



Credit Disrupted

Digital MSME Lending in India



Executive Summary

There are between 55 and 60 million micro, small, and medium-size enterprises (MSMEs) operating in India today, which are leading contributors to the nation's employment and gross domestic product (GDP). Yet this contribution remains well below its potential. A significant barrier to growth has been the lack of access to formal credit—today, **roughly 40 percent of India's MSME lending is done through the informal sector, where interest rates are at least twice as high as the formal market.**

This lending landscape is set for rapid change, with digital lending poised to disrupt the status quo. We estimate that by 2023, **MSME digital lending has the potential to increase between 10 and 15 fold to reach INR 6-7 Lakh Crore (\$80-100 billion) in annual disbursements**, creating a meaningful opportunity for innovative startups as well as traditional lenders.

The India MSME opportunity is driven by three major shifts.

First, MSMEs, especially those with annual revenue between INR 10 L and INR 1 Cr (\$15,000-\$150,000), are rapidly formalizing and digitizing. The government-led 2016 demonetization, Unified Payments Interface (UPI) launch, and 2017 Goods and Services Tax (GST) have each impacted MSME formalization and digitization. In parallel, market competition since 2015 has led to a dramatic shift in connectivity, with a 95 percent drop in data costs, eight-fold increase in MSME data consumption, and 85 percent total MSME smartphone adoption.

Second, the maturing India Stack, along with growing API-based data availability, has fundamentally transformed every step of the credit value chain. Near end-to-end digital MSME lending has become a reality, with loan approval turnaround times as short as one day.

Third, the increased receptivity to digital lending by MSMEs indicates the large scale of the potential market. More than 75 percent of the MSMEs surveyed report they are comfortable sharing data digitally, and over 60 percent expect to have significant digital payments in the next three years.

This environment has led to a watershed moment for MSME digital lending in India. Digital practices are transforming the entire MSME credit value chain, from sourcing to servicing and collections, addressing MSME borrower pain points and demonstrating the potential for unit economics that are 30 to 40 percent more favorable than traditional finance.

India's open digital infrastructure, unmet customer demand, and leapfrogging digital behavior have the potential to benefit a broad range of players—in sharp contrast to other countries, where an incumbent or e-platform often dominates. This largely level playing field creates opportunities across industry players (incumbent banks, e-platforms, and FinTechs) and allows for a range of business model approaches.

Digital lenders who seek to capitalize on this opportunity are more likely to succeed by taking steps to align themselves with the needs of MSMEs:

Segment the market, tailoring lending products and processes to a differentiated customer base.

Leverage supply chain ecosystems and e-commerce platforms to facilitate customer acquisition.

Embrace next-generation data analytics to manage risk, improve underwriting, and create more customized offerings.

Design tailored customer journeys to drive adoption and loyalty and improve lending outcomes.

India's regulators can further advance the digital MSME lending opportunity **by continuing to facilitate data sharing with consent and by instituting incentives for further MSME formalization.** These ongoing government efforts, along with the resulting market innovations, serve as a valuable global case study for other economies where regulators have the potential to develop similar infrastructure and policies.

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Introduction

India is one of the world's fastest-growing economies, boasting the sixth largest GDP and a vibrant business landscape.¹ At the center of this landscape are MSMEs—between 55 million and 60 million micro, small, and medium-size enterprises operating in India today. Collectively, MSMEs employ more Indians than any other sector except for agriculture and over the last decade have contributed roughly one-third of India's GDP.

While impressive, MSME contribution to India's GDP is nearly 10 percentage points lower than in the United States and 23 percentage points lower than in China.² There is potential, then, for this sector to be an even more powerful growth engine for India's economy going forward. We believe some of that growth is already fast on its way, thanks to a budding transformation in the MSME lending market.

The Start of a Lending Revolution

Although MSMEs in India are highly heterogeneous, they share a common challenge—a widespread inability to gain sufficient access to formal credit. Millions of MSMEs lack the proper documentation needed to secure a formal loan. Many cannot offer meaningful collateral or have incomplete or under-reported financials. As a result, the formal loan process can be laborious for MSMEs and costly for borrowers and lenders alike, leaving traditional lending models unable to properly address MSME needs.

It is no surprise that the majority of MSMEs have historically turned to informal financing to address their credit needs—whether through friends, family, or moneylenders. We found that urban and rural MSMEs are quite similar in their borrowing behavior, with nearly identical rates of informal borrowing and bank account registration. Total 2018 MSME credit demand is estimated to be INR 45 L Cr (\$600 billion). As shown in Figure 2, roughly 40 percent of that demand will be served by informal credit, with interest rates at least twice as high as formal credit. An additional 25 percent of MSME borrowing is invisible—through personal proprietor (rather than business) loans, demonstrating the shortcomings of the current lending process.

Across India, the MSME lending landscape is now shifting, with formalization and digitization driving the market toward disruption. Based on our research, we believe that MSME digital lending has the potential to grow 10 to 15 times larger by 2023, to INR 6-7 L Cr, or \$80-100 billion—nearly as large as the entire global microfinance industry today (\$114 billion loan portfolio).⁶

FIGURE 1

MSME Distribution by Sector and Annual Revenue

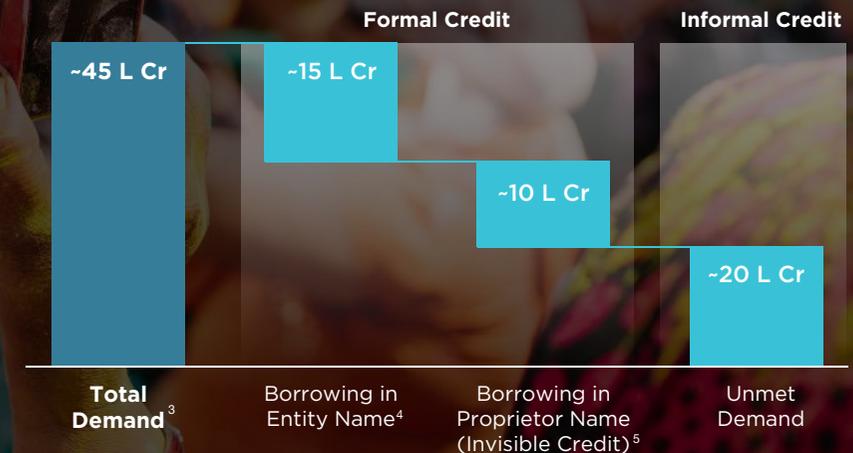
	<10 L	10 L - 1 Cr	>1 Cr	Overall MSME
Trade 	40-42%	2-3%	1-2%	40-45%
Manufacturing 	21-23%	5-7%	2-3%	30-35%
Services 	22-24%	2-3%	1-2%	25-30%
Overall MSME (55-60 Mn)	80-85%	10-15%	3-5%	100%

Source: 2016 MOSPI survey of MSMEs (N=3L), BCG analysis

FIGURE 2

MSME Credit Demand

Roughly 40 percent of India's MSME lending is in the informal sector, and an additional 25 percent is invisible (through proprietor borrowing)



Source: TransUnion CIBIL data and analysis, MSME Annual Reports, MOSPI survey of MSME's 2016 (N=3L), Ministry of MSME census 2007, BCG analysis

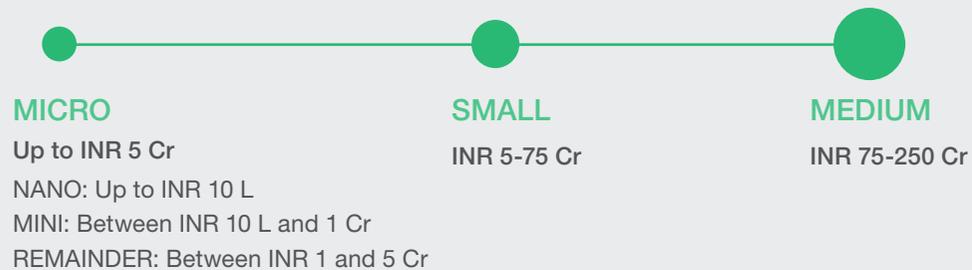
About This Report

Omidyar Network and BCG launched this study to evaluate the impact of formalization and digitization on MSME lending in India and to uncover the implications for Indian businesses, government, and beyond.

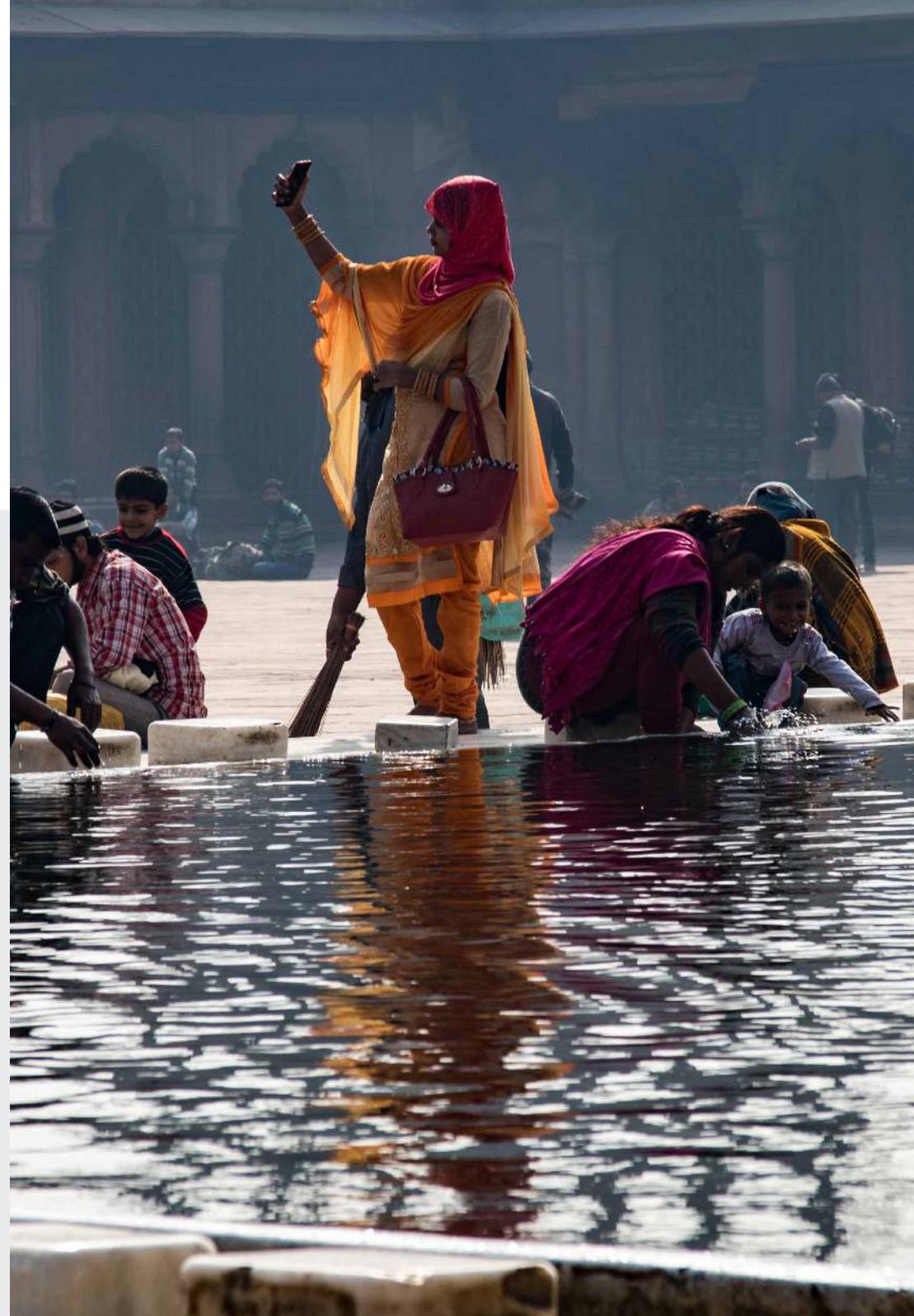
We surveyed more than 1,500 MSME owners with annual business revenue between INR 3 Lakh and 75 Cr to learn more about their perspectives on formalization, digitization, and credit needs. We conducted qualitative interviews and focus-group discussions with more than 80 MSME owners, as well as in-depth interviews with more than 60 digital lenders, intermediaries, ecosystem partners, and other subject-matter experts. Our team also did extensive secondary research, reviewing both recent and historical government data.⁷ What we found was a credit landscape on the verge of meaningful change.

