Photo: Isabel Campo

Agent Networks at the Last Mile

Implications for Policy Makers

SEPTEMBER 2022

Emilio Hernandez & Christopher Blackburn

CGAP

Channel

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CONSULTATIVE GROUP TO ASSIST THE POOR

1818 H Street NW, MSN F3K-306
Washington DC 20433
Internet: www.cgap.org
Email: cgap@worldbank.org
Telephone: +1 202 473 9594
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Background for the Content in This Deck

CGAP's Cash-In/Cash-Out (CICO) for Rural Agent Networks project supports market actors in six focus countries (Colombia, Côte d'Ivoire, India, Indonesia, Morocco and Pakistan) to implement practices, policies, and regulations that extend the reach and enhance the quality of rural CICO networks. This enables lower income rural customers, especially women, to use a wider variety of digital financial services (DFS) as tools to better manage and improve their livelihoods.

As part of this work, CGAP and its partners made a comprehensive compilation of recent global knowledge about how CICO agent networks operate in different markets and the Financial Service Provider (FSP) practices, policies and regulations that have enabled their development.

CGAP has used the global knowledge compiled to support a technical dialogue with focus country stakeholders that builds consensus on key constraints preventing CICO network development and to implement country-specific action plans that address these constraints.

This deck shares this global knowledge more broadly so that it can inform a similar dialogue among FSPs, policy makers and regulators in other countries.

Purpose of This Deck

This deck shares parts of the CICO global knowledge compiled by CGAP that are considered relevant for Financial Policy Makers. There are another two decks that do the same for FSPs and regulators.

The knowledge shared in this deck is general, meaning that it represents a comprehensive compilation of CICO agent network operations and recommendations without specifying whether they apply to, or could be implemented in, the reader's unique context.

Readers are expected to view this deck as a menu of potential good practices shown by the global experience and reflect on whether these practices apply in their own market and organization.

More specifically, this deck (i) shows how rural CICO agent network expansion is key to ensuring poor people can capture the benefits of digital financial ecosystems; and (ii) presents a set of policies that have been effective in enabling rural CICO in a way that benefits vulnerable segments, like women, and that reinforces the effectiveness of social programs targeting these segments.

This Deck is Part of a Broader Set of CGAP Knowledge Products on CICO

The CICO global knowledge compiled in this deck includes previous CGAP work, as well as work from partners like the Bill and Melinda Gates Foundation, Boston Consulting Group, MSC and IDEO Colab, among many others.

This deck will be complemented by subsequent CGAP knowledge products that synthesize lessons from the work conducted in the six focus countries, once CGAP's CICO project concludes.

These subsequent CGAP publications will reflect more deeply on those contextual settings (e.g. customer segments, markets, organizations) that determine when the general practice, policy and regulatory recommendations presented in this deck apply and suggest stakeholder implementation strategies that are better suited to the various contexts.

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Executive Summary

Rural CICO networks should be prioritized by policy makers

- Increasing the reach and quality of CICO agent networks has shown to enable people to take up and use digital financial services (DFS). In turn, the use of DFS allows people to build more resilient livelihoods and invest in opportunities that improve their well-being.
- However, there is a persistent rural gap in CICO network coverage that leaves out most of the world's poor from digital financial ecosystems.
- Policies that enable rural CICO consequently promote not only financial inclusion, but also other development outcomes benefiting the most vulnerable groups of society.

The global experience reveals effective policy pathways depending on context

- Global experience reveals that more effective policies are those that (i) enable financial service providers (FSPs) to start rural CICO operations in the short term; (ii) support FSPs to embark on a learning curve to make many rural CICO agents viable in the mid-term, and (iii) target effective support to those CICO agents and FSPs with comparative advantage in covering the more remote rural areas, where long-term commercial viability is not possible.
- How to apply this set of policies depends on context, and the global experience analyzed suggests we can use a decision tree, where depending on the country-specific barriers and root causes preventing rural CICO, some policies will be more effective than others.
- A policy agenda with long-term vision is required to adjust the emphasis over time to help FSPs start operating in rural areas, foster cross-industry innovations that enable viable CICO for a wider suite of services, and promote consumer education and protection as DFS becomes more prevalent.

Executive Summary

Rural CICO enabling policies need to have a gender lens to be effective

- Given that CICO is a strong driver of DFS use, the lack of women's access to adequate CICO helps explain the persistent gender gap in DFS. Therefore, removing barriers for women to use CICO contributes to more gender equitable digital financial systems.
- Gender barriers are complex and context-specific. Policies should focus on identifying and addressing them at various levels and aim to: (i) support R&D in FSPs to understand barriers to women's CICO and test solutions; (ii) address gender bias in social programs and regulations; and (iii) tackle deep social norms at the heart of discrimination against women.

The range of policies to enable rural CICO should leverage the universe of social programs in each country

- The ability of government to person (G2P) transfer programs to reach target beneficiaries depends on the reach and quality of CICO agents, since beneficiaries need to cash-out at agent outlets to meet their expense needs.
- This has motivated G2P policy to support the expansion of rural CICO, as many beneficiaries live and work in rural areas. To do so, G2P policy should assess the different FSP and CICO network types in operation to make sure those types of CICO networks with the most potential to reach rural areas are included in G2P distribution strategies.
- An additional benefit observed from such policies is that the fees offered for G2P distribution can represent an important incentive for FSPs to invest in rural CICO expansion models and embark on a learning curve to improve their DFS offer and the efficiency of their rural CICO networks.

Executive Summary

Any rural CICO enabling policy must be informed with accurate data on CICO agent geographic coverage

- To inform more effective policy, it is imperative to complement agent density data with measures of agent geospatial coverage.
- Unlike agent density, which measures number of agents per capita, geospatial coverage captures how the number of agents varies with the population density in each part of the country. This is critical to identify with more granularity areas that are underserved or excluded.
- Geographical coverage can be combined with other data sets, like economic census, ITC infrastructure, and merchant location data to develop more accurate predictions of areas where new agents can be viable but have not been activated by FSPs due to information asymmetries.
- Application of these geographical models improves subsidy targeting for customers who need it most and FSPs who have a comparative advantage to go rural.

2. Why CICO Networks Matter

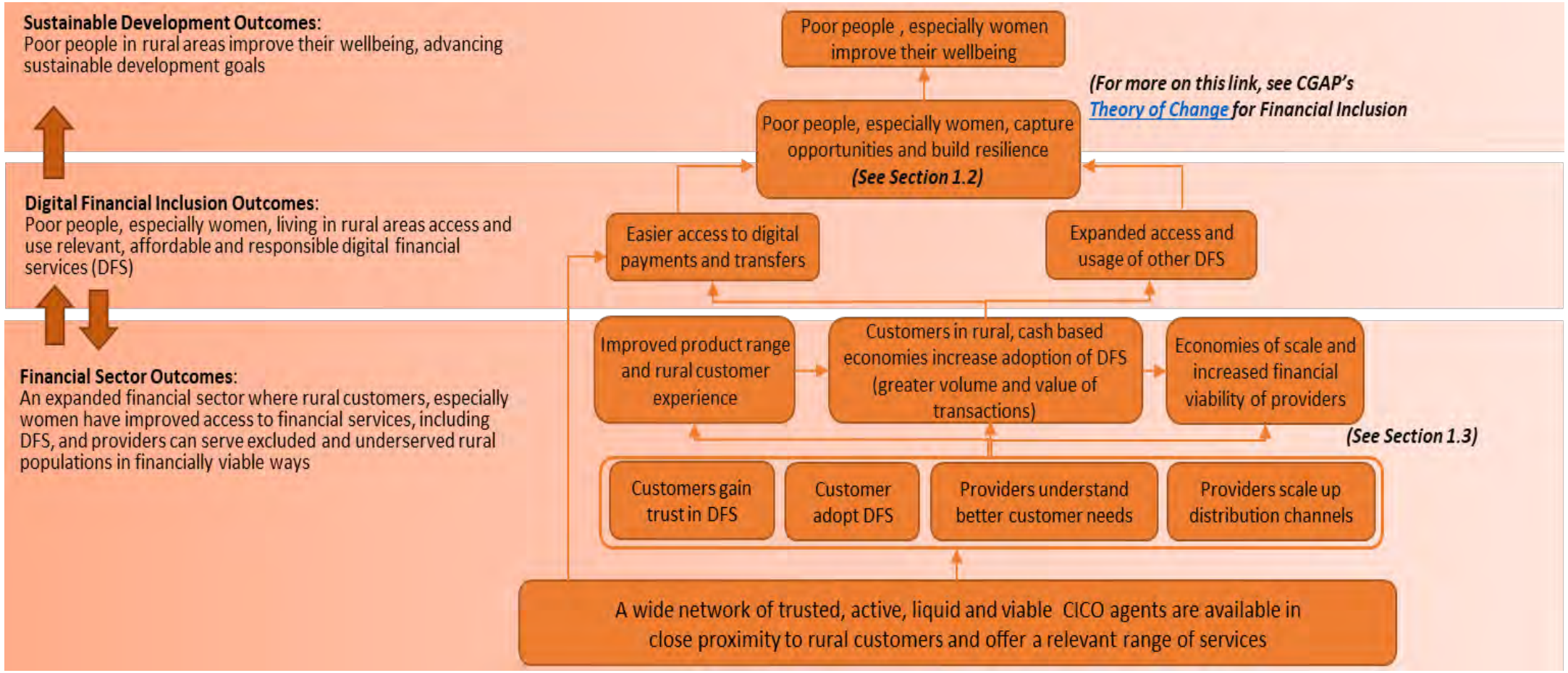
Policies that Promote Various Socio-Economic Development Goals Benefit from the Expansion of Rural CICO Agent Networks

Increasing the reach and quality of CICO agent networks has been shown to enable people to take up and use DFS. In turn, the use of DFS allows people to build more resilient livelihoods and invest in opportunities that improve their well-being, thereby contributing to the Sustainable Development Goals.

However, there is a persistent rural gap in CICO network coverage that leaves out most of the world's poor from digital financial ecosystems.

