

# From Cash to Deposits: Effects on Women's Status and Well-being\*

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March 18, 2024

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\*This work was made possible by the project “Prospera Digital Phase II: Financial inclusion for low-income women in Mexico,” with financing from the International Development Research Centre. We particularly thank Judith Mariscal, Gloria Mayne, Alejandra Ruiz del Rio, and Eduardo Clark for their collaboration.

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## **Abstract**

We study the short term effects of an experiment which transitioned conditional cash transfer beneficiaries from receiving benefits in cash at temporary payment modules to receiving benefits through account deposits on women's status, work and financial inclusion. The experiment was implemented in the context of the Mexican Prospera program in 150 communities in the state of Hidalgo. Our results suggest an immediate and important positive impact of the transition to deposits on women's control of resources in the household.

# 1 Introduction

The use of cash transfer programs as an anti-poverty policy has spread rapidly around the world during the past decades. Similarly, the use of accounts and deposits as mechanisms for Government to Person (G2P) payments has increased over time in both developed and developing countries (Demirgüç-Kunt et al. 2017). While providing G2P transfer payments through deposits is likely to be more cost effective for governments than delivering cash, there is little empirical evidence on the impacts to recipients of receiving account deposits rather than cash transfers.

We provide new evidence on this topic using an experiment carried out among the recipients of a prominent conditional cash transfer program, Prospera (Parker and Todd 2017). We study a randomized control trial of 150 communities in the Mexican state of Hidalgo in which female beneficiaries in 100 Prospera communities transitioned to receive cash transfers in bank account deposits in the fall of 2018 and 50 communities continued to receive transfers from a “temporary payment point”. In earlier work, we found that, perhaps unexpectedly, beneficiaries who transitioned incurred higher costs of collecting transfers, in terms of time and money (Marquez-Padilla and Parker 2024). However, these higher costs might be mitigated by greater convenience of withdrawal and the ability to conceal when transfers were obtained from other individuals, leading to greater control of women over resources. In this paper, we study the impacts of this transition on women’s work, measures of women’s status, and financial inclusion for female conditional cash transfer beneficiaries living in rural areas.

We find a significant effect of transitioning to a deposit-based system on women’s intra-household bargaining power and decision-making. An explanation of this is that by transferring the money into an account held by the (female) beneficiary as opposed to a payment in cash at public “payment points”, the transfer may be less salient for other family members. Receiving benefits directly into an account may give women the flexibility to conceal the amount and the time at which the withdrawal is made (as in Aker et al. (2016)), thus enabling them to have greater control of the transferred resources. The ability to conceal

cash transfers from their spouses may thus affect their intra-household bargaining power and lead to more empowerment (Ashraf 2009; Bobonis et al. 2013). We find few effects on labor force participation or indicators of financial inclusion (we only find a small effect on the probability of saving with family or friends). This might be due to the (potentially temporary) increase in costs of accessing benefits that were deposited into an account as opposed to delivered in cash, especially given the relatively short follow-up time after the transition (Marquez-Padilla and Parker 2024).

## 2 Background, hypotheses and previous literature

We hypothesize the transition from cash to deposits may improve women’s status in a number of concrete areas. In particular, we expect the transition to (1) potentially increase women’s labor market participation by reducing time costs of program participation, (2) improve the control of resources and household decision making through the deposit of resources into an account accessible only to the woman, and (3) increase financial inclusion, participation and savings as women must open a bank account to receive transfers. The mainly rural areas where Prospera has operated have historically been characterized by low labor market participation of women and low women’s status, including low levels of education and empowerment. In our sample only about one quarter of women report working outside the home and a similar fraction report needing their husband’s permission to leave the house. Prior to our experiment, only 10% report having used an ATM and only 4% report knowledge of interest rates.

Some recent studies have begun to examine how providing cash transfers to poor populations via direct deposit versus in cash affects program outcomes. Angelucci et al. (2016) discuss the potential costs, benefits, and likely hurdles associated with conditional cash transfer (CCT) programs’ mode of transfer delivery, in particular comparing cash to saving account deposits. The authors suggest that receiving benefits directly in a savings account

could promote access to the financial system, encourage saving, and reduce costs associated with collecting cash payments for beneficiaries. For governments, a deposit-based system could reduce transaction costs and help curb corruption and increase program transparency.

