0.132*** (0.021)	0.124*** (0.018)	0.288*** (0.071)	0.046*** (0.012)	0.000 (0.000)
JOINT TESTS (p-values)									
Coefficients of the additional covariates (z) are jointly equal to zero	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.000***	0.097*
R-squared	0.04 <sup>a</sup>	0.06 <sup>a</sup>	0.06 <sup>a</sup>	0.07 <sup>a</sup>	0.07 <sup>a</sup>	0.10 <sup>a</sup>	0.14	0.15 <sup>a</sup>	0.06
N	213	213	213	213	213	213	212	212	203

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors are in parentheses.

<sup>a</sup> Pseudo R-squared

<sup>b</sup> Highest 2 percent of values winsorized and resulting variable transformed to an inverse hyperbolic sine value

## Annex D. Analysis of Midline Business Owner Data

Table D-1. Sample means and standard deviations (in parentheses) of midline outcomes by treatment category

	Total sample		Treatment category					
	Mean (standard deviation)	Sample size	Females, untreated low ( $x_0$ )	Females, untreated high ( $x_1$ )	Females, treated low ( $x_2$ )	Females, treated high ( $x_3$ )	Males, untreated low ( $x_4$ )	Males, untreated high ( $x_5$ )
Knows about mobile money (MM)	0.155 (0.362)	2,319	0.090 (0.287)	0.110 (0.314)	0.219 (0.414)	0.255 (0.436)	0.132 (0.339)	0.115 (0.319)
Knows about digital wallet products (LKD)	0.021 (0.144)	2,319	0.000 (0.000)	0.000 (0.000)	0.058 (0.235)	0.053 (0.224)	0.004 (0.062)	0.009 (0.093)
Knows about Laku Pandai products (LP)	0.037 (0.190)	2,319	0.007 (0.082)	0.011 (0.105)	0.083 (0.276)	0.116 (0.321)	0.004 (0.062)	0.009 (0.093)
No LP: "Lack of information" cited as one reason	0.436 (0.496)	2,300	0.418 (0.494)	0.362 (0.481)	0.369 (0.483)	0.383 (0.487)	0.516 (0.500)	0.504 (0.501)
Uses mobile phone to access internet	0.346 (0.476)	2,306	0.251 (0.434)	0.283 (0.451)	0.300 (0.459)	0.297 (0.458)	0.430 (0.496)	0.436 (0.496)
Uses phone for MM	0.010 (0.099)	2,306	0.003 (0.058)	0.007 (0.086)	0.010 (0.099)	0.017 (0.128)	0.012 (0.108)	0.009 (0.093)
Uses phone for banking	0.069 (0.253)	2,306	0.027 (0.162)	0.045 (0.207)	0.066 (0.249)	0.053 (0.224)	0.090 (0.286)	0.102 (0.303)
Knows agent (unprompted)	0.382 (0.486)	2,318	0.290 (0.455)	0.294 (0.456)	0.530 (0.500)	0.587 (0.493)	0.276 (0.448)	0.322 (0.468)
Knows agent (prompted)	0.833 (0.373)	2,318	0.827 (0.379)	0.809 (0.394)	0.876 (0.330)	0.881 (0.324)	0.804 (0.398)	0.811 (0.392)
Agent provided information about LP	0.053 (0.225)	2,318	0.033 (0.180)	0.029 (0.169)	0.090 (0.287)	0.075 (0.263)	0.029 (0.168)	0.057 (0.231)
Willing to lend agent money	0.534 (0.499)	2,318	0.543 (0.499)	0.467 (0.500)	0.489 (0.500)	0.582 (0.494)	0.541 (0.499)	0.563 (0.497)
Not an LP customer: "Not trust agent" cited as one reason	0.049 (0.215)	2,300	0.057 (0.232)	0.044 (0.206)	0.057 (0.233)	0.068 (0.251)	0.039 (0.194)	0.035 (0.183)
Agent's perceived level of effort in providing LP information (1-10)	3.885 (2.214)	1,814	4.054 (2.219)	3.878 (2.167)	3.688 (2.253)	3.949 (2.293)	3.873 (2.281)	3.910 (2.047)
Agent's perceived competence (1-10)	7.144 (2.184)	2,313	7.351 (2.040)	7.143 (2.258)	7.219 (2.175)	7.265 (2.147)	6.992 (2.301)	7.004 (2.122)
Business owner purchased MM product from agent	0.007 (0.083)	2,318	0.000 (0.000)	0.004 (0.061)	0.024 (0.154)	0.014 (0.117)	0.000 (0.000)	0.000 (0.000)
Not an LP customer: "Not trust bank" cited as one reason	0.015 (0.122)	2,300	0.020 (0.140)	0.015 (0.121)	0.012 (0.111)	0.014 (0.118)	0.019 (0.138)	0.011 (0.104)
Perceived LP popularity	4.650 (2.352)	2,315	4.763 (2.295)	4.647 (2.312)	4.713 (2.349)	4.619 (2.288)	4.519 (2.375)	4.672 (2.432)
Perceived reliability of LP	6.983 (2.348)	2,314	6.900 (2.296)	6.824 (2.343)	6.978 (2.409)	7.089 (2.369)	6.996 (2.352)	7.039 (2.310)
Perceived safety of LP	6.923 (2.227)	2,314	6.960 (2.212)	6.768 (2.169)	6.925 (2.241)	6.922 (2.224)	7.016 (2.269)	6.887 (2.215)
Trust in state-owned banks	4.089 (1.177)	2,317	3.933 (1.225)	4.129 (1.087)	4.129 (1.100)	4.158 (1.106)	4.101 (1.230)	4.067 (1.243)
Trust in non-state-owned banks	3.377 (1.359)	2,317	3.277 (1.381)	3.368 (1.293)	3.416 (1.307)	3.427 (1.306)	3.400 (1.401)	3.357 (1.422)
Estimated number of LP customers in village <sup>a</sup>	13.540 (21.272)	2,211	12.672 (19.536)	13.143 (20.804)	11.817 (17.636)	12.442 (19.503)	16.295 (25.819)	13.645 (21.153)
Business owner alone decides whether to purchase new appliance	0.268 (0.443)	2,318	0.240 (0.428)	0.261 (0.440)	0.253 (0.435)	0.330 (0.471)	0.245 (0.431)	0.283 (0.451)
Business owner alone decides whether to work outside the home	0.340 (0.474)	2,318	0.177 (0.382)	0.191 (0.394)	0.217 (0.412)	0.260 (0.439)	0.537 (0.499)	0.487 (0.500)
Business owner alone decides whether to support other family members	0.255 (0.436)	2,318	0.213 (0.410)	0.165 (0.372)	0.214 (0.411)	0.255 (0.436)	0.313 (0.464)	0.309 (0.462)
Business owner alone decides whether to save for the future	0.267 (0.443)	2,318	0.227 (0.419)	0.206 (0.405)	0.246 (0.431)	0.305 (0.461)	0.290 (0.454)	0.293 (0.456)
	0.267	2,318	0.217	0.151	0.236	0.274	0.319	0.330

