CGAP

AGENT NETWORK JOURNEYS TOWARD THE LAST MILE

A cross-country perspective

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EXECUTIVE SUMMARY

AGENT NETWORKS ARE A CRITICAL INTERFACE BETWEEN POOR customers and digital financial services (DFS) providers. These networks enable cash-in and cash-out (CICO) transactions that allow customers to convert e-money into cash and cash into e-money—enabling the use of DFS. Therefore, the broader the reach of CICO agent networks, the broader the customer base for DFS providers.

Given that a majority of the world's financially excluded and underserved customers live in rural areas, extending rural CICO agent networks is critical to further financial inclusion. The challenge is the difficulty most agent business models face in viably operating in many of these rural areas, which results in a large rural agent coverage gap.

The COVID-19 pandemic has heightened the importance of CICO agent networks. The need to ensure that government social transfers reach those most affected by the pandemic has created a sense of urgency among public and private actors in making sure CICO networks remain functional and can expand to reach more poor people. This has further raised awareness among policy makers and regulators on the need to promote CICO networks' reach and quality, so poor people can use a broader range of financial services as tools to build their resilience and capture opportunities.

Earlier CGAP research had identified universal principles for expanding rural agent networks at the last mile,[1] based on global evidence. Nevertheless, the way in which these principles are applied seems to vary from country to country. To understand *how* policy makers, regulators, and providers have expanded rural agent networks and to validate the principles identified, CGAP and its partners studied five financial markets: China, Colombia, India, Indonesia, and Kenya. Each of these countries has significantly expanded its rural agent networks despite very different contexts.

Our analysis reveals three distinct journeys country stakeholders have taken to extend the reach and quality of rural agent networks. In each journey, the critical context relates to (i) what is the use case, or financial service, broadly accepted by rural communities that generated enough traction to motivate investments in rural agent networks, and (ii) which type of DFS provider had the capacity to lead this agent expansion process. These two contextual factors can change, depending on the market.

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1 See Hernandez (2019a). The term "last mile" refers to a country's most remote rural areas. Rurality is a spectrum that goes from the most to the least densely populated areas of a country. The expansion of CICO agent networks in rural areas has been progressive, tending to move from larger rural towns to smaller villages over time.

1. The **P2P-led journey,** exemplified by Kenya, occurs in contexts where person-to-person (P2P) transfers for urban to rural domestic remittances drive rural agent network growth. In the case of Kenya, mobile network operator (MNO) Safaricom was the lead provider to first formalize the P2P transfers market for lower income customers. In other P2P markets, lead providers have been third-party companies that connect to the country's mobile networks (e.g., bKash in Bangladesh, Wave Money in Myanmar). In this journey, enabling P2P transfers between people in urban and rural areas required DFS providers to incentivize rural CICO agent network coverage.

2. In the **G2P-led journey** exemplified by Colombia and India, the development of rural agent networks is initially driven by the government's desire to expand government-to-person (G2P) transfers through bank accounts to beneficiaries in rural areas. In this journey, various public organizations, including public banks, invest in rural financial infrastructure like bank branches and interoperable payment systems. They also partner with companies that act as agent network managers (ANMs) to achieve viable rural agent business models. Colombia exemplifies a country where private banks leveraged public investments and now play the lead role in rural DFS distribution. By contrast, public sector banks have taken the lead in India.

3. In the **e-commerce-led journey** exemplified by China and, increasingly, Indonesia, the desire to drive e-commerce transactions beyond major cities fuels the expansion of rural CICO agent networks. E-commerce companies have developed new agent business models that enable greater rural agent viability. In China and Indonesia, policy and regulatory measures have allowed these new players to enter the financial sector to some degree and to leverage a vast financial infrastructure initially developed by public sector banks. In China, the journey is at a mature stage and newly developed agent models have enabled lower cost rural distribution channels. The process is in the early stages in Indonesia, where the impact of e-commerce on rural agent viability is yet to be seen.

The optimal journey for a country depends on context, but the cross-country experience reveals common policy and regulatory levers.

Our analysis distils policy and regulatory implications. It suggests that there is no single or ideal journey toward agents at the last mile. All three journeys identified have shown success in dealing with market-specific constraints. The analysis also shows that agent network development should not be viewed in a vacuum, but rather, linked as part of the various building blocks of a digital finance ecosystem. Furthermore, it is possible for countries following one journey to pivot into another journey as their markets evolve.

Policy makers and regulators should consider which of the three journeys is closest to their own context, and whether the policy and regulatory levers used in these journeys apply to them. Six cross-country policy and regulatory implications stand out across all three journeys:

1. **Public investments are critical for agent expansion at the last mile.** Agent networks of the highest quality and with the greatest rural reach strongly benefitted from key public sector investments made early on. These investments include the

provision of subsidies for agents to start rural operations, which allowed DFS providers to move along a learning curve to test and grow new agent network models that became more viable in rural areas. These subsidies were most effective when the agent expansion process encompassed private service providers in addition to public ones. Other key investments included the setup of interoperable payment systems, which facilitated the connection between DFS providers and new rural agents, and the buildup of rural bank branches that helped rural agents manage liquidity. This experience is best exemplified by China, Colombia, India, and Indonesia.

2. **Channeling G2P payments through various types of agent networks greatly contributes to rural agent viability.** Distributing G2P payments through diverse types of agent networks with advantages in reaching various parts of a country is an effective policy lever to improve rural agent viability. G2P transfers complement the mix of services offered by agents, adding to an agent's bottom line. The effect of G2P programs on agent viability is best observed in the case of India, where programs are large and increasingly disbursed through CICO agents. However, G2P transfers alone do not solve for rural agent viability. Public–private collaboration that results in agents offering additional valued services from private providers can significantly improve rural agent revenue per customer. China and Colombia are positive examples of this type of public–private collaboration.

3. **Regulation is more enabling when it allows the testing of new agent models, irrespective of provider type.** Observed innovation in rural agent networks appears to have originated in early regulatory moves that allowed new and different types of providers to enter financial markets. Recognizing that various types of DFS providers can recruit different agent profiles that offer diverse services and pose different risks, tiered regulation thereby regulated each agent type proportionate to its risk profile, allowing all agent profiles to coexist and enabling greater rural coverage. China and Kenya are good examples of nonbank providers leading the development of viable rural agent models that expanded rural agent networks.

4. **Data on agents can accelerate expansion.** Policy makers and regulators can support providers to collect and report agent data and monitor how rural agent profiles evolve as the network expands. By documenting agent geolocation and business profiles, policy makers can distinguish which types of agents have an advantage in covering different parts of a country. They can then devise policy and regulatory measures that help these rural agents expand over time. Examples of holistic agent geolocation and profiling informing policy and regulation can be found in India, Indonesia, and Kenya.

5. **Developing more compelling use cases for a growing number of financial services increases rural agent viability.** CICO transactions are essential for the uptake and use of a broad range of financial services. However, CICO is just a function that enables the use of a valued service, such as sending a domestic remittance, withdrawing a government subsidy, or paying for goods sold on an e-commerce platform. For rural agents to see a rise in CICO transactions and become more viable, providers must conceive a more diverse service offering, beyond CICO, that is

valued by rural customers. The e-commerce-led journey perhaps exhibits the largest diversification of valued CICO-enabled services based on a deep understanding of rural communities' financial needs. The more innovative rural agent networks in all five countries studied link CICO to a growing suite of services, which translated into more CICO transactions at the agent. This enabled lead providers to better serve rural customers, including women.

6. **Providers must support agents to deliver great customer service.** There are limits to capacity, liquidity, and literacy when agents are asked to offer a growing menu of services. Providers need to back up efforts to develop rural agent networks with lean teams that periodically can reach rural areas to support customer onboarding, product sales, and customer protection protocols.

SECTION 1
INTRODUCTION

C GAP HAS ESTABLISHED AN EVIDENCE-BASED ADVOCACY program on agent networks at the last mile. Its initial focus was to improve our understanding of the role of cash-in and cash-out (CICO) agent networks in the process of digital financial inclusion (Hernandez 2019b). Through a global consultation with lead providers, policy makers, and regulators, the program distilled six universal principles for inclusive agent networks (see Box 1). These principles reflect those features agent networks need to have in order to viably operate in rural areas—as shown by industry evidence—and to improve the quality, convenience, affordability, equitability, and trustworthiness of CICO agents for rural low-income customers.

To deepen our understanding of these principles, in 2019–2020 CGAP and its partners conducted deep dive studies in China, Colombia, India, Indonesia, and Kenya. The goal was to validate the CICO principles we identified earlier, and to gain a more granular understanding of *how* DFS providers, policy makers, and regulators could enable those desired features of viable rural agent networks in different contexts. This Focus Note summarizes key lessons derived from across the five markets and is complemented by the detailed country study for each.[2]

> BOX 1. **CGAP's six principles for agents at the last mile**
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> 1. Enable rural CICO agents to generate more revenue streams.
>
> 2. Make CICO agents more accessible to rural customers, as defined by the local context.
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> 3. Expand the range of people that can serve as CICO agents.
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> 4. Identify and manage consumer protection and other risks posed by rural agents without impeding innovation.
>
> 5. Develop a data-driven strategy to close the gender gap in CICO access and use.
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> 6. Expand public–private partnerships that share CICO agent networks.
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> Source: Hernandez 2019a.

The five markets we analyzed were selected because they have made great progress in CICO network reach and quality. Agent reach across these markets is estimated to range

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2   See DFS Lab (2020), Marulanda and Consultores (2020), MSC (2020a), MSC (2020b), MSC (2020c).

from 70 percent of the population having access to a CICO agent within five kilometers (e.g., India) to near universal access (e.g., China and Colombia).

In studying these diverse contextual settings, we collected market data complemented by in-depth interviews with industry stakeholders. The market assessments mapped out the geographic distribution of CICO access points used by different providers. We included those that were not regulated as banking agents but that could offer some CICO function. The assessments also documented general economic growth; physical infrastructure such as internet, mobile network, and electricity coverage; and population density. We analyzed these to better understand how extended rural reach was achieved and what prevents further expansion. The assessments documented policy and regulatory measures taken over the years that have influenced the observed evolution of rural CICO agent networks and financial inclusion.

In the following sections we describe three journeys that characterize how policy makers, regulators, and providers have expanded rural agent networks. We distill those policy and regulatory levers that more effectively enabled such progress in different contexts. Readers may apply these learnings to their country contexts and, within the described levers, test those they deem relevant.

SECTION 2
THE **THREE JOURNEYS**

2.1 **The P2P-led journey**[3]

The person-to-person (P2P)-led journey, exemplified by Kenya, occurs in contexts where rural agent networks pursue opportunities for growth through domestic remittances. Mobile network operator (MNO) Safaricom was the first provider in Kenya to formalize the P2P transfers market for lower income customers.

In this journey, expanding P2P transfers from urban to rural areas requires building rural agent networks. As more and more competitors with similar value propositions enter the market, their distribution channels become a key part of their competitive advantage to increase their market share. This creates strong incentives among providers to promote closed-loop payment systems and agent networks that are not interoperable with those of other P2P transfer providers.

In this journey, further rural expansion is enabled by policies and regulations that allow nonbank providers to bring innovative products and distribution models to financial markets and to compete with incumbents. Over time, lead providers are able to test and develop an increasingly wider suite of services valued by lower income customers. As agents facilitate more services that customers value, the number of agent transactions and revenue per customer increase, which improves the viability of more rural agents.

KENYA'S EXPERIENCE

No country illustrates the P2P-led journey quite like Kenya. With its revolutionary business model, Safaricom was the first provider to formally capture Kenya's vast domestic remittances market. Early on, regulators permitted Safaricom to enter the payments market and build the foundations of M-PESA. Rural agents were a necessity since many M-PESA users wanted to send remittances to recipients in rural areas. As a result, today 93 percent of Kenyans live less than five kilometers away from a CICO point. For comparison, this figure is estimated at 87 percent for Indonesia and 70 percent for India. Several factors

3   The P2P-led journey presented is based on CGAP's analysis of the agent network country assessment MicroSave Consulting (MSC) conducted in Kenya in 2020, commissioned by CGAP.