Policies that enable rural CICO consequently promote not only financial inclusion, but also other development outcomes benefiting the most vulnerable groups of society.

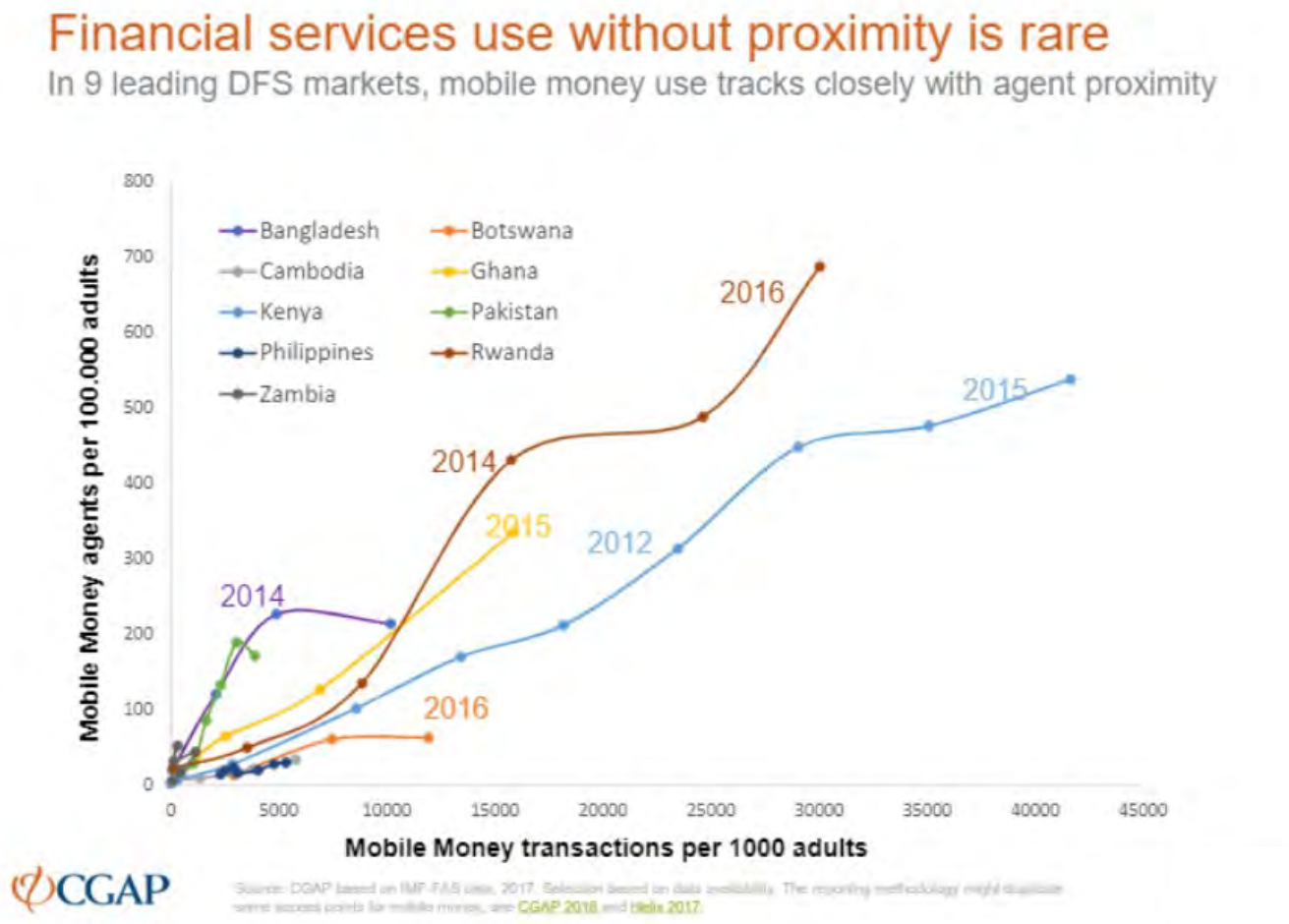
Enabling Policy to Support Rural CICO Contributes to Various Sustainable Development Goals Beyond Financial Inclusion



Source: Developing Rural Cash-In-Cash-Out (CICO) Agent Networks to Advance Digital Financial Inclusion: Emerging Guidance for Funders (CGAP, 2022)

Across the World, the Use of DFS Tracks Closely with Customer Proximity to CICO Agents

Research shows that across mobile money markets, agent proximity to customers has been important for the uptake and usage of mobile money

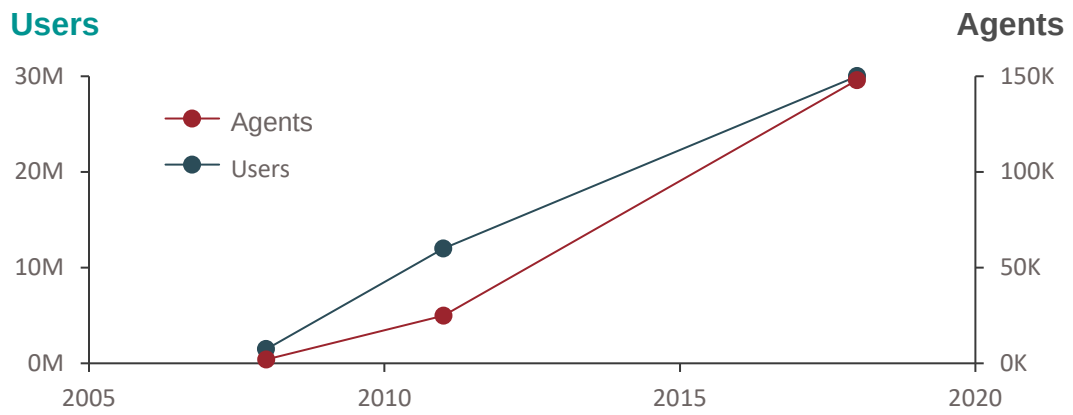


Source: Proximity Matters: Five Case Studies in Closing the CICO Gap (CGAP, 2018)

CICO Agent Networks Drive Initial Expansion of DFS Uptake and Use in both Banking and Mobile Money Markets, Enabling Sustained Growth

Example: Growth in the number of agents and users of Kenya's mobile banking service M-Pesa followed similar trajectories:

- M-Pesa grew very rapidly to become the largest agent network & mobile money platform in Kenya
- From **~2K agents and ~1.5M users in 2008** it grew to **~148K agents and ~30M users in 2018**



Example: Expansion of banking correspondents in Mexico caused an increase in uptake and use of accounts and FS:

- In 2018, **31.5M** Mexican adults were using banking correspondents' services, **an increase of 49% vs. 2012**
  - In rural areas, that number was **8.1M adults up from 4M in 2012** (a 2x increase)
- The number of active "Banamex Transfer" mobile accounts[2] **grew from 2.75M in 2014 to 10M+ in 2018**
- The number and amount of savings transactions managed by correspondents **grew ~6-7x between 2013 and 2018** to **23M transactions or $30M monthly**

1. Banamex Transfer accounts are simplified bank accounts that allow users to use their mobile phones to perform simple and secure bank transactions by phone. Sources: Measuring the Impact of Bank Correspondents on Financial Inclusion in Mexico (National Banking Commission, 2018); Payments are a-changin' but cash still rules (BIS, March 2018), The long-run poverty and gender impacts of mobile money (Suri and Jack, 2016); How Mobile Money is Spreading (The Economist, 2018)

In Most Emerging Markets, Cash Use is Growing Along with DFS Transactions

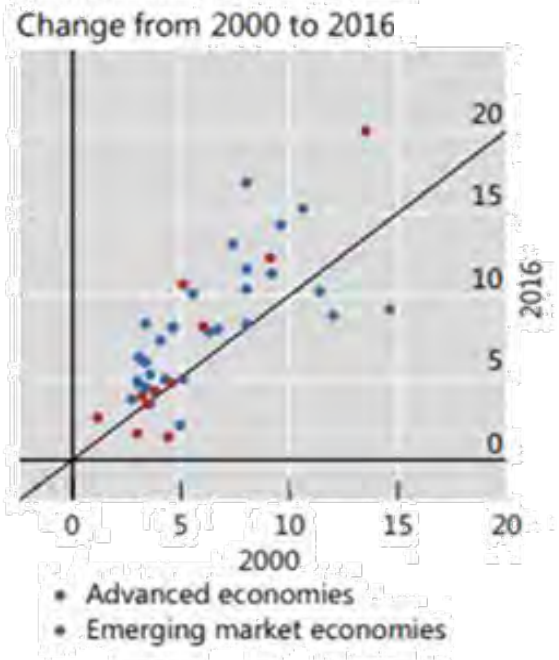
CICO Networks Act as a Bridge for Customers with Cash to Start Trying the DFS Offer, Growing Over Time

Growth of DFS does not eliminate the need for cash

Globally, the value of card payments is decreasing while their number is increasing

In most countries, cash in circulation is greater in 2016 than what it was in 2000