In trying to understand the causal effects of using direct-deposits as opposed to cash transfers, Aker et al. (2016) find that the use of technology for delivering monetary aid to households can reduce costs and improve logistics in Niger. They find that transferring money to an account (using mobile technologies) instead of delivering it in cash led households to buy more diverse types of goods, thus improving diet diversity, probably by liberating time from having to collect the cash transfer. The authors suggest mobile transfers likely also improved women's intra-household bargaining power. Women's decision making within the household appears to have been strengthened as women that received m-transfers were able to temporarily conceal the arrival of the transfer; this in turn allowed them to make more frequent visits to the market and spend more on children's clothing.

There is a growing literature analyzing the effects of how a savings account default (as opposed to cash) for making transfers could affect relevant economic variables in different settings in less developed countries. However, to the best of our knowledge, none of these focus on CCT transfers to beneficiaries, and thus might not capture the extent to which changing the delivery method of constant, anticipated, and repeated payments could affect individuals' behavior. Our work contributes to the literature by analyzing the effect of transitioning from cash payments to deposits precisely in this setting.

Somville and Vandewalle (2018) test whether the method of payment can have an effect on savings by randomizing whether villagers in India received a weekly transfer for ten weeks through a direct deposit or in cash. They find net positive impact of receiving deposits on respondents' total savings. Receiving transfers more than doubled account balances three months after the payments started, and the effects appear to be long lasting. Villagers paid in cash, on the other hand, appear to have increased consumption expenditures in a similar magnitude to the savings of the villagers paid into the account. Once the original

treatment group (account deposits) starts receiving payments in cash, their behavior cannot be distinguished from that of the control group (cash always). The authors interpret their results as evidence of a default effect, explained by a lack of self-control and by transaction costs.

Brune et al. (2016) find somewhat different results. By randomly assigning households in Malawi to receive a payment in cash or by direct deposit—and varying whether they experienced delays for receiving the total amount of the payment—the authors find that the amount and composition of spending was unaffected by savings defaults or payments delays. They interpret this as evidence of households’ ability to effectively manage cash. They do, however, find a persisting effect of defaulting the payments into savings accounts on higher net deposits into bank accounts. The results of Somville and Vandewalle (2018) and Brune et al. (2016) are not necessarily contradictory as the former finds an effect after several weeks of repeated payments while the latter study the effects of a one-time (unexpected) payment.

Blumenstock et al. (2018) experimentally evaluate the effects of defaults by randomizing the share of employees’ salary to be transferred by default to a savings account in Afghanistan, as opposed to their regular, direct deposits mobile money account. They find large and significant impacts on employee participation and savings that are comparable in magnitude to the effects of defaults found in developed countries. Effects persist long after the intervention concludes, as employees assigned to the defaults savings treatment were significantly more likely to save. Also, by including different matching incentives in the intervention, the authors are able to estimate that the default option has a similar effect on saving as a 50 percent match on employee contributions.

### **3 Context**

Prospera (previously known as Progresa/Oportunidades) was Mexico’s largest anti-poverty program and a pioneer of the CCT program model. At its peak it supported about 7 million

low-income families through direct monetary transfers conditioned to regular school enrollment of children and regular health clinic visits by all family members. The program was rigorously evaluated through a well known randomized controlled trial and has served as an example for the design and implementation of other CCT programs around the world (Parker and Todd 2017; Duflo and Kremer 2003). This literature shows that the program positively impacted a diverse set of outcomes, including, among others, income, savings, poverty, health, obesity, children’s school enrollment and attendance, migration, and measures of women’s status, (Parker and Todd 2017).

Prospera was primarily a rural program, with a majority of its beneficiaries residing in communities with less than 5,000 individuals (Parker and Todd 2017). The overwhelming majority of households throughout the two decades of Prospera received their benefits by travelling to a temporary payment module every two months to receive benefits in cash. The Prospera Digital pilot which we study aimed to explore strategies to transition beneficiaries to receiving benefits through account deposit.