	Total sample		Treatment category					
	Mean (standard deviation)	Sample size	Females, untreated low (x <sub>0</sub> )	Females, untreated high (x <sub>1</sub> )	Females, treated low (x <sub>2</sub> )	Females, treated high (x <sub>3</sub> )	Males, untreated low (x <sub>4</sub> )	Males, untreated high (x <sub>5</sub> )
Business owner alone decides whether to sign up for new banking product	(0.442)		(0.413)	(0.358)	(0.425)	(0.447)	(0.467)	(0.471)
Index of HH decision-making (0-5)	1.398 (1.684)	2,318	1.073 (1.576)	0.974 (1.514)	1.165 (1.615)	1.424 (1.721)	1.704 (1.691)	1.702 (1.749)
Percent of spouse earnings not known	81.734 (35.316)	2,073	78.058 (37.600)	77.948 (38.438)	72.378 (41.480)	73.219 (41.407)	91.200 (24.360)	91.071 (24.583)
Percent of household expenses financed by spouse	33.564 (32.421)	2,080	47.353 (30.631)	45.644 (30.749)	46.883 (30.668)	46.071 (31.403)	16.192 (25.402)	13.946 (23.991)
Spouse has some income	0.780 (0.414)	2,084	0.924 (0.266)	0.906 (0.293)	0.938 (0.242)	0.941 (0.236)	0.575 (0.495)	0.565 (0.496)
Spouse asked for money in past 12 months	0.095 (0.294)	2,085	0.062 (0.241)	0.071 (0.257)	0.076 (0.265)	0.071 (0.258)	0.136 (0.343)	0.125 (0.331)
Business owner has sole control over his/her business earnings	0.641 (0.480)	2,298	0.693 (0.462)	0.674 (0.470)	0.686 (0.465)	0.757 (0.430)	0.574 (0.495)	0.533 (0.499)
Business owner has sole control over the spending of some money	0.452 (0.498)	2,317	0.500 (0.501)	0.474 (0.500)	0.504 (0.501)	0.508 (0.501)	0.385 (0.487)	0.393 (0.489)
Business owner and spouse have equal say over spending of the spouse's earnings	0.719 (0.450)	1,710	0.734 (0.443)	0.748 (0.435)	0.737 (0.441)	0.744 (0.437)	0.669 (0.471)	0.677 (0.468)
Business owner has second business	0.192 (0.394)	2,318	0.207 (0.406)	0.165 (0.372)	0.170 (0.376)	0.177 (0.382)	0.204 (0.404)	0.215 (0.411)
Total number of unpaid workers	2.391 (1.214)	2,283	2.632 (1.316)	2.483 (1.171)	2.521 (1.252)	2.403 (1.166)	2.185 (1.182)	2.287 (1.168)
Total number of paid workers	0.488 (1.197)	2,284	0.294 (0.991)	0.206 (0.642)	0.247 (0.881)	0.272 (0.911)	0.834 (1.515)	0.777 (1.435)
Total business assets (Rp. millions) <sup>b</sup>	2.927 (1.606)	2,318	2.597 (1.457)	2.697 (1.551)	2.518 (1.413)	2.744 (1.530)	3.355 (1.682)	3.310 (1.675)
Total business profits, reported (Rp. millions) <sup>b</sup>	1.272 (0.778)	2,266	1.091 (0.737)	1.072 (0.708)	1.034 (0.709)	1.158 (0.706)	1.516 (0.779)	1.540 (0.803)
Total business profits, calculated (Rp. millions) <sup>b</sup>	1.415 (1.299)	2,256	1.334 (1.195)	1.228 (1.276)	1.286 (1.231)	1.313 (1.195)	1.585 (1.404)	1.588 (1.361)
Total business revenue (Rp. millions) <sup>b</sup>	2.721 (1.205)	2,270	2.613 (1.222)	2.631 (1.172)	2.516 (1.137)	2.665 (1.104)	2.882 (1.258)	2.893 (1.253)
Any saving during past 3 months	0.780 (0.414)	2,318	0.827 (0.379)	0.831 (0.376)	0.864 (0.343)	0.850 (0.357)	0.665 (0.472)	0.720 (0.450)
Total savings during past 3 months (Rp. millions) <sup>b</sup>	1.141 (1.164)	2,318	1.073 (1.148)	1.108 (1.092)	1.086 (1.064)	1.234 (1.102)	1.151 (1.259)	1.176 (1.234)
Ratio of total savings to total profit <sup>a</sup>	0.907 (0.941)	2,264	0.929 (0.963)	1.047 (0.998)	1.020 (0.927)	1.076 (1.013)	0.756 (0.888)	0.751 (0.856)
Current total savings balance (Rp. millions) <sup>b</sup>	2.277 (1.636)	2,304	2.115 (1.614)	2.255 (1.517)	2.177 (1.489)	2.448 (1.510)	2.311 (1.853)	2.319 (1.670)
Any borrowing during past 3 months	0.293 (0.455)	2,318	0.347 (0.477)	0.324 (0.469)	0.297 (0.457)	0.296 (0.457)	0.255 (0.436)	0.274 (0.446)
Amount borrowed during past 3 months (Rp. millions) <sup>b</sup>	0.529 (1.072)	2,318	0.461 (0.932)	0.553 (1.117)	0.455 (0.960)	0.521 (1.020)	0.501 (1.045)	0.661 (1.270)
Amount of currently outstanding loans (Rp. millions) <sup>b</sup>	1.602 (1.610)	2,312	1.429 (1.473)	1.459 (1.605)	1.380 (1.435)	1.353 (1.468)	1.854 (1.707)	1.898 (1.751)
Any formal savings	0.204 (0.403)	2,318	0.163 (0.370)	0.184 (0.388)	0.170 (0.376)	0.199 (0.400)	0.220 (0.415)	0.259 (0.438)
Any e-savings	0.005 (0.069)	2,318	0.000 (0.000)	0.007 (0.086)	0.007 (0.085)	0.014 (0.117)	0.000 (0.000)	0.002 (0.047)
Any savings at home	0.381 (0.486)	2,318	0.390 (0.489)	0.390 (0.489)	0.394 (0.489)	0.449 (0.498)	0.337 (0.473)	0.359 (0.480)
Any savings in a ROSCA	0.487 (0.500)	2,318	0.580 (0.494)	0.577 (0.495)	0.618 (0.486)	0.648 (0.478)	0.302 (0.459)	0.341 (0.475)
Any savings in real assets	0.103 (0.304)	2,318	0.143 (0.351)	0.118 (0.323)	0.124 (0.330)	0.089 (0.285)	0.084 (0.277)	0.083 (0.276)
Any other savings	0.414	2,318	0.483	0.452	0.501	0.446	0.333	0.337

	Total sample		Treatment category					
	Mean (standard deviation)	Sample size	Females, untreated low ( $x_0$ )	Females, untreated high ( $x_1$ )	Females, treated low ( $x_2$ )	Females, treated high ( $x_3$ )	Males, untreated low ( $x_4$ )	Males, untreated high ( $x_5$ )
	(0.493)		(0.501)	(0.499)	(0.501)	(0.498)	(0.472)	(0.473)
Formal savings in last 3 months (Rp. millions) <sup>b</sup>	0.301 (0.729)	2,318	0.212 (0.603)	0.229 (0.608)	0.213 (0.603)	0.270 (0.660)	0.391 (0.867)	0.406 (0.829)
e-savings in last 3 months (Rp. millions) <sup>b</sup>	0.003 (0.064)	2,318	0.000 (0.000)	0.005 (0.065)	0.006 (0.114)	0.005 (0.051)	0.000 (0.000)	0.003 (0.067)
Savings at home in last 3 months (Rp. millions) <sup>b</sup>	0.373 (0.661)	2,318	0.330 (0.626)	0.356 (0.641)	0.297 (0.555)	0.424 (0.677)	0.375 (0.679)	0.439 (0.738)
Savings in ROSCA in last 3 months (Rp. millions) <sup>b</sup>	0.266 (0.485)	2,318	0.321 (0.507)	0.299 (0.526)	0.329 (0.507)	0.372 (0.533)	0.170 (0.419)	0.182 (0.418)
Savings in real assets in last 3 months (Rp. millions) <sup>b</sup>	0.169 (0.581)	2,318	0.234 (0.669)	0.177 (0.572)	0.178 (0.567)	0.181 (0.637)	0.134 (0.522)	0.143 (0.555)
Other savings in last 3 months (Rp. millions) <sup>b</sup>	0.346 (0.651)	2,318	0.348 (0.636)	0.320 (0.583)	0.340 (0.595)	0.376 (0.659)	0.347 (0.701)	0.342 (0.687)
Formal savings: current balance (Rp. millions) <sup>b</sup>	0.699 (1.163)	2,308	0.530 (1.042)	0.601 (1.061)	0.521 (0.975)	0.672 (1.112)	0.869 (1.339)	0.861 (1.237)
e-savings: current balance (Rp. millions) <sup>b</sup>	0.014 (0.200)	2,317	0.003 (0.043)	0.004 (0.045)	0.007 (0.117)	0.045 (0.421)	0.010 (0.168)	0.013 (0.124)
Savings at home: current balance (Rp. millions) <sup>b</sup>	0.489 (0.783)	2,313	0.447 (0.730)	0.458 (0.745)	0.383 (0.618)	0.507 (0.759)	0.506 (0.850)	0.602 (0.894)
Savings in ROSCA: current balance (Rp. millions) <sup>b</sup>	0.660 (0.969)	2,317	0.799 (0.993)	0.673 (0.904)	0.816 (1.011)	0.925 (1.046)	0.453 (0.900)	0.451 (0.871)
Savings in real assets: current balance (Rp. millions) <sup>b</sup>	0.964 (1.646)	2,316	1.001 (1.637)	1.037 (1.527)	0.937 (1.532)	1.108 (1.660)	0.899 (1.785)	0.882 (1.647)
Other savings: current balance (Rp. millions) <sup>b</sup>	0.681 (1.016)	2,315	0.653 (0.998)	0.618 (0.928)	0.662 (0.949)	0.678 (0.958)	0.737 (1.117)	0.692 (1.059)
Any borrowing from bank in last 3 months	0.065 (0.247)	2,318	0.043 (0.204)	0.085 (0.279)	0.041 (0.199)	0.050 (0.218)	0.070 (0.255)	0.098 (0.297)
Any borrowing from friends and family in last 3 months	0.110 (0.313)	2,318	0.127 (0.333)	0.110 (0.314)	0.100 (0.300)	0.127 (0.334)	0.105 (0.307)	0.102 (0.303)
Any borrowing from cooperative in last 3 months	0.057 (0.232)	2,318	0.057 (0.232)	0.055 (0.229)	0.073 (0.260)	0.058 (0.234)	0.051 (0.219)	0.052 (0.223)
Any borrowing from BMT in last 3 months	0.010 (0.101)	2,318	0.003 (0.058)	0.011 (0.105)	0.012 (0.110)	0.011 (0.105)	0.014 (0.116)	0.009 (0.093)
Any borrowing from other sources in last 3 months	0.097 (0.295)	2,318	0.133 (0.341)	0.125 (0.331)	0.124 (0.330)	0.097 (0.296)	0.062 (0.242)	0.067 (0.251)
Amount borrowed from bank in last 3 months (Rp. millions) <sup>b</sup>	0.200 (0.796)	2,318	0.130 (0.652)	0.277 (0.940)	0.133 (0.667)	0.149 (0.693)	0.188 (0.733)	0.313 (1.002)
Amount borrowed from friends and family in last 3 months (Rp. millions) <sup>b</sup>	0.130 (0.451)	2,318	0.138 (0.448)	0.093 (0.371)	0.115 (0.415)	0.151 (0.483)	0.136 (0.465)	0.139 (0.484)
Amount borrowed from cooperative in last 3 months (Rp. millions) <sup>b</sup>	0.074 (0.323)	2,318	0.065 (0.289)	0.059 (0.271)	0.093 (0.357)	0.074 (0.321)	0.073 (0.334)	0.072 (0.330)
Amount borrowed from BMT in last 3 months (Rp. millions) <sup>b</sup>	0.019 (0.211)	2,318	0.005 (0.083)	0.022 (0.243)	0.028 (0.270)	0.026 (0.255)	0.021 (0.207)	0.013 (0.143)
Amount borrowed from other sources in last 3 months (Rp. millions) <sup>b</sup>	0.092 (0.359)	2,318	0.093 (0.326)	0.129 (0.418)	0.099 (0.353)	0.110 (0.406)	0.053 (0.271)	0.088 (0.383)
Amount currently owed to bank (Rp. millions) <sup>b</sup>	0.964 (1.569)	2,314	0.690 (1.358)	0.871 (1.528)	0.657 (1.298)	0.744 (1.391)	1.273 (1.735)	1.297 (1.754)
Amount currently owed to friends and family (Rp. millions) <sup>b</sup>	0.299 (0.771)	2,318	0.300 (0.724)	0.188 (0.620)	0.259 (0.693)	0.240 (0.668)	0.375 (0.883)	0.354 (0.865)
Amount currently owed to cooperatives (Rp. millions) <sup>b</sup>	0.199 (0.564)	2,316	0.207 (0.587)	0.184 (0.530)	0.173 (0.490)	0.188 (0.533)	0.207 (0.595)	0.224 (0.609)
Amount currently owed to BMT (Rp. millions) <sup>b</sup>	0.040 (0.287)	2,318	0.038 (0.288)	0.046 (0.372)	0.039 (0.271)	0.040 (0.314)	0.045 (0.275)	0.032 (0.233)



