

MIT SMR CONNECTIONS

EXECUTIVE | SCHOLAR **EXCHANGE**



Executive Viewpoint:

Toward Digital Financial Inclusion



COMMISSIONED BY: **TATA** CONSULTANCY SERVICES



The world's “unbanked populations” — individuals and businesses lacking secure, affordable access to financial services — represent a compelling social need and a tremendous economic opportunity. Here, an industry executive and a scholar offer insights on addressing both.

EXECUTIVE: Currently, we see a large global opportunity to turn many informal economic activities into formal ones by



Chandra Mohan Malladi

TCS, Head of Financial Services and Digital Payment Innovations

bringing unbanked populations into bankable segments. This transformation is essential for any country that aspires to support sustainable inclusive growth.

Globally, billions of low-income individuals and millions of micro, small, and medium enterprises lack access to viable financial services. Many reports indicate a pressing need for such access, which will require

country-level strategies. Although some markets have tried to improve access, their efforts haven't yet yielded sustainable results, and levels of financial inclusion still vary widely from country to country. At the same time, in some markets with access to financial services, usage remains low due to high financial and operational costs and consumer concerns about the security of financial transactions.

This situation represents not only a great need (and a compliance requirement), but also a huge opportunity. Government and market leaders can leverage digital technologies that can improve ease of use and availability; reduce costs; increase security, consumer protection, and trust; and drive sustainable

cooperation between businesses, governments, and unbanked populations. However, this is easier said than done.

How can we collectively build a digital ecosystem where individuals and small traders can access services on their own and at their doorsteps, and securely engage in financial transactions at an affordable cost? Can we use digital technology to close the gender gap with respect to access to financial services, by making them more accessible to women whose activities are centered around their homes and immediate communities?

We must also understand the cultural differences that may influence how receptive individuals are to new services and include communication and education efforts among our tool sets. In some markets, for example, improving financial literacy may help overcome resistance to borrowing for those whose economic mobility could be aided by access to credit.

While financial inclusion initiatives that provide access to basic banking services are widespread, there are still many unmet needs, particularly among small traders who account for a large part of the economic system in developing countries. For example, people who want to establish small shops require working capital. We need to facilitate liquidity for them with simple real-time loans. Subsequently, we need to help them sustain their businesses with access to financial

“How can we collectively build a digital ecosystem where individuals and small traders can access services on their own and at their doorsteps, and securely engage in financial transactions at an affordable cost?”



supports such as revolving lines of credit. Can we encourage clusters of these small businesses and provide financing using a peer-lending mechanism for those involved in the same type of supply chain?

Credit may be available, but individuals and small traders may lack credible evidence to demonstrate the revenues, profits, and net worth of their enterprises. To increase their ability to underwrite offerings to these individuals, financial institutions charge higher premiums or interest rates — which make credit too costly to the individual or small trader. In addition, financial regulations, such as anti-money-laundering rules, may need to be relaxed for transactions below a certain value to increase access for very small businesses or individuals. Both issues — difficulty in producing credible records in order to access credit or insurance and in establishing a single source of truth about a business entity or individual as is needed to comply with some regulations — could be alleviated with a trusted, interoperable digital financial ecosystem.

Creating and sustaining such an ecosystem depends on individual action by and collaboration between the following stakeholders:

- Government agencies need to collaborate to drive each country's agenda to increase financial inclusion. Typically, this will include agencies that oversee commerce, technology, education, revenue, and social and economic development. As noted earlier, regulators also play a key role in establishing the validity of credit histories and credit ratings and potentially relaxing norms such as “know your customer” (KYC) when addressing the bottom of the financial pyramid. They must also oversee appropriate regulations to help establish trust in an interoperable digital infrastructure that supports payment standards, account portability, consumer protection, and so on. Some governments have subsidized the last-mile infrastructure and instituted taxes to promote faster deployment. Blockchain technology may also help to establish a single source of truth for central KYC and the financial histories of those who are unbanked.
- Financial institutions must develop products that are customized to and priced appropriately for customers in this segment. They can leverage technologies such as dynamic pricing, as well as mass-personalized products and services that leverage advanced data analytics and insights. Machine learning and mobile technologies can be used to understand and deliver on customers' needs in each context. Financial institutions also need to mature from “know your customer” to “understand your customer,” which requires them to better leverage data such as customer behavior and sentiment analysis.
- Technology companies are naturally important stakeholders and enablers in any digital ecosystem. Technology service providers need to build solutions that are simple, easy to use, and contextual to the end customers' dynamic needs. As providers of mobile voice and data networks, telecom companies are on the front lines in many cases. Other suppliers include cloud service providers, outreach agencies, business correspondents or facilitators, interoperable agencies, and adjacent business lines (such as e-commerce, insurance, pension products, remittances, and payments).
- Last-mile agency networks comprising various service providers are also essential. This includes companies that handle remittances from abroad, bill-payment companies, microlenders, microinsurers, micropension service providers, communities such as self-help groups, and financial literacy evangelists. Last-mile devices such as point-of-sale terminals and mobile gadgets have to be used as well; these must also incorporate user authentication methods — biometrics, cards, one-time passwords or PINs, or QR codes, for example. Making options available at low cost and delivering reliable service are paramount for these entities.

Leveraging suitable technology is a challenge in creating this digital infrastructure. Although everything that is needed appears to be available, it is often in bits and pieces. Technology integrators are needed to anchor the change, bring all the elements together, and connect them digitally into a value chain. Making it all work together requires communication standards that all stakeholders can agree to support.



In our own experience working on large technology transformation programs for financial institutions, we have observed some of the benefits to advancing inclusion. Among them:

- Government programs — such as direct benefit transfers, pensions and social payments for the aged or disadvantaged, crop-insurance claim settlements, subsidies for providing cooking gas, farmer subsidies, and rural employment programs — have been initiated through the financial inclusion network. Today, that network is connected to various settlement systems that are providing interoperability for remittances, bill payments, purchases, and other banking services.
- The network has become the prime channel for providing access to a new market for ecosystem players such as financial institutions, telecom operators, marketplaces, governments, and other nonbanking entities. One large bank we have worked with on financial inclusion has acquired more than 160 million additional customers and established more than 60,000 touch points in unbanked areas.
- The government agencies for which we have set up interoperable technology solutions and settlement systems have been able to reduce the leakage of income and ensure that benefits reach the intended beneficiaries at the right time.

The work above has been recognized by the government of India with its top award for contributions to financial inclusion.

TCS envisions that the next wave of solutions will leverage digital technologies and data science to analyze customers' dynamic needs and offer these services when the need of the hour arises. Machine learning-based predictive models will suggest financial institutions to offer dynamic products or services that can be launched quickly and meet risk management and underwriting requirements. The variety of products or services may differ from region to region, culture to culture, and country to country. Thus, the ability to drive solutions that can be implemented without making too many changes to the solution framework is key for faster deployment and rollout.

We see a tangible opportunity in achieving this socioeconomic goal by leveraging digital technology solutions and frameworks that can constantly generate sustainable returns to the ecosystem's stakeholders. The belief and commitment from government, policy makers, and market players for creating such a digital ecosystem requires national-level strategies, win-win partnership arrangements, continuous learning, and adoption frameworks for innovating new business models suitable to the market segment that is being addressed.

The foundations for a financially inclusive digital ecosystem are being largely strengthened in the context of providing basic bank accounts and enabling payments and remittances through mobile money or card networks. However, better coordination at the country level is required to facilitate interoperability across service providers, settlement systems, and dispute resolution mechanisms. Much work still needs to be done to provide access to credit, microinsurance, and pension schemes when needed, and to expand digital financial literacy. It is important to not only provide access and increase usage but to measure the positive impact this creates in people's livelihoods, which is the goal of an inclusive society.

The bottom of the economic pyramid offers a new market for many financial institutions. If they create the right products and services and offer them to the end customers at an optimum price, there is an enormous, sustainable business opportunity for these players due to the sheer volume of interested customers.