"Rural agents were a necessity since many M-PESA users wanted to send remittances to recipients in rural areas. As a result, today 93 percent of Kenyans live less than five kilometers away from a CICO point."

helped Safaricom to expand its rural agent networks, including its first-mover advantage; the direct incentives it provided to rural agents early on; and its ability to diversify the valued services it offered through agents, which helped rural agents to increase transactions per customer and better balance CICO requests.

RURAL CICO NETWORK FOUNDATIONS

M-PESA's rural agent network has been central to its business model since its founding in 2007. A large share of the Kenyan population had an unmet need for domestic remittances flowing from urban to rural areas, which created remittances corridors throughout the country. People from rural Kenya migrated to urban centers in search of better economic prospects. However, they retained a deep connection with their families in the villages. Whatever they earned or saved was sent to their families in rural areas to sustain and develop their standard of living. Safaricom initially focused on serving these remittances corridors through accessible agent networks that stretched into rural areas where remittances recipients were concentrated.

The focus on domestic remittances is characteristic of most P2P-led markets. The share of the Kenyan population that was and remains engaged in domestic remittances represents one of the largest markets in Africa. In terms of domestic remittances markets across Sub-Saharan Africa, Kenya is the largest, with 59 percent of the country's population reporting they receive domestic remittances. Kenya is distantly followed by Botswana at 39 percent (Kendall and Sonnenschein 2012). The larger domestic remittances market in Kenya, relative to other markets in Africa, may explain why the relatively extensive rural reach of M-PESA agents in Kenya has not been replicated with the same level of success in other African P2P-led markets.

Formal bank account ownership in Kenya remained as low as 27 percent until 2006 (Suri and Jack 2016). Financial services were perceived to be for affluent people who used banks and postal money orders to save and transfer money. Lower income Kenyans used informal mechanisms such as *chamas*[4] and SACCOs[5] to save, and used the bus or postal mail to send money.

When Safaricom launched M-PESA, its main use case was domestic remittances. With this winning service as a point of departure, M-PESA leveraged the rapid growth in mobile phone ownership among the population to provide financial services at a lower cost relative to other financial services providers (FSPs). This made the service accessible even to those with lower levels of scholastic completion. Safaricom developed M-PESA to be available across a wide range of mobile phones and ensured there would be no device limitations by directly providing P2P service through the SIM card. Outside of regulatory requirements

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4   A *chama* is an informal cooperative society normally used to pool and invest savings.
5   Savings and credit cooperative organizations (SACCOs) are member-based and require regulatory license to accept deposits and provide lending to members.

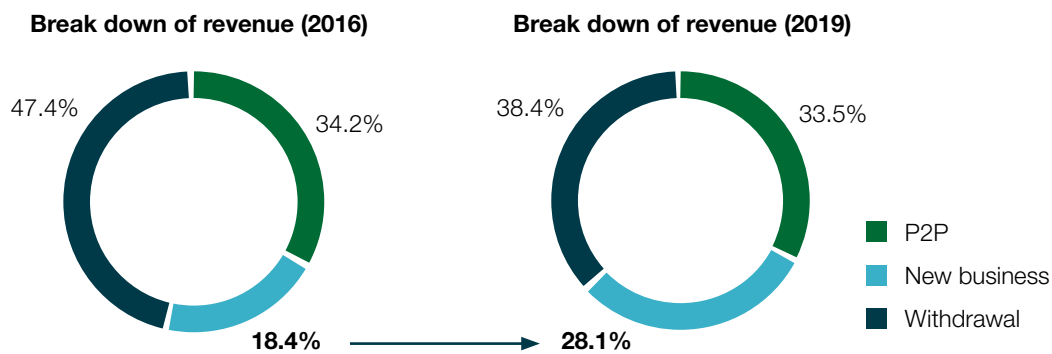(mainly KYC documents), the barriers to acquire a mobile wallet were fewer than those for a bank account.

Becoming an M-PESA agent also represented lower setup costs relative to other prevalent banking agents in Kenya, which facilitated rapid growth in the size of its agent network. Agent KYC requirements also were simpler from the start, given that the type of payment services mobile money agents offered tended to imply lower risks for regulators.

As the first provider to enter the mobile money market, by 2008 Safaricom's M-PESA held a dominant position in the mobile market with a 73 percent share.[6] The relative lack of competition helped with rapid adoption of the service. Safaricom needed to aggressively build its agent network to provide cash-in services to the mainly urban customers who wanted to load their e-wallets to send remittances, and cash-out services to the mainly rural customers who were recipients of those remittances.

INNOVATIONS THAT FUELED GREATER RURAL AGENT NETWORK EXPANSION

Thirteen years after its commercial launch, M-PESA continues to innovate by constantly expanding its set of services. In so doing it progressively makes itself less dependent on revenue from the cash-out transactions associated with domestic remittances and has achieved important growth in new services, such as merchant payments and digital credit. From 2016 to 2019, P2P and withdrawal transactions that proxy the use of remittances went from 82 percent to 72 percent of M-PESA's revenue, according to its yearly results report. Over the same period M-PESA saw total revenue increase by 80 percent. The largest growth came from "new business," which saw its contribution to revenue increase from 18.5 percent to 28.1 percent (see Figure 1, below).

FIGURE 1. **Break down of M-PESA revenue by transaction type**

Break down of revenue (2016)

47.4%   34.2%   18.4%

Break down of revenue (2019)

38.4%   33.5%   28.1%

- P2P
- New business
- Withdrawal

At 28.1 percent in 2019, revenue from new business is the fastest growing revenue area. Note: New business is mainly made up of bill payments, digital credit (M-Shwari), and merchant payments (Lipa Na M-PESA). Source: Safaricom Annual Reports, 2016 and 2019.

6   Safaricom 2008 Annual Results Presentation.

Although M-PESA's service diversification has taken time, it has enabled further agent network expansion. Our assessment reveals that with more use cases for e-money, cash-in requests have increased across the country—given that more customers with predominantly cash-based incomes want to use these new digital services (MSC 2020a). The rise in cash-in helps agents balance against cash-out requests motivated by remittances and helps them better manage their liquidity (electronic float or "e-float"). More balance in CICO requests is of particular value to rural agents that find it costly to rebalance e-float due to greater travel distances to the nearest bank branch or super-agent. Balanced liquidity ultimately makes it easier for more rural agents to operate.

While achieving a leading rural reach relative to others, the agent network model M-PESA developed solidified a legacy model that does not naturally lend itself to more interoperable and nonexclusive agent networks. Given the reliance on cash-out fees to its core business model, moves toward agent interoperability are harder to justify since they would enable competitors with similar services to enter the market area without investing in their own agent network setup and management. This contrasts with the G2P-led and e-commerce-led journeys, where the different business models used enable agent networks and accounts that are more open to nonexclusively and interoperability—given that partner providers have less competing, and even complementary, services that can be distributed through the same distribution channel.

Only by contrasting the three journeys does it become apparent that the P2P-led journey is naturally limited in its use of agent interoperability to increase service aggregation, improve agent liquidity management, and achieve greater agent viability. Rather, dominant providers in the P2P-led journey achieve service aggregation by increasingly offering new services they develop themselves.[7] Although collaboration with third-party service providers does exist, such collaboration seems to be sparse and slower to establish relative to journeys where banks and e-commerce companies dominate.

In 2014, the Competition Authority of Kenya (CAK) ordered Safaricom to open the M-PESA network to competitors by prohibiting agent exclusivity. This opened the door for other providers to appoint M-PESA agents as their own by giving these agents provider-specific processing devices. The result is a large share of Kenyan agents serving multiple providers. Each agent requires a separate processing device and e-float for each provider represented. This prevents agents from efficiently managing liquidity as they must separately rebalance each of their e-float accounts.

At the mobile e-wallet level, agreements between Safaricom and several banks introduced bilateral interoperability between bank accounts and e-wallets early on. However, in 2017 the regulator stepped in to force wallet-to-wallet interoperability between mobile money providers. Regulator intervention was needed as the MNO business model does not encourage agent or wallet-to-wallet interoperability.

Regulators in Kenya played a crucial role in enabling the agent network growth we observed. More than forcing agent non-exclusivity and wallet interoperability, perhaps the

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7   M-PESA's introduction of new services also considers new services that do not reduce revenue generated by domestic remittances, which remains the service that generates more revenue.

most impactful measure regulators took to promote rural agent network expansion was to allow a new nonbank player like Safaricom to enter the financial market in the first place. The Central Bank took a test-and-learn approach when issuing a letter of no objection for M-PESA's 2007 launch. The regulator had the capacity to recognize the innovation potential and allow M-PESA to operate without waiting to define a formal regulatory framework. By observing the development of the then-new business, the regulator was able to adapt an adequate regulatory framework which it continued to amend as the business evolved.

REFLECTIONS ON FURTHER REACH AND QUALITY

The success of M-PESA allowed Kenya to dramatically improve financial access. The country increased account ownership from 27 percent in 2006 to 83 percent in 2019, resulting in only about 7 percent of the population lacking access to a CICO point within five kilometers. (For reference, the figure in India is 30 percent; in Indonesia it is 13 percent.)[8] Almost the full 7 percent of people living far from a CICO point live in remote rural areas, which represents the current frontier at which the Kenyan agent network model seems to have plateaued. Based on the research conducted, we estimated that only 31 percent of all CICO agents operate in rural areas.[9]

Investment by government and donor partners to geolocate the various types of agents, their profiles, performance, and capabilities has enabled a greater understanding of the true reach of agents (BCG 2020). It also has helped stakeholders visualize new options for agent network expansion as it becomes more evident how different agent profiles may have comparative advantages in serving different parts of the country (e.g., mobile money agents vs bank agents).

Relative to the other four countries studied, Kenya's rural agent networks did not receive much public investment toward their evolution. The agent development trajectory was mostly left to the private sector. One potential way to deliver public support for rural agents would be to distribute G2P payments through M-PESA's agents and other mobile money agents. Such a move could further improve rural agent viability and expansion.

G2P programs currently only use banking agents to distribute transfers among vulnerable groups of people that tend to live in rural areas. As agent geolocation efforts reveal, bank agents reach 62 percent of the Kenyan population while mobile money agents like M-PESA's reach 84 percent within a five kilometer radius (Financial Inclusion Insights 2018). Enabling mobile money agents to deliver G2P transfers could expand the current reach of G2P distribution strategies.

The Ministry of Labour and Social Protection in Kenya decided to exclude mobile money providers and their agents from G2P distribution since its initial requirement for customers was a bank account with a biometrics-enabled debit card. Although M-PESA has the country's largest CICO network, it was not selected to distribute G2P for two main reasons: (i) mobile money accounts are PIN-enabled, not biometric, and the government felt that biometrics were necessary to ensure proof of life and to avoid fraud; and (ii) the government

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8   BCG geospatial analysis in Kenya (BCG 2020).
9   Based on MSC's research on rural agents in Kenya, completed for CGAP in 2020.

wanted to offer full bank accounts, not just mobile wallets, under the perception that recovery of misallocated funds would be more difficult with mobile money services (McKay et al. 2020).

These G2P programs have moved onto their second iteration. In the original design, only one provider won the public bid for distribution. Now programs allow beneficiaries to choose which provider to use for their subsidies withdrawals. MNOs could become one of the many provider choices if negotiations between the Kenyan government and MNOs like Safaricom address government concerns around account verification and fraud in G2P payments distribution. More agents in rural areas would become viable as a result, and, as we have seen in other countries, MNOs believe they could viably provide the service through their agents.

2.2 **The G2P-led journey**[10]

In the government-to-person (G2P)-led journey, rural agent network development is driven by the government's desire to expand the reach of G2P transfers through bank accounts to rural areas where many beneficiaries live. In this journey, public sector banks lead financial inclusion through public investments in rural financial infrastructure, such as rural bank branches and interoperable payment systems, and partnerships with various types of agent network managers. Payments interoperability schemes make it easier for public and private banks and their third-party partners to connect with each other and aggregate financial and nonfinancial services from different providers at a single agent point. This results in greater agent activity and viability in rural areas.