	Total sample		Treatment category					
	Mean (standard deviation)	Sample size	Females, untreated low ( $x_0$ )	Females, untreated high ( $x_1$ )	Females, treated low ( $x_2$ )	Females, treated high ( $x_3$ )	Males, untreated low ( $x_4$ )	Males, untreated high ( $x_5$ )
Amount currently owed to other sources (Rp. millions) <sup>b</sup>	0.353 (0.803)	2,317	0.390 (0.827)	0.408 (0.876)	0.408 (0.809)	0.385 (0.806)	0.266 (0.694)	0.316 (0.832)
Business owner has bank account in her/his name	0.563 (0.496)	2,319	0.483 (0.501)	0.551 (0.498)	0.496 (0.501)	0.543 (0.499)	0.621 (0.486)	0.633 (0.482)
Overall happiness (1-5)	4.397 (0.774)	2,314	4.355 (0.787)	4.353 (0.764)	4.428 (0.756)	4.425 (0.727)	4.396 (0.804)	4.407 (0.777)
Satisfaction with current job (1-5)	4.479 (0.825)	2,314	4.348 (0.905)	4.496 (0.833)	4.487 (0.753)	4.511 (0.814)	4.488 (0.837)	4.511 (0.820)
Assertiveness index (0-30)	15.820 (3.526)	2,314	14.946 (3.637)	15.154 (3.614)	15.703 (3.412)	15.406 (3.592)	16.475 (3.405)	16.493 (3.317)
Positive attitude index (0-50)	34.678 (4.640)	2,314	33.298 (4.603)	34.022 (4.456)	34.195 (4.320)	34.269 (4.341)	35.684 (4.842)	35.583 (4.654)
Household total income per capita (Rp. millions) <sup>b</sup>	0.411 (0.237)	2,278	0.392 (0.216)	0.408 (0.223)	0.390 (0.227)	0.417 (0.249)	0.428 (0.238)	0.421 (0.252)
Household asset index <sup>a</sup>	-0.021 (1.472)	2,318	-0.234 (1.384)	0.025 (1.468)	-0.102 (1.371)	0.048 (1.481)	0.068 (1.544)	0.015 (1.510)
N			300	272	411	361	514	461

<sup>a</sup> winsorized (highest 2 percent of values)

<sup>b</sup> winsorized (highest 2 percent of values) and resulting variable transformed to inverted hyperbolic sine values

**Table D-2. Knowledge of mobile money (MM)**

	Knows about MM	Knows about digital wallet products (LKD)	Knows about Laku Pandai (LP) products	No LP: Lack of information cited as one reason <sup>a</sup>	Uses phone to access internet	Uses phone for MM	Uses phone for banking
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
CONTROL VALUES (female, untreated with low agent incentives)							
Unadjusted sample mean ( $x_0$ )	0.090 (0.017)	0.000 (0.000)	0.007 (0.005)	0.418 (0.028)	0.251 (0.026)	0.003 (0.003)	0.027 (0.009)
Adjusted mean ( $x_0$ )	0.082 (0.018)	0.003 (0.003)	0.002 (0.007)	0.419 (0.031)	0.287 (0.022)	0.005 (0.004)	0.038 (0.010)
ESTIMATED MARGINAL EFFECTS							
Female, untreated with high agent incentives ( $x_1$ )	0.025 (0.025)	-0.000 (0.002)	0.006 (0.008)	-0.053 (0.042)	0.031 (0.030)	0.005 (0.006)	0.023* (0.014)
Female, treated with low agent incentives ( $x_2$ )	0.120*** (0.025)	0.060*** (0.016)	0.078*** (0.014)	-0.042 (0.036)	0.037 (0.025)	0.006 (0.006)	0.030** (0.014)
Female, treated with high agent incentives ( $x_3$ )	0.164*** (0.030)	0.052*** (0.016)	0.112*** (0.021)	-0.030 (0.037)	0.045 (0.029)	0.012* (0.007)	0.020* (0.012)
Male, low agent incentives ( $x_4$ )	0.069** (0.028)	-0.002 (0.007)	0.006 (0.011)	0.088* (0.047)	0.097*** (0.035)	0.003 (0.008)	0.033* (0.019)
Male, high agent incentives ( $x_5$ )	0.042 (0.030)	-0.001 (0.007)	0.011 (0.012)	0.079 (0.048)	0.109*** (0.034)	0.002 (0.007)	0.062*** (0.018)
JOINT TESTS (p-values)							
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.197	0.978	0.399	0.622	0.748	0.704	0.087*
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.000***	0.000***	0.000***	0.426	0.302	0.416	0.098*
Joint test of the interactive effect of high agent incentives and training on female business owners	0.201	0.744	0.163	0.735	0.784	0.427	0.448
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.097*	0.906	0.497	0.460	0.825	0.634	0.107
R-squared	0.11	0.06	0.07	0.05	0.45	0.05	0.25
N	2317	2317	2317	2298	2304	2304	2304

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> No baseline data available for this variable

**Table D-3. Relationships with MM agents**

	Knows agent (un-prompted)	Knows agent (prompted)	Agent provided information about LP <sup>a</sup>	Willing to lend agent money	No LP: Not trust agent cited as one reason <sup>a</sup>	Agent's perceived level of effort in providing LP information (1-10) <sup>a</sup>	Agent's perceived competence (1-10)
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Ordered logit <sup>c</sup>	Ordered logit <sup>c</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>CONTROL VALUES</b> (female, untreated with low agent incentives)							
Unadjusted sample mean (x <sub>0</sub> )	0.290 (0.031)	0.827 (0.027)	0.033 (0.010)	0.543 (0.033)	0.057 (0.015)	0.019 (0.007)	0.183 (0.022)
Adjusted mean (x <sub>0</sub> )	0.285 (0.028)	0.825 (0.024)	0.034 (0.010)	0.622 (0.037)	0.057 (0.017)	0.023 (0.004)	0.195 (0.016)
<b>ESTIMATED MARGINAL EFFECTS</b>							
Female, untreated with high agent incentives (x <sub>1</sub> )	0.011 (0.039)	-0.014 (0.031)	-0.006 (0.014)	-0.059 (0.048)	-0.014 (0.021)	-0.002 (0.004)	-0.017 (0.021)
Female, treated with low agent incentives (x <sub>2</sub> )	0.257*** (0.035)	0.067*** (0.023)	0.056*** (0.017)	-0.051 (0.042)	0.001 (0.018)	-0.006** (0.003)	-0.017 (0.019)
Female, treated with high agent incentives (x <sub>3</sub> )	0.285*** (0.039)	0.039 (0.028)	0.041** (0.019)	-0.009 (0.045)	0.009 (0.021)	-0.002 (0.004)	-0.010 (0.019)
Male, low agent incentives (x <sub>4</sub> )	-0.006 (0.036)	-0.023 (0.030)	-0.004 (0.017)	0.023 (0.047)	-0.019 (0.021)	0.000 (0.004)	-0.012 (0.023)
Male, high agent incentives (x <sub>5</sub> )	0.036 (0.044)	-0.015 (0.036)	0.023 (0.018)	0.043 (0.054)	-0.022 (0.022)	0.004 (0.004)	-0.015 (0.023)
<b>JOINT TESTS</b> (p-values)							
Joint test of the effect of high agent incentives (I <sub>1</sub> ) on female and male business owners	0.611	0.628	0.182	0.300	0.840	0.264	0.795
Joint test of the effect of female business owner training and mentoring (I <sub>2</sub> )	0.000***	0.003***	0.000***	0.239	0.393	0.105	0.619
Joint test of the interactive effect of high agent incentives and training on female business owners	0.505	0.272	0.479	0.280	0.678	0.200	0.705
Joint test of equality in the effect of high agent incentives (I <sub>1</sub> ) on female and male business owners	0.757	0.490	0.128	0.186	0.676	0.300	0.645
R-squared	0.19	0.25	0.02	0.20	0.02	0.01 <sup>b</sup>	0.04 <sup>b</sup>
N	2316	2316	2316	2316	2298	1812	2311

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> No baseline data available for this variable

<sup>b</sup> Pseudo R-squared

<sup>c</sup> Ordered logit control estimates of control values and marginal effects refer to the probability of the outcome being in the highest observed category.

