

Research Article

A State-led Model of Financial Inclusion Through Mobile Services

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Abstract

Financial inclusion spurs economic development, and digital mobile devices are considered an efficient tool for incorporating an unbanked population into the financial market. Despite this, close to 2 billion adults worldwide remain unbanked, as business models of digital financial services for the bottom of the pyramid have not proliferated. This article argues that the state may play a crucial role: acting as a catalyst to advance financial inclusion of the poor. We analyze how a conditional cash transfer (CCT) program may be an effective platform to achieve this. We offer evidence and analyze a pilot project through which beneficiaries of the CCT program in Mexico (Prospera) were migrated from a system of cash transfers to the use of digital transfers. The results show that a digital transfer platform may indeed be effective if governments integrate diverse public entities into the mobile money ecosystem and if they promote market competition in service delivery.

Keywords: mobile money services, financial inclusion, development, conditional cash transfer programs

Introduction

Financial inclusion has long been considered a key enabler of inclusive economic growth and reduction of extreme poverty (Bachas, Gertler, & Higgins, 2017; Demirguc-Kunt, Beck, & Honohan, 2008; Demirguc-Kunt, Klapper, & Singer, 2017; Demirguc-Kunt, Klapper, Singer, Ansar, & Hess, 2018; IMF, 2014; Lacalle-Calderón, Lurrú, Rico, & Perez-Trujillo, 2018; Sarma & Pais, 2011; World Bank, 2014). An inclusive financial system enhances the lives of the poor by allowing them to have a stable path of consumption, build assets, invest in education, save, and protect themselves against a variety of vulnerabilities (Demirguc-Kunt et al., 2017; Ouma, Odongo, & Were, 2017). Despite this awareness, financial inclusion is still lacking for a large proportion of the low-income population in developing countries. This dearth of access to financial services contrasts with two improvements for this segment of the population: (1) the rapid expansion of mobile phone ownership among the low-income population, where two thirds of adults own a mobile phone (Demirguc-Kunt et al., 2017) and (2) the implementation of conditional cash transfer (CCT) programs to invest in human capital and provide a safety net for people below the poverty line (Gentilini, Honorati, & Yemtsov, 2014).

This article threads these elements together. It follows the literature that offers evidence of the importance of financial inclusion and how it is best achieved through mobile services. We further argue that the state can play a key role in catalyzing this process by transferring funds from CCT programs via mobile phones. This argument is supported by the evidence gathered through in-depth interviews, focus groups, and a randomized experiment carried out by our research team. Through these instruments we analyze the effects of deposit-

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versus cash-delivered benefits to the beneficiaries of Mexico's CCT program (*Prospera*) as they were migrated from a system of cash transfers to digital transfers. The results show that CCT programs are a valuable platform that improves financial inclusion via mobile money services.

For this to happen, governments must adopt an active role to bring together diverse stakeholders as well as to promote market competition in the delivery service; thus, generating choices among service providers and incentives for private actors to participate in the mobile money ecosystem.

This article contributes to the literature on information and communication technologies for development (ICTD) by highlighting how CCT programs can be a strong platform for expanding financial inclusion. Additionally, this article provides insights from a political economy perspective on the role governments must play to ensure intragovernment collaboration and market competition in the supply of mobile money alternatives.

After the literature review (section 2), we describe the digitization process of *Prospera* and its implementation as well as the results of the pilot project¹ (section 3). We next offer some insights on the institutional framework that might allow *Prospera* to expand the financial inclusion of its beneficiaries (section 4). In the last section we discuss the state's role in achieving financial inclusion for the poor (section 5).