COLOMBIA'S AND INDIA'S EXPERIENCE

The Colombian and Indian governments have made financial inclusion a high priority for several decades and have heavily invested in rural financial infrastructure. Colombia's CICO network coverage is estimated to be nearly universal. Considering that India is the second most populous country in the world, the fact that 70 percent of its population lives less than five kilometers away from a CICO point is a major achievement. Although both countries were motivated to expand CICO networks by their desire to increase G2P delivery in rural areas, they took different paths. Colombia provided direct and temporary subsidies to bank providers establishing new agents directly or through ANMs in priority rural areas. This sparked new agent models with comparative advantages to operate in different parts of the country. It also led banks to establish dedicated staff units focused on diversifying the financial offering and enabling rural marketing, customer onboarding, and customer protection. Exclusively through public banks, India also provided direct incentives for CICO agents to operate in more rural areas. Interoperable payment systems in India enabled the

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10 The bank-led journey is based on CGAP's analysis of the agent network country assessment Marulanda and Consultores performed in Colombia, and the agent network country assessment MSC performed in India. Both assessments were undertaken in 2020 and commissioned by CGAP.

formation of private ANMs with very low channel costs partnering with public banks that work to increase their rural financial offering. Colombia is an example where private banks have led the establishment of active rural agents. India is an example where public-sector banks take the lead in rural agent coverage.

RURAL CICO NETWORK FOUNDATIONS

While both Colombia and India characterize the G2P-led journey, the countries have marked differences. It is important to note that private banks in Colombia have a much larger market share than public banks, and they lead over public banks in the number of active agents in rural areas. The opposite is true for India, where public banks have the largest market share and agent activity in rural areas.

"Colombia's CICO network coverage is estimated to be nearly universal. Considering that India is the second most populous country in the world, the fact that 70 percent of its population lives less than five kilometers away from a CICO point is a major achievement."

The two countries exhibit important commonalities. An important enabler in jumpstarting the expansion of rural agents was the 2006 introduction of regulations that allowed banks to appoint agents either through ANMs or directly. In Colombia, the long-term financial inclusion policy launched in 2006 created Banca de las Oportunidades—a program that continues to lead the financial inclusion policy's execution and provided time-bound subsidies that allowed private and public banks to establish agents in previously unserved rural areas. Also in 2006, the Reserve Bank of India (RBI) adopted a bank-led approach to deepen financial inclusion by permitting banks to appoint agents (or "business correspondents" as they are known in India).[11] In 2013, the National Payment Corporation of India (NPCI) launched the Aadhaar-enabled Payment System (AePS). The AePS now is widely accepted as a biometric authentication-based interoperable system for financial transactions across all agent networks.

Regulations in both countries gave ANMs direct responsibility for recruiting and overseeing individual agents. ANMs are private contractors that may also engage in other nonfinancial businesses. Banks may have agreements with ANMs to develop banking agent networks. Thus, the significant cost of establishing direct contracts between banks and individual agents can be avoided while banks can make ANMs fully accountable for the agents they recruit. This enabled various types of ANMs to evolve. Each held advantages in different parts of the country and devised agent management models that improved rural agent viability. Further, in Colombia we found that some private banks developed a model that directly manages agents, without an intermediary, enabling the offering of more complex financial services that have strong appeal in rural communities and have enabled more active rural agents relative to the ANM model.

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11 By 2010 the RBI allowed for-profit entities with large retail networks to become agents. See the RBI Master Circular: https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=2718&Mode=0.

The governments of both countries also provided direct subsidies (through their public banks or ministries) to bank providers and their agent networks that helped them kickstart rural operations. In Colombia, the subsidies were temporary; in India, some of the subsidies continue to the present day.

Another positive impact on rural agent network growth in India was the government's decision to establish at least one bank branch in every administrative district with a population of 5,000 or more. The plan was not financially viable as conceived and required cross-subsidies to cover the losses of the more remote bank branches. The investments have been sustained, however, allowing banks to build trust with rural customers through the years of their presence and to support rural agent liquidity management (i.e., bank branches often are the only service points where agents can rebalance their e-float). Bank branches, in turn, deputed various services to rural agents given their lower operating costs.

By 2018, Colombia had banking agents in 100 percent of the country's municipalities and 81 percent of adults had access to a financial account. These rates are in stark contrast to 2008, when just 72 percent of municipalities had banking agents or branches and 56 percent of adults had access to a financial account (Marulanda and Consultores 2020).

India's Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme remains the major reason for the rapid opening of bank accounts in the country. The program brought 404 million Indians into the formal banking system between August 2014 and August 2020. This figure is accompanied by a rapid rise in the total number of banking correspondents from 35,000 in 2010 (97 percent of them rural) to 988,000 in 2019 (55 percent rural). From 2011 to 2017, the rural adult population with access to a bank account rose from 33 percent to 80 percent (MSC 2020b).

Both in Colombia and India, important public sector support is represented by (i) an enabling regulatory environment for ANMs; (ii) the establishment of a rural banking branch network; (iii) the establishment of an interoperable payment system at the bank account level that helped banks transact with various ANMs and customers in rural areas; and (iv) the use of direct subsidies to bank providers and rural agents to help providers kickstart their rural operations. These four factors are deemed critical enablers of subsequent innovation that increase agent network reach and quality. They are further discussed below.

INNOVATIONS THAT FUELED GREATER RURAL AGENT NETWORK EXPANSION

Given the ability of banks to diversify revenue sources from a wider suite of financial services, their competitive strategies tend to rely more on the quality of the service mix than on the distribution channel. These strategies contrast with the provider incentives in the P2P-led journey previously described.

Banks in Colombia and India have increasingly relied on ANMs for efficient recruitment of a growing number of agents. These efforts are accompanied by important progress in the expansion of agents in rural areas and improvements in their viability with progressively less subsidies. However, the type of ANM model has evolved differently in the two countries.

The Colombia case

Colombia has developed two agent models that are prominent in rural areas. Both models recruit nondedicated individual agents (i.e., agents engaged in both financial and nonfinancial activities). In the first model, the bank outsources agent recruitment and management to an ANM. We call this the outsourced model. Here the ANM is a private company that is open to any DFS provider that wants to distribute services through its network. In the second agent model, the direct model, the bank recruits and manages its own agents without an intermediary. The bank establishes a direct contractual relationship with each agent and is responsible for providing direct agent training and support.

The largest number of *active* agents in rural areas belongs to the direct model used by private banks. Three key aspects help explain this larger rural reach and quality. First, the bank using this model developed a unique strategy early on to understand which financial services were of more value to rural communities and, based on the findings, recruited rural agents profiles better suited to distribute those services.

Second, the bank using the direct model focused on diversifying the financial offering to rural communities. This resulted in affordable deposits and withdrawals services associated with various tiers of savings accounts, bill payments, and to a lesser degree, loan repayments and disbursements. The bank determined that well-established rural shops offering various types of nonfinancial services (e.g., fast-moving consumer goods, office supplies, and agricultural inputs) are better suited to distribute these financial services. The bank also considers its staff, rather than ANMs, to be in a better position to more effectively train and monitor agents on how to support the more complex financial services offered.

The result of having more diverse financial services of value accessible at the agent is a greater number of monthly transactions per rural agent, which in turn improves agent revenue and viability. In the bottom quintile of the least densely populated municipalities, the direct model shows three times more agent transactions per month and four times the value of transactions per month than the outsourced model (Marulanda and Consultores 2020). The lead bank using the direct model claims that ANMs would not be able to train agents as effectively to ensure the quality of its service, given that ANMs are not as familiar with the bank's savings products as the bank itself is.

The diverse financial services banks in Colombia offer through the direct model and ANMs are associated with both cash-in and cash-out transactions (e.g., credit repayment and disbursement, bill payments, bank and e-wallet account deposits and withdrawals), which result in more balanced CICO requests from customers at the agent. This allows rural agents to better manage liquidity and reduce the frequency of visits to bank branches to rebalance float.

Third, the lead bank using the direct model claims it has achieved rural agent coverage thanks to the effective marketing of services that meet the needs of the rural community. The marketing strategy is implemented by a team of bank staff sales representatives that are a complement to agents. The sales representatives travel throughout rural areas explaining all of the bank's services to customers and facilitating account openings more effectively than agents could, since agents entertain many other services beyond the financial. The sales representatives do not perform CICO transactions, however; those are
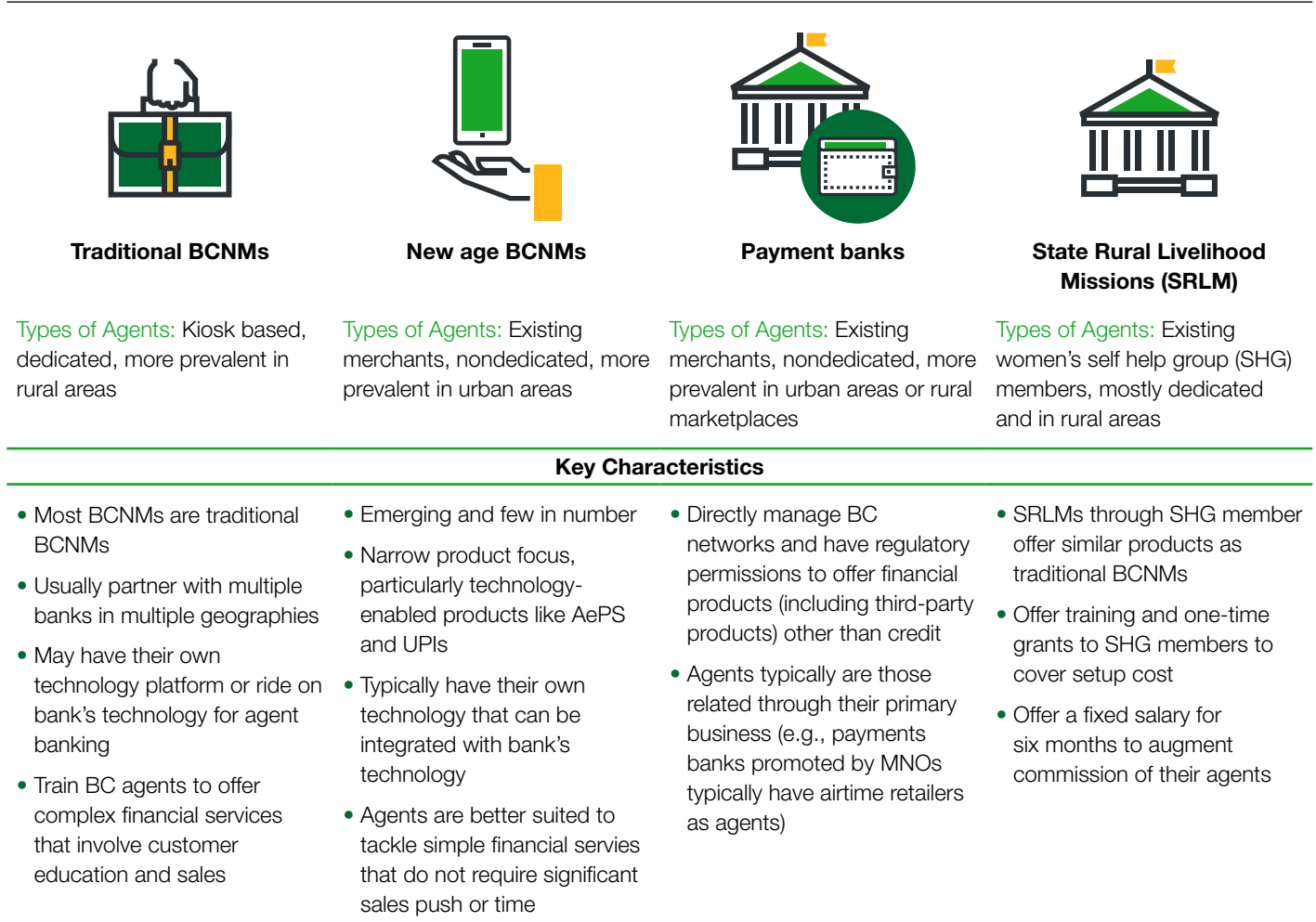
left up to agents.