India's MSME Landscape

MSMEs are broadly defined as businesses with annual revenue up to INR 250 Cr. (approximately \$35 million). However, MSMEs can be further broken down into smaller categories which align with recently proposed Indian government definitions (by annual revenue):



The majority of India's MSMEs are "nano" or "mini" businesses, with close to 96 percent of MSMEs having annual revenue of less than 1 Cr and roughly 80 percent under 10 L. **For the purposes of this research, we focused primarily on businesses with annual revenue between INR 3 L and 75 Cr.**



The Evolving MSME Landscape

MSMEs in India are rapidly formalizing (becoming government-licensed or government-registered businesses) and digitizing (adopting digital processes and practices). In 2017 alone, there was a significant increase in the number of MSMEs with some form of registration, driven by government tax reform. Meanwhile, MSMEs are also rapidly digitizing across various dimensions, including business processes, payments, and online sales. See Figure 3, which illustrates the impact of tax report on formalization and digitization.

A number of trends are driving this brisk shift toward formalization and digitization, beginning with several powerful policy initiatives set in motion by the Indian government.

Groundbreaking Government Initiatives

In 2016, India's government launched the **Unified Payments Interface (UPI)** real-time system for mobile transactions, followed by a **demonetization** effort that stimulated a country-wide transition from a cash-based economy toward a digital one. UPI, along with demonetization, triggered explosive growth in digital payments across India.

One year later, the country's government introduced the **Goods and Services Tax (GST)** to simplify business taxes and increase tax reporting. The GST initiative has already compelled millions of MSMEs to formalize. Roughly 9.2 million MSMEs in India are now GST registered—a more than 50 percent increase from the previous tax regime.¹⁰ The shift to online tax reporting through GST has created a trove of digital data from MSMEs that is verified (invoices matched), granular (invoice level details available), current (monthly/quarterly filing), and electronically accessible.

FIGURE 3

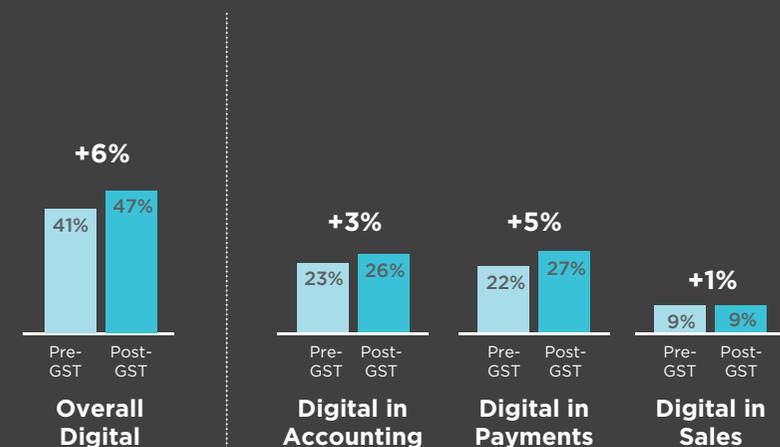
MSME Formalization⁸

In 2017, the number of MSMEs with some form of formal government registration grew by 5 percent—and by 14 percent among 10 L - 1 Cr annual revenue businesses



MSME Digitization⁹

Forty seven percent of MSMEs have adopted digital tools for business processes, payments, and online sales

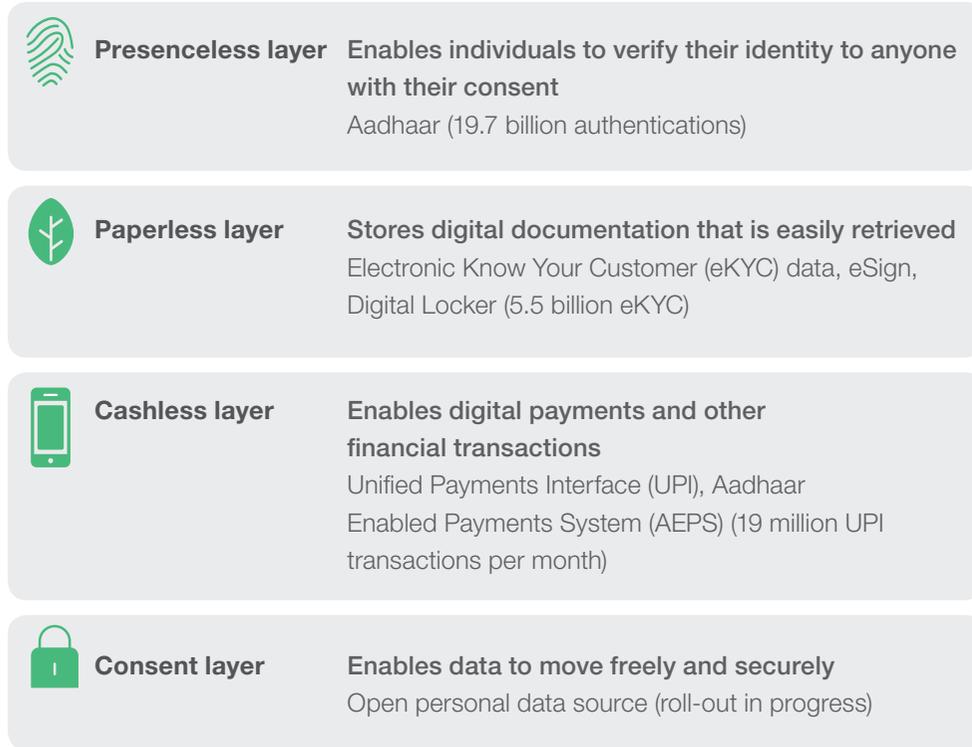


Source: Weighted BCG quantitative survey analysis (N=1514); Survey data weighted to be representative of the 3L+ annual revenue MSME universe with regard to annual revenue x sector x geography (urban vs. rural)

Evolving Digital Infrastructure

India is the only large economy with public digital infrastructure in the form of the so-called **India Stack**—another critical factor driving India’s digital evolution and its shift toward a cashless economy. India Stack is a set of Application Program Interfaces (APIs) that enable instant communication between servers and devices.

India Stack has four technology layers, each with its own function.



Both India Stack and additional APIs now serve as a rich source of public and private data. These data sources will enable granular verification of MSMEs and assessment of their future credit behavior. Already, a rapidly maturing India Stack combined with this growing API-based data availability is transforming every step of the credit value chain—which could allow nearly full end-to-end digital MSME lending to become a reality.

FIGURE 4
India’s API Infrastructure



Entity Data

- Ministry of Corporate Affairs
- Udyog Aadhaar
- Company Website
- Shop and Establishment
- Employees’ Provident Fund Organization
- Employees’ State Insurance Corporation



Individual Data

- Permanent Account Number
- Voter ID
- Driver’s License
- Professional Registration



Financial & Tax Data

- Goods and Services Tax
- Income Tax Return
- Tax Deducted at Source (Form 26AS)
- Service Tax
- Taxpayer Identification Number



Utility Data

- Electricity
- Telecom
- Gas Connections
- Internet
- Vehicle Registration



Credit Bureau Data

- Entity Credit Data (Commercial Bureau)
- Proprietor Credit Data (Consumer Bureau)



Social and Mobile Data

- Google Verification
- Facebook Verification
- LinkedIn Verification
- Email Verification
- Geotagging Services
- App Data
- Call Logs
- SMS Data

Note: While some of the data sources are in infancy, government actions and overall ecosystem maturity will drive increased readiness in the coming years.

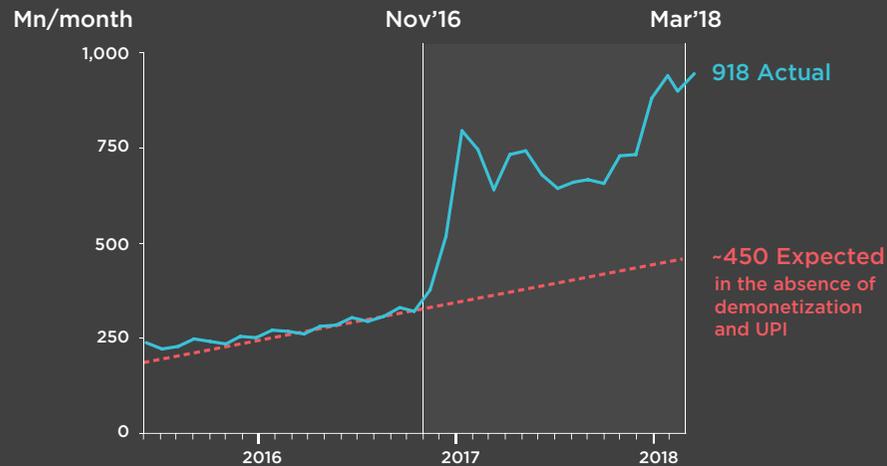
Plummeting Data Costs

In India, the cost of data has fallen by 95 percent in the last three years, making it the cheapest globally. These low costs have driven an eight-fold increase in data consumption across the country—including among previously non-digital MSMEs. Cost reductions have also led to a doubling of smartphone penetration in the last three years, to roughly 300 million users. Currently, 85 percent of MSMEs have smartphones. This increased access to and consumption of digital data is poised to have a significant impact on overall levels of digitization and business productivity among MSMEs in the country.

Digital payment transactions have already climbed two to five times above expected levels, leapfrogging India roughly 2.5 years ahead in the digital payment curve (see Figure 5). The entry of global players such as WhatsApp and Google has the potential to catalyze a step change in digital payment adoption, with small-ticket merchant payments likely to migrate to these platforms in large numbers. Close to 50 percent of the MSMEs surveyed said they would use WhatsApp payments once available. In all, India is poised for a payments disruption—and the beginning of this change is already underway.