## 4 Experimental design and data

The pilot was carried out in the state of Hidalgo, Mexico. One hundred and fifty communities were randomly selected out of the set of all communities in Hidalgo satisfying the following criteria: (1) having cell phone networks; (2) having between 30 and 150 beneficiary families; (3) having a population size between 100 and 5,000; (4) previously received all payments in cash; (5) having an ATM machine within 30 minutes travelling distance, and (6) previously participating in a small micro credits program (PROIIF) with Prospera. The randomization was carried out using a stratified design based on (1) the number of beneficiary families in the community; (2) the proportion of households with a cell phone; and (3) the number of ATMs within 5km of the community. Using a stratified design, the 150 communities were randomly assigned to three groups: 50 communities that remained receiving benefits in cash

in temporary payment modules (C), 50 communities that transitioned to receiving benefits via deposit (T1), and 50 communities that transitioned to receiving benefits via deposit and additionally received text messages to support the transition to using financial services (T2). The text messages sent contained information and advice on accessing deposits and encouraging saving and were sent weekly to all beneficiaries for whom Prospera had a cell phone number on record during the first four months of the transition (August to November 2018). Thus, 100 of the 150 communities (those in T1 and T2) transitioned to receive benefits via account deposit as opposed to cash.

This transition occurred in September/October of 2018. A follow up survey to evaluate the impacts of the transition was carried out in March and April of 2019 (about seven month post transition). The follow up survey was applied to 30 Prospera beneficiary households, randomly selected, in each of the 150 communities. (Marquez-Padilla and Parker 2024) demonstrates that the treatment and control groups are well-balanced and that adequate compliance of the assigned treatment and control group were attained, with the majority of beneficiaries in the 100 treatment communities transitioned to receive their deposits through bank deposits whereas the control group beneficiaries in the 50 control communities continued to receive their benefits in cash at local payment points. Table 2 shows some key summary statistics characterizing the communities included in the experiment. As expected, the selected communities are rural, small, and marginalized: communities are small (mean population of 530 inhabitants) and have a high share of indigenous population (22%), there is a high percentage (20%) of household with dirt floor, and low computer ownership (4%), for instance. In our sample, the mean age is approximately 42.7 years old, 79% report being married and only 2% attends school. More details on Prospera Digital and the experiment are available in Mariscal et al. (2019) and Marquez-Padilla and Parker (2024).

The main dependent variables of interest studied are the following: (1) household decision making: whether a woman can decide whether to work, leave the house, what to do with income, buy things, over spouse's expenses, what to wear, and give children permissions.



(2) labor market outcomes: whether a woman works, hours worked per week, whether she is self-employed, and total labor income; (3) savings: share of income saved, whether she owns a savings account, whether she saved with family, a savings’ box, at home, or made a loan.

An important issue for the evaluation was that the fieldwork took place during a context of high uncertainty on Prospera’s future. While President Lopez Obrador had campaigned on continuity in social programs, new operating rules for Prospera were published by the Federal government three months after Lopez Obrador took office, at the end of February 2019. The operating rules announced that “Prospera would be substituted for another program during fiscal year 2019, maintaining the amount of previously approved resources” and describing a new program, *Becas Benito Juarez*, in which a different structure of grants would be provided. At the end of May 2019, a presidential order was published formally eliminating the Prospera program and creating the administrative structure for enacting the *Becas Benito Juarez* program.<sup>1</sup> Several questions on the uncertainty on Prospera’s future were added to the end of the questionnaire in an attempt to study the extent to which this uncertainty might affect our outcomes of interest. Below, we examine heterogeneity of impacts of the program by beliefs on the program’s future.

## 5 Empirical Strategy

We analyze the effects of switching to cash deposits and on outcomes including women’s labor force participation, savings, and decision making. Formally, we estimate:

$$y_{im} = \alpha + \beta T_m + \gamma X_i + \varepsilon_{im}, \tag{1}$$

where  $y_{im}$  is the dependent variable of interest for woman  $i$  in community  $m$ ,  $T_m$  is a treatment dummy, and  $X_i$  is a vector of individual level controls including age, schooling dummies, household size, and whether she is married in addition to asset ownership controls (whether

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<sup>1</sup>Anecdotally, we can report a number of beneficiaries in the T2 group sent text messages inquiring about the future of the program.

her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine). The coefficient of interest is  $\beta$ . We cluster standard errors at the community level. We explore whether the effect of Prospera Digital differs for communities that transitioned to open loop (T1) and for those that additionally received SMS text messages regarding the transition (T2) by including these treatment dummies separately and testing their equality.