Literature Review

There is a considerable body of research on the effects of financial inclusion on development (Becker, 1975; Bittencourt, 2012; Menon & Rodgers, 2011). More recent literature highlights the importance of digital financial services such as mobile money services (Bachas et al., 2017; Della Peruta, 2018; Morawczynski, 2009; Suri & Jack, 2016).² Although the most basic function of mobile money is access to electronic accounts to enable cash in and cash out, this is the first step toward a broader inclusion in the financial market (World Bank, 2018). Mobile services increase access to information and expand the adoption of related financial services, while lowering geographical barriers. Mobile services help people improve earning potential, manage financial risks, and lower the costs of receiving payments and savings. In this vein, mobile money has been viewed as a means of addressing financial exclusion in developing countries (Maurer, 2011). Although mobile money and mobile banking are related in several ways, this article does not analyze the latter as it also refers to microcredit and access to loans (Asongu & Odhiambo, 2019).

Several studies have identified the conditions necessary for developing mobile money services. In fact, these conditions are numerous and must interact in order to create an effective ecosystem. Two initial and interrelated factors are infrastructure and regulatory policies (Evans & Pirchio, 2014; Macmillan, Paelo, & Paremoer, 2016; Maurer, Nelms, & Rea, 2013; Sarma & Pais, 2011; Suárez, 2016). Infrastructure requires allocating spectrum to the market; regulatory policies must diminish barriers to entry. However, financial regulation is a complex condition. Maurer et al. (2013) warn against the counterproductive effects of overregulation within the financial industry. In the same vein, Suárez (2016) compares the diffusion of mobile money in Mexico and Kenya, arguing that the regulatory capture—the convenient relationship between regulator and regulated industry—by private financial institutions in Mexico limited the diffusion of financial services to the unbanked population. Recalling Stigler (1971), Suárez states that a far-reaching regulation is prone to generating a convenient relationship between the regulator and the regulated industry, thus limiting competition. Macmillan et al. (2016) focus on the interaction between competition and regulation. They claim that although regulation must assure competition, in a context of initial too-light regulation, a firm can become a strong market leader, thus eroding competition.

As for the technical aspects, Chiang et al. (2018) find that in Latin America the adoption of mobile money services depends on the interface features displayed on the mobile devices. In this way, users are more likely to

1. Our research team comprised members of Centro Latam Digital, a cyberpolicy think tank based in Mexico City and funded by the International Development Research Centre (IDRC). The team included Judith Mariscal, Alejandra Ruiz del Río, Susan Parker, Fernanda Marquez, Gloria Mayne, and Daniel Rojas-Lozano.

2. For a criticism of this positive association, see Mader (2018), who argues that there is insufficient evidence to confirm that financial inclusion fosters development, alleviates poverty and is profitable enough to justify the attention and resources given to it.

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interact with mobile money applications when they can easily understand and visualize the money flow on their devices.

Recent literature identifies how government cash transfers to marginalized populations can benefit from mobile money. Mobile money can reduce the risks of corruption, improve efficiency and transparency, and lower transaction costs (Demirguc-Kunt et al., 2018; Klapper & Singer, 2017). However, there are few studies that examine how the adoption of mobile money services has the potential to significantly increase financial inclusion and, thus, welfare. Moreover, Chiapa and Prina (2017) suggest that depositing cash transfers into a savings account could provide millions of low-income people with access to the financial market, although they do not examine the process by which that could happen.

There needs to be more analysis of the state's role in generating financial inclusion for low-income populations by using mobile digital services via social programs that send government transfers to the very poor. This article contributes to the literature through an examination, from a political economy perspective, of the state's role in enabling financial inclusion through mobile money services in social programs. Particularly, we examine how CCT programs linked to mobile services are a powerful vehicle that allow the poor to enter the financial market. We offer policy suggestions about the necessary conditions for this to happen.

Prospera: Its Effects and Digitization Potential

CCT programs are government social programs through which governments make money transfers to invest in human capital growth and to provide a safety net for people below the poverty line (Gentilini et al., 2014). *Prospera* was launched in Mexico in 1997 (under the name of *Progresa*), following the 1995 economic crisis. It was the first CCT program of its kind, operating throughout the entire country in rural communities and urban settings. Transfers are conditioned on school attendance and periodic health checkups for the recipient families.