**Table D-4. Demand for MM**

	Obtained MM services from agent <sup>a</sup>	No LP: Not trust bank cited as one reason <sup>a</sup>	Perceived LP popularity	Perceived safety of LP	Perceived reliability of LP	Trust in state-owned banks	Trust in non-state-owned banks	Perceived number of LP customers in village <sup>b</sup>
Statistical model →	Linear regression	Linear regression	Ordered logit <sup>d</sup>	Ordered logit <sup>d</sup>	Ordered logit <sup>d</sup>	Ordered logit <sup>d</sup>	Ordered logit <sup>d</sup>	Poisson regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>CONTROL VALUES</b> (female, untreated with low agent incentives)								
Unadjusted sample mean (x <sub>0</sub> )	0.000 (0.000)	0.020 (0.008)	0.025 (0.009)	0.186 (0.021)	0.177 (0.020)	0.369 (0.032)	0.161 (0.022)	12.672 (1.260)
Adjusted mean (x <sub>0</sub> )	-0.003 (0.001)	0.026*** (0.010)	0.045 (0.005)	0.215 (0.018)	0.198 (0.016)	0.388 (0.029)	0.175 (0.018)	13.551 (1.501)
<b>ESTIMATED MARGINAL EFFECTS</b>								
Female, untreated with high agent incentives (x <sub>1</sub> )	0.003 (0.004)	-0.006 (0.011)	-0.005 (0.006)	-0.012 (0.026)	-0.018 (0.022)	0.058 (0.040)	0.010 (0.025)	0.425 (1.926)
Female, treated with low agent incentives (x <sub>2</sub> )	0.024*** (0.008)	-0.008 (0.010)	-0.002 (0.005)	0.017 (0.023)	0.001 (0.021)	0.073** (0.033)	0.022 (0.023)	-1.174 (1.609)
Female, treated with high agent incentives (x <sub>3</sub> )	0.014* (0.007)	-0.006 (0.010)	-0.004 (0.006)	0.026 (0.025)	-0.010 (0.021)	0.085** (0.042)	0.027 (0.023)	-0.251 (1.743)
Male, low agent incentives (x <sub>4</sub> )	0.008*** (0.003)	-0.014 (0.013)	-0.001 (0.007)	-0.001 (0.025)	0.007 (0.022)	0.111*** (0.039)	0.036 (0.027)	1.694 (1.932)
Male, high agent incentives (x <sub>5</sub> )	0.007*** (0.003)	-0.022 (0.014)	0.005 (0.007)	-0.006 (0.028)	-0.003 (0.024)	0.103** (0.051)	0.032 (0.031)	-1.204 (2.246)
<b>JOINT TESTS</b> (p-values)								
Joint test of the effect of high agent incentives (T <sub>1</sub> ) on female and male business owners	0.580	0.657	0.521	0.918	0.776	0.440	0.972	0.219
Joint test of the effect of female business owner training and mentoring (T <sub>2</sub> )	0.006***	0.709	0.890	0.234	0.918	0.066*	0.402	0.703
Joint test of the interactive effect of high agent incentives and training on female business owners	0.327	0.781	0.820	0.792	0.619	0.757	0.808	0.553
Joint test of equality in the effect of high agent incentives (T <sub>1</sub> ) on female and male business owners	0.412	0.608	0.328	0.800	0.954	0.323	0.905	0.135
R-squared	0.02	0.01	0.03 <sup>c</sup>	0.02 <sup>c</sup>	0.03 <sup>c</sup>	0.02 <sup>c</sup>	0.01 <sup>c</sup>	0.05 <sup>c</sup>
N	2316	2298	2313	2312	2312	2315	2315	2199

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> No baseline data available for this variable.

<sup>b</sup> winsorized (highest 2 percent of values)

<sup>c</sup> Pseudo R-squared

<sup>d</sup> Ordered logit control estimates of control values and marginal effects refer to the probability of the outcome being in the highest observed category.

**Table D-5. Household decision-making**

	Business owner alone decides whether to purchase a new appliance	Business owner alone decides whether to work outside the home	Business owner alone decides whether to support other family members	Business owner alone decides whether to save for the future	Business owner alone decides whether to sign up for a new banking product
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)
CONTROL VALUES (female, untreated with low agent incentives)					
Unadjusted sample mean ( $x_0$ )	0.240 (0.024)	0.177 (0.020)	0.213 (0.021)	0.227 (0.024)	0.217 (0.024)
Adjusted mean ( $x_0$ )	0.264 (0.027)	0.280 (0.020)	0.282 (0.020)	0.263 (0.025)	0.264 (0.025)
ESTIMATED MARGINAL EFFECTS					
Female, untreated with high agent incentives ( $x_1$ )	0.022 (0.036)	0.017 (0.029)	-0.051* (0.028)	-0.007 (0.031)	-0.068** (0.029)
Female, treated with low agent incentives ( $x_2$ )	0.009 (0.027)	0.032 (0.024)	-0.013 (0.026)	0.003 (0.026)	0.002 (0.029)
Female, treated with high agent incentives ( $x_3$ )	0.075** (0.033)	0.087*** (0.027)	0.033 (0.028)	0.067** (0.032)	0.046 (0.032)
Male, low agent incentives ( $x_4$ )	-0.038 (0.039)	0.116*** (0.038)	-0.052 (0.037)	-0.016 (0.037)	0.003 (0.040)
Male, high agent incentives ( $x_5$ )	-0.013 (0.040)	0.069* (0.038)	-0.060 (0.039)	-0.010 (0.038)	0.011 (0.038)
JOINT TESTS (p-values)					
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.180	0.077*	0.084*	0.148	0.049**
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.225	0.024**	0.009***	0.042**	0.000***
Joint test of the interactive effect of high agent incentives and training on female business owners	0.034**	0.049**	0.098*	0.024**	0.130
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.439	0.042**	0.038**	0.147	0.021**
R-squared	0.16	0.22	0.18	0.22	0.19
N	2316	2316	2316	2316	2316

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> Pseudo R-squared

**Table D-6. Spousal roles**

	Percent of business earnings known to the spouse	Percent of household expenses financed from spouse earnings	Spouse has some income	Spouse asked for money in past 12 months that you did not want to give	Business owner has sole control over his/her business earnings	Business owner has sole control over the spending of some money	Business owner and spouse have equal say over spending of the spouse's earnings
Statistical model →	Poisson regression	Poisson regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>CONTROL VALUES</b> (female, untreated with low agent incentives)							
Unadjusted sample mean ( $x_0$ )	78.058 (2.204)	47.353 (1.854)	0.924 (0.017)	0.062 (0.015)	0.693 (0.026)	0.500 (0.033)	0.734 (0.025)
Adjusted mean ( $x_0$ )	79.404 (2.292)	43.515 (2.708)	0.897 (0.025)	0.053 (0.018)	0.669 (0.027)	0.485 (0.034)	0.719 (0.032)
<b>ESTIMATED MARGINAL EFFECTS</b>							
Female, untreated with high agent incentives ( $x_1$ )	2.734 (3.240)	-0.607 (1.868)	-0.013 (0.025)	0.007 (0.023)	-0.014 (0.040)	-0.033 (0.046)	0.030 (0.037)
Female, treated with low agent incentives ( $x_2$ )	-4.839 (3.030)	-0.475 (1.648)	0.017 (0.021)	0.013 (0.021)	-0.008 (0.033)	0.008 (0.038)	0.003 (0.035)
Female, treated with high agent incentives ( $x_3$ )	-5.033 (3.269)	-1.235 (1.779)	0.024 (0.022)	0.004 (0.021)	0.058* (0.035)	0.003 (0.044)	0.013 (0.036)
Male, low agent incentives ( $x_4$ )	8.914*** (3.204)	-28.720*** (5.751)	-0.282*** (0.055)	0.088** (0.036)	-0.061 (0.039)	-0.075* (0.044)	-0.009 (0.085)
Male, high agent incentives ( $x_5$ )	7.191** (3.146)	-33.054*** (5.884)	-0.306*** (0.057)	0.096*** (0.036)	-0.099** (0.041)	-0.069 (0.048)	-0.015 (0.082)
<b>JOINT TESTS (p-values)</b>							
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.500	0.642	0.833	0.933	0.141	0.895	0.859
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.031**	0.887	0.123	0.805	0.163	0.701	0.907
Joint test of the interactive effect of high agent incentives and training on female business owners	0.955	0.632	0.694	0.660	0.053*	0.896	0.765
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.431	0.714	0.653	0.807	0.065*	0.757	0.828
R-squared	0.11 <sup>a</sup>	0.24 <sup>a</sup>	0.24	0.07	0.10	0.09	0.03
N	2046	2050	2057	2058	2296	2315	1488

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> Pseudo R-squared

**Table D-7. Business outcomes**

	Has second business	Number of unpaid workers	Number of paid workers	Total business assets (Rp. millions)	Total business profits, reported (Rp. millions)	Total business profits, calculated (Rp. millions)	Total business revenue (Rp. millions)
Statistical model →	Linear regression	Poisson regression	Poisson regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
CONTROL VALUES (female, untreated with low agent incentives)							
Unadjusted sample mean ( $x_0$ )	0.207 (0.023)	2,632 (0.082)	0.294 (0.053)	2,597 (0.087)	1.091 (0.048)	1.334 (0.077)	2.613 (0.077)
Adjusted mean ( $x_0$ )	0.202 (0.021)	2,588 (0.073)	0.352 (0.063)	2,786 (0.084)	1.158 (0.041)	1.382 (0.077)	2.679 (0.069)
ESTIMATED MARGINAL EFFECTS							
Female, untreated with high agent incentives ( $x_1$ )	-0.022 (0.026)	-0.146* (0.088)	-0.091 (0.117)	0.048 (0.114)	-0.025 (0.059)	-0.107 (0.103)	0.006 (0.095)
Female, treated with low agent incentives ( $x_2$ )	-0.021 (0.023)	-0.081 (0.080)	-0.028 (0.099)	-0.041 (0.095)	-0.033 (0.048)	-0.007 (0.093)	-0.051 (0.090)
Female, treated with high agent incentives ( $x_3$ )	-0.016 (0.025)	-0.163** (0.083)	0.050 (0.097)	0.112 (0.107)	0.048 (0.053)	-0.042 (0.096)	0.017 (0.088)
Male, low agent incentives ( $x_4$ )	-0.005 (0.033)	-0.352*** (0.101)	0.274** (0.122)	0.293** (0.124)	0.250*** (0.060)	0.108 (0.113)	0.090 (0.092)
Male, high agent incentives ( $x_5$ )	-0.001 (0.033)	-0.290*** (0.102)	0.238** (0.116)	0.302** (0.126)	0.306*** (0.061)	0.148 (0.130)	0.138 (0.107)
JOINT TESTS (p-values)							
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.852	0.228	0.616	0.495	0.216	0.657	0.805
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.659	0.588	0.450	0.779	0.407	0.775	0.848
Joint test of the interactive effect of high agent incentives and training on female business owners	0.863	0.314	0.401	0.131	0.111	0.729	0.422
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.689	0.157	0.459	0.511	0.388	0.500	0.883
R-squared	0.25	0.04 <sup>a</sup>	0.36 <sup>a</sup>	0.34	0.35	0.11	0.22
N	2316	2281	2282	2316	2250	2240	2254

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Notes: Estimated standard errors adjusted for clustering at the village level are in parentheses. The dependent variables in columns 2-7 are winsorized (highest 2 percent of values), and the resulting variables are transformed to inverse hyperbolic sine values in columns 4-7.