We explore whether heterogeneous effects exist across types of women by adding an interaction term with different women characteristics. Formally, we estimate the following:

$$y_{im} = \alpha + \beta T_m + \phi T_m \times X_i + \gamma X_i + \varepsilon_{im}, \quad (2)$$

where covariates ( $X_i$ ) are interacted with treatment assignment to estimate whether the effect of switching to cash deposits is larger for certain types of individuals, such as those that have been Prospera beneficiaries for longer, older beneficiaries, beneficiaries that are married or have a partner, and those who are illiterate. The coefficient on the interaction term,  $\phi$ , shows the differential effect for women with characteristic  $X_i$ .

In our analysis, we separately estimate the impact of T1 from T2 relative to the control group for all of our impact indicators. However, for space reasons and given few general significant differences between the results for T1 and T2, our main text results aggregate the two treatment groups together and present the overall effect of the transition for the two groups. Separate results for T1 and T2 are presented in Appendix 1, in tables A.1–A.3.

## 6 Results

### 6.1 Effects on household decision-making and women’s control of resources

While previous sections have shown few benefits in terms of reduced time and expenditures associated with obtaining transfers, one potential advantage is the convenience of being able to obtain transfers when it is convenient for each individual beneficiary (Aker et al. 2016). When women are paid with temporary payment points, the day of payment becomes public in each community as all beneficiaries from the same community are paid on the same day and thus it is common knowledge. To the extent that some spouses control resources provided to women from Prospera, it is potentially welfare enhancing for households for these spouses to have less information about when women obtain cash (Ashraf 2009).

We test whether treatment affects household decision-making and in particular the weight women have in household decision-making. In Table 3 we present our estimates regarding the effects of transitioning to open loop on women’s ability to make the decisions on their own for diverse topics within the household.

We find significant positive effects of Prospera Digital on women’s decision making for several topics. We find that the effect of receiving transfers via bank deposit increased women’s decisions related to when to leave the house, buy things, and granting child permissions (albeit marginally significant). The estimated effects are of 10.3%, 7.1%, and 19%, respectively.

### 6.2 Female labor force participation and savings

We next study effects on women’s labor force participation and on indicators of savings. Women’s labor force participation may show changes to the extent to which the deposits allow women to have more flexibility in picking up deposits versus needing to potentially spend the day in the community waiting for the payment truck to arrive (Aker et al. 2016).

Table 4 however shows no significant effects of treatment on the probability of working during the previous week. Additionally, we find no effects (of either T1 or T2 or both) on the number of hours worked, whether a woman is self-employed, or total labor income.

Direct deposit of transfers may affect financial inclusion and in particular increase the use of banks and potentially promote savings of transfers. Table 5 examines several dimensions of savings including the probability of having a bank account and amount of savings per month. In general, these do not show significant effects on total savings or the probability of having bank account. There is however a small increase in the percentage of women who report savings with their families and friends for both treatments. The increase is statistically significant and is large in magnitude (2x).

## 7 Heterogeneity

In this section we study two possible sources of heterogeneity in the impacts. First, we study heterogeneity in program impacts of the transition to deposits by socio-demographic characteristics and secondly, we study if effects differed according to expectations about the program's future.

### 7.1 Beneficiary-level heterogeneity

Table 6 shows our results from analyzing the heterogeneous impacts of transitioning to bank deposits for different types of women. We present results for the different variables related to women's decision making within the household. We find that the effects are driven by women that are married or have a partner, as would be expected. Additionally, we find that the effect was larger for illiterate (and arguably poorer and with less schooling) women in terms of decisions related to leaving the house. Finally, we find that effects are not significantly different between women of different ages (both when we include age as a continuous variable or as a dummy indicating that the beneficiary is under 40 years old) or that differ in terms

of how long they have received Prospera benefits.

## 7.2 Expectations of the future of the program

We analyze whether the effects were different for women that had different expectations regarding the future of the Prospera program. In particular, we interact the treatment dummy with a variable indicating whether the beneficiary has heard that there will be changes in the way the program operates (we also include this variable as a control). Table 7 shows that there are few differences in impacts according to whether beneficiaries expected changes in the Program’s future.

## 8 Concluding remarks

As transfer programs have increased in popularity over the past decades, the total amount of resources being transferred population worldwide in the form of these programs’ benefits has dramatically increased. The way in which these benefits is delivered can have an important impact on the impacts of these transfer programs—both for governments and beneficiaries—and not nearly enough is known about how different delivery methods impact program outcomes. This paper studies the effects of transitioning from a cash-based to a deposit-based system on female beneficiary outcomes, including women’s status, labor market participation, and savings.