Prospera is Mexico's largest social assistance program and the world's second largest CCT. It currently supports close to 7 million low-income families, or about 30 million Mexicans (one fourth of the country's population), through direct monetary transfer. *Prospera* has been internationally recognized as a successful model for social inclusion; it has been replicated in several countries and has gained a reputation for being an antipoverty policy that is effective, stable, and evidence based (Codagnone, Bogliacino, & Veltri, 2018). Studies that evaluate *Prospera's* impact show that it has had positive effects on education, health, nutrition, consumption, investment, and savings (Parker & Todd, 2017). Recent findings show *Prospera's* positive long-term effects on educational attainment (more completed years of education), geographic mobility, labor market outcomes (increases in paid work, hours worked, labor earnings), and household economic outcomes (increases in goods ownership and positive impacts on housing conditions) in early adulthood (Parker & Vogl, 2018).

Today, *Prospera* benefits include about US\$80 for families with children in primary and secondary school and up to US\$146 for families with children in high school. These benefits are provided directly to female heads of household by wire transfer to their accounts. Every beneficiary is a *Bansefi* (National Savings and Financial Services Bank) accountholder. *Bansefi* is one of Mexico's social development banks and the great majority of its clients are *Prospera* beneficiaries. Although every *Prospera* beneficiary has a bank account in her name, bimonthly disbursement of *Prospera* benefits is done mostly through cash in impromptu locations set up by *Bansefi*.

Although several CCT programs have started to digitize their processes, few have used digital technologies to transfer the funds directly to the beneficiaries. The benefits of the digital transfers have been reviewed by Demirguc-Kunt et al. (2017), who point out that these transfers are more efficient and transparent, save time and money, and increase payment security.

Chile, Colombia, and Peru, for example, have included electronic banking options to service their beneficiaries (see Table 1). Nonetheless, funds transfer via digital devices has been missing in CCT programs. Initially, these programs focused on education, nutrition, and health (Sedlacek, Ilahi, & Gustafsson-Wright, 2000). However, the expansion of mobile phone ownership in the low-income population that took place in the early 2000s, who are also the likely target population of CCT programs, represented a potential to promote financial inclusion through mobile money services.

Table 1. CCTs with an ICT Component in Latin America.

	Chile	Colombia	Peru
CCT program	<i>Ingreso Ético Familiar</i>	<i>Más Familias en Acción</i>	<i>Programa Juntos</i>
Monthly transfer	US\$23	US\$25	US\$33
Means of dispersion	90.7% disbursed in cash; 9.3% through electronic transfer	90% through electronic transfer; only 10% in cash	Mostly through bank accounts in remote areas. Bank accounts are temporarily blocked as cash is dispersed in these operations

Source: Authors.

Peru is a recent example of a market-led mobile money model, albeit not within the context of a CCT. In 2015, ASBANC, an association of private banks, launched *Modelo Perú* (Peru Model). This initiative created an ecosystem of mobile payments with electronic money, facilitating access to financial services, especially for disadvantaged groups. *Billetera Móvil* (Mobile Wallet) allows people to withdraw money, make purchases and transfers, acquire microinsurance, and make deposits, among other financial transactions via mobile phones (Cámara & Tuesta, 2014). Considering that *Billetera Móvil* lowers costs associated with transactions, the Social Inclusion and Development Ministry in Peru has started to evaluate how to deliver the CCT program *Juntos* (“together”) via mobile money services (Antón-Díaz & Conde, 2017).

In Mexico, the current payment delivery system in its CCT program, Prospera, has been highly inefficient, both for the government and for its recipients. The logistical and security challenges of transporting over US\$4 billion to about 120,000 communities across Mexico on a bimonthly basis are apparent. From the perspective of Prospera families, beneficiaries incur additional costs related to transportation and labor opportunity, as well as risks associated with receiving payments in cash.

Additionally, the vast majority of Prospera recipients have little or no experience with basic banking services such as savings accounts and credit. Almost 80% percent of Prospera’s women live more than 4 kilometers away from a retail banking location, and it takes them more than 30 minutes to reach a bank. In addition, the majority will spend more than US\$3 to get to the banking locations, amounting to double the average daily income of the low-income population.