<sup>a</sup> Pseudo R-squared

**Table D-8. Total saving and borrowing during the past 3 months**

	Any saving during past 3 months	Total savings during past 3 months (Rp. millions)	Ratio of total savings to total profit	Current total savings balance (Rp. millions)	Any borrowing during past 3 months <sup>a</sup>	Amount borrowed during past 3 months (Rp. millions) <sup>a</sup>	Amount of currently outstanding loans (Rp. millions) <sup>a</sup>
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>CONTROL VALUES</b> (female, untreated with low agent incentives)							
Unadjusted sample mean ( $x_0$ )	0.827 (0.024)	1.073 (0.074)	0.929 (0.058)	2.115 (0.108)	0.347 (0.027)	0.461 (0.054)	1.429 (0.091)
Adjusted mean ( $x_0$ )	0.808 (0.026)	1.068 (0.067)	0.925 (0.064)	2.132 (0.091)	0.353 (0.029)	0.494 (0.057)	1.527 (0.091)
<b>ESTIMATED MARGINAL EFFECTS</b>							
Female, untreated with high agent incentives ( $x_1$ )	0.002 (0.032)	-0.012 (0.087)	0.086 (0.086)	0.072 (0.124)	-0.023 (0.038)	0.087 (0.083)	-0.016 (0.122)
Female, treated with low agent incentives ( $x_2$ )	0.036 (0.024)	0.038 (0.074)	0.080 (0.064)	0.115 (0.093)	-0.043 (0.035)	0.019 (0.068)	0.058 (0.113)
Female, treated with high agent incentives ( $x_3$ )	0.018 (0.032)	0.097 (0.081)	0.132 (0.081)	0.246** (0.114)	-0.047 (0.036)	0.067 (0.075)	-0.065 (0.112)
Male, low agent incentives ( $x_4$ )	-0.121*** (0.040)	0.080 (0.093)	-0.147* (0.085)	0.145 (0.116)	-0.112*** (0.038)	-0.052 (0.078)	0.166 (0.126)
Male, high agent incentives ( $x_5$ )	-0.053 (0.044)	0.167 (0.103)	-0.141 (0.092)	0.232* (0.136)	-0.093** (0.045)	0.111 (0.098)	0.189 (0.129)
<b>JOINT TESTS</b> (p-values)							
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.097*	0.629	0.737	0.620	0.863	0.155	0.623
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.280	0.320	0.386	0.082*	0.369	0.936	0.792
Joint test of the interactive effect of high agent incentives and training on female business owners	0.510	0.438	0.471	0.206	0.910	0.507	0.198
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.052*	0.662	0.716	0.889	0.689	0.597	0.518
R-squared	0.11	0.22	0.10	0.24	0.02	0.04	0.27
N	2307	2307	2241	2294	2316	2316	2310

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Notes: Estimated standard errors adjusted for clustering at the village level are in parentheses. The dependent variables in columns 2-4 and 6-7 are winsorized (highest 2 percent of values), and the resulting variables are transformed to inverse hyperbolic sine values.

<sup>a</sup> baseline value is “any borrowing during the past 12 months”



**Table D-9. Any savings during the last 3 months by source**

	Any formal savings	Any e-savings	Any savings at home	Any savings in a ROSCA	Any savings in real assets <sup>a</sup>	Any other savings
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)
CONTROL VALUES (female, untreated with low agent incentives)						
Unadjusted sample mean ( $x_0$ )	0.163 (0.022)	0.000 (0.000)	0.390 (0.029)	0.580 (0.033)	0.143 (0.021)	0.483 (0.031)
Adjusted mean ( $x_0$ )	0.175 (0.022)	0.001 (0.001)	0.382 (0.030)	0.543 (0.033)	0.152 (0.024)	0.478 (0.034)
ESTIMATED MARGINAL EFFECTS						
Female, untreated with high agent incentives ( $x_1$ )	0.019 (0.029)	0.008 (0.005)	-0.008 (0.040)	-0.023 (0.045)	-0.029 (0.028)	-0.025 (0.045)
Female, treated with low agent incentives ( $x_2$ )	0.019 (0.023)	0.008* (0.004)	0.003 (0.036)	0.033 (0.036)	-0.019 (0.022)	0.029 (0.034)
Female, treated with high agent incentives ( $x_3$ )	0.033 (0.028)	0.015** (0.006)	0.052 (0.036)	0.054 (0.041)	-0.059** (0.026)	-0.028 (0.042)
Male, low agent incentives ( $x_4$ )	0.023 (0.033)	-0.002 (0.003)	-0.029 (0.043)	-0.175*** (0.048)	-0.077*** (0.029)	-0.152*** (0.047)
Male, high agent incentives ( $x_5$ )	0.061* (0.037)	0.000 (0.004)	-0.003 (0.045)	-0.142*** (0.050)	-0.081** (0.032)	-0.140*** (0.053)
JOINT TESTS (p-values)						
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.453	0.244	0.438	0.711	0.277	0.426
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.660	0.156	0.279	0.105	0.332	0.689
Joint test of the interactive effect of high agent incentives and training on female business owners	0.579	0.373	0.144	0.587	.071	0.151
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.752	0.482	0.542	0.585	0.414	0.284
R-squared	0.22	0.01	0.12	0.16	0.04	0.06
N	2312	2316	2316	2316	2316	2316

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> No baseline data available for this variable

**Table D-10. Savings (Rp. millions) during the last 3 months by source**

	Formal savings in last 3 months	e-savings in last 3 months	Savings at home in last 3 months	Savings in a ROSCA in last 3 months	Savings in real assets in last 3 months <sup>a</sup>	Other savings in last 3 months
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)
CONTROL VALUES (female, untreated with low agent incentives)						
Unadjusted sample mean ( $x_0$ )	0.212 (0.037)	0.000 (0.000)	0.330 (0.038)	0.321 (0.032)	0.234 (0.041)	0.348 (0.035)
Adjusted mean ( $x_0$ )	0.244*** (0.039)	0.001 (0.001)	0.334*** (0.039)	0.281*** (0.028)	0.238*** (0.043)	0.341*** (0.040)
ESTIMATED MARGINAL EFFECTS						
Female, untreated with high agent incentives ( $x_1$ )	0.018 (0.049)	0.006 (0.004)	0.017 (0.051)	-0.014 (0.042)	-0.064 (0.052)	-0.027 (0.050)
Female, treated with low agent incentives ( $x_2$ )	0.008 (0.041)	0.007 (0.006)	-0.035 (0.045)	0.033 (0.033)	-0.052 (0.043)	0.004 (0.046)
Female, treated with high agent incentives ( $x_3$ )	0.057 (0.048)	0.006** (0.003)	0.080 (0.050)	0.058 (0.041)	-0.062 (0.054)	0.030 (0.050)
Male, low agent incentives ( $x_4$ )	0.087 (0.061)	-0.002 (0.003)	0.039 (0.053)	-0.073** (0.036)	-0.105** (0.051)	0.004 (0.064)
Male, high agent incentives ( $x_5$ )	0.133** (0.067)	0.001 (0.004)	0.124** (0.061)	-0.058 (0.042)	-0.100* (0.055)	0.007 (0.066)
JOINT TESTS (p-values)						
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.616	0.475	0.030**	0.840	0.677	0.891
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.745	0.519	0.262	0.095*	0.481	0.496
Joint test of the interactive effect of high agent incentives and training on female business owners	0.302	0.841	0.010**	0.534	0.838	0.599
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.884	0.678	0.285	0.726	0.517	0.731
R-squared	0.11	0.01	0.09	0.13	0.03	0.04
N	2312	2316	2313	2316	2316	2316

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Notes: Estimated standard errors adjusted for clustering at the village level are in parentheses. All of the dependent variables in this table are winsorized (highest 2 percent of values), and the resulting variables are transformed to inverse hyperbolic sine values.