The India case

In India, the foundational public investments previously discussed have enabled the development of various types of agent networks, as Figure 2 describes (below).

These various types of ANMs (also called business correspondent network managers or BCNMs in India) have a range of capabilities that provide certain advantages in covering different parts of the country and serving various customer segments. All allow for diverse service aggregation at the agent, which increases transactions per customer and improves rural agent viability. In terms of agent share, the largest ANMs are traditional ANMs, followed by new age ANMs, payment banks, and State Rural Livelihood Missions.

New age ANMs are spreading faster in India's rural areas. They have developed an approach that furthers rural viability and are now significant in number. With automated agent onboarding and a focus only on CICO transactions linked to bill, merchant, and e-commerce payments, new age ANMs deliver efficiency, speed, and agility through digital technology. They also leverage the country's unified payment interface (UPI) and the AePS,

FIGURE 2. **Types of agent (or business correspondent) network managers in India**

Traditional BCNMs	New age BCNMs	Payment banks	State Rural Livelihood Missions (SRLM)
Types of Agents: Kiosk based, dedicated, more prevalent in rural areas	Types of Agents: Existing merchants, nondedicated, more prevalent in urban areas	Types of Agents: Existing merchants, nondedicated, more prevalent in urban areas or rural marketplaces	Types of Agents: Existing women's self help group (SHG) members, mostly dedicated and in rural areas

Key Characteristics

• Most BCNMs are traditional BCNMs • Usually partner with multiple banks in multiple geographies • May have their own technology platform or ride on bank's technology for agent banking • Train BC agents to offer complex financial services that involve customer education and sales	• Emerging and few in number • Narrow product focus, particularly technology-enabled products like AePS and UPIs • Typically have their own technology that can be integrated with bank's technology • Agents are better suited to tackle simple financial servies that do not require significant sales push or time	• Directly manage BC networks and have regulatory permissions to offer financial products (including third-party products) other than credit • Agents typically are those related through their primary business (e.g., payments banks promoted by MNOs typically have airtime retailers as agents)	• SRLMs through SHG member offer similar products as traditional BCNMs • Offer training and one-time grants to SHG members to cover setup cost • Offer a fixed salary for six months to augment commission of their agents

Source: MicroSave Consulting 2020.

which makes it easy to process transfers between different service providers.

New age ANMs focus on onboarding nondedicated agents to scale (i.e., allowing agents to engage in nonfinancial activities to complement their revenue)—an approach which so far is not the norm for traditional ANMs serving rural areas. New age ANMs encourage agents to facilitate transactions with other providers, like e-commerce firms or firms selling home appliances. Out of concern for quality control and risk mitigation, dominant state banks still tend to require that rural agents dedicate themselves to financial services. However, these requirements make agent break-even points more difficult to reach in less densely populated areas. New age ANMs are finding ways to improve risk management while allowing nondedicated agents to generate additional revenue streams that enhance their viability. These ANMs seek agent profiles among a wider range of rural businesses and entrepreneurs better suited to tackle simpler financial services that do not require significant sales push or time.

We found that agents for new age ANMs have much lower capital expenditures relative to traditional ANMs ($61 vs $1,076). Operating expenses (opex) are also much lower per month ($3.5 vs $34). Although agent monthly revenue is lower for new age ANMs, the monthly revenue/opex ratio is double that of traditional ANMs. This aids scalability, as more revenue is generated per dollar spent by the agent (MSC 2020b).

REFLECTIONS ON QUALITY AND FURTHER REACH

Colombia's and India's experience suggests that public investments can have an important positive impact on agent viability and expansion. This can catalyze a learning process among financial providers and ANMs which leads to additional gains in efficiency for agent network models that continues beyond temporary early-stage agent subsidies.

In the case of Colombia, early government support to agent networks included a time-bound subsidy from 2007 to 2009 to cover the shortfall in reaching agent break-even points for all private and public banks that would establish agents in unserved rural municipalities. Participating banks were able to establish a learning curve on rural customer financial behavior and needs, and on new rural agent profiles that previously were unknown. In retrospect, lead banks consider this to have enabled the concept of a new agent network model, through trial and error and in partnerships with third-party companies that became specialized ANMs. As previously noted, the emergence of the direct agent network model in Colombia, which shows greater viability in rural areas, is the result of lead bank learning curves since the inception of agent operations in rural areas.

In the case of India, the focus on progressive expansion of rural agents (with significant subsidies to cover agent operation costs) by public sector banks led to the evolution of private ANM models with lower channel costs, as represented by the emergence of new age ANMs.

Public investment also was leveraged by channeling G2P payments through agent networks. G2P programs can strengthen rural agent network viability by adding a revenue-generating service that complements services already on offer, such as bill payments and remittances. Perhaps more than Colombia's experience, India's experience shows how

important additional revenue can be to remote rural agents. The yearly value of government payments in India represents a significant market for banks and ANMs. For the fiscal year 2018–2019, the total value of G2P transfers to individual beneficiaries amounted to more than $30 billion (Direct Benefit Transfer, Government of India 2019). As the COVID-

FIGURE 3. **Value of interbank ATM and agent (i.e., micro ATM) withdrawals, 2016 to 2020**
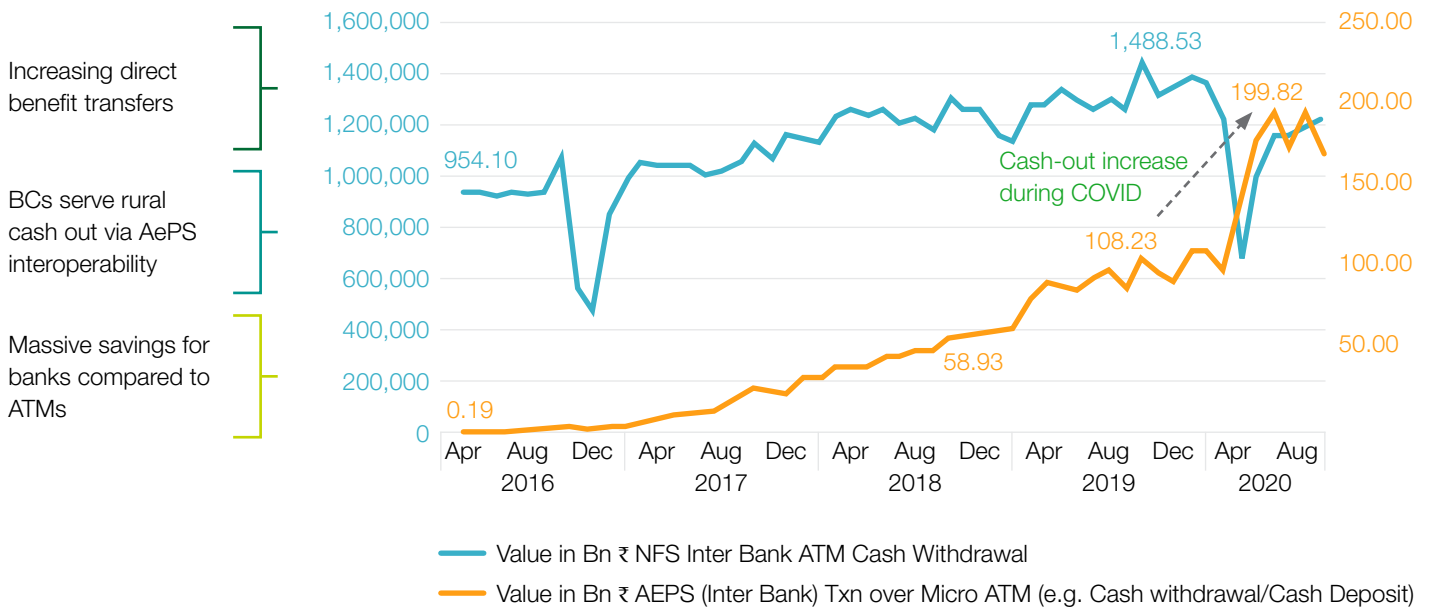

Business correspondents (i.e., agents) are becoming a viable alternative to ATMs in rural areas; some agents are ready to offer more sophisticated financial services.
Source: NPCI Statistics.

19 pandemic hit in 2020, the percentage of cash-out requests serviced by agents has increased significantly (see Figure 3, below).

As more G2P transfers are electronically distributed through banks and their agent networks, the greater the number of revenue-generating related transactions created for agents. Given that a larger share of government-targeted beneficiaries live in nonurban areas, rural and peri-urban agents have seen revenue increase by more than 100 percent between 2015 and 2017. Meanwhile, urban agents have seen revenue increase by 38 percent in the same period (see Figure 4, below). From the beneficiary perspective, G2P funds represent an e-money balance that can be digitally spent if providers diversify digital use case offers.

Colombia's and India's experience illustrates the many ways public subsidies can influence the development of agent networks of better quality and stronger rural reach.

FIGURE 4. **Average monthly revenue growth per agent in India in US$ for 2015 and 2017 (left), and by percentage between 2015 and 2017 (right)**
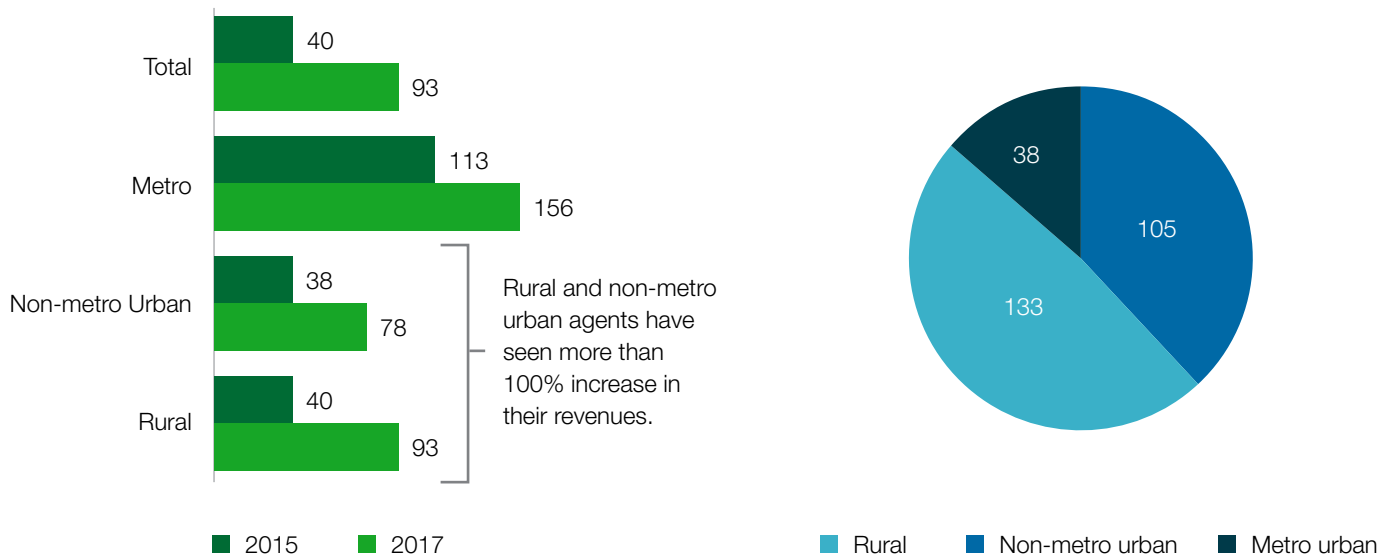
Source: MicroSave Consulting 2018.