Given this context, *Prospera Digital* was designed with very ambitious objectives: to introduce a digital payment ecosystem by providing CCT beneficiaries with a mobile money platform that could facilitate access to financial services and potentially reduce household poverty levels, reduce program costs, and mitigate security risks for both the government and the Prospera recipients. *Prospera Digital* was also expected to simplify business transactions and generate more economic activity under formal mechanisms through the development of formal transaction ecosystems. An interactive environment could be created to combine the benefits of Prospera, financial inclusion, and digitization.

The initial conditions were positive. According to the literature, a successful deployment of mobile money services requires an ecosystem wherein a mobile telecommunications infrastructure is an initial condition (Flores-Roux & Mariscal, 2010; Mothobi & Grzybowski, 2017). Likewise, the target population must own mobile phones (Johnson & Arnold, 2012). In Mexico much of the physical infrastructure for migrating to a mobile payment platform is already present. Currently, more than 92% percent of Mexicans have access to cellphone coverage: 52% of current Prospera beneficiaries already own a cellphone, and 75% of the 120,000 Prospera localities are covered by cellphone networks, yet have no physical banking infrastructure. The process to construct an ecosystem able to provide mobile money services made significant advances with *Prospera Digital*. A key condition—a retail network—was created that was capable of accepting mobile payments made by Prospera beneficiaries, a component of the system that had been elusive in many countries. However, as we will argue below, two components for a fruitful financial inclusion are still lacking in the design of *Prospera Digital*: (1) a strong and continuous high-level leadership that coordinates intragovernment collaboration and (2) market competition in providing the funds transfer.

From *Prospera* to *Prospera Digital*: CCT via Mobile Money Payments

In 2015, after many years of operating the CCT program, the Mexican government launched *Prospera Digital*, a pilot program promoted by the Office of the National Digital Strategy in the Office of the Presidency. Initially, *Prospera Digital* began as an m-health program aimed at improving maternal and child health by setting up a two-way SMS messaging platform to disseminate health advice, send appointment reminders, and share useful information about pregnancies and babies' first two years of life. The goals were to improve health conditions for pregnant women and their children and to contribute to a decrease of infant mortality rates in the country (UNICEF, 2015a). Once *Prospera Digital* proved its effectiveness in providing useful information that appealed to women, which was reflected in the high response rates through the two-messaging platform (UNICEF, 2015b), the Office of the Presidency considered it possible to set more ambitious goals in its social objectives and sought to find a way by which *Prospera Digital* could now focus on financial inclusion by providing financial education through SMS and, more important, incorporate a mobile payments solution that would harness cellphone ownership as a way to access financial services. This was clearly a high-impact strategy to not only generate greater benefits for the women funded by *Prospera*, but also to diminish the government's transaction costs in the delivery of funds. On average, women spend up to eight hours traveling to a cash-out point (a store where beneficiaries solicit their cash transfers), waiting for their disbursement, and returning to their homes. In addition, women spend up to US\$2.80 during this process, between expenses related to transportation to receive their cash payments (17 Mexican pesos, equivalent to approximately US\$1) and conducting balance inquiries (35 pesos). Furthermore, receiving their cash payments in a lump sum has several drawbacks, including vulnerability to theft, lower rates of saving, and increased impulse spending (Demirguc-Kunt et al., 2017).

In this context, our research team, in partnership with Women's World Banking and the Behavioural Insights Team (BIT), developed a project roadmap for the Office of the National Digital Strategy within the Office of the Presidency for the design and implementation of a pilot program that would offer evidence to strengthen a national scale-up of the financial inclusion component of *Prospera Digital*. The design of the payment digitization and financial inclusion pilot program included coordination and collaboration with the Ministry of Social Development (*Sedesol*), *Prospera*, Bansefi, and the Ministry of Finance.