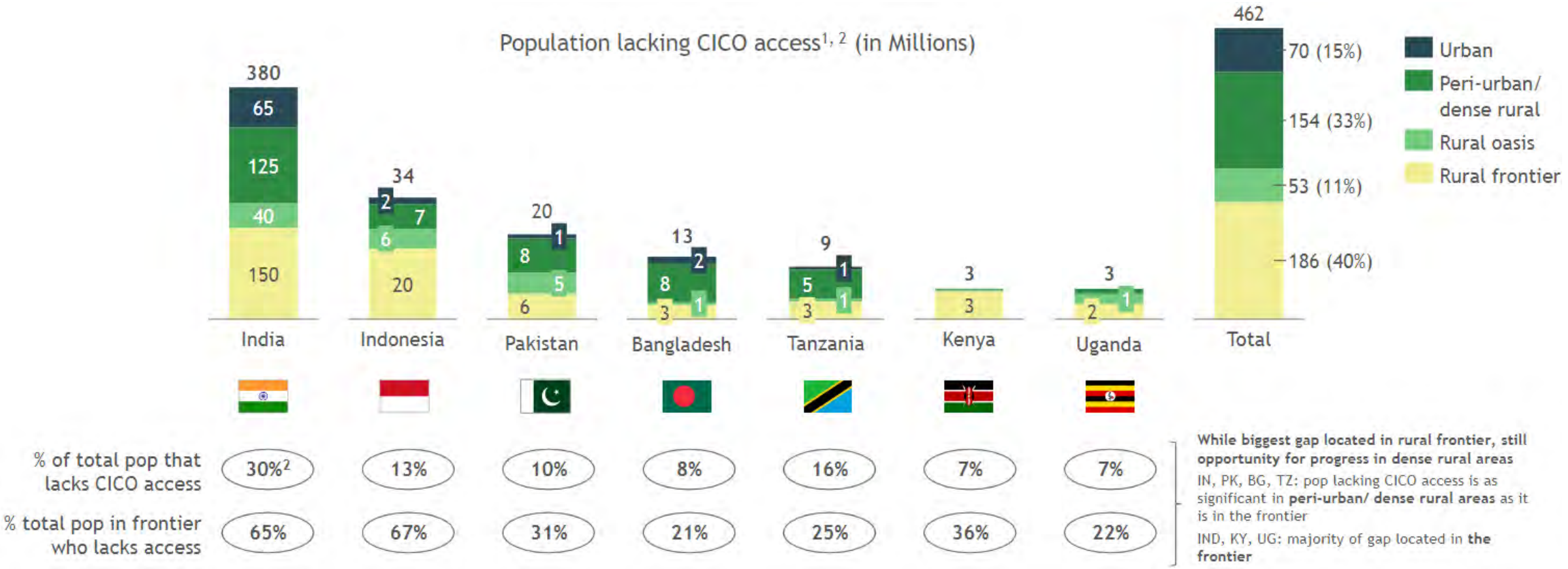
Cash in circulation, as a % of GDP



Digital (card) payment and cash transactions have been growing side-by-side in most countries around the world. In emerging markets in particular, CICO infrastructure has expanded and, actually, enabled the initial DFS uptake and use.

Sources: The Role of Cash In/Cash Out in Digital Financial Inclusion (CGAP, 2019); Payments Are a-Changin' but Cash Still Rules, BIS (2018)

However, the Vast Majority of People who Currently Lack CICO Access Live in Rural Areas



Source: BCG (2019). Definitions: **Rural frontier** is sparsely populated, very remote, and no established commercial activity; **Rural oasis** is sparsely populated, remote, but with towns that drive commercial activity; **Peri-urban** is less densely populated, slightly less infrastructure connectivity and commercial activity; **Urban** is large, densely populated with very high infrastructure connectivity and commercial activity. 1. Defined as the percentage of people within 5 km of a CICO service point. 2. For India, defined as % of people within 1 km of a CICO service point.

Prevailing Agent Models Make it Hard for Rural Agents to Drive Sufficient Transaction Volume within Their Catchment Area

Characteristics of rural geographies…

Low population size and density
Typically <5000 population

Lower economic activity
Typical consumer income is <$500/yr

Geographically remote
>50km from closest urban center

Limited existing infrastructure
Limited banking presence, limited postal infrastructure, fewer paved roads (however assumes presence of telco network)

… Leading to three main barriers

Supply and demand challenges
Leading to transactions ~70% less in volume and ~30% less in value than in 'oasis' rural areas, & lower profitability

Regulatory challenges
When regulations are not designed with rural constraints in mind, e.g., ID requirements, exclusivity, unrealistic KYA requirements

Operational & industry complexities
Limited commercial partnerships as a result of limited infrastructure

Policies have been shown to enable innovations in agent management models that address these constraints, as shown below

Source: BCG DFS Agent Interview Study 2018, secondary Research (Helix ANA surveys, IFC/MasterCard Foundation), BCG DFS Provider Interview Study 2018

3. Policy Support Pathways

Policy Support is Required to Spark Public and Private Investments Necessary to Build Rural CICO Networks

Global experience reveals that the more effective policies are those that (i) enable financial service providers (FSPs) to start rural CICO operations in the short term; (ii) support FSPs to embark on a learning curve to make many rural CICO agents viable in the mid-term, and (iii) effectively target support to those CICO agents and FSPs with a comparative advantage in covering the more remote rural areas, where long-term commercial viability is not possible.

How to apply this set of policies depends on context, and the global experience analyzed suggests we can use a decision tree, where depending on the country- specific barriers and root causes preventing rural CICO, some policies will be more effective than others.

We compile various country examples illustrating which policies have played out favorably depending on the type of barriers prevailing in a country.

There are Three Categories of Policies that can Help Expand CICO Networks into Rural Areas Over Time

Inclusion guidelines	Direct provider/ agent profitability improvements	Demand generation
• Statements of ambition on financial inclusion and/or CICO agent network access • 'Soft' guidelines can be coverage or service-level targets set by regulators, policymakers, or service providers • 'Hard' guidelines[1] can be mandates or service obligations, set by regulators or policymakers	• Incentives that tangibly improve agents' and providers' estimated profitability • These often take the form of smart subsidies[2], price or volume guarantees, or favorable access to financing	• Activities to raise consumer demand for digital financial services and/ or CICO agent networks • These often aim to raise awareness, lower consumers' costs, or tailor services to consumer preferences

Source: BCG (2019). 1. Although hard guidelines have worked in some countries, the evidence is mixed. Extreme care needs to be taken to assess guidelines' viability through dialogue and agreement with the financial industry. For this reason, soft guidelines are more common. 2. Smart subsidies refer to those that help cover one-time investments related to building capacity, but do not cover on-going needs to avoid the creation of dependency.

Detail | Specific Policies Under Each Category can Take Multiple Forms

Inclusion guidelines	Direct provider/ agent profitability improvements	Demand generation
1 **Mandates/service obligations/new urban opening restrictions** to force service in frontier areas	3 **Preferred financing/loans** to fund initial operations setup of providers/agents	10 **Direct subsidies to end-consumers** (e.g., discounted/waived transaction fees) to encourage DFS adoption
2 **Coverage/service-level targets** to encourage service in frontier areas	4 **Research & innovation grants** to help providers adapt DFS offerings/operating models to rural customer needs	11 **Creation of new use cases** to kick-start and guarantee minimum DFS/CICO demand by rural consumers
	5 **Favorable government contracts** with terms that ensure provider/agent viability or ability to cross-subsidize in rural areas	12 **Consumer behavior shaping nudges** (e.g., incentives/rewards) to encourage usage for long-term
	6 **Income guarantees/fee subsidies** to ensure viability in early days	
	7 **Price guidelines** to ensure fees cover cost to serve	
	8 **Tax rebates or credits** to incentivize collaboration or innovation or ensure positive bottom-line in early days	
	9 **Discounted inputs/operational support** for providers or agents to reduce costs	

Source: Literature review on government incentives to drive rural expansion in financial services, utilities, telco and other industries; expert interviews; BCG analysis

Seven Specific Policies Seem Particularly Promising, Especially Combined, to Catalyze Near-Term CICO Expansion While Improving Long-Term Viability Prospects

	Incentive/ mandate	Benefits	As seen combined in:
"Push"	1 Mandates/ service obligations; 2 Coverage/ service level targets	To drive quick expansion of providers/agents in frontiers	India, Indonesia
"Pull"	3 Preferred financing/loans	To incentivize and de-risk providers/agents' initial set-up and operational model experimentation	China, Australia
"Pull"	6 Income guarantees/ temporary fee subsidies	To ensure economic viability in early days for agents and providers, allowing them to learn about rural customers	Colombia, DRC
"Pull"	7 Price guidelines	To ensure fees cover cost to serve, fostering a healthy market for longer-term provider/agent viability[1]	UK, Kenya
"Pull"	11 Creation of new use cases	To jump-start and build consumer demand for DFS	Pakistan, Bangladesh
"Pull"	12 Consumer behavior shaping nudges	To support DFS adoption and usage for long-term (via awareness/education campaigns and active behavior shaping)	USA, UK

1. Potentially adding "compensating" consumer subsidies for low-income segments to protect from rate hikes

To Date, Efforts in Developing Markets Seem to Have Mainly Focused on Four of These Top Policies to Expand CICO networks

1 2

Mandates or coverage targets

Mandates (or sometimes coverage targets as part of FSPs' licensing agreements) have shown promising results in driving quick expansion of rural agents/outlets

As seen in:

India, Indonesia

3

Preferred financing/ loans

Favorable financing (e.g., preferred loans) schemes are being tested to help FSPs set up operations in rural areas – results are yet to be measured

China, Nigeria

6

Income guarantees/ fee subsidies

Income guarantees are being used to enable rural expansion and cover costs to serve of providers & agents – coverage results are promising, but long term viability is unproven

Pakistan, Kenya

11

Creation of new use cases

G2P payments digitization is emerging as a popular option to generate demand for DFS in urban & rural areas – initial results seem promising

India, Colombia

Source: Literature review on government incentives to drive rural expansion in financial services, utilities, telco and other industries; expert interviews; BCG (2019)

Two Additional Policies, Observed in More 'Mature' Contexts, Could Have Potential for CICO Expansion and Viability in Developing Markets

Policies	Lessons from other markets/industries
7 **Price guidelines** **Gabon –** Electricity market	**Differentiated or market-based pricing** enables providers to boost profits in dense urban areas, in order to cross-subsidize operations and become viable in rural areas Implementing this lever might require: • Hands-on collaboration between government and private providers to determine the "right price(s)" • New/revised regulations (if prices are fixed/capped by government) • Technical support to providers to evolve pricing models (if provider practices uniform pricing) • "Compensating subsidies or social tariffs" to protect low-income consumers
12 **Consumer behavior shaping nudges** **USA**	**Explicit DFS product features** have potential to both to shape the behavior and potentially educate consumers to build long-term demand/continued usage of DFS Implementing this lever might require: • Transparent, explicit goals and rewards (e.g., rewards for savings, no rewards for withdrawals) • Education and/or marketing campaigns to generate awareness and interest of consumers • Agent touchpoint with consumer to explain/accompany adoption and motivate usage