2.3. The e-commerce-led journey[12]

In the e-commerce-led journey exemplified by China and Indonesia, once lead e-commerce companies consolidate their market share in the larger cities they switch focus to expand rural agent networks in order to serve more rural customers and keep growing. E-commerce agent networks support the marketing and logistics required to enable the trade of an increasingly diverse menu of goods and services offered on their e-platforms. CICO transactions associated with digital payments were soon added to their agent service mix to help boost e-trade. Policy and regulatory measures allowed for the progressive entry of e-commerce players into financial markets, which facilitated agent network innovation by creating a space for providers to experiment with innovative distribution channels. The resulting reduction in channel costs and the growing aggregation of financial and nonfinancial services that agents could offer created more agent transactions per customer and improved their viability in rural areas. The speed at which rural agents become viable depends on how fast the e-commerce sector can integrate with the existing banking system to allow e-commerce agents to complement existing agent banking services. In China we see that the integration process resulted in additional rural reach. In Indonesia, integration is in the early stages and its impact on rural agent viability is yet to be seen.

12 The e-commerce-led journey is based on CGAP's analysis of the agent network country assessment DFS Lab performed in China and the agent network country assessment MSC performed in Indonesia. Both assessments were undertaken in 2020 and commissioned by CGAP.

CHINA'S AND INDONESIA'S EXPERIENCE

China and Indonesia share a common path with Colombia and India in that much of the initial progress in expanding rural agent networks was the result of public investments in rural financial infrastructure and the desire to distribute G2P payments in rural areas. However, China and Indonesia have seen an inflection point in their agent network trajectory marked by the rapid expansion of e-commerce providers and their entrance into financial markets. These new players have developed new business models that allow a significant aggregation in the offer of financial and nonfinancial services facilitated by agents. E-commerce agent networks are mature in China, where new agent models have improved rural agent network viability and helped the country to reach near universal coverage in the last decade. In Indonesia, the entrance of e-commerce players in financial markets is more recent and restricted to some payment functions. However, these e-commerce players have developed a massive agent network in urban areas and report an ambition to go rural. We describe below the journeys taken by Chinese and Indonesian stakeholders, what they have achieved, and reflections on potential ways forward.

"E-commerce agent networks are mature in China, where new agent models have improved rural agent network viability and helped the country to reach near universal coverage in the last decade. In Indonesia, the entrance of e-commerce players in financial markets is more recent and restricted to some payment functions."

RURAL CICO NETWORK FOUNDATIONS

The development of agent networks in China and Indonesia has a lot in common with the bank-led journeys Colombia and India experienced. In each case, the government made significant early investments through public banks to push financial infrastructure such as bank branches and banking agents into rural areas.

In both countries, large public sector banks led the development of branch networks in urban areas and larger rural towns. In the 1950s in China, the "big six" state-owned banks (Agricultural Bank of China, Bank of China, Bank of Communications, China Construction Bank, Industrial and Commercial Bank of China, and Postal Savings Bank of China) led the process. In Indonesia, beginning in the 1960s the four state-owned banks, known as "Himbara" banks, led the process. The Himbara banks include Mandiri, Bank Negara Indonesia, Bank Rakyat Indonesia, and Bank Central Asia.

The China case

Rural agent networks began in China in 2003, supported by the government's efforts to recapitalize and improve performance of rural credit cooperatives and, later, village and township banks. The government allowed these financial institutions to use contractors to set up service points in areas that did not have bank branches. In 2006, the Bank of China

accelerated development of rural payment systems by integrating rural bank branches and agents into national clearinghouse systems (DFS Lab 2020).

By 2011, an important rural CICO agent network was well established and mainly used to distribute G2P transfers to rural residents. It also disbursed and collected microcredit services for rural small and medium-sized enterprises (SMEs). Agent network operations did not cover their own costs. Therefore, to keep these agent networks functional, the government periodically subsidized their operations through state banks (DFS Lab 2020).

As rural CICO networks were being established with strong government support, a dramatic inflection point occurred: In 2011, Alipay, WeChat, UnionPay, and KuaiQian were issued the first nonbank payments licenses. These new nonbank payment companies were created by e-commerce groups focused on the e-trade of goods that had, by then, significant reach in urban areas. The companies quickly grew, motivating the e-commerce groups that owned them to further strengthen their financial arms and diversify their financial services offering beyond payments. The agent networks—initially established by the e-commerce groups to support e-trade—were quickly enabled as CICO agents to support financial services offered. Agents also greatly benefitted from access to a vast rural bank branch network established earlier by state banks. The result was banking agent networks in China further expanded into rural areas by a vast number of e-commerce agents that could now facilitate financial and nonfinancial transactions. By 2017, 66 percent of rural adults used digital payments and, by 2018, 97 percent of administrative villages (i.e., rural areas) in China had access to a CICO agent.

Although Chinese regulators had permitted the inflection point, their approach shifted over time. Regulators initially allowed the e-commerce groups to operate digital finance delivery models even before the existence of a detailed regulatory framework that applied to them (e.g., Alipay launched in 2004, seven years before its payment license was issued). This enabled regulators to monitor the evolution of the new business model e-commerce groups had developed and adjust regulation along the way. In 2016, regulators signaled a shift to (i) mitigate damage from the downfall of the Chinese peer lending platforms, and (ii) ensure a competitive financial market as the Alibaba and WeChat e-commerce models reached dominant market share.

The Indonesia case

The Himbara banks supported the inception of CICO agents in Indonesia in 2009 with the launch of e-money agents. With the new regulatory framework under Bank Indonesia, bank and nonbank institutions could issue e-money and offer digital wallet solutions. By 2012, banks (BRI and Bank Central Asia) and nonbanks (telecoms like XL, Telkomsel, and Indosat) launched digital wallet solutions. They were governed under the Layanan Keuangan Digital (LKD) e-money agent program for financial inclusion, which aims to broaden access to e-wallets and facilitate the use of digital payments.

However, LKD agents have limited functionality even today. They most noticeably are permitted to perform cash-in but not cash-out—unless a user's e-wallet account is registered and connected to a bank account. Full banking agents started later, in 2013, when the banking regulator OJK established the agent banking or the Laku Pandai (LP)

framework as the main way to broaden the reach of G2P payments in rural areas, where cash-out is critical. The LP framework enables commercial banks to directly appoint agents to provide basic banking services, including deposits, withdrawals, bill payments, and money transfers. The LP framework aims to provide all Indonesian citizens with savings accounts (MSC 2020c).

By 2019 Indonesia had 1.4 million LP agents and 485,000 LKD agents. Together with bank branches they delivered services to 87 percent of adults within five kilometers of a CICO service point. Still, the Global Findex estimates that financial inclusion was at 48 percent of the country's adult population by 2017, low relative to countries with an economy of similar size (MSC 2020c).

However, Indonesia may be on the verge of an inflexion point similar to the one China reached in 2011. In 2016, a new type of provider entered the country's domestic payments market: e-commerce firms mainly dedicated to ride hailing services and goods sold on digital platforms like Grab, Gojek, and Bukalapak. These firms established or partnered with digital payments companies (e.g., OVO, GoPay, Dana), and so became nonbank electronic money issuers in order to grow their e-commerce transactions.

Over the past several years e-commerce firms have built a large network of agents—known as fintech agents—currently estimated at 6 million. Their role is to facilitate the core business of trading nonfinancial goods and services. Fintech agents include ride hailing services drivers, shopkeepers, and warehouse operators that increasingly facilitate cash-in so customers can load their e-wallets and pay digitally for e-commerce goods and services. Fintech agent activities fall under an undefined regulatory framework. That is, Indonesian regulations require LP or LKD agents to be recruited by banks and registered as businesses. However, most fintech agents are individuals associated with e-commerce groups (rather than banks) and are not registered businesses (they are individual entrepreneurs). There also is no regulatory framework specifically for fintech agents. Due to this regulatory constraint, it has been difficult to scale efforts by e-commerce groups to formalize their fintech agents as LKD or LP agents, which would add a broader suite of financial services to their e-platform offerings.

If regulators, banks, and e-commerce companies agree on how to address the above regulatory constraint, fintech agents could complement the current rural banking agent network. If the decision to add fintech agents to the banking agent landscape happens, Indonesia—like China—could march further along an e-commerce-led journey.

The following sections present innovations in new agent network models in China and Indonesia that show the potential to increase rural agent viability.

INNOVATIONS THAT FUEL GREATER RURAL AGENT NETWORK EXPANSION
The China case
In 2014, three years after China issued the first nonbank payment licenses, dominant e-commerce players began to focus on further expansion into rural areas. The Alibaba Group promoted its Rural Taobao program and WeChat targeted marketing campaigns toward rural inhabitants. At this juncture, 74 percent of the rural population had access to

a bank account (albeit with high inactivity rates), thanks to the public investments in rural financial infrastructure described earlier (Aveni and Roest 2017).

After consolidating their reach in urban areas, e-commerce groups wanted to increase the number of agents available to facilitate rural e-commerce and enable CICO transactions for a rural customer base that used cash more frequently than urban dwellers. In partnership with rural banking agent network providers, e-commerce firms invested in expanding the number and reach of agents to facilitate the many financial and nonfinancial services their digital platforms offered (Hernandez 2019b). In that sense, e-commerce firms saw CICO networks as basic infrastructure to enable rural distribution of their diverse digital service offerings.

The e-commerce agents in question were individual rural entrepreneurs recruited by e-commerce firms in partnership with local governments. These public–private partnerships were important catalysts for the introduction of e-commerce at the village level. Village leaders lobbied province-level administrations to approve government-funded e-commerce trainings. E-commerce firms trained village entrepreneurs on how to link their own shops, warehouses, and transport firms to e-commerce transactions going to and from rural areas. Transactions initially included cash-out. Cash-in came later, as regulation adapted to acknowledge the relevance of balancing cash-in and cash-out transactions to facilitate agent liquidity management (Meagher 2019).

The entrance of this new type of agent into the rural banking agent landscape led to an important rise in rural service points. The percentage of administrative villages with an agent increased from 88 percent to 97 percent from 2014 to 2018 (Meagher 2019).

The main innovation e-commerce agents in China came up with was the expansion of revenue through customer transactions linked to a quickly growing menu of financial and nonfinancial services that e-commerce platforms offered through agents. For example, Alibaba's Rural Taobao program established rural agents that could help offline customers purchase goods and services on e-commerce platforms; offered warehousing for goods traded online; and enabled CICO transactions associated with e-wallets or bank accounts to pay for e-trade transactions (DFS Lab 2020).

While e-commerce providers aggregate services offered through agents, agent themselves aggregate demand at the last mile for providers. Agents not only aggregate logistics for local producers trading on digital platforms, but also aggregate customers buying goods and financial and nonfinancial services offered by e-commerce platforms.

The impressive growth in the collection of customer transactional data and of agent behavioral and location data allows e-commerce providers to segment customer and agent needs by location in great detail. The growing provider knowledge on agent and customer location and profiles allows providers to tailor services for a growing number of segments, such as rural women, smallholder farmers, and rural youth. New generation e-commerce providers, like Pinduoduo, have specialized in capturing niche customer segments in urban and rural areas, showing how greater aggregation of services enables a learning curve that allows providers to serve more vulnerable groups.

Chinese regulators also have become highly conscious of tracking providers and agents that possess a comparative advantage in reaching rural dwellers in different parts of the country, with the goal to distinguish and support agents at the last mile (DFS Lab 2020).

Banks and other financial institutions have preserved their existing customer touchpoints but also can use e-commerce agents to service rural customers and incentivize rural account ownership. This complementarity is reflected in a growing number of partnerships between banks and e-commerce groups—even when e-commerce groups own their own banks (Hernandez 2019a).

The number of viable rural agents in larger rural villages has risen thanks to the expansion of the e-commerce model and the increased economic activity that came along with it. This success represents a subsidy savings for the Chinese government, which can now redirect to those unserved remote rural areas where even the e-commerce model is not economically viable.

The Indonesia case

At first glance, Indonesians have relatively good access to CICO service points, with only about 13 percent of adults living more than five kilometers away from one (BCG 2020). Yet only about 48 percent of adults in the country own a financial account, and they use it infrequently (Demirgüç-Kunt et al. 2018). This is due in part to the limited number of valued financial services made available through financial accounts to lower income customers. Those valued services available are mostly centered on government payments and remittances, which tend to generate fewer agent transactions per month.