The first step in this process was to conduct a randomized field survey with 19,000 beneficiaries in 34 localities in the Mexican states of Puebla, Chiapas, and Yucatan during the spring of 2017. The survey aimed to acquire information on the financial behavior of *Prospera* beneficiaries, in particular, withdrawal frequency and use patterns of *Prospera* benefits, the current costs (money/time) associated with collecting their benefits, and beneficiaries' access to cellphones, familiarity with mobile solutions and their perceived advantages, and concerns about a mobile money solution.

After conducting the survey, we found that a mobile payments solution would be well received by *Prospera* beneficiaries. The survey detected high levels of mobile phone ownership among respondents and interest in a mobile payments solution, with 44% of participants claiming they would use a payments app if it were offered to them. As expected, there were variations in these responses reflecting differences in age and years of experience using mobile phones. These results also pointed to the perceived benefits of a digital payments solution with savings in time and money as the most salient features. However, beneficiaries revealed concerns about the use of a mobile payments solution, such as not receiving the money, not being able to make a payment due to network failure, or making mistakes when trying to conduct a transaction. In another key finding, even though all *Prospera* beneficiaries are Bansefi clients, few have a clear understanding that they are bank account holders. The research findings attribute this to the spread of misinformation and confusion among beneficiaries about the difference between *Prospera* (the program) and Bansefi (the bank). This limits the adoption and use of available financial services and, therefore, would create a barrier to the uptake of future mobile money solutions.

To address this issue, a trial led by the BIT was conducted to inform the beneficiaries about their Bansefi accounts and, in particular, to motivate them to use these financial services via banking agents, as these employees are known to be effective infomediaries in promoting financial adoption. At the time of the trial

design, Bansefi was launching its own banking agent services in partnership with *Yastas*, a network of small retail stores with a presence in a significant number of Prospera localities. In addition, a training session with materials developed by Women's World Banking took place in which beneficiaries were taught how to withdraw cash, make balance inquiries, and access other bank services throughout the banking agent network. In addition, banking agents belonging to the network were provided with promotional materials to inform Bansefi clients about available banking services. Store owners received text messages with reminders and promotional materials to complete more than 20 transactions with Prospera beneficiaries in two months. The intervention was applied with 130 *Yastas* stores in 11 states and 28 localities where Prospera beneficiaries were present.

The results of this trial and the training sessions were promising. Not only were both components effective at increasing transactions with *Yastas* banking agents, but the agent intervention resulted in almost tripling the likelihood that beneficiaries would use *Yastas* agents at least once. This constituted a clear, positive impact and offered policy lessons that could be applied to other national cases: Agents who were part of the ecosystem should respond in a collaborative and coordinated manner. Indeed, a basic lesson is that knowledge gaps should be identified and addressed through the collaboration of all stakeholders. The Prospera government program trained beneficiaries, Bansefi contributed through its banking agents, and *Yastas* trained and distributed the learning materials.

These simple, coordinated strategies generated the creation of a key component of the financial inclusion ecosystem: an extensive use of the network of banking agents, thus indicating that CCT may be a powerful mechanism by which to improve financial inclusion at the bottom of the pyramid. The next step was to incorporate mobile payments as the means of transferring funds. What was needed was a simple app that could be used by the women to make payments, consult their balances, and so on. Here is where Bansefi's lack of capacity and appropriation of the project halted the possibility of achieving the complete original financial inclusion objective.

The basic barrier was Bansefi's lack of readiness to launch the simple mobile banking app, necessary for the funds disbursements, which was purportedly in the final stages of development since mid-2016. Bansefi's vulnerabilities included technical difficulties in ensuring app functionality with Bansefi's outdated banking core and a complicated mix of online and offline activities associated with the initiation process of beneficiaries. Moreover, Bansefi's directors were replaced three times during the process and the newly appointed staff was less willing to participate in the project, despite attempts by the Office of the Presidency to involve high-level leadership from the bank. Collaboration with Bansefi diminished and continued to fade through the end of the administration's term; thus, the possibility of focusing the pilot on testing a digital payments solution was canceled.