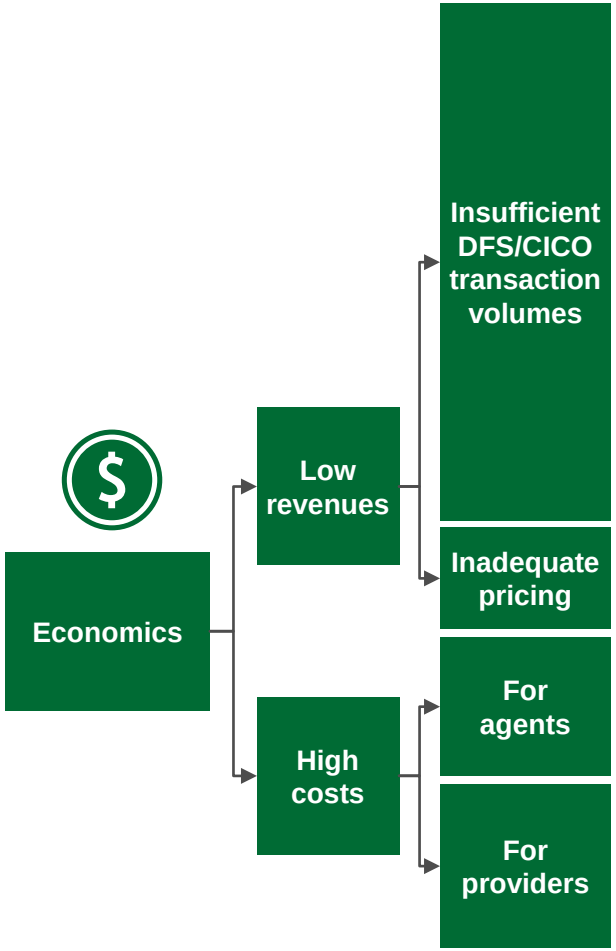
Source: Literature review on government incentives to drive rural expansion in financial services, utilities, telco and other industries; expert interviews; BCG (2019)

Decision Trees can Help Select Effective Policy Levers

Photo: Marulanda Consultores

Diagnosis of Barriers and Root Causes for CICO Expansion Should Inform Policy Selection

'Decision tree' can then be used to help shortlist potential incentive levers to address identified root causes



Typical root causes	Incentive Levers	
Small addressable consumer pool	1 Mandates 5 Favorable contracts	2 Service targets 6 Income guarantees
Lack of DFS/CICO use cases	11 New use cases	
Limited consumer awareness & use	10 Cons. fee subsidies	12 Behavioral nudges
Fees higher than consumers' willingness to pay, limiting consumption	6 Income guarantees 7 Price guidelines	10 Cons. fee subsidies
Limits imposed on txn volumes/amounts and types of services agents can provide	N/A	
Intense competition in rural areas	5 Favorable contracts	
Inadequate commission structure	5 Favorable contracts 6 Income guarantees	7 Price guidelines
Low ceilings on DFS/ CICO fees		
High upfront investment required (e.g., business registration, POS device)	3 Preferred financing	9 Discounted inputs
High ongoing costs—variable or fixed (e.g., liquidity management, rent)	3 Preferred financing	9 Discounted inputs
Lack of strategic focus on, and investment available for, rural expansion	1 Mandates 3 Preferred financing	2 Targets 5 Favorable contracts
High operating costs (e.g., agent network/liquidity management)	4 R&D grant 8 Tax rebates	9 Discounted inputs

Sources: 2018-2019 agent field research in 5 countries; Incentives Landscaping & Assessment study 2019; Expert interviews; BCG analysis

Beyond Policy Levers, Countries will Need to Take a Holistic Approach to Address a Broad Range of Opportunities*

Expansion of financial services to underserved populations in developed markets have typically followed the following sequence with "push" levers closely followed by "pull" ones:[1]

Mandates (US, GE, FR) or preferred financing (UK, AU, CH) to create the initial impetus for providers to expand

Creation of new use cases (e.g., basic bank accounts, savings, microcredit) almost simultaneously–or even before Favorable Financing–to unlock latent demand

Consumer behavior-shaping and education–to scale and ensure safe usage of ew products/services put on the market by government/ providers

And, emerging more recently, cross-industry partnerships, interventions/attempts to hare knowledge and establish new partnership models and solutions to Inclusion

Note: This sequence was seen overall in developed markets, many of which already had key infrastructures in place (e.g., connectivity, electricity).

There is an opportunity for developing markets to tailor to their unique context and needs; and learn from developed markets to combine "push-pull" levers and accelerate expansion.

*See country examples in Appendix

1. “Push” policies refer to those that give incentives to providers to start rural CICO operations without having changed their internal know-how yet. “Pull” policies refers to those that focus on changing providers’ capacities to run rural CICO operations sustainably.

Range of Policy Levers Includes those that Monitor/Prevent Customer and Agent Risks as DFS Becomes more Widespread in Rural Areas

Various approaches observed:

CUSTOMER-AFFECTING

Examples: Identity theft including SIM swaps, PIN theft, account takeover, biometric ID fraud. Policies should focus on providers establishing recourse mechanisms that track and verify such abuses.

AGENT-AFFECTING

Examples: Fake currency deposits, fraud by impersonators of FSP staff. Policies should establish recourse mechanisms for agents and ensure agent network managers train agents on how to recognize prevailing frauds.

PROVIDER-AFFECTING

Examples: Agent commission fraud, transfers of criminal proceeds on mobile money platforms, multiple registrations of fraudsters using fake IDs. Policies should establish continuous internal control measures within FSPs to track and prevent.

Source: Fraud in Mobile Financial Services (CGAP, 2017), The Evolution of the Nature and Scale of DFS Consumer Risks – A Review of Evidence (CGAP, 2022)

4. Policies to Promote Gender Equity in CICO Networks

Policy Support Should Focus on Identifying Context-Specific Gender Constraints and Testing and Scaling Solutions

Although the gender gap in financial services access and use is decreasing globally, it persists to date with various degrees of severity in most countries.

Given that CICO is a strong driver of DFS use, the lack of women's access to adequate CICO helps explain the persistent gender gap in DFS. Therefore, removing barriers for women to use CICO contributes to more gender equitable digital financial systems.

Gender barriers are complex and context-specific. Policies should focus on identifying them and addressing them at various levels: (i) Supporting R&D in FSPs to understand barriers to women's CICO and test solutions; (ii) addressing gender bias in social programs and regulations; and (iii) tackling deep social norms that are at the heart of discrimination against women.

Women Represent a Significant Fraction of the Global Financially Excluded Population

Progress has been made to address the gender access/usage gap in recent years:

The number of women holding financial accounts grew by **600 million** between 2011 and 2020

In this period, **140 million** women opened their first financial account specifically to receive G2P payments – signaling strong momentum in public sector-driven initiatives to address gender equity

However, much work remains to be done to achieve gender parity

182 million women worldwide remain without a financial account (2021)

6 percentage points is the average gap between men and women in likelihood of owning a financial account among developing economies (with high variability across countries) (2021)

About **60%** of all unbanked adults in China and India are women

Source: GFPI 2020; IFC (1); Findex (2021)

!

Improving gender equality at a faster pace can unlock enormous global value - as much as ~$28 trillion[1] to be added to global GDP by 2025 if labor market gender parity is achieved (increase of 26% compared to baseline projections)

“

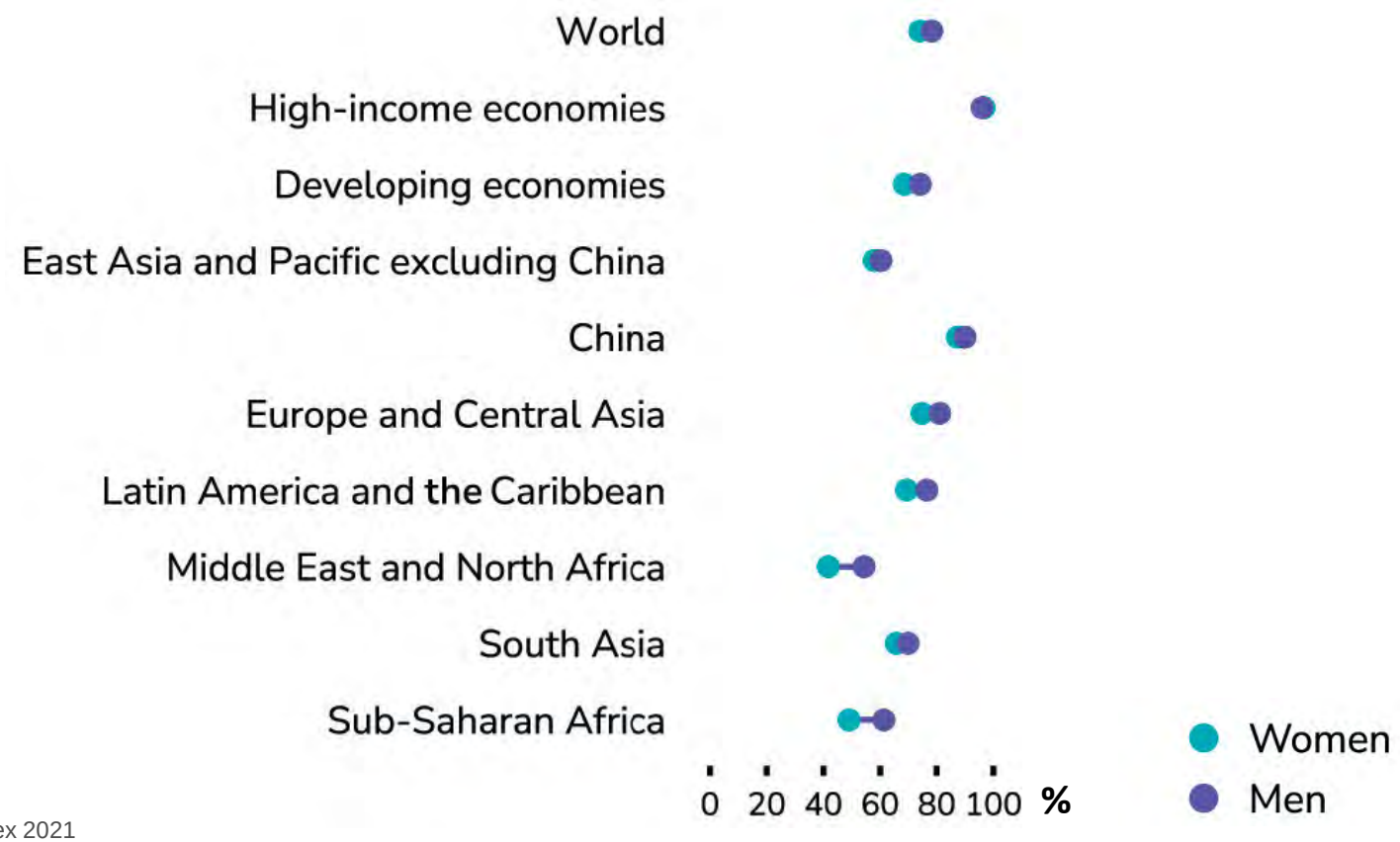
DFS: key mechanism in addressing the financial access/ usage gender gap

It is essential for women to access and use digital transactions and for women entrepreneurs to access digital finance to achieve gender equality in financial services

- GFPI

Women Continue to Face Barriers to Financial Inclusion Across Geographies...