In this context, the e-commerce landscape in Indonesia shows rapid growth. As a growing number of e-commerce tech companies adopt and use app-based solutions, the country has become the leading investment hub for digital startups in the ASEAN region, directly after Singapore (Singapore Fintech Association 2018).

Faced with an economy that is heavily reliant on cash, e-commerce companies have focused on building vast fintech agent networks that can facilitate the trade of goods and services and offer cash-in points for customers that need e-money to transact on digital platforms. As in China, tech companies in Indonesia quickly entered the digital payments space and set up their own (or partner) digital payments companies. Thanks to government and donor efforts to geolocate the various types of agent profiles, estimates suggest *active* fintech agents are in the order of 400,000, mostly concentrated in urban and peri-urban areas.[13] By contrast, there are about 440,000 active bank (Laku Pandai) agents and about 195,000 active e-money agents (LKD) (BCG 2020).

Indonesia's e-commerce business model is similar to China's in that it allows greater service aggregation at the agent level and lower operating costs. These "fintech agents" show signs of becoming the country's lowest cost distribution channel (see Table 1, below). The e-commerce model allows agents to more swiftly reach break-even transactions as the number of services offered to customers increases.

13 "Active" agents are defined as those facilitating one transaction per 30 days.

TABLE 1. **Agent economics for LP, LKD, and fintech agents in Indonesia**

Laku Pandai (LP) agent	Layanan Keuangan Digital (LKD) agent	Fintech agents (cash-in point)
• Start-up costs for provider: IDR 4.5 M (US$300) — POS-based • Start-up cost for agent: IDR 5M ($345) • Break even with 1-3 transactions per day (higher value txns) • Banks cross-subsidize agent Opex with revenue from other financial services • Highest channel costs for providers	• Start up costs for provider: IDR 300K ($20) — App-based • Start-up costs for agent: IDR 500K ($35) • Break even with 3-4 transactions per day (lower value txns) • EMIs can cross-subsidize agent opex with earnings from transactions with multiple providers of goods and services • Medium channel costs for providers	• Start-up costs for provider (App-based): negligible at margin • Start-up cost for agent: IDR 500K ($35) • Break even 3-4 txns/day (ride hailing) (lower value txns) • Fintechs can cross subsidize agent opex with earnings from the menu of e-commerce transactions in their platforms • Lowest channel costs for providers

Source: MicroSave Consulting's ANA data (2017) and BCG (2020).

Most fintech agents are not eligible to become LKD or LP agents within current regulation. This limits the types of financial services fintech agents can add to the current mix of services they facilitate on behalf of e-commerce platforms. It also limits the ability of fintech agents to increase activity rates and further reduce operating costs, which can help them expand into rural areas, as China's experience suggests.

REFLECTIONS ON GREATER REACH AND QUALITY

China's economy in recent years has been on a trajectory toward lower cash use. In the first quarter of 2019, transaction value in cash decreased by 19 percent (DFS Lab 2020).[14] The trend appears to be long term, as cash demand nationwide decreased by 5 percent from 2000 to 2016, making China one of the few countries in the world where this is occurring (Bech et al. 2018).[15]
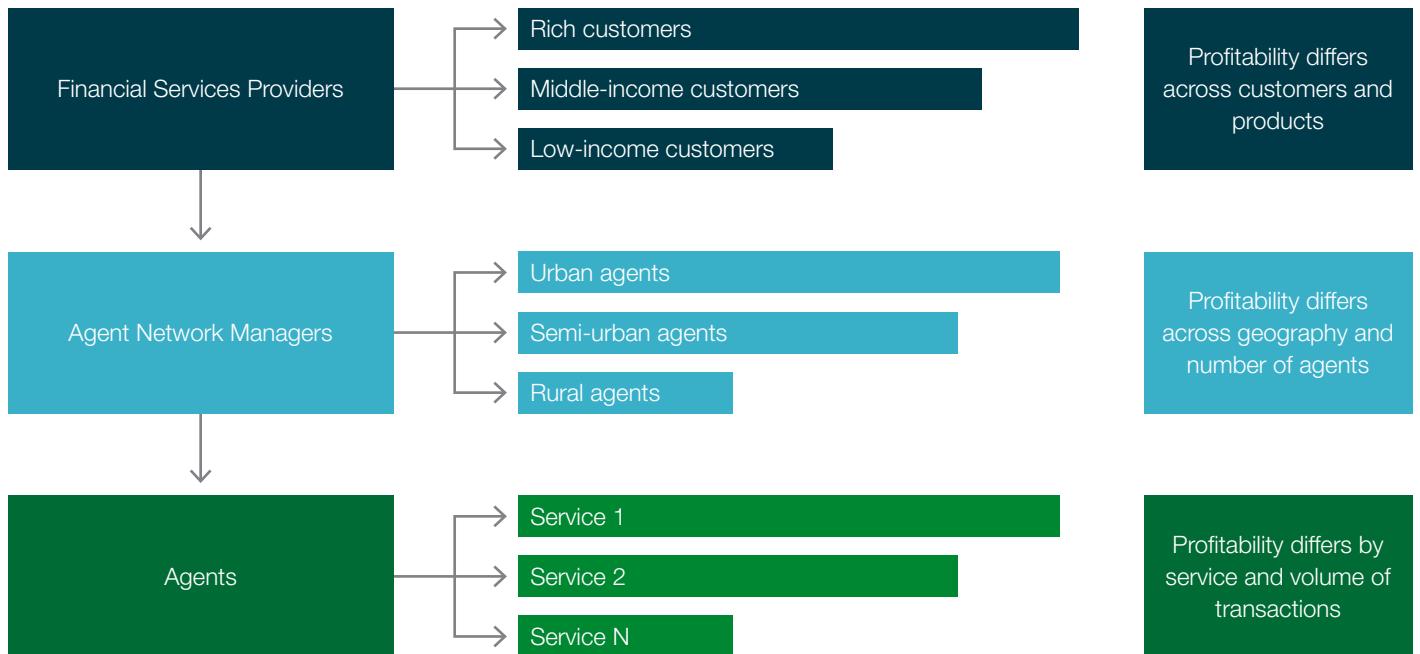
Although cash use has decreased on average nationwide, given that rural dwellers still need it, CICO remains an option for China's most remote rural agents. The improved viability of rural agents brought about by e-commerce players means the government no longer needs to subsidize them. It can instead focus on subsidizing agents that serve the most remote rural villages where even the e-commerce agent model is not fully viable. These last mile agents still receive a fixed government subsidy to help cover operating costs (DFS Lab 2020).

Subsidizing rural agent networks highlights a more nuanced concept of agent viability which can be better understood from a portfolio perspective (see Figure 5, below). In an attempt to remain viable, individual agents often cross-subsidize their financial services business with nonfinancial businesses—as long as all services are valued by the customer.

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14 Transaction value in cash refers to all cash payments made or received by companies nationwide.
15 The authors use total cash in circulation as a proxy for the demand for cash in the country.

FIGURE 5. **Business lines with cross-subsidization potential across FSPs, agent network managers, and individual agents**

Financial Services Providers	→ Rich customers	Profitability differs across customers and products
	→ Middle-income customers	
	→ Low-income customers	

Agent Network Managers	→ Urban agents	Profitability differs across geography and number of agents
	→ Semi-urban agents	
	→ Rural agents	

Agents	→ Service 1	Profitability differs by service and volume of transactions
	→ Service 2	
	→ Service N	

Source: Authors.

Similarly, providers often cross-subsidize rural and urban agent operations, and may even run their overall agent network at a loss when its expansion enables increased returns from the other financial and nonfinancial services offered. Lastly, at the national level, governments can use subsidies to catalyze new agent network models that make more rural agents viable over time, reducing the need to subsidize the latter and freeing resources to support those agents at the last mile.

It remains to be seen whether regulators, banks, and e-commerce companies in Indonesia will agree on the potential of incorporating e-commerce or fintech agents into the national banking agency landscape to lower channel costs and viably expand agents in rural areas. In so doing, they would be taking a journey similar to China's. It may involve establishing a regulatory framework that recognizes the role of ANMs and allows banks to leverage e-commerce firms that manage large agent networks. This type of framework currently does not exist in Indonesia the way it does in China, Colombia, and India.

IMPLICATIONS FOR POLICY MAKERS AND REGULATORS

The public sector's role in building CICO network reach and quality

The cross-country analysis presented above suggests that policy makers play a crucial role in enabling and accelerating rural CICO networks by (i) supporting the establishment of rural bank branch network and interoperable payment systems; (ii) temporarily subsidizing the operation of newly established rural agents in unserved areas; and (iii) leveraging existing G2P programs to contribute to rural agent viability.

A rural bank branch network is a critical foundation that determines how far into rural areas future agent network innovations can reach—as revealed by the cases of China, Colombia, India, and Indonesia. Public subsidies routed through public or private banks to create a rural bank branch network early on incentivize providers to take further risks and invest in innovations that viably extend rural agent networks. Even the most innovative agent models depend on access to bank branches for agent liquidity management. Innovations observed are more about reducing the frequency with which agents need to visit bank branches to balance their e-float than they are about eliminating branch visits altogether.

Support to create interoperable payment systems also helps various FSPs connect to increasingly diverse rural agent networks that cover different parts of a country. Positive examples include India, where a growing number of agents and providers have leveraged the AePS to transact, and China, where efforts have been made to connect rural agent networks with national clearinghouses.

Temporary public subsidies to cover part of a rural agent's operating costs are one element of the successful policy mix observed during early stages of rural agent network development. These subsidies provide a base income stream for agents to start operating in previously unserved rural areas and allow providers to start learning about rural customers. In China, government subsidies were used to train rural dwellers on how to become e-commerce

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agents, which helped e-commerce providers set up rural agent networks that later delivered banking services. This was deemed justified, given the increase in rural incomes brought about by e-commerce (Luo, Wang, and Zhang 2019). India and Colombia also are good examples of how direct subsidies to rural agents accelerated provider innovation on rural agent models. Rural agents in India received a fixed monthly subsidy to operate, while the government in Colombia covered shortfall against rural agent break-even points during their first years of operation, then halted the subsidy.

In many cases, public subsidies to support rural bank branches or rural agents are motivated by the government's need to expand the reach of G2P transfers in rural areas where many target beneficiaries live. G2P transfers represent a revenue-generating service agents can offer in addition to the others they offer on behalf of FSPs. The aggregation of services contributes to more agent transactions per customer and rural viability. In addition, collaborations that pool G2P transfers with a growing number of services from other private providers can help agents better balance customer cash-in and cash-out requests, which improves liquidity management. From the beneficiary perspective, G2P funds represent income that can be spent digitally—if providers were to diversify digital use case offers.

However, public subsidies to rural agents can do more than cover operations costs. They can enable providers to begin a learning process that has led to innovation in more viable rural agent models. When innovations happen, they are long-lasting and can outlive subsidies focused on early-stage agent operating costs. As the previous chapter explained, China, Colombia, and India are good examples of subsidies paving the way for the more efficient agent models we see today.

As enhanced agent models expand among more rural agents, the need for governments to continue subsidizing those agent models reduces. This is important for governments with limited public budgets that face competing priorities. As more rural agents become viable, funds can be freed up and redeployed to focus on the most remote rural areas—the last mile—where even the more innovative agent models are not viable without public subsidies. Subsidies focused on more remote rural agents remain even in China—the country in our study sample with the largest digital ecosystems and agent networks with the farthest rural reach.

Public sector investment alone has not been shown to make rural agents viable at the last mile without financial provider innovation. Equally, it has not proven possible for private providers to advance agent network models to the last mile by themselves. Kenya exemplifies an almost absent level of public investment in support of rural CICO networks compared with the other countries studied. Although its M-PESA agent model has significant rural reach in relative terms, the country's more remote rural areas remain uncovered and the mobile money agent model is deemed to be at its limit.