In this context, the project's objectives had to be scaled back and were shifted toward Prospera's disbursement methods. Prospera started its efforts to distribute debit cards to beneficiaries and deliver funds via electronic transfers in 2009. The decision as to which families could receive digital payments and which would receive cash payments was based on an analysis of the distance of each locality from ATMs and Bansefi branches. The basic criteria were that families receiving Prospera payments through debit cards should live no more than 30 minutes from an ATM and no more than one hour from a Bansefi branch. From 2010 there had been no updates to this analysis; therefore, families who would fit the criteria to receive card payments by 2017 were still required to attend cash payment appointments and the use of their Bansefi accounts was restricted. Of the almost 7 million families that received Prospera benefits by 2017, nearly 80% were receiving their payments in cash. This not only limited the program's efforts toward financial inclusion, but it presented a costly and risky operation for both the government and the beneficiaries.

Observing existing restrictions, even for those women who had a debit card that was not being used, our team decided to focus on the low-hanging fruit. From April to September 2017, we worked closely with Prospera senior leadership to prioritize the transition of women currently receiving bimonthly cash payments to a debit card payment system. Despite that mobile payments were not going to be evaluated at this point, the transition to a digital transfer would generate clear advantages that included:

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- greater freedom for the beneficiaries to collect the funds at their convenience;
- ease in setting aside money in the account for later use, resulting in safer conditions for beneficiaries by carrying less cash and balancing consumption between payments;
- a positive impact on indicators of wellbeing, particularly work participation, time allocation, and increased customer satisfaction, and
- greater interaction with the financial system that could lead to financial inclusion.

As Prospera had no formal protocol for facilitating the transition from cash payments to debit card payments, we were presented with the opportunity to work with Prospera in designing a process that could ensure a smooth transition for the women. One of these components was to improve the financial education messages via SMS, not only to support women throughout the transition, but also to assess their responses to this tool and to gain a proof of concept for the use of new technologies as a way to strengthen financial inclusion.

SMS messages were sent through *RapidPro*, an open-source communication platform, to approximately 2,870 beneficiaries within the greater pre-pilot group. Participating beneficiaries were randomly allocated to either the control or the treatment group. Treatment groups included messages with reminders of payment dates as well as information and advice messages regarding savings and tips for use of the app. Messages were sent up to three weeks before beneficiaries received their first cashless payment, with individuals receiving three to four messages per week. The preliminary results of this trial indicated that women saw value in having a direct communication channel via mobile phones to acquire information from Prospera. This was observable through the proactive messages that women sent in which, again, a lack of account information appeared to be the salient issue.

The final step of the process was an impact evaluation of the transition to the cashless payment system through an endline survey that measured the effects on participants' wellbeing. In early 2019, our research team conducted a randomized experiment in 150 localities in the state of Hidalgo, dividing beneficiaries to a control group, a treatment group that would receive the benefits via deposit, and another treatment group that would receive the deposit along with an SMS message to support the transition to financial services.³ The objective was to identify the effects of deposit- versus cash-delivered benefits. Surprisingly, treatment groups reported an increase in time spent traveling to pick up transfers and also in higher expenditures, which can be ascribed to transition costs or a learning curve that would flatten over time. This may also be explained by the numerous payment points set up by Bansefi in states where there were numerous beneficiaries. This could mean that some beneficiaries received their cash transfer at a payment point that was closer to their homes than the bank or ATM. The important factor to highlight is that while for some beneficiaries' travel time may have increased, this factor may be less important than safety and financial inclusion. We also found that women who received direct deposits reported greater intrahousehold bargaining power and decision making. Deposits appear to be less visible than cash payments, which give women more control of the resources.

In sum, field research results show that women who received their funds via their debit cards perceived that their bargaining power and decision-making opportunities increased. These field results must be taken with a cautionary note as there were only two points in time that could be evaluated. There is surely a learning curve and, thus, not all impacts could be captured.