FIGURE 5
Total Digital Transactions¹²

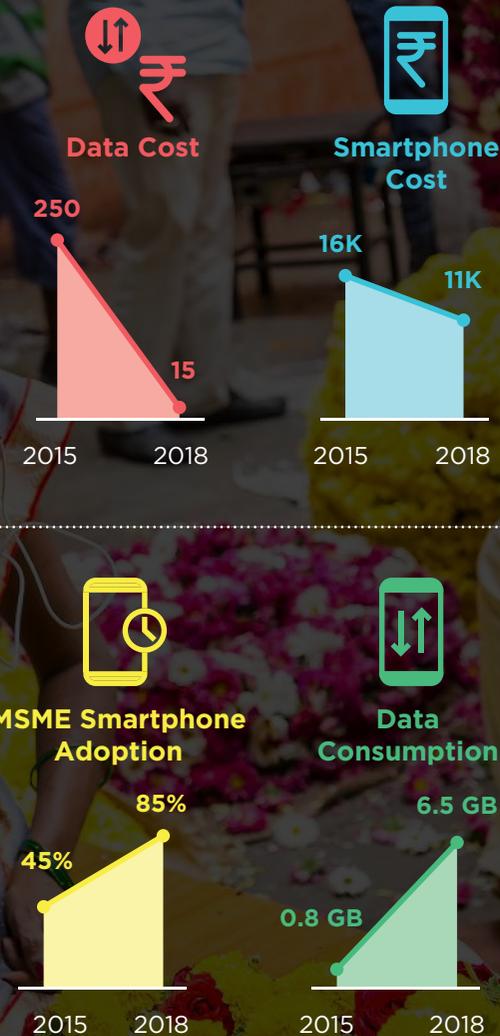
India has leapfrogged 2.5 years ahead on the digital payment curve post-demonetization in 2016



Source: RBI database, NPCI, BCG analysis

FIGURE 6
Data Cost and Digital Adoption¹¹

A 95 percent decrease in data and 1/3 fall in smartphone cost has led to an eight-fold increase in data consumption and nearly 100 percent increase in MSME smartphone adoption



Source: Credit Suisse report "India Market Strategy" May 2018, IDC Quarterly Mobile Phone Tracker - Final Historical 2018Q2, BCG analysis

With the increasing adoption of digital devices and platforms in people's personal lives, MSMEs are becoming more ready and comfortable with digital transactions, and they are increasingly willing to share their data. The number of digitally sophisticated MSMEs is expected to double over next three years, reflecting a rising digital maturity. MSMEs typically follow a set pattern in their digital adoption, starting from basic online searches to digital banking and sales. Today the majority of MSMEs are in the early stages of this digital sophistication journey, but this will shift as the enabling environment around data and infrastructure continues to mature (see Figure 7).

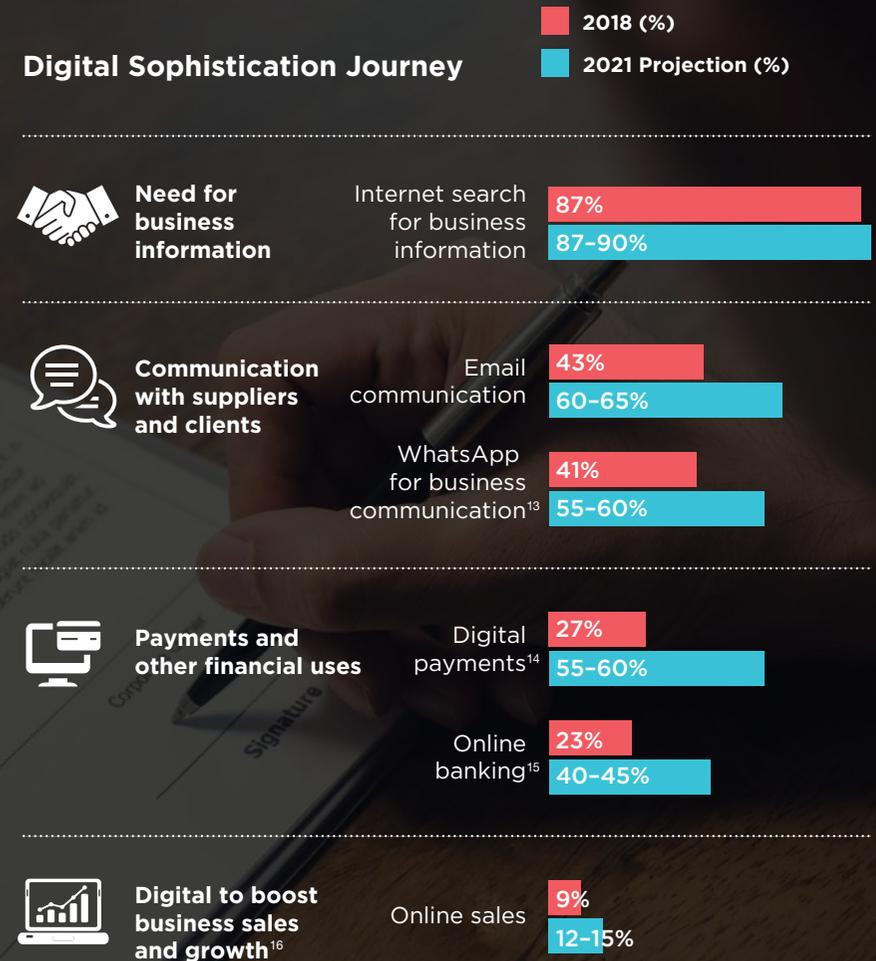
MSME Business Challenges

Despite these shifting dynamics, MSMEs in India continue to struggle with traditional banking challenges that, if addressed by digital lenders, could accelerate both formalization and digitization among businesses in this sector. In our survey and in our interviews, MSME owners shared a host of challenges that they believe are inhibiting their businesses from growing or thriving. Among these, two in particular stood out.

The first was **attracting and retaining customers**. In our survey, one-third of MSMEs named "customer demand" as their greatest business challenge (either finding new customers or managing fall in demand). Digital platforms present the most viable new channel for customer discovery. MSMEs, particularly those in urban nano businesses (with annual revenue less than INR 10 L) are increasingly turning to aggregator platforms to access new customers. In Chapter 5, we outline how digital lenders can partner with digital platforms and aggregators to bundle credit with other services.

FIGURE 7

Digital Sophistication, 2018-2021



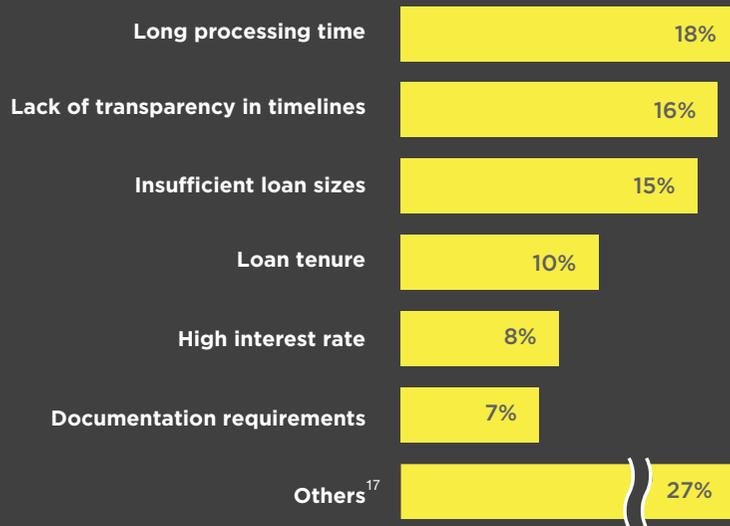
Source: Weighted BCG quantitative survey analysis; 2021 projected based on analysis of MSME responses

The second critical pain point was **gaining access to affordable credit**. Nearly all MSME credit-related challenges, shown in Figure 8, can be traced to pain points in the traditional loan process. Among the MSMEs we surveyed, the biggest issues were long processing times, lack of transparency in timelines, and insufficient loan sizes. These pain points are substantial enough to compel many MSMEs to continue to seek out informal sources, often at much higher interest rates. Digital lending has inherent advantages that address these credit pain points.

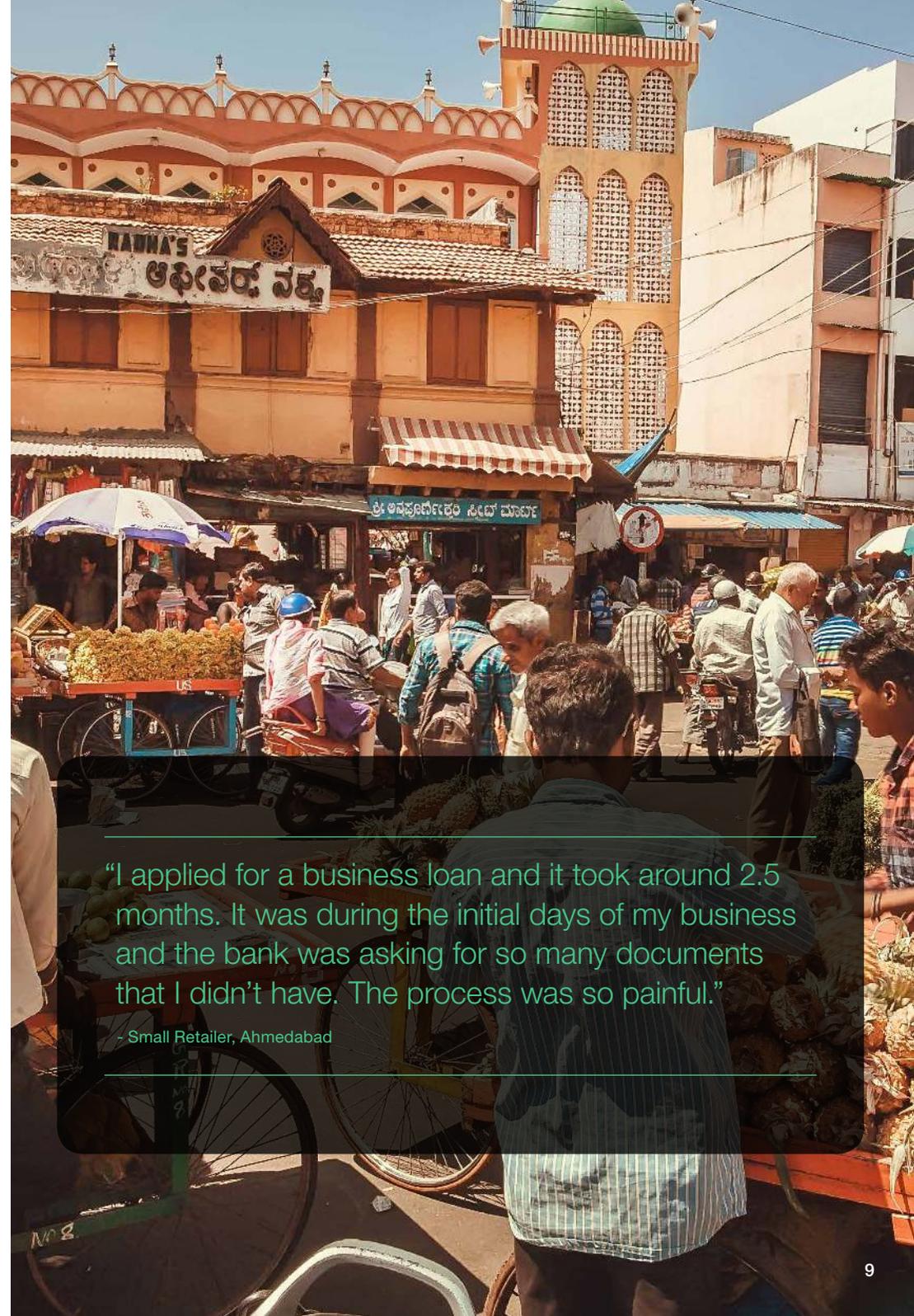
FIGURE 8

Loan Process Pain Points

Digital lending can address the challenges in traditional processes through alternative approaches to sourcing, underwriting, and servicing



Source: Weighted BCG quantitative survey analysis



“I applied for a business loan and it took around 2.5 months. It was during the initial days of my business and the bank was asking for so many documents that I didn’t have. The process was so painful.”