We find that delivering benefits using direct deposits has the potential to improve women’s bargaining power within the household and increases the share of women that can independently decide how to spend money and decide to buy things for themselves. Deposits give women the ability to conceal the moment at which transfers are received—which is typically public when transfers are made in cash—thus allowing them to gain greater flexibility for using household resources. We find that the transition towards deposits did not affect labor force participation for beneficiaries. We also do not find significant effects on total

savings or the probability of having a bank account, although we do find a small effect on the probability of saving with family or friends in both treatment groups.

The follow up survey took place during a period of uncertainty on the program's future and in fact was carried out just prior to the Program's elimination. In this context, it is in fact striking that we observe significant effects on women's household decision making within a short time period and high uncertainty and these effects likely represent a lower bound to the potential effects on women's status. Furthermore, effects are particularly strong for women with low education. However, we do not see effects on financial inclusion or on labor market participation of women. Again, the short time period and uncertainty of the program's future may play a role here. Overall, we consider the findings here to be relevant evidence of the role that providing anti-poverty payments through account deposits rather than cash can play towards improving women's status.

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Table 1: Timeline: Prospera Digital pilot

June 2018	Randomization of 150 communities to 3 groups with 50 communities each: T1, T2 and C
July 2018	Prospera beneficiaries in T1 and T2 informed of treatment: Prospera payment to transition to deposit
Aug-Sept 2018	Transition to payments by account deposit in T1 and T2 begins
Aug-Nov 2018	Information and advisory text messages on transition sent to T2
March 2019	Follow-up survey to measure impacts in T1, T2 and C

Source: Marquez-Padilla and Parker (2024).

Table 2: Summary statistics (community level)

	Mean	Std. Dev.	Max	Min
No. ATMs	3.22	9.22	70.0	0.0
% Cel	0.31	0.23	0.8	0.0
% Dirt Floor	0.20	0.17	0.8	0.0
% Fridge	0.55	0.21	0.9	0.0
% Water	0.70	0.35	1.0	0.0
% Computer	0.04	0.06	0.4	0.0
Altitude	1,237.10	963.61	2,650.0	97.0
Tot. Pop.	529.52	575.23	4,558.0	110.0
% Indig.	0.22	0.20	0.5	0.0
Age	42.70	4.56	55.6	32.3
Married	0.79	0.12	1.0	0.3
Attends School	0.02	0.05	0.4	0.0
Observations	147			

Notes: Shows the mean, standard deviation, maximum, and minimum of selected variables of interest, at the community level. Of the 150 communities included in the original experimental design, interviews could not be conducted in 3 of them as the communities denied entry to the firm carrying out the fieldwork.

Table 3: Effects of Prospera Digital on Household Decision Making

	(1) Work	(2) Leave House	(3) Do with Income	(4) Buy Things	(5) Spouse Exp.	(6) Wear	(7) Child. Permissions
Prospera Digital	0.027 (0.018)	0.034** (0.017)	0.027 (0.018)	0.036** (0.017)	0.015 (0.014)	0.009 (0.015)	0.019* (0.011)
MDV (T=0)	0.26	0.33	0.36	0.51	0.16	0.65	0.10
N	4,385	4,385	4,385	4,385	4,385	4,385	4,385

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The dependent variable is a dummy equal to 1 if the beneficiary responded positively to participating in decisions related to being able to work, leaving the house, what to do with household income, buying things, spouse's expenses, what to wear, and giving permissions for the children. The independent variable of interest is whether a beneficiary's community was transitioned to Prospera Digital. Controls for beneficiaries' age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.

Table 4: Effects of Prospera Digital on Labor Market Outcomes

	(1) Works	(2) Hrs.	(3) Self Emp.	(4) Lab. Income
Prospera Digital	-0.010 (0.027)	-1.487 (2.131)	-0.028 (0.019)	-1.157 (47.715)
MDV (T=0)	0.35	10.32	0.20	452.24
N	4,382	4,385	4,385	4,385

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The dependent variable is a dummy equal to 1 if the beneficiary responded that she worked, the number of hours worked per week, being self-employed, and her labor income. The independent variable of interest is whether a beneficiary's community was transitioned to Prospera Digital. Controls for beneficiaries' age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.