Chandra Mohan Malladi is head of financial services and digital payment innovations at TCS and a member of the company's senior leadership team. He has nearly 25 years of experience in technology transformation programs for the banking and financial services industry and was a lead partner with the World Economic Forum for its Global Financial Inclusion program. At TCS, he is responsible for large digital ecosystem creation and driving the financial inclusion and digital payments business. He can be reached at cm.malladi@tcs.com or +91-924-682-9600.

SCHOLAR:

To Engage the Financially Excluded, Understand Their Informal Systems**Libby McDonald**Inclusive Economies
Specialist and Lecturer,
MIT D-Lab

Libby McDonald's work with economically marginalized individuals in Africa and Latin America has given her a firsthand perspective on their needs and preferences when it comes to inclusion in financial services. She and her colleagues at MIT's D-Lab have worked with waste pickers, small-scale gold miners, smallholder farmers, and others. "We are thinking constantly about how to engage them in formal sys-

tems so they have access to tools that provide opportunities for livelihood, including digital financial services," she says.

MIT SMR Connections spoke with McDonald to learn more about how these individuals currently address their financial needs, and what organizations should consider as they seek to broaden financial inclusion.

Q. How do the people you work with handle basic financial needs such as saving money?

McDonald: Almost all of the women I work with do not engage in formal financial services. Many of them organize themselves into savings groups, rotating funds among themselves. It's fascinating, and I feel strongly that we should think about mimicking these systems that are already in place. Women also hide their money — on their bodies, under a rock. Many of them

are mothers, single mothers. What's really a struggle for them is to save to pay out the money needed to keep their kids in school, to buy books and uniforms, and pay school fees. They are hungry for mechanisms that allow them to save and pay out at particular moments.

Q. What other financial services do these individuals need, such as credit or insurance?

McDonald: Insurance, yes — that's interesting to them. But most of the informal-sector workers I work with are not interested in loans; it's just too scary for them. They say, "We've been burned by loans. We're not interested in microloans — we're not interested in loans, period." This applies to both informal and formal systems of lending money.

Q. What are some of the obstacles to their participation in formal systems such as banks or emerging digital financial services?

McDonald: Most of the women that I work with say they're not comfortable walking into a bank, so they don't do it. What about digital financial services? It's very conceptual. All of a sudden, you're not even seeing your money; it's all happening on a phone. While many of them have a phone, they're not comfortable using it. They find the idea of digital financial services intriguing, but it's a little bit scary for them because they're not even comfortable with that phone.

So how do you capture that client? In Latin America, some phone companies offer cash to entice people to sign on to digital financial services. For example, they may offer \$5 to every farmer in a region via an app. That motivates people to down-

“For digital financial services in particular, the situation varies dramatically by country — a lot of it depends on regulations. You've got to create regulations that allow for innovation but also protect people.”



load the app, and then they're off and running, and their comfort level begins to grow.

We have also learned that it matters who is staffing the kiosks that phone carriers have set up to interact with customers. I would suggest they have more women in those kiosks. These staffers must be trained to be patient and confident, to help customers use their phones to manage their money.

Q. What advice do you have for organizations that are trying to broaden access to digital financial services?

McDonald: For digital financial services in particular, the situation varies dramatically by country — a lot of it depends on regulations. You've got to create regulations that allow for innovation but also protect people.

The banking and telecommunication industries make assumptions and don't really understand what the folks living at the bottom of the pyramid want and need. I see a lot of informal

and community-based banking systems. Who's to say those aren't systems? They are systems, but they are informal. If I were to go into a particular country to spread digital financial services and financial literacy, I would make it my job to understand the informal practices, and then look at how we can build those out so that they become more formal.

Libby McDonald is an inclusive economies specialist and lecturer at MIT's D-Lab, which uses participatory design to develop and advance collaborative approaches and practical solutions to global poverty challenges. Previously she was program director of global sustainability partnerships for MIT's Community Innovators Lab (CoLab), which works with community partners to explore the intersection of democratic engagement, shared wealth creation, and the environment to support cities' efforts to become socially, environmentally, and economically sustainable.

COMMISSIONED BY:



MIT SMR Connections develops content in collaboration with our sponsors. We operate independently of the MIT Sloan Management Review editorial group.