- Small Retailer, Ahmedabad

The Digital Lending Advantage

Digital lending has notable advantages over traditional lending in India, with the potential to address MSME credit-related challenges. One of the most obvious advantages is **loan approval speed**. Digital loans have significantly shorter turnaround times than traditional loans—especially for small-ticket loans, which are most common among new-to-credit MSMEs (i.e., first-time borrowers). The turnaround time for an unsecured digital loan can be as quick as one day, with loan approval occurring within hours (or in some cases, minutes). Traditional processes, conversely, can take weeks or even months to go from loan application to final approval and disbursement.

With digital loans, manual form filing is replaced by digital data capture; account analysis is automated; and no in-person visits are required—making the process more streamlined and efficient for lenders and borrowers alike. Figure 9 shows what an end-to-end digital customer journey might look like. See sidebar on page 12 for the implications of the September 2018 Supreme Court Aadhaar ruling on the digital customer journey.

Digitally available data also paints a more accurate portrait of a borrower’s creditworthiness and associated risk for **credit underwriting insight**. With increased formalization and digitization, bank statements have become more granular and complete, enabling lenders to generate much more detailed insights into borrower behavior. New sources, such as transaction data (e.g., point-of-sale credit card trails) and other surrogate data (e.g., telco, utility payments) are giving lenders an even deeper view. As a result, the relative importance of different sources in digital underwriting is undergoing a shift, with decreasing reliance on audited financials and increasing focus on new data sources.



FIGURE 9

Customer Digital Lending Journey

With digital data, the customer lending journey can take less than one day

Loan Journey



Borrower verification

- Aadhaar-based eKYC verification¹⁸
- API-based verification of Tax Deduction and Collection Account Number (TAN) or Permanent Account Number PAN)



Entity data

- Company, director, and partner details from Ministry of Corporate Affairs (MCA) or surrogate data such as GST



Credit bureau data

- Automated credit bureau check for commercial business or individual proprietor



Financial data

- Additional financial data and bank transactions accessed and validated through third-party sources (MCA, bank account login)



Fraud check

- Online customer verification using surrogate data and automated fraud checks



Loan agreement

- Digital sanction and disbursement documents, direct disbursement set-up and automated repayment setup



Servicing and collections

- Automated repayments and loan servicing on website and/or app

Customer Engagement Points

Initial customer inputs

- Customer provides all data electronically, including consent to access digital data sources

Customer financials

- Customer submits company financials and bank statements
- Customer submits processing fee through payments gateway

Automated loan decision

- Automated credit underwriting provides instant decision
- Yes / No / Counteroffer

Customer agreement

- eSign loan documents and provide original documentation as needed
- Agree to e-NACH/ e-MANDATE setup for auto-repayment

Automated customer servicing

- Customers have real-time access to payment schedules, outstanding balance, and closure documents

Perhaps most important is the **operating cost efficiency** associated with digital lending models. With their labor-intensive sourcing approaches and manual processes, traditional lending models can be quite costly. They are burdened with higher operational expenses and often cannot scale beyond the size of their sales staff. Digital models, on the other hand, are labor-light and far more efficient. By our estimates, digital lending models can deliver between 30 and 40 percent cost advantage over traditional models.¹⁹ This low-cost model allows digital lenders to aggregate a large volume of small loans, which in turn enables them to serve smaller MSMEs than they could previously afford to reach. (See Figure 14 for a unit economics comparison.)

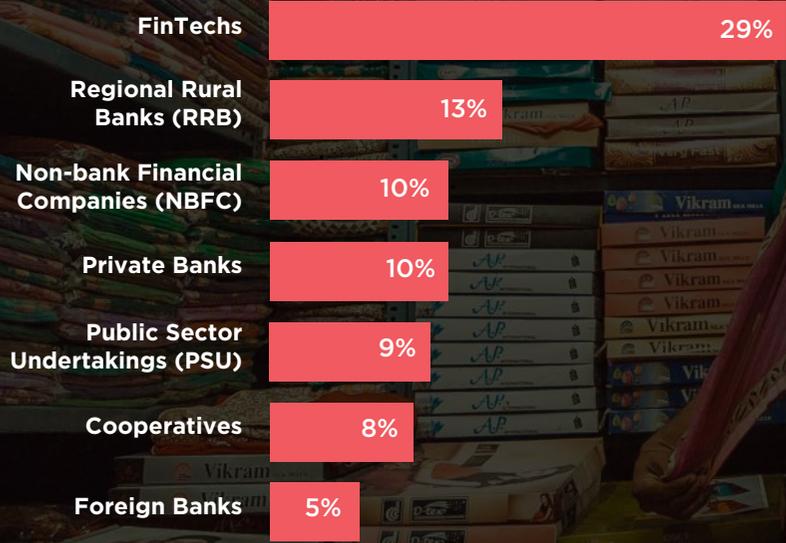
A Growing Readiness for Digital Lending

Many MSMEs recognize the promise of digital lending and its ability to make their business lives easier. MSMEs are already growing more comfortable with digital behavior—and, with assistance, this can extend to greater comfort with digital lending. Seventy-seven percent of MSMEs we surveyed said they are comfortable sharing data digitally; 75 percent with filling out an online application; and 57 percent with giving lenders access to account statements online. Thirty percent expressed increased comfort with digital lending if they were provided with ready assistance, and over 60 percent expect to use digital payments in the next three years—more than double the 27 percent of MSMEs who reported digital payments today.²⁰

Notably, FinTechs have had particular success reaching new-to-credit (NTC) borrowers. Figure 10 shows that in commercial bureau reporting, the proportion of NTC borrowers is three times higher for FinTechs versus private banks, NBFCs, and public sector banks, highlighting the role that FinTechs can play in expanding credit coverage among India’s MSMEs.



FIGURE 10
Proportion of New-to-Credit Borrowers by Lender Type²¹



Source: TransUnion CIBIL data and analysis; BCG analysis

As it grows, digital lending could make the benefits of formalization and digitization more visible, particularly for new-to-credit companies. Digital lending could trigger a virtuous cycle by incentivizing more MSMEs to formalize in order to reduce the cost of borrowing (see Figure 11). As the benefits of formalization, especially the availability of cheaper credit, become apparent, we believe there will be a massive formalization shift, particularly among small MSMEs that are not legally compelled to formalize.

2018 Aadhaar Supreme Court Ruling

The September 2018 Supreme Court ruling on Aadhaar usage has been interpreted as a ban on private entity access to Aadhaar-based authentication. We expect that with informed customer consent it will still be possible to leverage Aadhaar-based authentication, but we recognize that a purely digital model will no longer be possible.

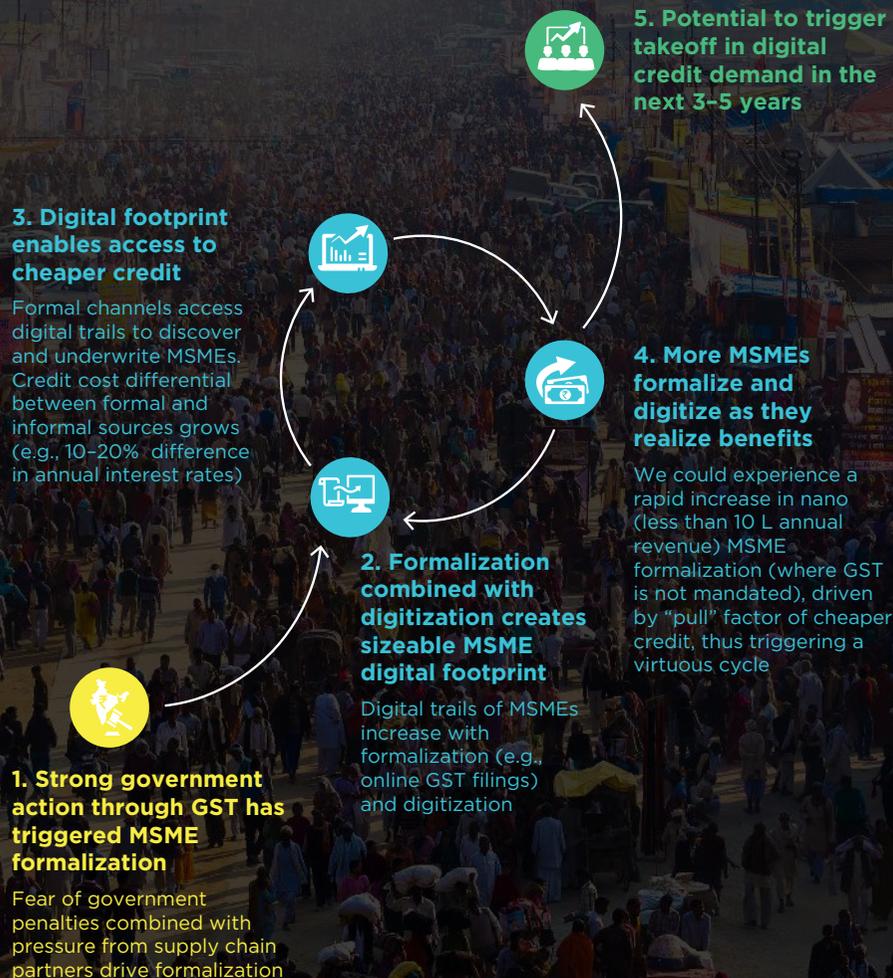
There are three steps in the MSME credit process that require Aadhaar-based authentication—eKYC, eSign, and eNACH. eKYC allows for paperless customer verification, eSign permits paperless documentation, and eNACH permits paperless repayment setup. Paper-based alternatives are required in the absence of these tools, resulting in a slower and more costly process.

Despite this ruling, the benefits of digital credit assessment remain, and lenders will be able to maintain a customer journey that is largely digital. In light of the overwhelming benefits of Aadhaar-based digital transactions, we expect that there will be a legal framework with appropriate consent mechanisms that empowers customers to opt in to Aadhaar-based authentication.

FIGURE 11

Formalization Cycle

Easier and cheaper access to finance could incentivize formalization for up to 85% of MSMEs by 2023²²



Triggering a Virtuous Cycle of Formalization

While more and more MSMEs are formalizing, a strong pull toward formalization has yet to materialize. Among the 1,500 MSMEs we surveyed, 50 percent reported formalizing only due to government mandate. Only 7 percent reported that they saw the value in formalizing—which strongly suggests that MSMEs are not perceiving the inherent benefits of formalization. Moreover, only 50 percent of sales from formalized MSMEs are getting reported through the GST, further suggesting that there is a long way to go in bringing already formal MSMEs into full compliance. We believe the availability of credit will incentivize more MSMEs to formalize over time.²³

“We are seeing more MSMEs formalize for cheaper credit and non-monetary long term benefits like better credit scores, ability to scale the business, and access to loan options.”

– Chartered Accountant for India MSMEs

The Emerging Digital Lending Landscape

Digital credit is poised to transform lending in India, bringing millions more MSMEs into the formal market in the next several years. But how the market will evolve is not yet fully evident. Digital lending models have evolved differently around the world, based largely on the uniqueness of their home market. In the United States, incumbent banks, with their captive customer base, now dominate digital lending. In China, large technology platforms have leveraged the advantages of their closed ecosystem to capture that country’s digital lending market. Across Africa, mobile operators working in partnership with banks are gaining top advantage.

We believe that India—with its unique open infrastructure, significant unmet customer demand, and strong digital uptake—will be far more friendly to a broad range of players.