<sup>a</sup> No baseline data available for this variable

**Table D-11. Current savings balance (Rp. millions) by source**

	Formal savings: current balance	e-savings: current balance	Savings at home: current balance	Savings in a ROSCA: current balance	Savings in real assets: current balance	Other savings: current balance
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)
<b>CONTROL VALUES</b> (female, untreated with low agent incentives)						
Unadjusted sample mean ( $x_0$ )	0.530 (0.070)	0.003 (0.002)	0.447 (0.044)	0.799 (0.064)	1.001 (0.107)	0.653 (0.057)
Adjusted mean ( $x_0$ )	0.608 (0.068)	0.005 (0.005)	0.435 (0.044)	0.712 (0.058)	1.012 (0.104)	0.643 (0.060)
<b>ESTIMATED MARGINAL EFFECTS</b>						
Female, untreated with high agent incentives ( $x_1$ )	0.067 (0.087)	0.002 (0.004)	-0.001 (0.059)	-0.100 (0.074)	0.022 (0.142)	-0.032 (0.078)
Female, treated with low agent incentives ( $x_2$ )	0.009 (0.067)	0.005 (0.007)	-0.066 (0.046)	0.084 (0.069)	-0.036 (0.122)	0.036 (0.064)
Female, treated with high agent incentives ( $x_3$ )	0.132 (0.086)	0.044** (0.022)	0.040 (0.056)	0.155* (0.080)	0.095 (0.140)	0.024 (0.076)
Male, low agent incentives ( $x_4$ )	0.119 (0.101)	0.002 (0.009)	0.089 (0.067)	-0.188** (0.077)	-0.129 (0.128)	0.088 (0.087)
Male, high agent incentives ( $x_5$ )	0.181* (0.104)	0.004 (0.009)	0.209*** (0.073)	-0.183** (0.086)	-0.151 (0.150)	0.054 (0.096)
<b>JOINT TESTS</b> (p-values)						
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.334	0.277	0.044**	0.292	0.763	0.945
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.763	0.133	0.262	0.000***	0.780	0.649
Joint test of the interactive effect of high agent incentives and training on female business owners	0.112	0.093*	0.027**	0.362	0.321	0.855
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.822	0.322	0.228	0.162	0.628	0.970
R-squared	0.17	0.01	0.11	0.16	0.06	0.06
N	2303	2315	2308	2315	2314	2313

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Notes: Estimated standard errors adjusted for clustering at the village level are in parentheses. All of the dependent variables in this table are winsorized (highest 2 percent of values), and the resulting variables are transformed to inverse hyperbolic sine values.

The baseline variables in this table refer to savings by source during the past 3 months (baseline values of current balances by source are not available).

**Table D-12. Any borrowing during the past 3 months by source**

	Any borrowing from bank	Any borrowing from friends and family	Any borrowing from cooperative	Any borrowing from BMT	Any borrowing from other sources
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)
<b>CONTROL VALUES</b> (female, untreated with low agent incentives)					
Unadjusted sample mean ( $x_0$ )	0.043 (0.011)	0.127 (0.019)	0.057 (0.013)	0.003 (0.003)	0.133 (0.018)
Adjusted mean ( $x_0$ )	0.055 (0.013)	0.107 (0.019)	0.067 (0.014)	0.003 (0.004)	0.137 (0.019)
<b>ESTIMATED MARGINAL EFFECTS</b>					
Female, untreated with high agent incentives ( $x_1$ )	0.041** (0.021)	-0.015 (0.026)	-0.001 (0.018)	0.007 (0.007)	-0.004 (0.027)
Female, treated with low agent incentives ( $x_2$ )	-0.002 (0.015)	-0.026 (0.024)	0.020 (0.019)	0.009 (0.006)	-0.008 (0.020)
Female, treated with high agent incentives ( $x_3$ )	0.006 (0.016)	0.004 (0.025)	-0.001 (0.017)	0.007 (0.007)	-0.033 (0.024)
Male, low agent incentives ( $x_4$ )	-0.000 (0.023)	0.023 (0.028)	-0.032 (0.021)	0.011 (0.010)	-0.084*** (0.025)
Male, high agent incentives ( $x_5$ )	0.028 (0.023)	0.019 (0.031)	-0.029 (0.022)	0.007 (0.008)	-0.076*** (0.028)
<b>JOINT TESTS</b> (p-values)					
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.104	0.576	0.690	0.686	0.656
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.245	0.433	0.588	0.377	0.530
Joint test of the interactive effect of high agent incentives and training on female business owners	0.594	0.211	0.243	0.828	0.291
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.412	0.379	0.550	0.495	0.459
R-squared	0.02	0.02	0.01	0.01	0.02
N	2316	2316	2316	2316	2316

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses. Baseline values are not available for any of the dependent variables in this table

**Table D-13. Amount borrowed (Rp. millions) during the past 3 months by source**

	Amount borrowed from bank	Amount borrowed from friends and family	Amount borrowed from cooperative	Amount borrowed from BMT	Amount borrowed from other sources
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)
CONTROL VALUES (female, untreated with low agent incentives)					
Unadjusted sample mean ( $x_0$ )	0.130 (0.036)	0.138 (0.026)	0.065 (0.016)	0.005 (0.005)	0.093 (0.018)
Adjusted mean ( $x_0$ )	0.160 (0.040)	0.124 (0.027)	0.076 (0.019)	0.008 (0.007)	0.091 (0.019)
ESTIMATED MARGINAL EFFECTS					
Female, untreated with high agent incentives ( $x_1$ )	0.149** (0.066)	-0.043 (0.034)	-0.004 (0.022)	0.016 (0.015)	0.042 (0.034)
Female, treated with low agent incentives ( $x_2$ )	0.010 (0.047)	-0.021 (0.032)	0.033 (0.024)	0.021 (0.014)	0.009 (0.021)
Female, treated with high agent incentives ( $x_3$ )	0.019 (0.050)	0.017 (0.036)	0.008 (0.023)	0.019 (0.014)	0.021 (0.027)
Male, low agent incentives ( $x_4$ )	-0.019 (0.061)	0.031 (0.041)	-0.024 (0.029)	0.010 (0.016)	-0.041 (0.026)
Male, high agent incentives ( $x_5$ )	0.109 (0.069)	0.033 (0.045)	-0.020 (0.030)	0.002 (0.015)	-0.002 (0.033)
JOINT TESTS (p-values)					
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.031**	0.401	0.756	0.680	0.304
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.155	0.188	0.350	0.302	0.779
Joint test of the interactive effect of high agent incentives and training on female business owners	0.858	0.260	0.294	0.883	0.642
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.173	0.231	0.666	0.478	0.681
R-squared	0.02	0.01	0.01	0.01	0.01
N	2316	2316	2316	2316	2316

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Notes: Estimated standard errors adjusted for clustering at the village level are in parentheses. Baseline values are not available for any of the dependent variables in this table. In addition, all of the dependent variables are winsorized (highest 2 percent of values), and the resulting variables are transformed to inverse hyperbolic sine values.

**Table D-14. Total amount currently owed (Rp. millions) by source**

	Amount currently owed to bank	Amount currently owed to friends and family	Amount currently owed to cooperative	Amount currently owed to BMT	Amount currently owed to other sources
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)
CONTROL VALUES (female, untreated with low agent incentives)					
Unadjusted sample mean ( $x_0$ )	0.690 (0.082)	0.300 (0.041)	0.207 (0.034)	0.038 (0.019)	0.390 (0.046)
Adjusted mean ( $x_0$ )	0.793 (0.089)	0.266 (0.045)	0.208 (0.035)	0.036 (0.020)	0.404 (0.050)
ESTIMATED MARGINAL EFFECTS					
Female, untreated with high agent incentives ( $x_1$ )	0.187 (0.131)	-0.104* (0.059)	-0.019 (0.048)	0.007 (0.029)	0.031 (0.077)
Female, treated with low agent incentives ( $x_2$ )	0.004 (0.095)	-0.030 (0.057)	-0.026 (0.041)	-0.000 (0.024)	0.022 (0.056)
Female, treated with high agent incentives ( $x_3$ )	0.062 (0.107)	-0.051 (0.054)	-0.018 (0.044)	-0.002 (0.027)	0.002 (0.066)
Male, low agent incentives ( $x_4$ )	0.315** (0.136)	0.144** (0.069)	-0.011 (0.054)	0.014 (0.029)	-0.167** (0.066)
Male, high agent incentives ( $x_5$ )	0.346*** (0.133)	0.128* (0.071)	0.008 (0.054)	0.001 (0.026)	-0.115 (0.073)
JOINT TESTS (p-values)					
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.505	0.348	0.936	0.904	0.721
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.565	0.552	0.825	0.955	0.860
Joint test of the interactive effect of high agent incentives and training on female business owners	0.534	0.684	0.847	0.943	0.738
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.608	0.505	0.823	0.816	0.644
R-squared	0.11	0.02	0.02	0.01	0.02
N	2312	2316	2314	2316	2315

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Notes: Estimated standard errors adjusted for clustering at the village level are in parentheses. Baseline values are not available for any of the dependent variables in this table. In addition, all of the dependent variables are winsorized (highest 2 percent of values), and the resulting variables are transformed to inverse hyperbolic sine values.