Women and men with financial accounts by regions of the world (2021)



The gender gap varies across the world. Currently it is more pronounced in Sub-Saharan Africa (13 percent) and the Middle East and North Africa (12 percent).

Source: Global Findex 2021

… Including Barriers to Accessing/Using CICO Services

Example: In Nigeria, Diamond Y'ello faced challenges to convert women customers and encourage active usage

- From 2014-2016 MTN, Nigeria's largest mobile network operator (over 63M subscribers), and Diamond Bank partnered to launch Diamond Y'ello, a mobile-based bank account facilitated by agent networks
- Only 36% of all accounts were held by women, of which 2% were active
- Women's active account adoption/engagement faced three major obstacles:
  - Overcoming old habits and status quo
  - Limited first impressions of products and agents
  - Transaction distrust in products and agents

Example: IN PAKISTAN, Jazz experienced an acquisition issue among women customers in Pakistan due to its agent network composition

- In 2017 Jazz, Pakistan's largest mobile wallet provider, identified the women's market as a priority segment for its e-money service Jazzcash
- While women who were successfully onboarded demonstrated strong usage, only 11% of all clients were women
- Acquiring women customers was challenging because 95% of Jazz agents were men–transacting with male agents disrupted social norms
- Women faced several behavioral biases limiting their adoption of mobile money through Jazz's agent networks:
  - Services' lack of relevance for women's needs
  - Providers' lack of awareness of how their service delivery processes are inconvenient for women
  - Social norms that prevent women to visit agents

Source: Women's World Banking

Taking a Gender Lens in Designing Solutions can Accelerate the Process of Reaching Full Financial Inclusion

… creating a "multiplier effect" in the development of gender-inclusive financial services

Greater usage and engagement with CICO agent networks will also help FSPs and agents craft financial services/products adapted to women's needs, further boosting gender-equitable inclusion …

Women's usage of financial services at CICO points can contribute to improved viability of agent networks through additional use cases and increased transaction volume – especially in rural areas

Designing in a gender-intentional fashion will improve uptake and adoption of DFS among women

> "The more women and girls that use [DFS] platforms, the more of their data inform new products, innovations and decisions by the private and public sectors … this can accelerate gender equality
>
> - GFPI

Policies Should Address Knowledge Gaps about How to Attain Gender Equity in CICO Networks

Photo: Pensaar

Addressing the Gap Requires Customized/ Targeted Interventions Specific to the Local Context

The fact that gender-based constraints are highly context-specific has made it difficult to identify effective policies in ensuring that women benefit from the use of CICO networks

- Limited evidence is mixed on whether women agents serve more women customers
- No clear policies on how FSPs can onboard more women agents have yet been defined

Thus, CICO-related policies should support moves by FSPs to do R&D that results in understanding gender barriers, and test and scale CICO processes and DFS that address these barriers, in order to address knowledge gaps.

- Policies should support FSPs R&D efforts to understand women's financial needs in the context of their livelihoods, analyze how CICO networks can bring value to more women customers and agents, and test solutions
- Policies should push for the collection of gender disaggregated data among FSPs and agent network managers, to monitor the participation of women customers and agents.

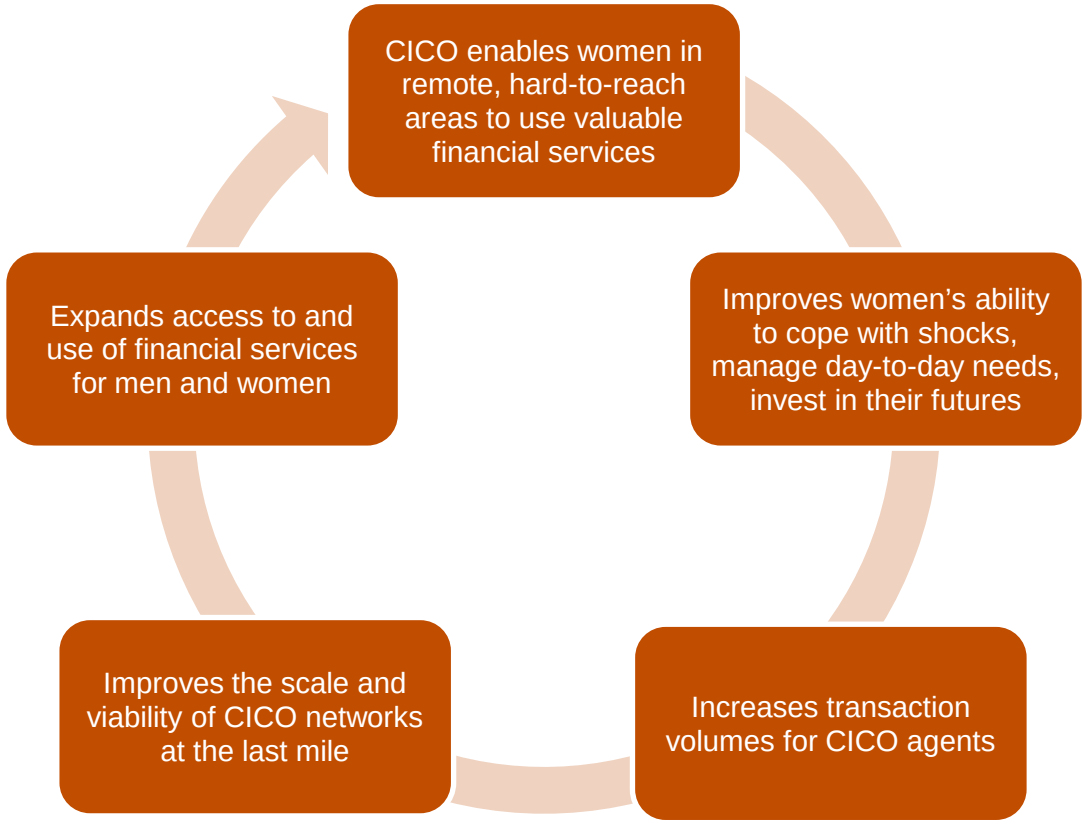
Source: IDEO.org (2020); World Bank (2020)

A Theory of Change (TOC) Based on What We Know so far Suggests Enabling Women's Access to CICO can Serve a Dual Goal

Dual goal: Improve both gender equality and the ability of agent networks to serve rural communities

- At the global level, gender gaps in access to financial services persist
- Even where there's no gap in access, usage patterns reveal implicit bias in policy and product/service design and delivery
- A gender gap in usage means a missed market opportunity for providers
- More gender-diverse agent networks may perform better overall

How could it happen? Through a virtuous cycle



Policies can Support R&D by FSPs to Validate the TOC Through at Least Three Key Steps to Apply a Gender Lens in CICO Network Development Strategies

To improve outcomes for women and expand CICO networks:

1. **Understand** women's livelihoods and how these shape their financial services needs, which will vary across different segments of women
2. **Analyze** how existing CICO networks might be missing out on women customers and agents due to structural and normative gender factors
3. **Develop** and **test** hypotheses for solving these gaps

Step 1. Understand Women's Needs and Contexts

Low-income women have complex and dynamic financial lives

Potential Needs among women:

- Focus on child education and household expenses highlights need for payment services that make it easier to pay for school fees and utilities or groceries
- Responsibility for large, irregular family expenses like weddings and festivals highlights the need for commitment savings
- The need to deal with emergencies like funerals or healthcare costs suggests there is value in savings and insurance products
- Tendency to lead certain businesses like vegetable production and trade suggests the need for tailored credit products

Potential Agents' Needs:

- More reliable and diverse income sources
- Ability to manage income-generating work with other responsibilities
- Role models and support of community

Questions to understand barriers and opportunities

For customers:

- How does she manage these needs now?
- What stands in her way when trying to manage her money and invest in the future?
- What products are available, and do they seem valuable?
- What is her level of comfort with technology and financial transactions?
- Are there opportunities to bring DFS closer to the spaces where she already learns and gathers with community members?

For agents:

- What are her current sources of income and financing?
- When and how is she available for income-earning activities?
- Does her family support her going into business as an agent?