India’s **open digital infrastructure** will prevent any single player from establishing monopolistic advantage over customers and customer data. It will also minimize data asymmetry, allowing for democratized data access with consent.

The current dominance of informal credit among MSMEs means that most of these potential customers are new to formal credit—in other words, **no player holds an incumbent advantage**.

The benefits of India’s **leapfrogging in digital behavior** (e.g., going directly from cash to digital payments by skipping cards altogether) will be available across all players in the digital lending space.



Looking forward, we believe three type of players will compete to capture a share of the emerging MSME digital lending market: incumbent banks and NBFCs, internet platforms, and FinTech innovators.

Incumbent Banks and NBFCs

Today, 99 percent of formal MSME lending is met by incumbent banks and NBFCs, most of it non-digital. But these longstanding players are already expanding their existing lending capabilities into the digital realm. Most incumbent banks and NBFCs use branch networks, “feet-on-street” sales agents, and intermediary-led models to acquire customers. In order to compete in the digital lending market, they are either building their own proprietary digital-lending capabilities to ensure greater control and differentiation, or collaborating with the other two categories of players below.

Internet Platforms

E-commerce digital aggregators like Amazon, Flipkart, and Ola, along with digital payment platforms like Paytm and PhonePe, are already providing MSMEs with non-credit services. As the digital lending market evolves, they are in a strong position to leverage customer data to expand into MSME credit. For now, most internet platforms in India that seek to enter the digital lending market are doing so by partnering with banks, NBFCs, and FinTechs—but they could also emerge as standalone players.

FinTech Innovators

We have seen early stage MSME lenders shift from “feet-on-street” agent-based approaches to true FinTech digital models (see Figure 12). These nimble emerging players are building business models that tap new MSME markets and extract greater efficiencies from existing ones. FinTech lenders are building capabilities to capture the digital lending market and aim to build scale by addressing the whole or parts of the lending value chain.

FIGURE 12

MSME Lender Early Stage Funding

Early stage lenders are increasingly shifting from feet-on-street to digital lending models



FinTech Business Models

While still early days, three distinct FinTech business models are emerging—two partnership-based and one directly digital. See Figure 13 for a description of how each operates across the lending lifecycle.

Platform partnerships between digital lenders and platform-based businesses such as e-commerce enterprises, online aggregators, and payment providers help acquire MSMEs transacting on the platform, provide better underwriting data, and at times, facilitate repayments.

Supply chain partnerships between digital lenders and supply chain aggregators (e.g., automobile parts manufacturing ecosystems that help acquire MSMEs, provide cash-flow data for underwriting, and facilitate loan repayments).

Direct digital customer acquisition model uses lender digital assets such as a company website (pull-based) and advertising outreach through social media platforms like YouTube, Facebook, WhatsApp, Google, etc. (push-based) to acquire customers, and leverages the consent-based public digital infrastructure to access customer data for underwriting.

Digital lending success—particularly for underwriting—depends on strong supporting players:

API aggregators enable data access from public and private sources (examples: Jocata and Karza Technologies)

Credit scoring and verification services provide alternate data-based credit scoring and verification services (examples: CreditMantri, Lenddo, Creditvidya).

Digital process enablers assist in executing operational processes such as eSign, eKYC, eStamping, etc. (examples: TechProcess Solutions, Signzy, Digio, LegalDesk).

Data extraction and analytics firms extract, analyze, and present third-party data in lender-requested formats (examples: Perfios, FinBit.io, AccountScore, FinTechlabs).

Surrogate data providers access and analyze surrogate data like telecom and other utility data such as SMS data analysis and location analysis (examples: Zumigo, TrustingSocial, Cignifi).

FIGURE 13

FinTech Business Models

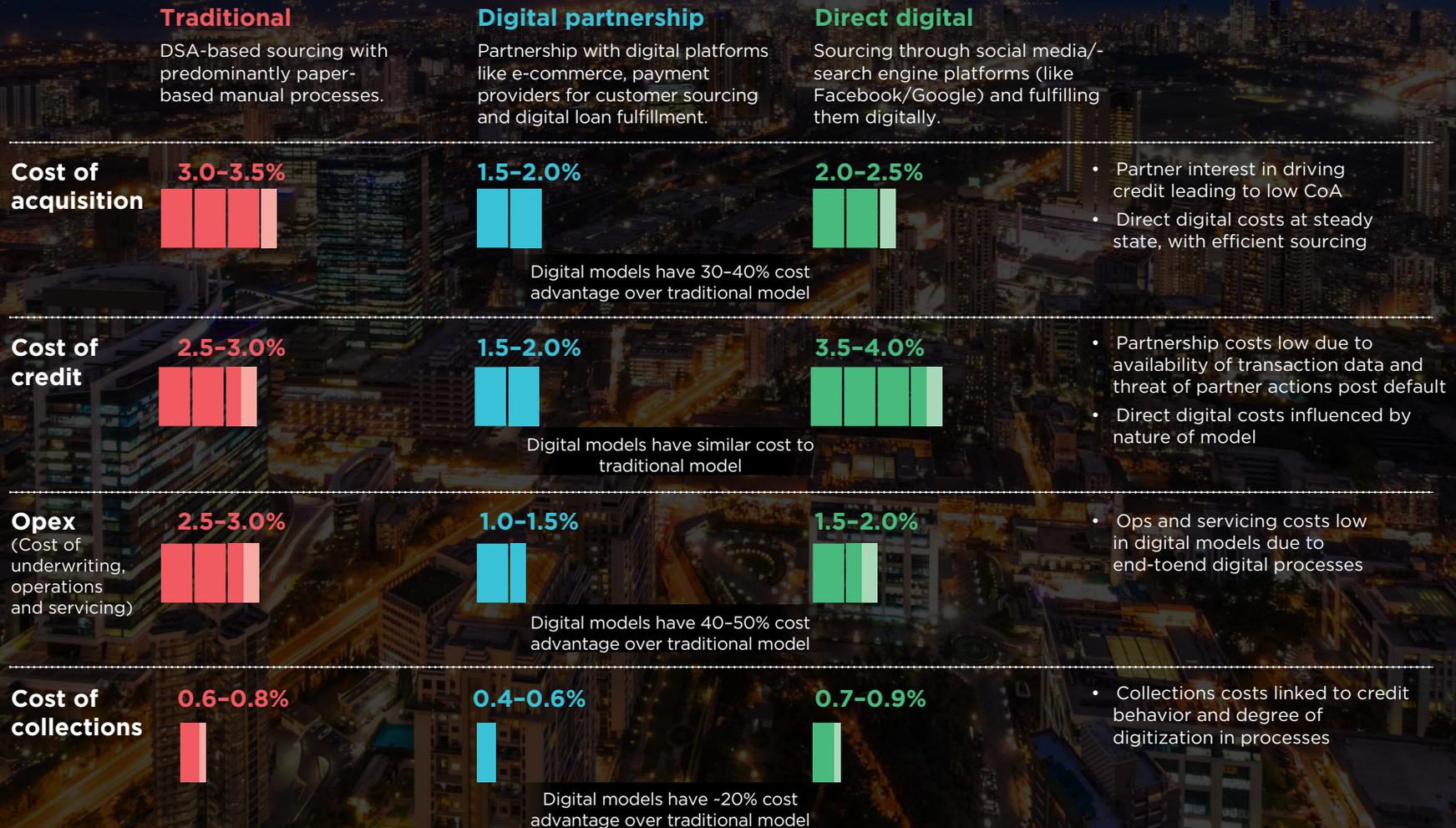
Entrepreneurs are experimenting across the lending value chain, with some FinTechs focused exclusively on customer sourcing, and others engaged in underwriting, co-lending, or full end-to-end digital lending.



FIGURE 14

Unit Cost Estimate for INR 10 L, 1 Year, Unsecured Business Loan²⁵

Our analysis of emerging models shows that digital partnerships offer the best steady state unit economics today



Source: Primary interviews, BCG case experience

The Segmentation Imperative

The players that will flourish in India’s digital lending market **must differentiate the future customer base** through actionable segmentation. Below, we illustrate a new approach to segmenting the landscape of potential digital borrowers in India—one that we believe yields considerable insight into the way the Indian digital lending market will evolve and where the immediate advantage lies for the players hoping to capture it.

Digital Data Meets Lending Demand

Based on our MSME survey findings and research, we identified two critical dimensions that we believe are highly predictive of the likelihood that an MSME will make the leap to digital lending.

Digital data trail. Does the MSME have a data trail, and how robust is it? A digital data trail is what enables lenders to capture and analyze MSME data efficiently and rapidly.

Across MSMEs, the digital data trail ranges from low (no data trail or bank transaction data only) to high (strong data trail through bank, digital payments, GST, and other alternative sources).

Digital lending demand. What is the MSME’s propensity for digital lending? Their credit needs and comfort with digital processes speak volumes about their potential preference to enter the digital lending process.

Some MSMEs have a large unmet credit demand and likewise have relatively high comfort with digital lending processes. Others have low digital lending demand—either due to lack of comfort with digital processes, lack of credit needs, or because credit needs are already met by incumbent banks and NBFCs.

Crossing these two key predictors into a matrix creates a useful framework for MSME segmentation. See Figure 15, which plots MSME industry types across this matrix and illustrates the four resulting segments: **Digital Performers, Digital Emergers, Mainstream Digital Players, and Digital Strugglers.**