Insights from *Prospera Digital*

Despite all the barriers our research team encountered, field work results based on the responses of women and of bank staff reveal it is possible for the state to be an effective agent for generating financial inclusion to the bottom of the pyramid by using digital mobile platforms to transfer funds from the CCT programs. Even though Prospera Digital never implemented the actual mobile money transfer, the women and retailers showed a positive response in terms of interest and a learning facility in their training sessions. A clear example

3. The design of this randomized experiment was led by Susan Parker and Fernanda Marquez. A technical evaluation is forthcoming.

of the positive response is the high level of interaction women had through SMS texts. The initial collaboration of Prospera, Bansefi, and the National Digital Strategy Office strengthened the network of bank agents, a key component of financial inclusion.

However, one of the primary challenges faced during project implementation was Bansefi's independent role over the disbursement of Prospera CCTs. Since 2002, Bansefi had been financially supporting the national social policies, Prospera in particular. After renaming the CCT program *Oportunidades Prospera*, the financial capacity component was added to Bansefi's structure and Bansefi maintained its monopoly on funds transfer to the beneficiaries. The underlying interministerial agreement limited opportunities for outsourcing the development of a digital payment tool and for diversifying the disbursement methods through partnerships via financial-technical (fin-tech) or private banking solutions. The monopolistic situation was especially serious as Bansefi had little operational and technical capacity to integrate e-wallet and digital payment platforms with its core banking capabilities.

Even though the National Digital Strategy Office was key in promoting the implementation of Prospera Digital, this high-level support of the project was not continual; it was intermittent, as the office sometimes pursued other political priorities, namely the upcoming presidential elections. Moreover, coordination between Prospera and Bansefi was an ongoing challenge due, on the one hand, to long-standing conflicts between the two actors and, on the other, to the limited capacity to innovate and respond quickly to opportunities for adoption of digital financial inclusion strategies. Moreover, Bansefi stopped participating in the transition to CCTs after the September 2018 earthquake as it was asked to transfer funds to the rescue process. A final problem was the time constraints that limited Prospera Digital's possibilities of success since the program was initiated in the middle of the previous administration and there was not enough time for the new administration to coordinate all the actors as well as to dismantle existing barriers.

Despite these limits, given the sheer volume of CCT beneficiaries and the initial positive response of women, agents, and merchants, it appears that Prospera Digital as well as other national CCT programs have the potential to significantly improve financial inclusion. However, a high-level office within the state must play the central role of integrating stakeholders into the mobile money ecosystem. Prospera Digital was set up in a context in which key components of the complex ecosystem that provided financial inclusion for the poor was in place: a sufficient level of mobile telecommunications infrastructure and phone ownership by beneficiaries as well as financial regulations that allow the existence of diverse bank agents. Prospera Digital also initiated partnerships and capacity-building trials with agents and merchants. Scale—that is, large volumes of very small transactions and low transactions fees—was also available since Prospera transfers funds to around 7 million families. Yet the fact that the Mexican government created barriers to private banks' participation in the delivery process made financial inclusion through Prospera Digital difficult to succeed. This can be explained by the fact that, over time, the Mexican government has intended to strengthen Bansefi as a development bank institution, and if it faced competition, it would have to be closed. Bansefi's only mission is the disbursement of funds for CCT beneficiaries. Stronger and continuous high-level support within the administration would have been necessary for Prospera Digital to offer mobile payments.

In this vein, we consider that developing a retailer network as intermediaries and adding market options to deliver the program could overcome the limitations faced by Bansefi (Figure 1). Considering that most Prospera beneficiaries are located in rural areas, the retailer network becomes a key component within the mobile money ecosystem, not only because it can compensate for the lack of banking infrastructure in these areas for beneficiaries to deposit and withdraw cash, but also because retailers might educate beneficiaries and promote the use of mobile money within a context of trust and confidence (Della Peruta, 2018), assuming beneficiaries are familiar with retailers.