Table 5: Effects of Prospera Digital on Savings

	(1) % Saved	(2) Savings Acc.	(3) Family	(4) Savings Box	(5) House	(6) Made Loans
Prospera Digital	-0.151 (0.497)	0.003 (0.018)	0.010** (0.004)	0.005 (0.006)	0.015 (0.020)	0.003 (0.005)
MDV (T=0)	6.34	0.11	0.01	0.02	0.23	0.01
N	4,095	4,380	4,384	4,383	4,384	4,384

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The dependent variables show (1) the % of income saved, (2) whether beneficiary holds a savings account, (3) saves with family or (4) with a saving box, (5) saved money at home, and (6) made loans. The independent variable of interest is whether a beneficiary's community was transitioned to Prospera Digital. Controls for beneficiaries' age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.

Table 6: Effects of cash deposits on decision making in Prospera households, heterogeneous effects

	(1) Work	(2) Leave House	(3) Do with Income	(4) Buy Things	(5) Spend Money	(6) Spouse Exp.
Treatment	0.027 (0.018)	0.034** (0.017)	0.027 (0.018)	0.036** (0.017)	0.035* (0.019)	0.015 (0.014)
Treatment	0.039* (0.021)	0.050** (0.022)	0.022 (0.023)	0.042** (0.020)	0.029 (0.023)	0.017 (0.017)
× Prospera tenure (in years)	-0.001 (0.001)	-0.002 (0.001)	0.000 (0.001)	-0.001 (0.001)	0.001 (0.001)	-0.000 (0.001)
Treatment	0.031 (0.046)	0.085 (0.053)	0.061 (0.061)	0.053 (0.056)	0.036 (0.053)	0.003 (0.048)
× Age	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	0.000 (0.001)
Treatment	0.020 (0.021)	0.010 (0.019)	0.012 (0.021)	0.038* (0.020)	0.020 (0.023)	0.014 (0.017)
× < 40 years old	0.015 (0.027)	0.054* (0.030)	0.032 (0.031)	-0.003 (0.030)	0.033 (0.030)	0.004 (0.025)
Treatment	0.001 (0.007)	-0.017 (0.014)	-0.007 (0.010)	-0.015 (0.014)	0.003 (0.009)	0.006 (0.005)
× Married/Partner	0.031 (0.024)	0.061** (0.027)	0.040 (0.027)	0.061** (0.027)	0.038 (0.026)	0.010 (0.017)
Treatment	0.055 (0.036)	0.090*** (0.033)	0.007 (0.033)	0.019 (0.034)	0.047 (0.034)	0.026 (0.030)
× Literate	-0.035 (0.035)	-0.069** (0.034)	0.024 (0.037)	0.022 (0.036)	-0.015 (0.036)	-0.013 (0.032)
MDV (T=0)	0.26 4,385	0.33 4,385	0.36 4,385	0.51 4,385	0.25 4,385	0.16 4,385
N						

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The dependent variable is a dummy equal to 1 if the beneficiary responded positively to participating in decisions related to being able to work, leaving the house, what to do with household income, buying things, spouse's expenses, what to wear, and giving permissions for the children. The main independent variable of interest is whether a beneficiary's community was transitioned to Prospera Digital. Interaction terms with beneficiaries' tenure in Prospera (number of years receiving CCTs), age, a dummy for being under 40 years of age, being married or having a partner, and a dummy for being able to read/write are included in different models and presented in different rows. Controls for beneficiaries' age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.

Table 7: Effects of Prospera Digital on Household Decision Making and Uncertainty Regarding the Program

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Work	Leave House	Do with Income	Buy Things	Spouse Exp.	Wear	Child. Permissions
Prospera Digital	0.035 (0.033)	0.028 (0.031)	0.001 (0.029)	0.050* (0.028)	0.030 (0.022)	0.049* (0.025)	0.023 (0.023)
× Uncertainty	-0.012 (0.035)	0.009 (0.035)	0.039 (0.032)	-0.020 (0.030)	-0.022 (0.026)	-0.058** (0.027)	-0.005 (0.025)
MDV (T=0)	0.26	0.33	0.36	0.51	0.16	0.65	0.10
N	4,385	4,385	4,385	4,385	4,385	4,385	4,385

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The dependent variable is a dummy equal to 1 if the beneficiary responded positively to participating in decisions related to being able to work, leaving the house, what to do with household income, buying things, spouse's expenses, what to wear, and giving permissions for the children. The main independent variable of interest is whether a beneficiary's community was transitioned to Prospera Digital. Interaction terms with beneficiaries' a variable indicating that the beneficiary has heard that there will be changes in the way that the program operates. Controls for beneficiaries' age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.