**Table D-15. General welfare indicators**

	Business owner has bank account in her/his name	Overall happiness (1-5) <sup>a</sup>	Job satisfaction (1-5) <sup>a</sup>	Assertiveness index (0-30) <sup>a</sup>	Positive attitude index (0-50) <sup>a</sup>	Household total income per capita (Rp. millions) <sup>a,b</sup>	Household asset index <sup>c</sup>
Statistical model →	Linear regression	Ordered logit <sup>e</sup>	Ordered logit <sup>e</sup>	Poisson regression	Poisson regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
CONTROL VALUES (female, untreated with low agent incentives)							
Unadjusted sample mean (x <sub>0</sub> )	0.483 (0.030)	0.461 (0.028)	0.511 (0.27)	14.946 (0.219)	33.298 (0.245)	0.392 (0.013)	-0.215 (0.081)
Adjusted mean (x <sub>0</sub> )	0.530 (0.022)	0.483 (0.030)	0.531 (0.029)	15.185 (0.230)	33.362 (0.269)	0.407 (0.012)	-0.233 (0.067)
ESTIMATED MARGINAL EFFECTS							
Female, untreated with high agent incentives (x <sub>1</sub> )	0.037 (0.029)	-0.012 (0.041)	0.092** (0.040)	0.280 (0.320)	0.803** (0.369)	0.019 (0.016)	0.240*** (0.091)
Female, treated with low agent incentives (x <sub>2</sub> )	0.043 (0.028)	0.050 (0.038)	0.059* (0.032)	0.725** (0.288)	0.919*** (0.346)	-0.003 (0.013)	0.201** (0.079)
Female, treated with high agent incentives (x <sub>3</sub> )	0.039 (0.028)	0.044 (0.040)	0.096*** (0.036)	0.480* (0.283)	1.036*** (0.344)	0.030** (0.015)	0.235*** (0.089)
Male, low agent incentives (x <sub>4</sub> )	0.039 (0.033)	0.048 (0.043)	0.109** (0.044)	0.942*** (0.336)	2.206*** (0.450)	-0.008 (0.018)	0.283*** (0.101)
Male, high agent incentives (x <sub>5</sub> )	0.033 (0.034)	0.053 (0.046)	0.116*** (0.044)	0.991*** (0.329)	2.132*** (0.454)	-0.006 (0.020)	0.304*** (0.104)
JOINT TESTS (p-values)							
Joint test of the effect of high agent incentives (T <sub>1</sub> ) on female and male business owners	0.639	0.986	0.110	0.553	0.178	0.135	0.077*
Joint test of the effect of female business owner training and mentoring (T <sub>2</sub> )	0.311	0.162	0.194	0.031**	0.025**	0.713	0.040**
Joint test of the interactive effect of high agent incentives and training on female business owners	0.897	0.885	0.286	0.329	0.723	0.025**	0.686
Joint test of equality in the effect of high agent incentives (T <sub>1</sub> ) on female and male business owners	0.456	0.937	0.240	0.350	0.170	0.252	0.103
R-squared	0.48	0.01 <sup>d</sup>	0.02 <sup>d</sup>	0.01 <sup>d</sup>	0.01 <sup>d</sup>	0.38	0.45
N	2316	2312	2312	2312	2312	2263	2316

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> No baseline data available for this variable

<sup>b</sup> This variable is winsorized (highest 2 percent of values) and transformed to inverse hyperbolic sine values

<sup>c</sup> This variable is winsorized (highest and lowest 2 percent of values)

<sup>d</sup> Pseudo R-squared

<sup>e</sup> Ordered logit control estimates of control values and marginal effects refer to the probability of the outcome being in the highest observed category.

## Annex E. Heterogeneity Analysis of Household Decision-Making

The results in Table 5 (column 4) and Table D-5 (Annex D) indicate that higher agent incentives and the training and mentoring of women business owners (WBO) in combination had a consistently positive effect on whether the WBO indicated that she was the exclusive decision-maker in the following decisions:

- Whether or not to buy an appliance for the home, such as a TV or microwave
- In the way household members may work outside the home (in which jobs, how many hours, where, etc.)
- Whether to support family members, such as her parents, siblings, or in-laws
- Whether to save for the future
- Whether to sign up for a new banking product

This annex reports on further analysis to obtain answers to the following questions:

1. How do the estimated effects in Table 5 and Table D-5 vary if the WBO reports that instead of being the sole decision-maker, she reports that she is either the sole decision-maker or only “participates” in the decision along with her spouse or along with another household member?<sup>48</sup>
2. How do the estimated effects in Table 5 and Table D-5 vary if the sample is divided into two parts, one (n=1,025) with weakly empowered WBOs (i.e., those who identify themselves as other than the sole decision maker *in all five decisions*) and the second (n=1,291) with more strongly empowered WBOs (i.e., those who identify themselves as the sole decision-maker in one or more of the five decisions)?
3. Are the answers to question #2 robust with respect to the choice of dependent variable and statistical model, given the highly skewed distributions of the z-scores (Figure 1)?

To answer the first question, Table E-1 presents results similar to those in Table 5 and Table D-5 for outcomes based on whether the WBO is either the sole decision-maker *or only a participant in the decision*. The results indicate that the pattern is similar, although the combined effect of higher agent incentives and WBO training and mentoring ( $x_3$ ) is generally smaller, as evidenced by the estimated effect on the z-score in column 6 (e.g., +0.087, compared to +0.149 in Table 5). Accordingly, the remaining analysis in this annex focuses on the more sharply distinguished outcomes based on whether the WBO is the sole decision-maker, as in Table 5 and Table D-5.

Tables E-2 and E-3 address the second question. The results in Table E-2 are based on the sub-sample of WBOs that were weakly empowered at baseline, whereas the results in Table E-3 are based on the sub-sample of WBOs who were more strongly empowered at baseline. The results indicate that the combined effects of higher agent incentives and WBO training and mentoring ( $x_3$ ) are uniformly positive in both Tables E-2 and E-3. However, the estimated effects of  $x_3$  are statistically significant for three of the five outcomes among weakly empowered WBOs. Not surprisingly, given the small differences in the estimated positive effects in relation to the estimated standard errors, the cross-equation tests of the hypothesis that the effect of  $x_3$  is the

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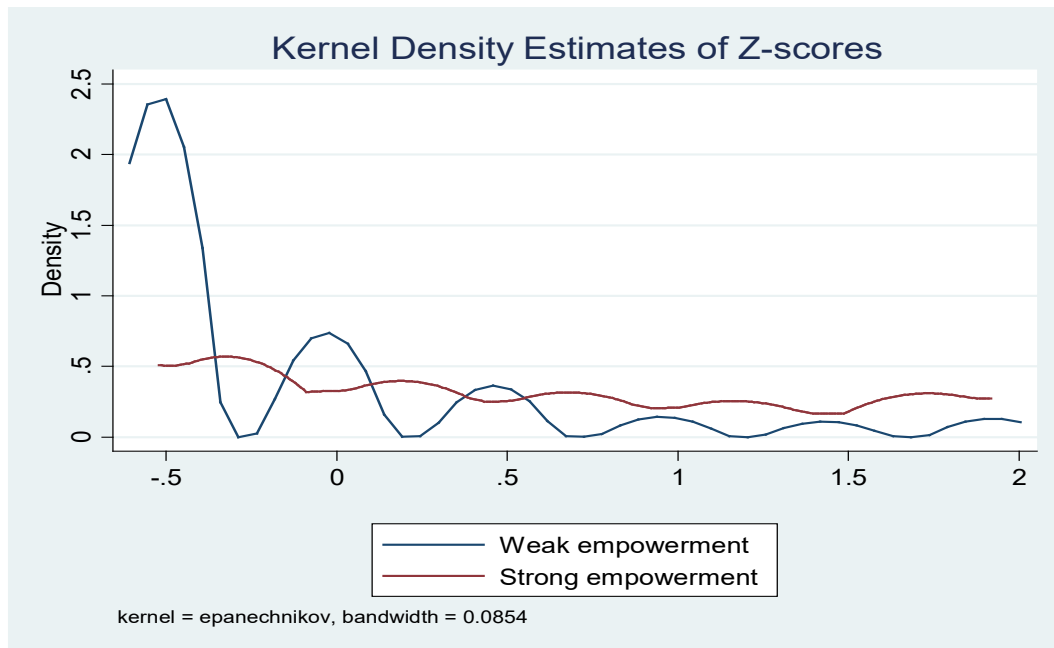
<sup>48</sup> The remaining two choices are that the WBO's spouse or another household member is the sole decision-maker.



same for both groups of WBOs (reported at the bottom of Table E-3) cannot be rejected for any of the outcomes at conventional levels of significance.

Table E-4 presents estimates of the effects of the treatments on z-scores based on the responses for all five decisions for both groups of WBOs. To answer the third question, given the highly skewed distributions of the z-scores (Figure 1), the estimates are presented for the following four alternative z-score measures and/or statistical models: untransformed z-scores in a linear regression model (columns 1 and 5); an inverse hyperbolic sine (IHS) transformation of the z-scores in a linear regression model (columns 2 and 6), untransformed z-scores<sup>49</sup> in a Poisson regression model (columns 3 and 7); and the change in the z-scores between the baseline and the midline in a linear regression model (columns 4 and 8).<sup>50</sup> The results indicate that all four of these alternative statistical models lead to similar estimates of the marginal effects of  $x_3$ , i.e., all positive, with those for the weakly empowered group of WBOs (columns 1-4) larger than those for the strongly empowered WBOs (columns 5-8). The hypothesis that the effect of  $x_3$  does not vary between the two groups of WBOs is rejected at the 0.05 level ( $p=0.025$ ) only in the Poisson regression model applied to the untransformed z-scores (with the test reported in column 3 of the third from the bottom row of Table E-4).

**Figure 1. Kernel densities of midline z-scores for weakly and strongly empowered WBOs at baseline**



<sup>49</sup> The Poisson regression model requires that all observations are non-negative. Accordingly, a constant is added to the estimated z-scores so that their lowest value is zero. The z-score is used as the dependent variable in the Poisson regression model, rather than the count of sole decision-maker responses, in order to make the estimated marginal effects directly comparable across the models. The cross-equation test is unaffected by whether the dependent variable is the z-score or the count of sole decision-maker responses.

<sup>50</sup> The covariates included in the models estimated in columns 4 and 8 do not include the baseline value of the z-score.