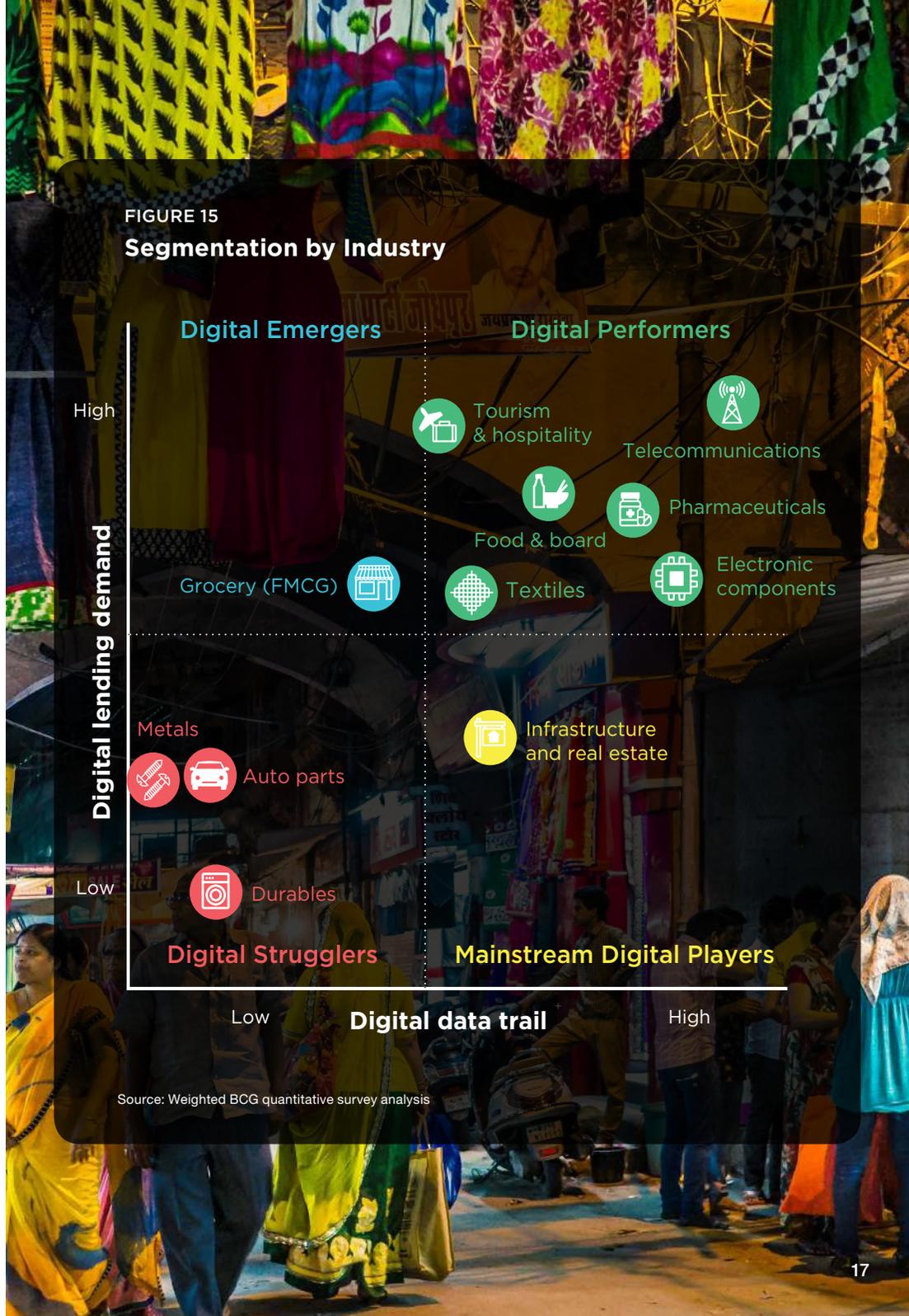
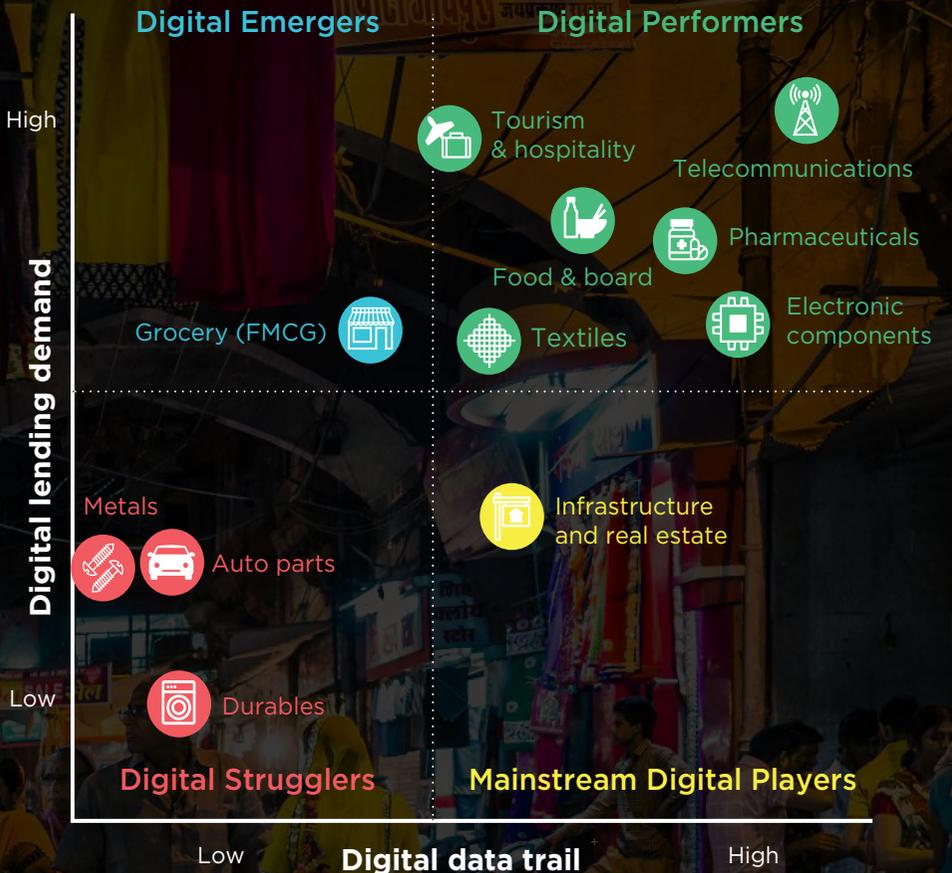


FIGURE 15
Segmentation by Industry



Source: Weighted BCG quantitative survey analysis

MSME Segment Profiles

Digital Performers are those with a strong digital data trail and a high potential demand for digital lending. This segment largely comprises urban and semi-urban direct customer-facing retail businesses (e.g., goods, food, and board) and a long trail of supply chains (tier 3 suppliers and below) that rely on digital sales. Their unmet borrowing needs, rich data trails, and accessibility via e-commerce platforms and industrial supply chains make MSME Digital Performers highly attractive to digital lenders.

Strong digital trail: These MSMEs have point-of-sale (POS) credit card machines, operate online, and are formalized. They also have a strong online presence through e-commerce aggregator platforms like Swiggy, UberEats, Amazon, and Flipkart, which makes them easier to discover. Their online and POS data trails are not traditionally used for underwriting by banks, however; this data is not in one place, making it challenging for traditional banks to understand and predict their cash flows.

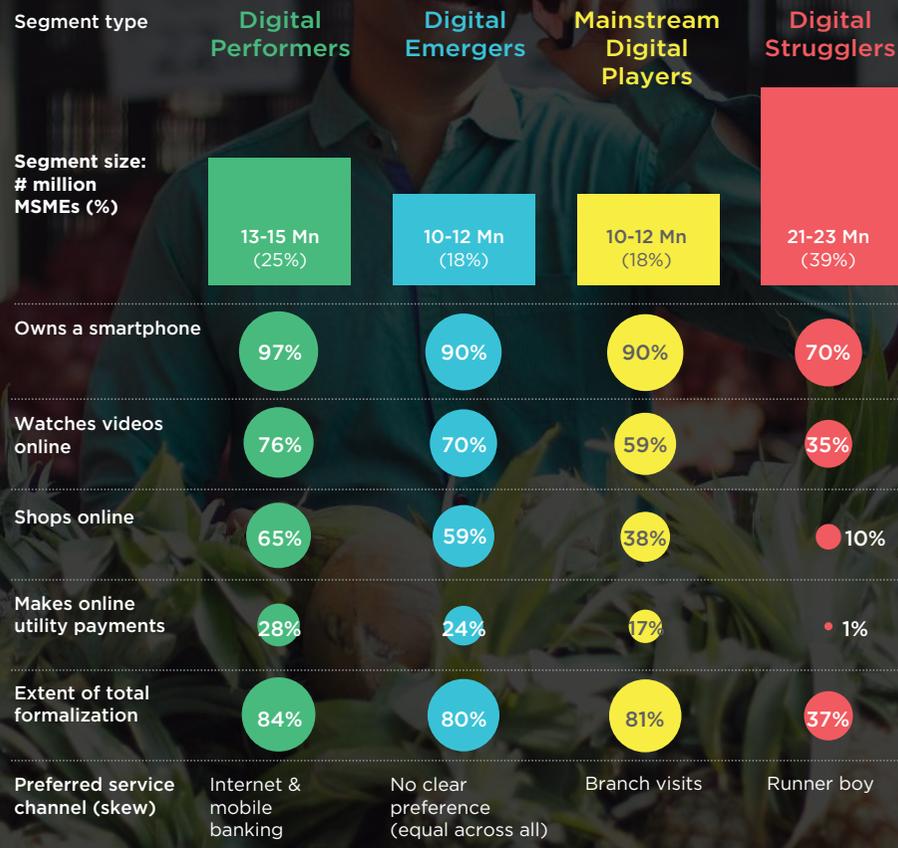
High digital-lending demand: This segment is largely underbanked because they do not have property to give as collateral and incumbent lenders are unable to fulfill seasonal needs with the desired loan turnaround times and service levels. While they have some access to long-term loans, their primary need is for short-term working capital. Turnaround times are long for loan applications through incumbant banks, and loan approval amounts tend to be too small.

Most attractive for digital lenders: Digital Performers need short-term loans and value quick turnaround times for their loan applications. Given their advantage in data aggregation and analytics, digital lenders are able to serve these MSMEs better than traditional banks and collect via existing digital payments systems. While over time we expect banks and NBFCs to expand into this segment as GST data becomes more widely available, in the near term these digital performers provide a strong opportunity for digital lenders.

Service businesses are **twice as likely** to use the internet for business processes; internet usage rates are even higher for self-employed professionals, where **80 percent** are using the internet for their business.

FIGURE 16

Proprietor Digital Comfort by Segment



Source: Weighted BCG quantitative survey analysis

Digital Emergers have similar lending needs to Digital Performers, but they have a thinner data trail. This segment comprises smaller, urban retail businesses that provide consumer goods and high-end services (such as hospitality, spa & salon, wellness, and pharmacies). These companies are not part of a supply chain, but rather are standalone businesses.

Emerging digital trail: While their data trail is often thin today, it will become more substantial as digital customer payments (UPI, credit card) increase and if there is more supplier pressure to report GST.

High digital-lending demand: These retail MSMEs need loans for business expansion and for working capital. Much like digital performers, this segment cannot currently get sufficiently sized loans at quick turnaround times from traditional banks.

Emerging opportunity for digital lenders: These tend to be smaller enterprises where more data analytics are required for underwriting—well outside of the core market for banks and non-banking financial companies (NBFCs). Digital lenders can create a highly differentiated model for serving this segment given their advantage in data analytics and their nimbleness to evolve over time.

Mainstream Digital Players are formal businesses that have low need for digital lending. These are often tier 1 vendors—big supply chain businesses primarily in manufacturing (auto, textile)—but can include others with strong collateral, such as transport service businesses (e.g., taxi fleet owners). This segment has established bank relationships, a strong borrowing track record, and fairly predictable business growth that is well-served by existing bank loans.

Strong traditional data trail: With high GST registration and reliable revenue streams from big business buyers, Mainstream Digital Players have “traditional” data trails and predictable bank account cash flows for bank and NBFC loan underwriting. Because their business is part of an organized supply chain, they are not incentivized to experiment with new digital payment models or online sales.

Low digital-lending demand: Credit demand is well served by long-term loans from traditional banks and NBFCs.

Potential opportunity for digital lenders: While there is generally less demand, seasonal spikes (e.g., Diwali season demand for textile manufacturers) can lead to some need for short-term loans that could be well served by digital lenders. Digital lenders can differentiate on product design (loan size and tenor) and quick turnaround times.

Digital Strugglers are the most challenging for both digital lenders and banks to serve. These are typically rural and/or single proprietor shops with self-employed nonprofessionals (e.g., welders, auto mechanics).

Weak digital data trail: These companies are too small to require GST registration and are not part of a supply chain, so do not have outside pressure to voluntarily register. Their payments data trails are low, as customers tend to pay with cash.

Low digital-lending demand: Digital Strugglers tend to be cautious with business expansions, and so their credit needs are lower and less frequent. When they need a loan, they tend to go to informal lenders.

Challenging for digital lenders to serve: Given their small digital footprint, Digital Strugglers are difficult to discover (not part of an ecosystem or platform), cannot be digitally underwritten, and collections cannot be made digitally. Success serving this segment will be best met with a “feet-on-street” agent model backed by a highly automated internal tech operation.

Digital Strugglers are currently served by lenders such as **Vistaar** and **Five Star**.