Step 2a. Analyze How Existing CICO Services Might be Missing Out on Women Customers

Awareness

- Relevance of marketing
- Lack of compelling value proposition
- Few examples of women around them using the service
- Trial stakes may be higher for women

Registration

- 165 million fewer women own a mobile phone than men in LMICs[1]
- Women are 20% less likely than men to use mobile internet[1]
- 27% of adult women globally cannot read/write

Verification

- In low-income countries, 45% of women lack ID (compared to 30% of men)[2]

Deposit/ withdraw cash

- Distance to agents and concerns over safety
- May not be acceptable or preferable to visit a (male) agent alone or without permission
- Trust and confidence in the process and agent

Continued usage

- 64% of mobile money accounts are inactive[3]

1 GSMA Mobile Gender Gap Report 2020
2 World Bank Blogs, "The global identification challenge: Who are the 1 billion people without proof of identity?"
3 Bull, Greta (2018), "Financial Inclusion: Is the Glass Half Empty or Half Full (Pt 2)", CGAP Blog

Step 2b. Analyze How CICO Networks Could be Missing Out on Women Agents

Drivers of the Agent Business Case	Examples of Possible Gender-based Constraints
Basic pre-conditions: • Mobility to reach access point/customers • Entrepreneurship capacities	• Limitations on mobility and time due to care work • Gendered social norms around risk-taking and entrepreneurship • Implicit bias about who is likely to be an entrepreneur • Biased recruitment practices by networks
Financial considerations: • Up-front capital, space and staff costs • Liquidity management	• Control over household capital or access to credit • Ability to travel for rebalancing (time, cost, means of transport) • Opportunity costs of capital versus household needs
Exogenous factors: • Security risks • System interruptions • Effect on other lines of business	• Actual or perceived higher vulnerability to safety risks • Effects on other financial responsibilities she manages
Time-specific issues: • Time to profitability • Major growth costs	• Length of time loss-making is acceptable • Access to credit or capital to invest in growth

Drivers adapted from CGAP's "Agent Management Toolkit" (2011)

Step 3. Develop Hypotheses and Test Identified Local Constraints

Example of hypotheses identified coming from the global experience

Core hypotheses

1. Inclusion of women (as customers/agents) **benefits CICO network development**

2. CICO networks **meaningfully benefit women**

Underlying hypotheses

3. A stronger value proposition is needed for women to participate

4. CICO network models need to adapt to address structural and normative barriers women face

Cross-cutting considerations

These factors vary with intersectional characteristics such as age, location, socioeconomic status and ethnic group

As Learnings from FSP's R&D Efforts are Generated, Policy Makers Should Consider these Learnings to Adjust and Improve Policies that Enable Women to Participate as Agents and Customers

As R&D efforts take place policy makers should:

1. Establish adequate monitoring and evaluation systems to incorporate learnings into an updated or new policy agenda that increases women's financial inclusion
2. Synthesize, disseminate and engage with market actors to share learnings and promote new FSP practices that enhance women's financial inclusion

5. Government to Person Programs as a Lever to Rural CICO

G2P Program Policy has been a Powerful Tool to Spark FSP Investment in Rural CICO Networks While Expanding G2P Reach to Most Vulnerable Groups

G2P programs' ability to reach target beneficiaries depends on the reach and quality of CICO agents, since beneficiaries need to cash-out their subsidies at agent outlets to meet their expense needs.

This has motivated G2P policy to support the expansion of rural CICO, as many beneficiaries live and work in rural areas. To do so, G2P policy should assess the different FSP and CICO network types in operation to make sure that those types of CICO networks with the most potential to reach rural areas are included in the G2P distribution strategy.

An additional benefit observed from such policies is that the fees offered for G2P distribution can represent an important incentive for FSPs to invest in rural CICO expansion models and embark on a learning curve to improve their DFS offer and the efficiency of their rural CICO networks.

CICO Networks are Foundational Financial Infrastructure that Determine Social Transfer Programs' Ability to Reach Vulnerable Groups

Payment Service Provider (PSP)

Typically rural branches are not commercially viable.

Agent networks extend the reach of of CICO points at much lower costs than establishing branch.

Rural branches are important for agent liquidity management.

CICO Agent Networks

Agents are a crucial interface between beneficiaries and their accounts.

Agents can take many forms (e.g. shops or individuals) and act as cash-out access points.

They are increasingly diverse and have potential to be tapped by G2P programs.

Cash-Digital Divide

Beneficiaries

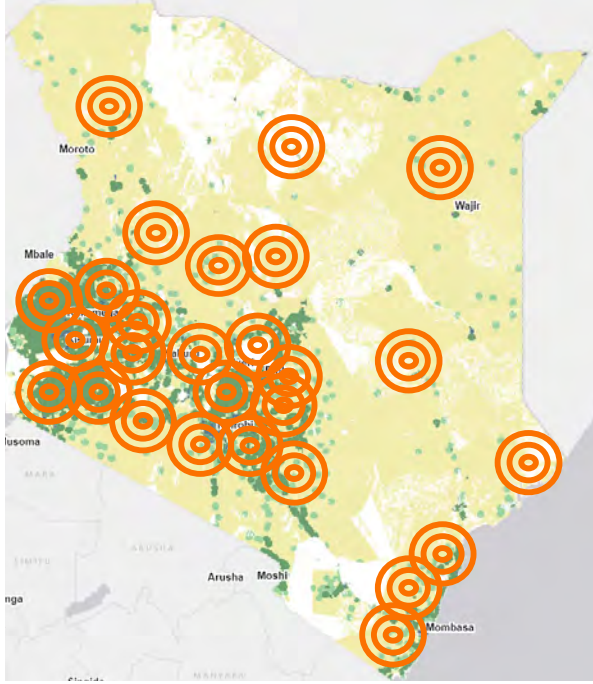
CICO agents are important for G2P programs' reach to rural beneficiaries.

Support to expand rural CICO networks enables G2P programs to reach those who need benefits the most.

G2P Programs' Understanding of the Diversity of CICO Networks in a Country can Help Devise G2P Distribution Strategies with Greater Reach (1/2)

Example 1: G2P programs in Kenya

Current G2P Distribution Coverage
(bank agents)



M-Pesa Agent Coverage
(excluded from G2P)

Kenya: G2P program delivery was mandated to be through a bank account. Without cross-agent interoperability, this effectively excludes recipients from accessing 225,000 non-bank agents, including M-Pesa, with greater coverage.

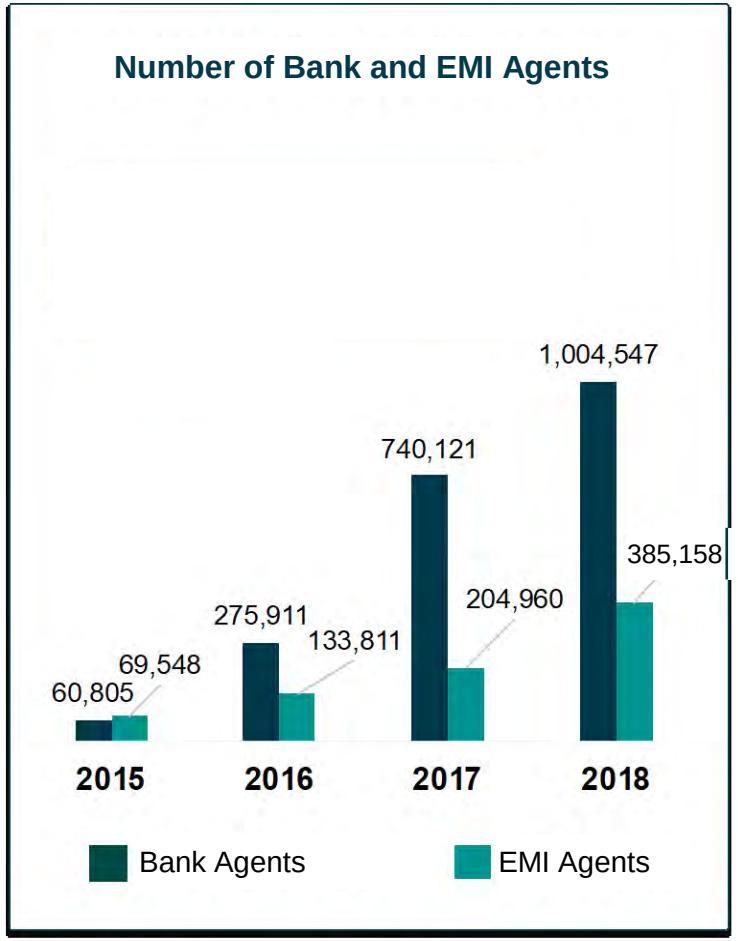
Recognizing the greater geographical coverage of mobile money agents would argue for their inclusion in G2P distribution. If this happened, agent networks would increase the G2P delivery reach from 62% to 84% of the population (*CICO within 5 km).*

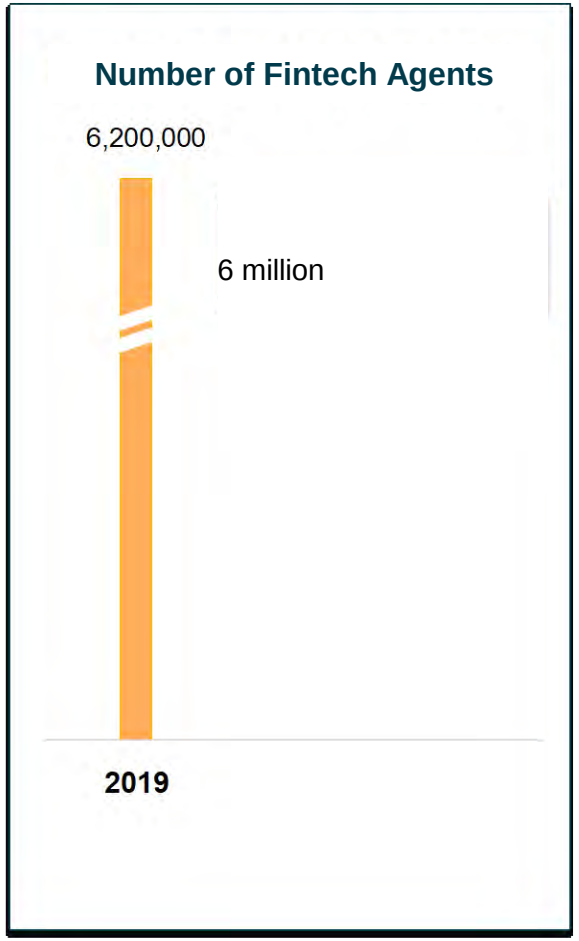
Policy reform would be needed to unlock this potential.

Sources: MSC. 2020. "Cash-in Cash-out Cross-country Analysis: Kenya."