**Table E-1. Estimated effects of treatments on decision-making in households in which the business owner is either the sole decision-maker or only participates in the decision**

	Whether to purchase a new appliance	Whether to work outside the home	Whether to support other family members	Whether to save for the future	Whether to sign up for a new banking product	Household decision-making (z-score)
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)
CONTROL VALUES (female, untreated with low agent incentives)						
Unadjusted sample mean ( $x_0$ )	0.390 (0.030)	0.477 (0.028)	0.377 (0.026)	0.363 (0.027)	0.383 (0.028)	0.000 (0.043)
Adjusted mean ( $x_0$ )	0.406 (0.032)	0.520 (0.030)	0.413 (0.027)	0.383 (0.027)	0.401 (0.027)	0.045 (0.043)
ESTIMATED MARGINAL EFFECTS						
Female, untreated with high agent incentives ( $x_1$ )	0.038 (0.042)	0.023 (0.041)	-0.032 (0.037)	-0.030 (0.037)	-0.025 (0.038)	-0.012 (0.057)
Female, treated with low agent incentives ( $x_2$ )	0.001 (0.036)	-0.030 (0.034)	-0.025 (0.036)	-0.026 (0.034)	-0.023 (0.033)	-0.039 (0.050)
Female, treated with high agent incentives ( $x_3$ )	0.107*** (0.041)	0.044 (0.038)	-0.004 (0.036)	0.048 (0.036)	0.024 (0.036)	0.087 (0.057)
Male, low agent incentives ( $x_4$ )	-0.059 (0.047)	0.027 (0.044)	-0.053 (0.043)	-0.037 (0.041)	-0.011 (0.038)	-0.035 (0.067)
Male, high agent incentives ( $x_5$ )	-0.019 (0.044)	-0.020 (0.046)	-0.052 (0.043)	-0.030 (0.038)	-0.031 (0.039)	-0.041 (0.065)
JOINT TESTS (p-values)						
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.020***	0.057*	0.767	0.136	0.356	0.103
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.234	0.576	0.566	0.086*	0.343	0.154
Joint test of the interactive effect of high agent incentives and training on female business owners	0.004***	0.039**	0.526	0.026**	0.146	0.017**
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.269	0.024**	0.570	0.099*	0.197	0.064*
R-squared	0.13	0.09	0.16	0.19	0.16	0.24
N	2316	2316	2316	2316	2316	2316

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

**Table E-2. Estimated effects of treatments on decision-making in households of weakly empowered WBOs (WBOs identified as other than the sole decision-maker *in all five decisions*)**

	Whether to purchase a new appliance (0-1)	Whether to work outside the home (0-1)	Whether to support other family members (0-1)	Whether to save for the future (0-1)	Whether to sign up for a new banking product (0-1)
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)
CONTROL VALUES (female, untreated with low agent incentives)					
Unadjusted sample mean ( $x_0$ )	0.094 (0.022)	0.063 (0.019)	0.088 (0.023)	0.101 (0.024)	0.107 (0.023)
Adjusted mean ( $x_0$ )	0.079 (0.029)	0.081 (0.030)	0.094 (0.035)	0.094 (0.033)	0.100 (0.036)
ESTIMATED MARGINAL EFFECTS					
Female, untreated with high agent incentives ( $x_1$ )	0.056 (0.039)	0.054* (0.032)	-0.035 (0.029)	-0.016 (0.033)	-0.045 (0.030)
Female, treated with low agent incentives ( $x_2$ )	0.040 (0.028)	0.057** (0.028)	0.042 (0.031)	-0.004 (0.033)	0.021 (0.032)
Female, treated with high agent incentives ( $x_3$ )	0.109*** (0.036)	0.113*** (0.030)	0.047 (0.032)	0.067* (0.036)	0.029 (0.033)
Male, low agent incentives ( $x_4$ )	0.073 (0.073)	0.266*** (0.091)	0.071 (0.095)	0.068 (0.079)	0.109 (0.098)
Male, high agent incentives ( $x_5$ )	0.092 (0.072)	0.210** (0.082)	0.098 (0.095)	0.070 (0.078)	0.081 (0.092)
JOINT TESTS (p-values)					
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.151	0.060*	0.631	0.160	0.446
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.172	0.032**	0.010***	0.046**	0.053*
Joint test of the interactive effect of high agent incentives and training on female business owners	0.056*	0.090*	0.872	0.026**	0.809
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.591	0.139	0.465	0.138	0.493
R-squared	0.04	0.12	0.05	0.07	0.05
N	1025	1025	1025	1025	1025

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

**Table E-3. Estimated effects of treatments on decision-making in households of more strongly empowered WBOs (WBOs identified as sole decision-makers in one or more of the five decisions)**

	Whether to purchase a new appliance (0-1)	Whether to work outside the home (0-1)	Whether to support other family members (0-1)	Whether to save for the future (0-1)	Whether to sign up for a new banking product (0-1)
Statistical model →	Linear regression	Linear regression	Linear regression	Linear regression	Linear regression
	(1)	(2)	(3)	(4)	(5)
CONTROL VALUES (female, untreated with low agent incentives)					
Unadjusted sample mean ( $x_0$ )	0.404 (0.042)	0.305 (0.036)	0.355 (0.039)	0.369 (0.040)	0.340 (0.040)
Adjusted mean ( $x_0$ )	0.422 (0.046)	0.421 (0.034)	0.425 (0.035)	0.393 (0.040)	0.387 (0.039)
ESTIMATED MARGINAL EFFECTS					
Female, untreated with high agent incentives ( $x_1$ )	-0.023 (0.054)	-0.026 (0.050)	-0.069 (0.050)	-0.006 (0.054)	-0.090* (0.049)
Female, treated with low agent incentives ( $x_2$ )	-0.027 (0.046)	0.009 (0.040)	-0.070 (0.044)	0.015 (0.048)	-0.013 (0.050)
Female, treated with high agent incentives ( $x_3$ )	0.042 (0.055)	0.061 (0.048)	0.022 (0.046)	0.070 (0.053)	0.065 (0.051)
Male, low agent incentives ( $x_4$ )	-0.119** (0.054)	0.071 (0.048)	-0.106** (0.047)	-0.052 (0.047)	-0.036 (0.049)
Male, high agent incentives ( $x_5$ )	-0.079 (0.059)	0.034 (0.051)	-0.126** (0.050)	-0.043 (0.052)	-0.006 (0.050)
JOINT TESTS (p-values)					
Joint test of the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.350	0.395	0.052*	0.693	0.063*
Joint test of the effect of female business owner training and mentoring ( $T_2$ )	0.300	0.209	0.032**	0.270	0.004***
Joint test of the interactive effect of high agent incentives and training on female business owners	0.163	0.260	0.033**	0.253	0.110
Joint test of equality in the effect of high agent incentives ( $T_1$ ) on female and male business owners	0.360	0.239	0.021**	0.626	0.032**
Cross-equation test of equality of the effect of $x_3$ in low-empowerment versus high-empowerment group of WBOs at baseline	0.294	0.379	0.665	0.965	0.535
R-squared	0.15	0.19	0.18	0.21	0.17
N	1291	1291	1291	1291	1291

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

**Table E-4. Estimated effects of treatments on z-scores in low and high baseline empowerment groups**

Dependent variable →	Weakly empowered WBOs at baseline				More strongly empowered WBOs at baseline			
	z-score	z-score (IHS)	z-score	z-score (Diff)	z-score	z-score (IHS)	z-score	z-score (Diff)
Statistical model →	Linear regression	Linear regression	Poisson regression	Linear regression	Linear regression	Linear regression	Poisson regression	Linear regression
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CONTROL VALUES (female, untreated with low agent incentives)								
Unadjusted sample mean ( $x_0$ )	-0.302 (0.035)	-0.300 (0.031)	0.220 (0.035)	0.257 (0.035)	0.341 (0.070)	0.242 (0.057)	0.862 (0.070)	-0.264 (0.067)
Adjusted mean ( $x_0$ )	-0.304 (0.060)	-0.308 (0.049)	0.207 (0.036)	0.255 (0.060)	0.469 (0.063)	0.343 (0.051)	0.931 (0.068)	-0.215 (0.072)
ESTIMATED MARGINAL EFFECTS								
Female, untreated with high agent incentives ( $x_1$ )	0.008 (0.051)	0.009 (0.044)	0.012 (0.089)	0.008 (0.051)	-0.099 (0.087)	-0.085 (0.071)	-0.119 (0.129)	-0.077 (0.099)
Female, treated with low agent incentives ( $x_2$ )	0.077 (0.049)	0.068 (0.043)	0.108 (0.076)	0.077 (0.049)	-0.048 (0.075)	-0.033 (0.062)	-0.029 (0.113)	-0.063 (0.087)
Female, treated with high agent incentives ( $x_3$ )	0.179*** (0.053)	0.155*** (0.045)	0.214*** (0.075)	0.179*** (0.053)	0.120 (0.085)	0.106 (0.069)	0.119 (0.112)	0.087 (0.091)
Male, low agent incentives ( $x_4$ )	0.294* (0.171)	0.278** (0.139)	0.358*** (0.112)	0.294* (0.171)	-0.081 (0.081)	-0.050 (0.065)	0.035 (0.114)	0.062 (0.093)
Male, high agent incentives ( $x_5$ )	0.273* (0.164)	0.259* (0.133)	0.349*** (0.110)	0.273* (0.164)	-0.098 (0.084)	-0.068 (0.068)	0.008 (0.116)	-0.041 (0.095)
JOINT TESTS (p-values)								
Joint test of the effect of high agent incentives ( $\Gamma_1$ ) on female and male business owners	0.309	0.311	0.365	0.309	0.063*	0.054*	0.106	0.084*
Joint test of the effect of female business owner training and mentoring ( $\Gamma_2$ )	0.003***	0.003***	0.005***	0.003***	0.008***	0.005***	0.020**	0.114
Joint test of the interactive effect of high agent incentives and training on female business owners	0.062*	0.064*	0.076*	0.062*	0.038**	0.036**	0.069*	0.077*
Joint test of equality in the effect of high agent incentives ( $\Gamma_1$ ) on female and male business owners	0.303	0.311	0.332	0.303	0.026**	0.022**	0.047**	0.039**
Cross-equation test of equality of the effect of $x_3$ in low-empowerment versus high-empowerment group of WBOs at baseline	0.542	0.548	0.025**	0.372				
R-squared	0.09	0.09	0.06 <sup>a</sup>	0.09	0.29	0.27	0.09 <sup>a</sup>	0.25
N	1025	1025	1025	1025	1291	1291	1291	1291

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Note: Estimated standard errors adjusted for clustering at the village level are in parentheses.

<sup>a</sup> pseudo R-squared