Digital Performer

Lakshmi

27 years old • Delhi

Mobile store retailer (B2C) • 4 years in business

INR 50 L annual revenue | 12-15% annual growth

Proprietor digital savviness

Very high

Years of internet usage

- 10-12 years

Online spend as percentage of total

- 25%+ with 100% via credit cards, internet banking, wallets

Ecosystem

Yes: Direct dealer for larger brands such as Samsung and Xiaomi

Degree of formality

High (with data trail): GST, shop registration

Digital data trail

High

- **Sales:** 30% sales online (associated with e-commerce platforms)
- **Payments:** 90%+ via credit card, e-wallet, online banking, or check; minimal cash
- **Processes:** "Busy" software used for accounting

Digital lending demand

High

- Currently underserved due to lack of property as collateral
- Has heard of digital lenders but has not yet explored
- Key trigger: short loan processing time and loan flexibility



Digital Emerger

Venkat

35 years old • Bangalore

Garments Retailer (B2C) • 5 years in business

NR 30-40 L annual revenue | 15-19% annual growth

Proprietor digital savviness

Very high

Years of internet usage

- 6-8 years

Online spend as percentage of total

- 10-15% spend online (mostly card-based)

Ecosystem

No: Standalone enterprise

Degree of formality

High (with data trail): GST (recent), shop registration

Digital data trail

Moderate / low

- **Sales:** 0% sales online (offline retail only)
- **Payments:** 30-40% via credit card and e-wallet; the rest in cash
- **Processes:** No software; physical books used for accounting

Digital lending demand

Moderate / high

- Currently underserved; relies on informal lenders
- Unaware of digital lenders, but keen to explore
- Key barriers: digital loan process, thin data file, and trust concerns



Mainstream Digital Player

Srinivas

45 years old • Chennai

Tier 1 auto manufacturing vendor (B2B) • 7 years in business

INR 70 L annual revenue | 10-12% annual growth



Digital Struggler

Pramod

40 years old • Rural Karnataka

Textile weaver (single proprietor) • 20 years in business

INR 10 L turnover | 5-10% annual growth

Proprietor digital savviness

Moderate

Years of internet usage

- 7-9 years

Online spend as percentage of total

- 5-10% spend online; rest is primarily cash on delivery

Ecosystem

Yes: Part of automobile supply chain

Degree of formality

High (with data trail): GST and most other registrations

Digital data trail

High

- **Sales:** 0% sales online
- **Payments:** 90%+ via credit card, e-wallet, online banking, or check; minimal cash
- **Processes:** “Busy” software used for accounting

Digital lending demand

Low

- Needs are met by traditional banks given access to collateral and predictable cash flows
- Key barrier: already has established relationship with bank, with access to sufficient and low-cost credit

Proprietor digital savviness

Moderate

Years of internet usage

- 0-1 years

Online spend as percentage of total

- No online spend

Ecosystem

No: Standalone job worker

Degree of formality

Low: GST not required given small size of business

Digital data trail

Very low

- **Sales:** 0% sales online
- **Payments:** 95%+ cash
- **Processes:** No software; physical books used for accounting

Digital lending demand

Low

- Relies on local informal lenders
- Has lending demand, but difficult to serve given lack of digital infrastructure and reach
- Key barrier: unaware of digital credit; low digital trail

EXAMPLE



Targeted Insights: Building Deep Understanding of Segment Behavior to Deliver Tailored Solutions

While Indifi primarily utilizes a platform partnership lending model, the company believes their key differentiator is their deep understanding of the segments where they operate. This differentiated approach has allowed the company to assess businesses in the context of the industry where they operate, thus opening up possibilities for those MSMEs with previously limited access to credit.

INDIFI'S VALUE PROPOSITION



Deep segment understanding

Focus on a seven high priority segments, developing deep understanding of segment customer behavior and credit needs.



Product offerings specific to the segment

Product parameters matched with cash flow patterns of the segments (e.g., 30-40 day working capital for travel agents).



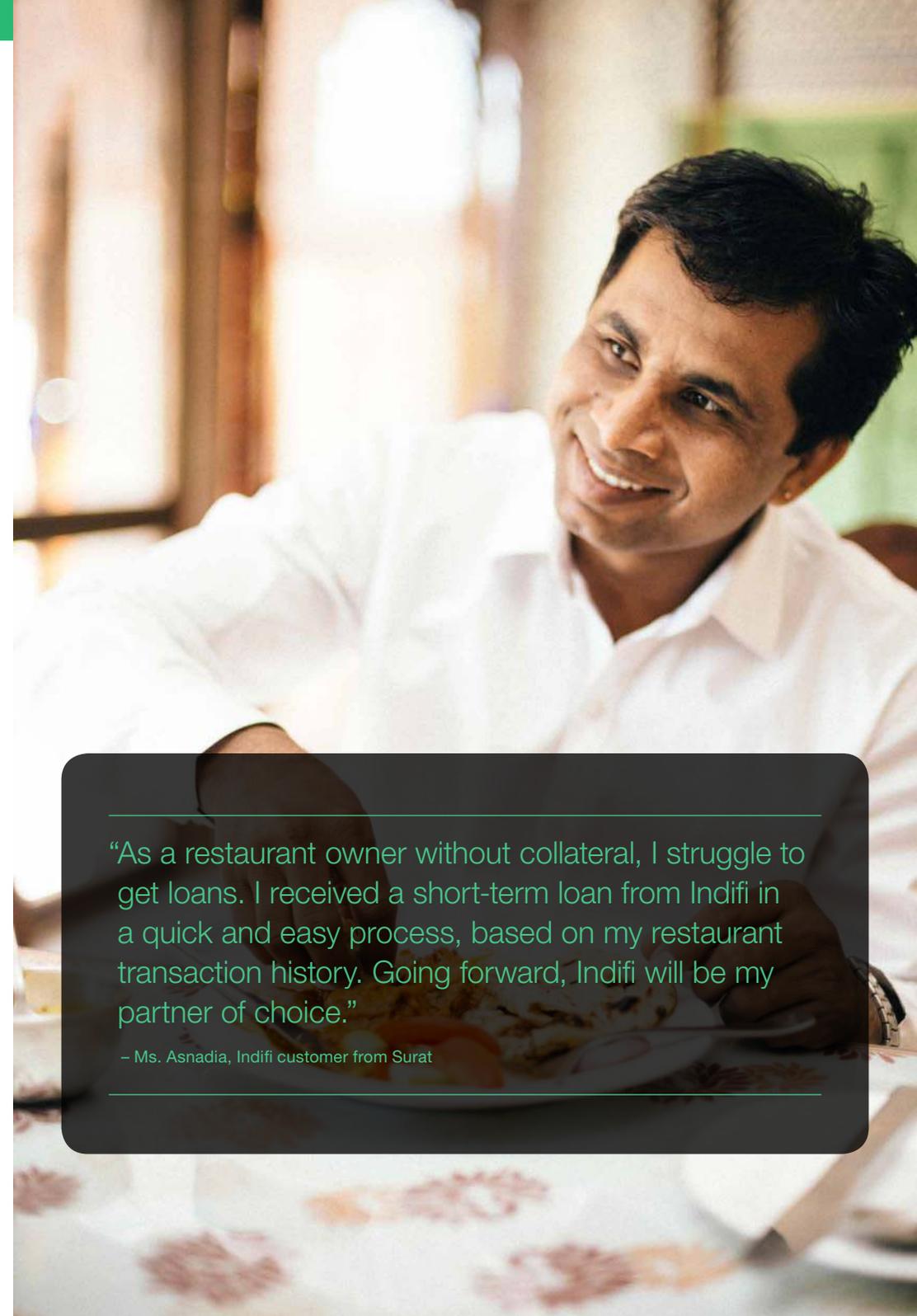
Segment-specific risk scorecards

Credit assessment scorecards tailored to risk parameters that leverage segment-specific digital data trails (e.g., scorecards specific to restaurant business).



Customized pricing models

Pricing models customized to the segment risk continuum.



“As a restaurant owner without collateral, I struggle to get loans. I received a short-term loan from Indifi in a quick and easy process, based on my restaurant transaction history. Going forward, Indifi will be my partner of choice.”

– Ms. Asnadia, Indifi customer from Surat

Recommendations

Serving the Market: Lender Recommendations

In the context of India’s diverse and rapidly evolving MSME sector, both incumbent lenders and new entrants will need to establish segment-specific solutions to effectively serve the digital MSME credit market. These solutions span three critical areas, each discussed below.

1. ACQUISITION: Leverage supply chain ecosystems and e-commerce

platforms to improve customer acquisition. Customer discovery cost has been the biggest challenge for low-ticket MSME loans. Finance through existing ecosystems, such as industrial supply chains aggregates small loans to help lenders access a sufficiently large volume of customers to reach viable scale. Going forward, we can also expect direct digital sourcing through e-commerce to pick up in a meaningful way, especially for the Digital Performers segment.

Industrial supply chains have unique characteristics—for example, different cash cycles, different levels of digitization, seasonal variation, and returns management needs. Traditionally dominated by banks serving the Mainstream Digital Player segment (tier 1 suppliers), new lenders have started bundling digital loan offerings with other supply chain services, thereby improving customer acquisition among Digital Performers (tier 3 suppliers) where lending needs have not been met by banks. This becomes an attractive proposition for underwriting as well: These MSMEs are more likely to participate in the GST network given pressure from supply chain partners, creating a trail of both GST data and verifiable supply chain data.

Key success factors in supply chain finance include: support throughout the transaction flow (e.g., invoicing, tracking invoices, reconciliation, cash position) and deeper integration with anchors and vendors (especially enterprise resource planning platforms).