G2P Programs' Understanding of the Diversity of CICO Networks in a Country can Help Devise G2P Distribution Strategies with Greater Reach (2/2)

Example 2: G2P program in Indonesia





Indonesia: G2P programs are restricted to state- owned banks. This means that agents working for Electronic Money Issuers (EMI) and ~6 million fintech agents working with e-commerce firms do not support G2P delivery.

Policy reform would be needed to unlock this potential.

Digital technology has enabled fintech agents to show better unit economics that could make their operation viable in rural areas, if G2P was offered through them.

Agent onboarding costs

- $345 for Bank
- $35 for EMI / Fintech agents

EMI / Fintech agents offer more products relative to banks, which increases agent activity.

Sources: MSC. 2020. "Cash-in Cash-out Cross-country Analysis: Indonesia."

G2P Programs can Devise Tiered Fees for Agent Networks that Have been Shown to Encourage Investments in Rural CICO Networks

Start with…

Offering DFS providers tiered fees for G2P distribution, acknowledging that CICO is more expensive in rural areas. Other G2P programs have offered temporary subsidies for DFS providers who opened agents in areas that did not have one.

G2P agent fees have played a crucial role in complementing rural agent revenues while providers innovate and expand their models. Examples: Colombia, China, India.

…then progress to

Restrict subsidies to the most remote rural areas, as DFS providers improve the efficiency of their CICO networks in most rural towns.

India and Bangladesh showed a virtuous cycle where greater CICO reach enabled better response during shocks like the Covid-19 pandemic.

Sources: MSC. 2020; DFS Lab. 2020; Marulanda Consultores (2020);

6. Geospatial Agent Mapping to Inform Public-Private CICO Network Investments

Geospatial Agent Coverage Data is a Powerful Tool to Inform Policy that Effectively Promotes Rural CICO Networks

To inform more effective policy, it is imperative to complement agent density data with measures of agent geospatial coverage.

Unlike agent density, which measures the number of agents per capita, geospatial coverage captures how the number of agents varies with the population density in each part of the country. This is critical to identify with more granularity areas that are underserved or excluded.

Geographical coverage can be combined with other data sets, like economic census, ITC infrastructure, and merchant location data to develop more accurate predictions of areas where new agents can be viable but have not been activated by FSPs due to information asymmetries.

Application of these geographical models improves subsidy targeting for customers who need it most and FSPs who have a comparative advantage to go rural.

To Inform Policy that Enables Rural CICO it is Critical to Go beyond Collecting Agent Density Data and Measure Geospatial Coverage to Understand CICO Access

While agent density can be a helpful macro-level measure, customer access is more nuanced and highly impacted by geography

Agent density

Agent-focused metric; typically defined as the number of CICO network agents per 10,000 population

Does not account for spread of agents, density of population, or other factors determining access

Helpful metric for defining overall market maturity, but does not pinpoint access gaps

Geospatial coverage

Consumer-focused metric; typically defined as % of population located within a geographic radius from CICO access point[1] (bank branch, ATM, agent)

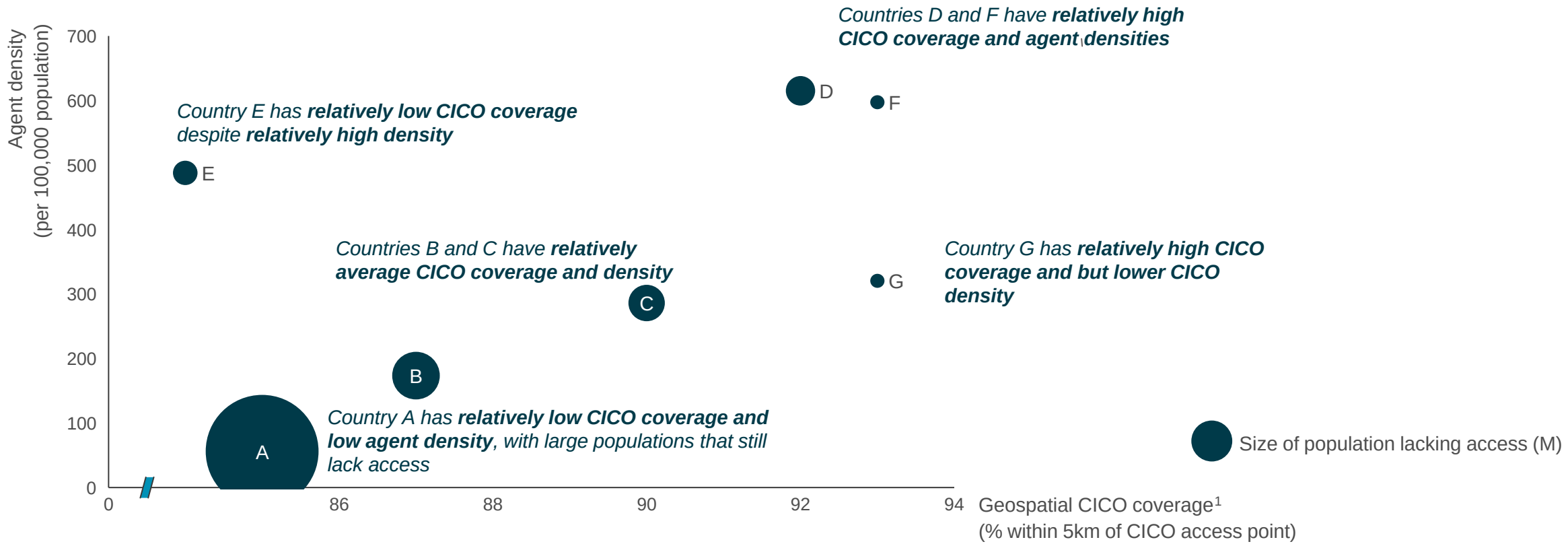
Accounts for variations in population density, infrastructure connectivity, and economic activity

Helpful metric for identifying gaps & homing in on root causes affecting network expansion

1. Unless otherwise noted, coverage defined as % of population located <5km from CICO access point (bank branch, ATM, agent, per analysis of Financial Inclusion Insights (FII) survey. Fraym provides probabilities of CICO access by distance bands (<1km, 1-5km, >5km)
Source: Landscan – population; Fraym CICO layer based on FII consumer survey data; BCG analysis

Comparing Measures of Agent Density and Geospatial Coverage Illustrate Importance of Holistic Measurements to Assess Real Access

Illustrative: Agent density vs. geospatial CICO coverage for 7 countries (2017-2020 data)



1. Coverage defined as % of population located <5km from CICO access point (bank branch, ATM, agent, per analysis of Financial Inclusion Insights (FII) survey
Source: Landscan – population; Fraym CICO layer based on FII consumer survey data; Esri bank & ATM POI; insight2impact FSP Maps; IMF FAS 2017; BCG analysis

Customer Travel Preferences and Behavior are Important Inputs to Determine Appropriate Radius of Access

Illustrative:	India	Indonesia	Pakistan	Bangladesh	Tanzania	Kenya	Uganda
Market research reveals:	Government planning conducted with village as the unit of analysis Village boundaries averaged ~2.5km radius	5km is the max median distance travelled daily 20km is max distance traveled for less frequent causes	Rural individual travel is mostly focused within the village due to lack of vehicle ownership 5km is max typical distance for health-related travel	<40% of rural population own bicycles Vast majority of rural residents currently travel <5km for financial services	Rural secondary school children walk an average of ~3km to get to school In 85% of regions, average travel is <5km for firewood	~5km typical distance traveled for weekly market trips ~6 km median distance traveled by lowest income quintile for fertilizer market	Daily trips usually limited to within 5km ~12km is a typical distance for weekly trips
Potential target radius based on market research:	**1km in urban; 2.5kms in rural**	**5km**	**5km**	**5km**	**5km**	**5km**	**10km**

Customer research to determine travel preferences should include subjects from different segments, e.g., women, who may face different constraints on mobility

Note: If travel time rather than distance is reported, assumed a travel time of 5km/hour; 2. Some studies lack detail on primary mode of transport for the population of interest.
Sources: GIZ, Improving access to financial services in Indonesia (World Bank, 2010), Rural Transport and Health – A Pakistan Perspective (NED University of Engineering and Technology, 2019), The Reality of getting from point a to point b in rural Kenya (2016), Tanzania Household Budget Survey Main Report (HBS, 2012), Study on energy for cooking in developing countries (OECD, 2006), Market access and child labour (Muhumuza, 2012), Rural transport and livelihoods in Uganda (Naiga, 2015), Challenging pathways to safe water access in rural Uganda: From supply to demand-driven water governance (International Journal of the Commons, 2015)

Four Geographic Contexts Determine the Nature of CICO Agent Networks and Their Viability

Description

Urban

Large, densely populated with very high infrastructure connectivity and commercial activity

Peri-urban/ Dense rural

Less densely populated, slightly less infrastructure connectivity and commercial activity

Rural oasis

Smaller, sparsely populated, remote, but with points of interest that drive commercial activity

Rural frontier

Very sparsely populated, very remote, and no established commercial activity

Implications for CICO viability

Organic CICO network expansion is more likely in urban, peri-urban/dense rural, and rural "oases"; viability is less likely in the rural "frontier"

Likely economically and operationally viable

- More than sufficient population density, size, and economic activity for economic viability
- Highly connected with roads and rebalancing locations

Likely economically and operationally viable

- Sufficient population density, size, and economic activity for economic viability
- Sufficiently connected with roads and rebalancing locations

Potentially economically viable with operational challenges

- Potentially limited local demand; however commercial points of interest draw customers from surrounding areas
- Remote location and infrastructure gaps may present challenges (e.g., liquidity management)

Significant challenges to economic and operational viability

- Insufficient customer demand
- High operating costs and complexity (esp. liquidity management)
- Lack of enabling infrastructure also a potential barrier (e.g., mobile connectivity)

Geospatial Data is Valuable to both Public- and Private-Sector Stakeholders and Requires Multilateral Collaboration*

Measuring/investing in the collection of geospatial data provides value outside of just enabling interventions geared toward financial inclusion…

Geospatial data can be leveraged to support broader public/ private use cases:

- Development of transportation and telecommunications infrastructure
- Public health programs and infrastructure e.g., national immunization programs

…and has implications for national economic policymaking/ strategy

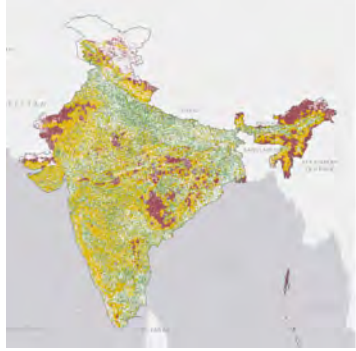
Government stakeholders can draw upon geospatial data as a proxy for understanding economic activity at a sub-national level to inform economic strategy and resource allocation e.g., distribution of G2P payments

Public- and private-sector stakeholders must align on common objectives and use cases for developing/maintaining geospatial data, in addition to defining clear roles for how either side will contribute to collecting the data

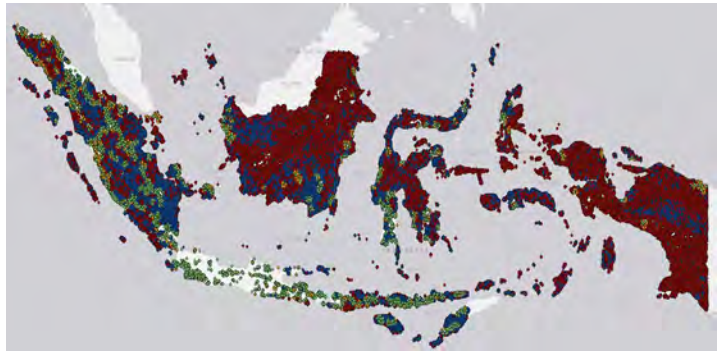
*See country examples in Appendix

Geospatial Mapping Methodology has been Used to Identify New CICO Access Points Needed and Their Likely Viability in Various Countries

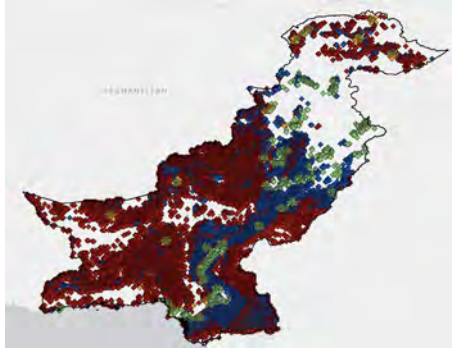
India



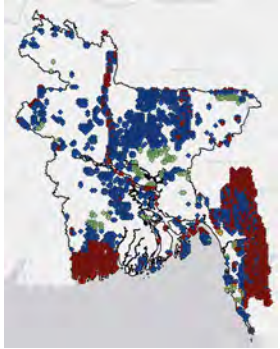
Indonesia



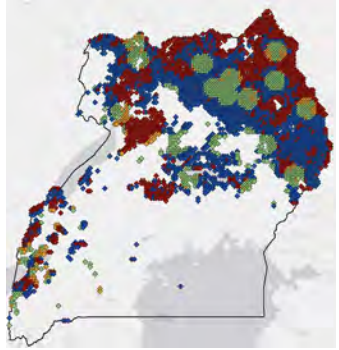
Pakistan



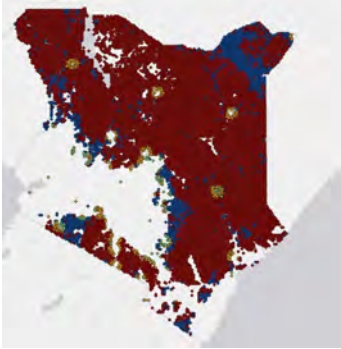
Bangladesh



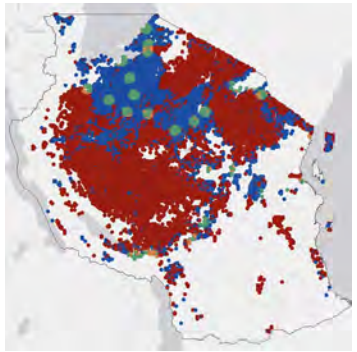
Uganda



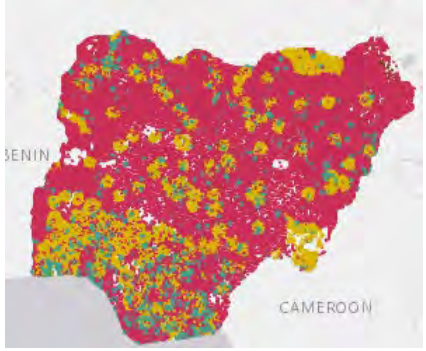
Kenya



Tanzania



Nigeria



Viability:

- Economically & operationally viable
- Economically viable, operationally unviable
- Economically unviable, operationally viable
- Economically & operationally unviable

Note: Shading of colors in maps may vary based on user interface, but general color scheme (red, yellow, green, blue) is consistent across all countries.

7. Appendix

Examples of How Countries Applied Broad Policies

Photo: Marulanda Consultores

Examples: Countries Around the World are Experimenting with a Full range of Policy Levers to Tackle their Specific Challenges and Drive Rural Expansion of CICO/ DFS

Opening restrictions pushes new agents to underserved areas in Malaysia

~50% increase in financial service coverage in 4 years

1

Income guarantees help meet G2P distribution coverage targets in Colombia

+187 rural municipalities with new agent banking

2 6

Preferred loans help operators fund agent network expansion in Nigeria

$13.5M lent across 9 ops. to setup 10k agents each

3

Favorable contracts enable deployment of new digitized G2P payments in Pakistan

$900M distributed to 5.4M women in 2016

5

Government partnerships fund efforts to develop DFS for rural women in India

+1500 rural female agents June 2017 to April 2018

4 9

Tiered pricing helps providers meet G2P coverage targets in Kenya

~$120M disbursed to 1M beneficiaries last cycle

2 7

Subsidies for point-of-sales terminals help merchants cover upfront costs in China

~4M POS terminals opened in rural areas in 2011-16

9

Consumer subsidies to pay for biogas help generate rural CICO demand in Vietnam

158k+ domestic biogas digesters built in 13 years

6

New matched-funds savings accounts (IDA) shape consumer behavior in USA

$117M earned income deposited by IDA holders

12

Tax credits incentivize investments in marginalized areas in USA through CDEs[1]

~750k jobs created or retained since 2003

8

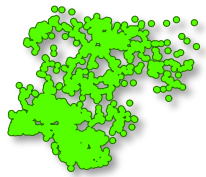
1. CDE: Community Development Enterprises. Sources: See details of 65+ global interventions reviewed and case studies in Compendium document (21 interventions related to CICO in developing markets; 16 interventions related to rural expansion of other industries in developing markets – e.g., utilities, telco; 29 interventions related to FS expansion in developed markets)

Example of Agent Geospatial Mapping

Photo: Anand Raman

Detail: Example of Geospatial Methodology Applied to CICO

Financial infrastructure



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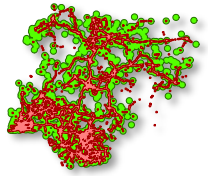
Economic activity



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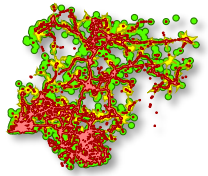
Cell towers



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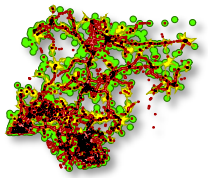
Power connectivity



Overlaying maps

a — Data preparation and preprocessing

- Processed and converted addresses of ~4,000 POIs into LAT/LON
- Prepared data using Alteryx
- Mapped banks, cell locations, power infrastructure, and economic activity POIs

b — Population-based Catchment Analysis

- Generated drive time polygons across various scenarios—5 mins, 10, 15, 30 mins etc. using street network dataset
- Population catchment summary to achieve 80% of the population

c — Spatial Intersection and Funnel Methodology

- Calculated population coverage for individual layer—cell towers, economic, power and financial POIs
- Performed geospatial intersection using geoprocessing tool in ESRI's Spatial Analyst
- Created layers and intermediate report/summary using Alteryx modules

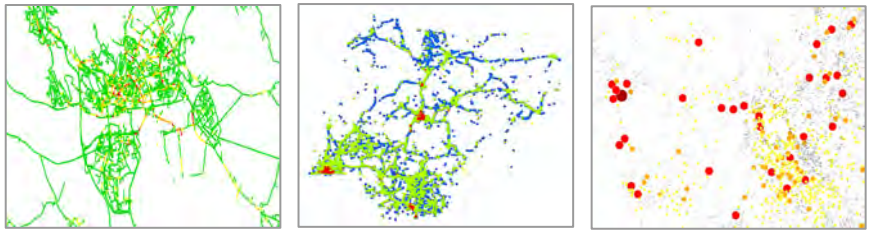
d — Visualizations

- Visualized multiple layers with their corresponding coverage areas using ESRI's ArcGIS online
- Added dynamic functionality, allowing option to zoom in/out, select layers, and see corresponding details

Single view and spatial framework of multiple layers

Population-based catchment analysis summary report

Visualization dashboard—ArcGIS online



Modeling proposed locations/territories on an interactive dashboard

Generated catchment summaries

A	B	C	D	E	F	G	H
Scenarios		Banks		Banks + ATMs		Banks + ATMs + Power/Mobile Connectivity	
No.	Drive time (Mins)	Total Population Covered	Population Coverage (%)	Total Population Covered	Population Coverage (%)	Total Population Covered	Population Coverage (%)
1	5	43,591,548	23%	44,052,530	24%	43,356,363	23%
2	15	79,499,180	43%	79,859,470	43%	77,304,241	42%
3	30	104,986,214	56%	105,377,549	57%	95,149,814	51%
4	45	124,786,740	67%	125,159,839	67%	104,340,443	56%
5	60	139,798,211	75%	140,129,729	75%	108,877,141	58%
6	70	148,012,657	79%	148,229,498	80%	110,715,907	59%
7	72	149,515,568	80%				

Catchment Summary Report

CGAP MEMBERS AS OF JULY 2022