Digitizing the CCT fund would generate numerous advantages (previously mentioned) and would include more freedom for the beneficiaries to collect the money at their convenience, ease in setting aside money in the account for regular use, safer conditions for beneficiaries because they carried less cash, and smoother consumption between payments. It would also reduce high transactions costs for the government and greater security for government agents. All these are clear, positive impacts on indicators of wellbeing (particularly work participation), time allocation, and customer satisfaction.

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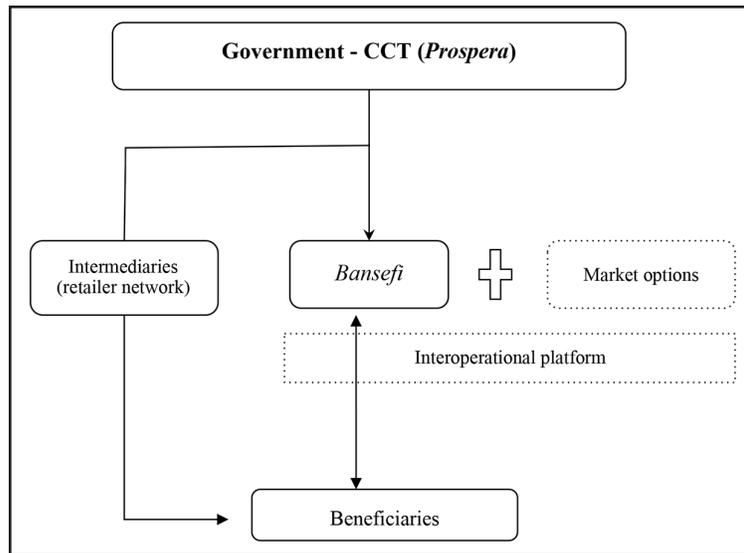


Figure 1. Mobile money ecosystem.

Source: Authors.

impact on low-income population. Perhaps it is unreasonable to expect that the market alone will provide the underlying mechanisms for social and economic development, in this case, linking mobile money services to financial inclusion for the poor. In this vein, the discussion is not whether it is the state or the market that is responsible for boosting financial inclusion by means of mobile money services, but whether the state contributes toward reaching this inclusion without the support of market competition.

Conclusion

The positive impact of financial inclusion on economic and social development is widely accepted. Expanding the infrastructure for connectivity and ICTs offers the potential to promote financial inclusion through mobile money services. Within this scenario, we argue that CCT programs are a valuable platform for improving financial inclusion via mobile money services. Given that CCTs are often manual transfers, deficits in the physical infrastructure limit the scope and increase the costs of funds distribution (Aker, Boumnijel, McClelland, & Tierney, 2016). While governments face these challenges and the poor remain financially excluded, mobile technologies have expanded at a rapid pace, even in unbanked populations. This rapid expansion has been welcomed as a way to reduce costs associated with the delivery of CCTs (Aker et al., 2016; Demirguc-Kunt et al., 2018; Klapper & Singer, 2017) and to expand financial inclusion via mobile money services (Aker et al., 2016; Ghosh, 2016; Kikulwe, Fischer, & Oaim, 2014; Sihvonen, 2006; Suri & Jack, 2016). Mobile money services allow users to access financial services via mobile phones so they can save, send, and receive money through their devices, thus, lowering economic and geographical barriers. However, the state is critical to ensuring financial inclusion, but its role must be as a catalyst that provides incentives for key players—such as banks, fin-tech companies, and mobile operators—thus understanding that concentrating these services can exceed its operational capacity and limit market alternatives that can also boost financial inclusion. ■

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In sum, lessons derived from this project show that Prospera Digital was a step forward toward financial inclusion that was cut short of its significant potential due to several factors at play, namely, the lack of ownership and technical capacity of the project by the development bank Bansefi, and the lack of a determined, high-level leadership. Likewise, the absence of alternatives to Bansefi in the operational dimension of the program was a critical factor that limited the program's potential for financial inclusion through mobile money services.

As recent history has shown, market-led efforts such as M-Pesa have not proliferated with the same level of success and, thus,

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