# A Appendix

## A.1 Results disaggregating treatment group into T1 and T2

We explore whether the effect was different for communities where SMS texts were sent to beneficiaries in addition to the transition to open loop by including the treatment type (T1 vs T2) separately in our main regression. Tables A.1–A.3 show that in general, effects appear to be similar across treatment groups. Except for the variable regarding whether a woman reports being able to participate in decisions regarding purchases for the household in Table A.1, where the significant effect is driven by women that did not receive SMS, all other outcome variables in these tables show statistically insignificant differences across types of treatment. In general, our results suggests that SMS reminders do not improve the effect of transitioning to open loop.

Table A.1: Effects of Prospera Digital on Household Decision Making by Treatment Type

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Work	Leave House	Do with Income	Buy Things	Spouse Exp.	Wear	Child. Permissions
T1	0.033 (0.021)	0.035* (0.021)	0.038* (0.020)	0.055*** (0.020)	0.022 (0.016)	0.020 (0.017)	0.024* (0.013)
T2	0.021 (0.020)	0.033* (0.019)	0.016 (0.023)	0.018 (0.020)	0.008 (0.016)	-0.001 (0.018)	0.015 (0.014)
MDV (T=0)	0.26	0.33	0.36	0.51	0.16	0.65	0.10
N	4,385	4,385	4,385	4,385	4,385	4,385	4,385
p-value (T1=T2)	0.58	0.92	0.35	0.07	0.40	0.30	0.50

The dependent variable is a dummy equal to 1 if the beneficiary responded positively to participating in decisions related to being able to work, leaving the house, what to do with household income, buying things, spouse’s expenses, what to wear, and giving permissions for the children. The independent variables of interest show whether community was transitioned to Prospera Digital (T1) or was transferred and received SMS (T2). Controls for beneficiaries’ age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.

Table A.2: Effects of Prospera Digital on Labor Market Outcomes by Treatment Type

	(1) Works	(2) Hrs.	(3) Self Emp.	(4) Lab. Income
T1	-0.004 (0.030)	-2.384 (2.113)	-0.033 (0.021)	30.495 (53.074)
T2	-0.015 (0.031)	-0.606 (2.473)	-0.024 (0.023)	-32.224 (53.065)
MDV (T=0)	0.35	10.32	0.20	452.24
N	4,382	4,385	4,385	4,385
p-value (T1=T2)	0.70	0.31	0.63	0.18

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The dependent variable is a dummy equal to 1 if the beneficiary responded that she worked, the number of hours worked per week, being self-employed, and her labor income. The independent variables of interest show whether community was transitioned to Prospera Digital (T1) or was transferred and received SMS (T2). Controls for beneficiaries' age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.

Table A.3: Effects of Prospera Digital on Savings by Treatment Type

	(1) % Saved	(2) Savings Acc.	(3) Family	(4) Savings Box	(5) House	(6) Made Loans
T1	-0.153 (0.555)	0.002 (0.020)	0.011** (0.005)	0.001 (0.007)	0.011 (0.023)	0.005 (0.005)
T2	-0.149 (0.564)	0.004 (0.022)	0.009* (0.005)	0.008 (0.007)	0.018 (0.023)	0.002 (0.005)
MDV (T=0)	6.34	0.11	0.01	0.02	0.23	0.01
N	4,095	4,380	4,384	4,383	4,384	4,384
p-value (T1=T2)	1.00	0.92	0.74	0.34	0.78	0.66

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The dependent variables show (1) the % of income saved, (2) whether beneficiary holds a savings account, (3) saves with family or (4) with a saving box, (5) saved money at home, and (6) made loans. The independent variables of interest show whether community was transitioned to Prospera Digital (T1) or was transferred and received SMS (T2). Controls for beneficiaries' age, schooling dummies, marriage status, household size, and whether her household owns a radio, refrigerator number of rooms, wood-fueled stove, blender, and washing machine are included. Standard errors are clustered at the community level.