When rural agent network expansion is the result of coordinated public and private sector investments, rural reach seems to be maximized. This is best illustrated by China and Colombia, the countries in our sample with the largest rural agent networks and the strongest public–private collaboration models to build rural agent networks.

Standout effective regulatory interventions include countries that take a test-and-learn approach and allow new players (e.g., nonbank electronic money issuers) to enter financial services markets initially dominated by bank incumbents. China and Kenya are good examples, as regulators in these countries gave new nonbank providers the chance to test and improve innovative agent models—a process that makes them competitive in the long term. Risk-based agent network regulation also has been shown to allow development of diverse types of agents with an advantage in covering different parts of a country. This system enables CICO-only agents in addition to those agents that offer the full suite of banking services. CICO-only agents pose little risk and thus require more flexible regulations relative to agents that also do marketing or help with customer onboarding (Chen and Hernandez 2019).

The private sector's role in expanding CICO networks for each journey

The country experiences presented throughout this Focus Note show that the private sector not only recognizes the benefits of expanding services to rural areas and lower income customers in collaboration with the public sector, but often leads the way in finding innovative agent network models that fundamentally improve the unit economics of serving less densely populated areas. Private sector-led innovations in China, Colombia, and Kenya have resulted in permanent gains in agent network quality and rural reach.

Lead e-commerce players in China, such as Alibaba and WeChat, brought unprecedented gains in economies of scale and scope for agent networks. Innovative business models leveraged digital platforms to pool hundreds of services from different providers, facilitated by a provider-agnostic agent network.

Kenya's lead MNO, Safaricom, was the first to leverage its mobile network to viably deliver a much-needed domestic remittances service at a lower cost. Agent viability benefitted from Safaricom's value proposition for lower income customers and its increasingly diverse service offering, which translated into more transactions per customer for agents.

In Colombia, Bancolombia stands out as the provider with the most active agents in rural areas. This is a direct result of the private bank's focus on expanding the menu of financial services through its ANMs in rural areas. Services are offered through diverse commercial partnerships with other service providers, most notably fintechs like Nequi, that tailor services to many lower income customer segments (e.g., G2P, bill and merchant payments, cable TV, airtime, internet). The bank also has developed a lean team of staff representatives that travel to rural areas to onboard new customers, sell services, and ensure customer protection—all of which complements the limited capacity of its growing number of rural agents.

Effective partnerships expand CICO reach and quality

Partnerships are essential to expanding CICO agent networks to remote areas in developing countries. They allow third-party providers in completely different industries to connect agent networks and complement each other. Examples in India are numerous: A payments bank and an oil marketing company target truck drivers by providing CICO services at rural petrol pumps. India Post Payments Bank and the Department of Post offer deposit accounts, CICO, money transfer, and bill payments to more remote rural customers, while the Department of Post provides access to physical infrastructure (nearly 155,000 post offices) and human resources (over 300,000 postal employees) to deliver those financial services. A highly digitized agent network management company, Atyati, acts as an outsourced microfinance arm for a public sector bank. While the bank provides capital and underwrites risk, Atyati provides the field staff to source group loan applicants, fulfil clerical customer due diligence, and train and monitor agents performing disbursals and collections. Together these organizations have built a formidable loan portfolio with rural customers traditionally not sourced by banks (MSC 2020b).

Safaricom began to partner with Commercial Bank of Africa (CBA) in 2008 to offer mobile customers M-Shwari savings accounts. This partnership enabled Safaricom customers to use their mobile phones to access a menu of loan services offered through a CBA account. These loans represent a valued service that has motivated additional customer requests for CICO transactions associated with loan disbursement and repayment. These CICO request are enabled by M-PESA agents and help improve agents' revenue per customer. M-Shwari now has 32 million customers (all with a CBA bank account) and $4.5 billion disbursed through December 2019.

In Indonesia, Bank BNI and Grab Kios are exploring how Grab Kios agents potentially could offer lower-tier savings accounts issued by BNI. This would allow customers to perform deposits or withdrawals at the Grab Kios agent in real time using the agent's e-float account.[16] Although the trial is just beginning, this partnership can reduce agent acquisition and maintenance costs for Bank BNI. Grab Kios would enhance individual agent revenue and sustainability by adding savings deposits and withdrawals to the various services its platform offers.

Analysis of the five countries studied allowed us to revisit the validity of the overarching principles CGAP identified during a previous global stakeholder consultation. The Annex in this Focus Note shows how country analyses found the principles to strongly hold up across the five countries. It also elaborates on how some overarching principles catalyze others.

16 Grab, Southeast Asia's largest e-commerce company, connects millions of consumers to millions of drivers, merchants, and businesses. Grab Kios, a member company of the Grab group, offers small merchants the choice of ordering fast-moving consumer goods to restock their shops. Grab Kios also enables merchants to offer digital payments to nearby customers. All merchant transactions are made through the Grab Kios app.

SECTION 4
CONCLUSION

BY FOLLOWING THE EVOLUTION OF AGENT NETWORKS IN FIVE financial markets, we learned that providers, policy makers, and regulators have made great progress toward expanding rural CICO network reach and quality. Our analysis helped us to understand which strategies work well in different contexts and enabled us to identify common policy and regulatory levers that prevail across market journeys.

Through the analysis we were able to characterize three distinct journeys for agents at the last mile. While no journey is superior to the others, each is forged by the conditions of its market. It is clear that the overall business models used by dominant providers in these P2P-, G2P-, and e-commerce-led journeys were driven by diverse incentives. Some allowed lead providers to diversify their own service offer distributed by exclusive agents and non-interoperable accounts. Others developed more "open" agent networks that can be leveraged by various types of partner providers through interoperable agents and accounts.

The policies and regulations that focused on "carrots" (i.e., incentives) to encourage agent network innovation by new and incumbent providers were more effective in enabling rural agent reach and quality. As innovations evolved, policies and regulation adjusted in proportion to revealed risks, resulting in improved customer protection, a well-maintained competitive financial market, and promotion of further agent network expansion.

From the public sector perspective, policies that made key public investments in rural CICO networks were critical levers for subsequent rural expansion. These policy levers include:

- Providing temporary subsidies to cover a portion of new rural agent operation costs and encourage providers to test and grow new, more viable, rural agent network models.

- Establishing a deeper rural bank branch network and establishing interoperable payment systems that are critical to helping rural agents manage liquidity and enabling providers to connect with increasingly diverse rural agents.

- Channeling G2P transfers through various types of rural agent networks, which complements rural agent revenues and improves viability as providers build new and more viable agent network models.

Innovations in the rural agent networks observed trace their origins to early regulatory moves that recognized new and different types of providers with innovation potential and allowed players to test and grow their models while learning to limit risks in the process.

Lead providers expanded agent networks by finding new partners that could help them connect with new types of agents with rural reach. Policy makers and regulators can similarly learn about the evolution of agent networks by supporting various types of providers to collect and report data on the locations and profiles of their agents. These insights will allow policy makers and regulators to distinguish which agent profiles could operate at an advantage in rural areas and target support to those agents that are most likely to expand network quality and rural reach.

From the private sector perspective, any effort to build rural CICO agent networks must be accompanied by compelling use cases for the rural customer base. CICO transactions are necessary for the uptake and use of a broad range of financial services. However, providers must conceive of a diversity of service offerings that rural customers will value before rural agents see a rise in CICO transactions that make them more viable. Expanded service offerings bring agents more than just additional CICO revenue. They complement other lines of business by pushing foot traffic into shops, increase cross-selling of other products and services, and provide agents with a valued social role in their communities.

Finally, providers must support agents to deliver quality customer service. Agents may have limited capacity, liquidity, and literacy when asked to offer a growing menu of services. Providers must back up efforts to develop rural agent networks with lean teams and smart processes that reach rural areas to support customer onboarding, product sales, and customer protection.

Our analysis reveals distinct journeys that country stakeholders have taken to drive rural distribution. We suggest that readers envision themselves on these journeys based on similarities and differences with their own contexts. Readers can then select and test the policy and regulatory levers they consider most appropriate for their respective countries.

REFERENCES

Aveni, Tyler, and Joep Roest. 2017. "China's Alipay and WeChat Pay: Reaching Rural Users." Brief. Washington D.C.: CGAP, December. https://www.cgap.org/research/publication/chinas-alipay-and-wechat-pay-reaching-rural-users

BCG (Boston Consulting Group). 2020. "Cash-In/Cash-Out Agent Networks: Reaching the Last Mile in Financial Inclusion. Sizing and Locating the CICO Agent Network Expansion Challenge and Opportunity." Boston: BCG, April. https://connect.bcg.com/cicoeconomics/2-sizing-the-cico-access-challenge_april-2020_v05/

Bech, Morten Linnemann, Umar Faruqui, Frederik Ougaard, and Cristina Picillo. 2018. "Payments Are A-Changin' but Cash Still Rules." *BIS Quarterly Review,* 11 March. https://www.bis.org/publ/qtrpdf/r_qt1803g.htm

Chen, Greg, and Emilio Hernandez. 2019. "It's Time to Deregulate Agent Cash In/Cash Out." CGAP blog post, 9 January. https://www.cgap.org/blog/its-time-deregulate-agent-cash-incash-out

Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar, and Jake Hess. 2018. "The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution." Washington D.C.: World Bank Group. https://globalfindex.worldbank.org/index.php/#GF-ReportChapters

DFS Lab. 2020. "China's CICO Agent Evolution: From Cooperatives to Social Commerce." FinDev Gateway. https://www.findevgateway.org/slide-deck/2020/12/agent-network-journeys-country-deep-dives

Direct Benefit Transfer, Government of India. 2019. Official website. https://dbtbharat.gov.in/

Financial Inclusion Insights. 2018. "Kenya: Quicksights Report. Fifth Annual FII Tracker Survey." Washington, D.C.: FII, June. http://finclusion.org/uploads/file/kenya-wave-5-quicksites_final.pdf

Government of India. 2018. "Pradhan Mantri Jan Dhan Yojana Progress Report." Indian Ministry of Finance, Department of Financial Services. https://pmjdy.gov.in/account

Hernandez, Emilio. 2019a. "Agent Networks at the Last Mile." Technical Guide. Washington, D.C.: CGAP, November. https://www.cgap.org/research/publication/agent-networks-last-mile

Hernandez, Emilio. 2019b. "The Role of Cash In/Cash Out in Digital Financial Inclusion." CGAP blog post, 29 July. https://www.cgap.org/blog/role-cash-incash-out-digital-financial-inclusion

IDEO.org. 2019. "Women and Money: Insights and a Path to Close the Gender Gap." https://www.womenandmoney.design/

Kendall, Jake, and Jan Sonnenschein. 2012. "Many Sub-Saharan Africans Receive Domestic Remittances." Gallup blog post, 18 June. https://news.gallup.com/poll/155213/sub-saharan-africans-receive-domestic-remittances.aspx

Luo, Xubei, Yue Wang, and Xiaobo Zhang. 2019. "E-Commerce Development and Household Consumption Growth in China." World Bank Policy Research Working Paper 8810. Washington, D.C.: World Bank Group, April. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3369985

Marulanda and Consultores. 2020. "Country Analysis on CICO Networks in Colombia." FinDev Gateway. https://www.findevgateway.org/slide-deck/2020/12/agent-network-journeys-country-deep-dives

McKay, Claudia, Gcinisizwe Mdluli, Milkah Chebii, and Victor Malu. 2020. "The Future of Government-to-Person (G2P) Payments: Innovating for Customer Choice in Kenya." Case study. Washington, D.C.: CGAP, January. https://www.findevgateway.org/case-study/2020/01/future-government-person-g2p-payments-innovating-customer-choice-kenya

Meagher, Patrick. 2019. "China's Long March to a Cashless Future: Regulatory Responses to DFS Innovation and the Challenges of Rural Distribution." FinDev Gateway. Washington, D.C.: CGAP, December. https://www.findevgateway.org/paper/2019/12/chinas-long-march-cashless-future

MSC (MicroSave Consulting). 2017. "Agent Network Accelerator (ANA) Research: Indonesia Country Report 2017." MSC Helix Institute of Digital Finance, December. https://www.microsave.net/wp-content/uploads/2018/12/ANA-Indonesia.pdf

MSC. 2018. "State of the Agent Network, India 2017". MSC Helix Institute of Digital Finance. February. https://www.microsave.net/wp-content/uploads/2018/12/Agent_Network_Accelerator_Research_Country_Report_India.pdf

———. 2020a. "Cash-in Cash-out Cross-country Analysis: Kenya." FinDev Gateway. https://www.findevgateway.org/slide-deck/2020/12/agent-network-journeys-country-deep-dives

———. 2020b. "Cash-in Cash-out Cross-country Analysis: India." FinDev Gateway. https://www.findevgateway.org/slide-deck/2020/12/agent-network-journeys-country-deep-dives

———. 2020c. "Cash-in Cash-out Cross-country Analysis: Indonesia." FinDev Gateway. https://www.findevgateway.org/slide-deck/2020/12/agent-network-journeys-country-deep-dives

Singapore Fintech Association. 2018. "The Next Wave of Growth." White paper. Singapore: Singapore Fintech Association. https://thefinlab.com/wp-content/uploads/2020/01/UOB-The-Next-Wave-of-Growth-2018-White-Paper.pdf

Suri, Tavneet, and William Jack. 2016. "The Long-Run Poverty and Gender Impacts of Mobile Money." *Science,* 354:6317, 1288–92. https://science.sciencemag.org/content/354/6317/1288

DOES THE CROSS-COUNTRY EXPERIENCE SUPPORT UNIVERSAL PRINCIPLES FOR AGENTS AT THE LAST MILE?

THIS CGAP CROSS-COUNTRY STUDY TO LEARN ABOUT THE various journeys for agents at the last mile presents several policy and regulatory levers that enabled an increase in agent network quality and rural reach in five markets. Important progress has been achieved in all these markets, despite wide differences in market conditions.
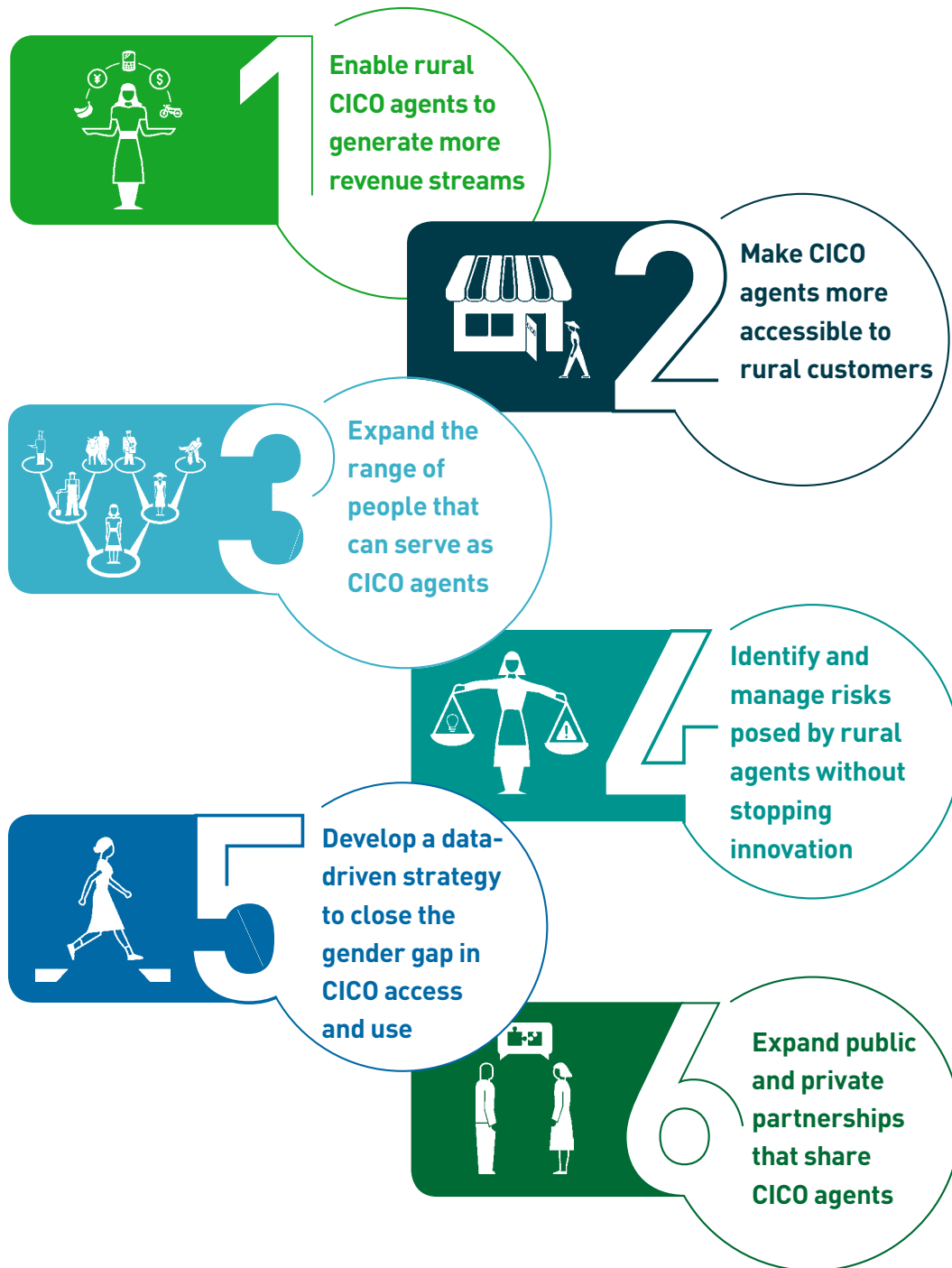
The analysis allows us to revisit the validity of six overarching principles identified by CGAP during a global stakeholder consultation completed previous to this study. These principles were published as a CGAP Technical Guide and are summarized in Figure 1a (below).

The principles articulate an evidence-based narrative that defines exactly what digital finance providers, policy makers, and regulators need to achieve—as demonstrated by practice—to make significant progress in CICO network quality and rural reach, and to offer more convenient, affordable, equitable, and trusted CICO service points to low-income customers in rural areas.

Although the principles highlight *what* needs to be achieved, they do not provide a granular understanding of *how* to achieve it. As we learned during our deeper analysis in the five countries studied, the "how" of implementing conducive policies and regulation varies by context. Polices and regulations that stand out include making public investments in rural infrastructure, temporary subsidies for remote agents, leveling the playing field among various providers, and channeling G2P transfers through diverse agent networks.

Country analysis found the principles to hold up well across the five countries studied. However, we realize that some principles catalyze others. The connections between principles are explained below.

FIGURE 1A. **CGAP's six principles for inclusive CICO networks**

1 Enable rural CICO agents to generate more revenue streams

2 Make CICO agents more accessible to rural customers

3 Expand the range of people that can serve as CICO agents

4 Identify and manage risks posed by rural agents without stopping innovation

5 Develop a data-driven strategy to close the gender gap in CICO access and use

6 Expand public and private partnerships that share CICO agents

Source: Hernandez 2019. CGAP Technical Guide, "Agent Networks at the Last Mile." https://www.cgap.org/sites/default/files/publications/2019_11_Technical_Guide_Agent_Networks_Last_Mile_0.pdf

Principles 1 and 6 are overarching principles that enable the four other principles.
All leading CICO agent models described in the three journeys succeeded in allowing
individual agents to generate more revenue streams (Principle 1) and to expand public and
private partnerships that share CICO agents (Principle 6).

In the P2P-led journey illustrated by Kenya, providers succeeded in conceiving and
distributing a growing diversity of services valued by lower income customers through their
relatively closed mobile and agent networks. Examples include customer and agent credit;
various P2P and merchant payment services; insurance policies; and savings accounts.
As dominant providers pooled the distribution of these valued services through their own
agents, agents were able to process more CICO transaction requests per customer. It
was then more likely that agents would generate enough transactions to break even in
communities with lower population density.

In the G2P-led journey illustrated by Colombia and India, banks led the pooling of services
not only by offering services they directly provided but by increasingly relying on agent
network managers (ANMs) to add products and services offered by other providers to the
service mix offered by agents. Collaboration with the public sector was critical as it brought
public services, like G2P transfers, into the service mix and allowed public subsidies to
support the startup of agent and provider operations in rural areas. It also catalyzed the
establishment of a rural bank branch network with relatively strong reach.

The e-commerce-led journey illustrated by China and Indonesia met both principles as
well. E-commerce players stood out in their ability to pool services from a vast number of
third-party partners by opening their digital platforms and agent networks and integrating
these into the banking system. The increasing linkage of bank accounts with mobile wallets
offered by nonbank electronic money issuers exemplified the integration. It was, in part,
made possible by public sector collaboration that added public services to the mix offered
by these "super platforms." It also created a vast financial infrastructure, including bank
branches in rural areas, and made important public investments in training rural agents on
how to join the digital economy.

In all three journeys, the pooling of various services through public–private collaboration
improved unit economics and viability in rural areas. With this goal achieved, agents
became more accessible to rural dwellers (**Principle 2**) since they were able to viably
operate in closer proximity to those customers. The expansion of agents in rural areas also
required agent eligibility criteria to be more inclusive of people engaged in different rural
economic activities (**Principle 3**). Agent profiles further diversified as agents began to
operate in more rural areas across the country. This implied that providers needed to come
up with more flexible agent onboarding processes. Exposure to new types of agents also
helped providers learn to better segment agent profiles, identify different agent needs and
capabilities, and tailor agent support. Providers subsequently could lobby for regulators to
allow new types of agents to operate.

With the pooling of services through third-party partners and public–private collaboration,
rural agents began to do more than process CICO transactions. Many started to provide
sales and marketing services and support customer onboarding processes. These
enhancements brought with them the greater need to identify and manage risks (**Principle 4**)

to prevent fraud or abuse, and was true of all three journeys. The P2P- and G2P-led journeys showed mature mechanisms to establish tiered risk management mechanisms for their diverse agent types. The e-commerce-led model remains relatively new and is evolving fast, which makes the development of better risk management strategies a continuous priority for providers and regulators.

The pooling of services through common mobile and physical distribution channels also increased the viability of data-driven strategies to capture the information of more customers, including vulnerable groups like rural women and smallholder farmers, in a way that helps close the gender gap (**Principle 5**). The evidence of a gender gap in global financial inclusion is robust, which leads us to hypothesize that a gender gap exists in the use of CICO networks. Recent studies show how certain elements of CICO services delivery prevent women from using them (IDEO.org 2019).

To effectively correct the design of financial products and CICO features, we need to better understand how CICO can be of value to women and how to remove obstacles to CICO access for women. This requires additional gender disaggregated data on transactions by agents and customers who are women. The majority of agents and providers do not collect gender disaggregated data among agents and customers, although they do collect information like shop or home location, type of business or employment, and levels of cash flow or income. The lack of gender disaggregated data makes it difficult to identify and understand where gender constraints remain in CICO agent networks in order to design more intentional interventions from providers, policy makers, and regulators to remove these constraints.

The successful agent network models described in the three journeys could make it easier to collect gender disaggregated data since they already collect data on many services from a variety of providers. Further, the pooling of increasingly diverse services at the agent enables data collection on diverse aspects of people's lives beyond the financial. Providers could then capture a more holistic picture of customers, including women. The e-commerce-led journey stands out in its ability to capture an ever-growing diversity of gender disaggregated transactions that cover the financial and nonfinancial lives of customers and agents. Continuing these efforts holds important promise to reduce the gender gap in financial inclusion that is prevalent in many countries.

The principles for inclusive CICO networks suggest a North Star for policy makers and regulators to shape a vision of how agent networks should evolve. These principles are complemented by the deeper analysis of the five country studies presented in this Focus Note. Together they improve our ability to understand not only what agent networks should achieve, but *how* they can do so in very different contexts.