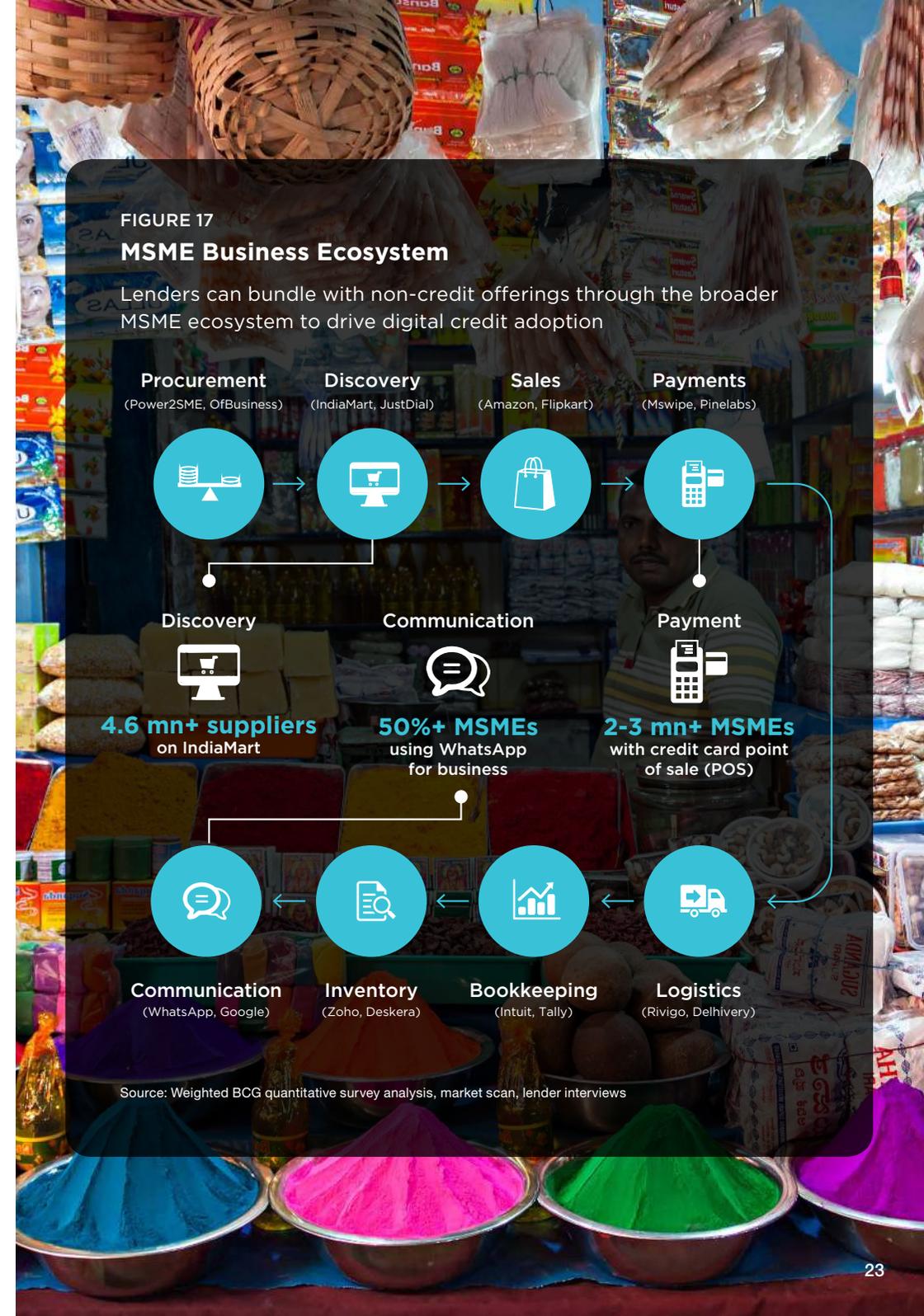
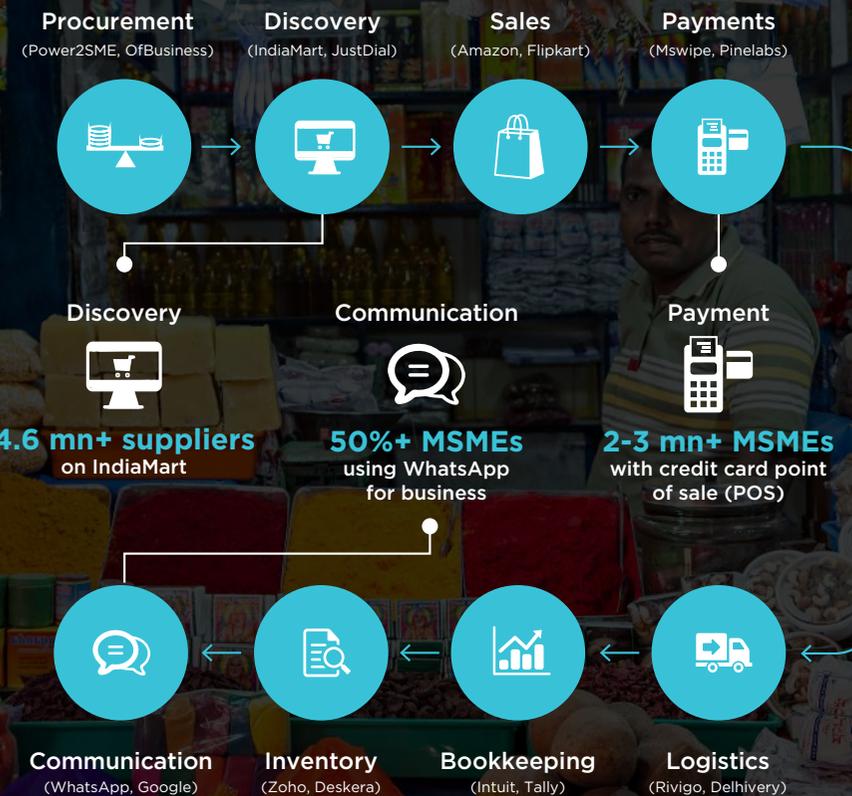


FIGURE 17
MSME Business Ecosystem

Lenders can bundle with non-credit offerings through the broader MSME ecosystem to drive digital credit adoption



Source: Weighted BCG quantitative survey analysis, market scan, lender interviews

E-commerce platforms and business management ecosystems can also bundle with credit to help lenders reach Digital Performers and increasingly, Digital Emergers (urban and semi-urban retail businesses). Some MSMEs have taken advantage of these e-commerce platforms to expand their customer base (addressing the customer demand pain point mentioned in Chapter 3), while others have leveraged group buying platforms to drive down costs. Being a part of the platform has had a spillover effect of greater digitization of business processes (e.g., inventory management, digital payments, accounting software), thereby creating a more robust data trail for lenders. Digital lenders who partner with e-commerce and business management ecosystems will build distinct advantages in MSME customer sourcing and underwriting. Figure 17 illustrates some of the business process platforms that could serve as partners for bundled offerings and access to MSME data.

2. ANALYTICS: Embrace next-generation data analytics to manage risk, improve underwriting, and thereby offer more customized loans (e.g., by tenor, size).

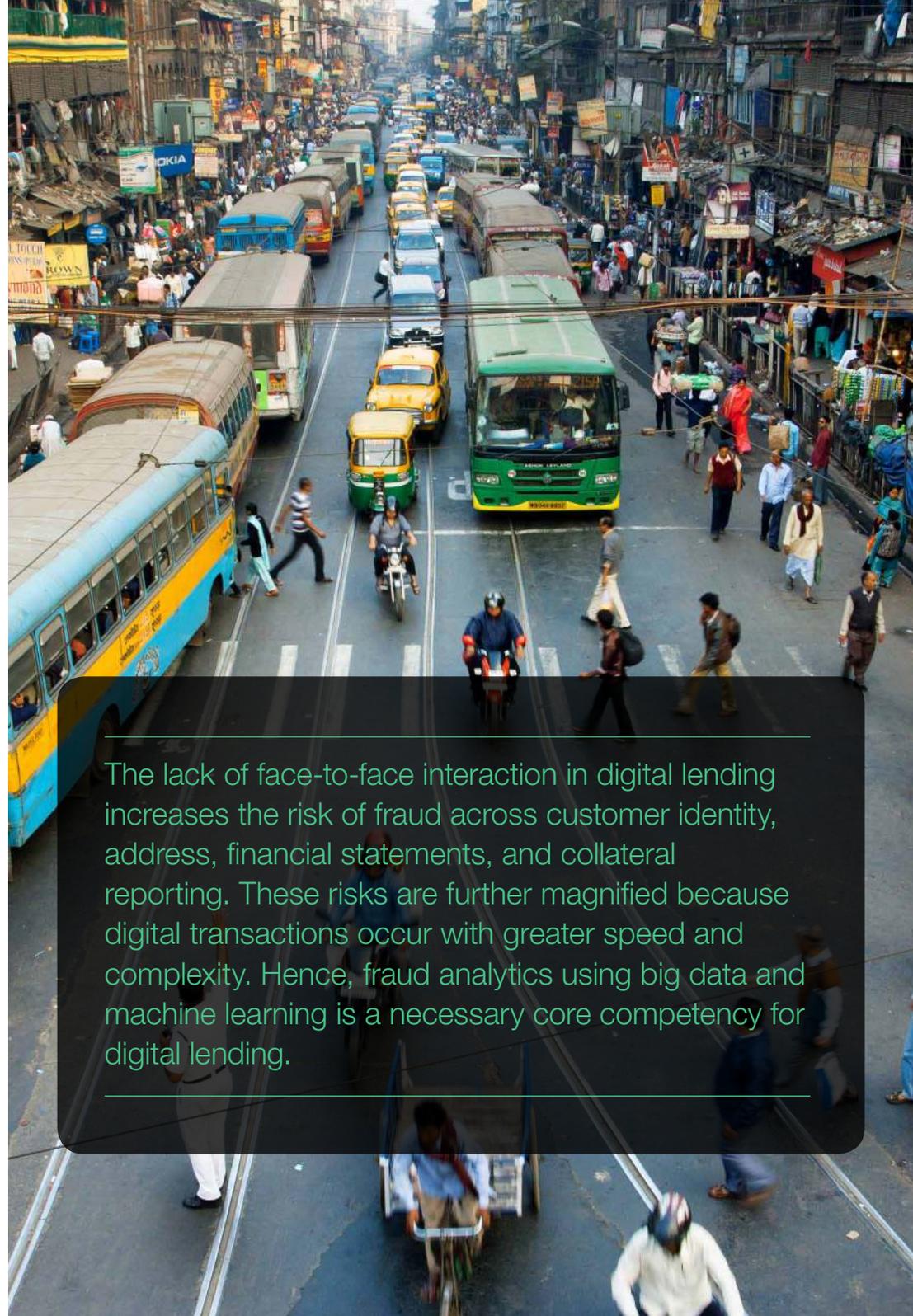
With large quantities of structured and unstructured data available from numerous data sources, a lender's ability to analyze and generate insights from data—specifically for credit underwriting, monitoring, and fraud detection—is emerging as a key differentiator.

The benefits of tailored analytics across multiple dimensions (e.g., industry, new versus repeat customer, new data sources) lead to:

Deeper customer knowledge. A differentiated analytics approach allows lenders to develop deep understanding of specific industries, thereby allowing them to expand reach and improve offerings.

Improved flexibility in product design and delivery. This includes ticket size, tenor, collateral requirements, and interest rates, which can be constructed with a much faster turnaround time than traditional lending.

Improved fraud detection outcomes. Our research shows that digital lending AI systems provide a 15 to 25 percent improvement in fraud detection over legacy models.²⁶



The lack of face-to-face interaction in digital lending increases the risk of fraud across customer identity, address, financial statements, and collateral reporting. These risks are further magnified because digital transactions occur with greater speed and complexity. Hence, fraud analytics using big data and machine learning is a necessary core competency for digital lending.

EXAMPLE



Data-driven Models: Understanding Customers and Reducing Risk Through Deep Analytics

NeoGrowth is a good example of a pioneer lender leveraging deep data insight and analytics to drive customer sourcing, underwriting, and monitoring, supported through a best-in-class tech stack.

NeoGrowth serves MSME retailers, applying smart analytics on their bank account and financial data, along with insights from the retailer point-of-sale (credit card) system to predict customer patterns and behavior.

The company also offers flexible and innovative repayment options to customers which are linked to their actual business revenues and performance.



Cash-flow pattern recognition

Bank statements and other cash-flow transaction data utilized for powerful analytics on MSME patterns and behavior.



Early warnings for loan monitoring

Granular assessments of card chargebacks and repayment patterns (e.g., daily volume patterns) leveraged for early warnings on customer credit health.



Segment-specific modelling

Given retail-only focus, deep understanding of industry patterns (e.g., peaks, seasonality, volumes, returns) supports customized credit models.



Fraud analytics

Continued pattern recognition to identify potential fraud patterns such as point-of-sale suppression and diversion by merchants.



“My relationship with NeoGrowth started back in November 2014. NeoGrowth was responsive to my funding requirements and provided me a business loan only based on analysis of my monthly credit and debit card swipes ... [I was] amazed by the 30-minute loan approval process.”

– Mr. Jitendra, NeoGrowth customer

3. ENGAGEMENT: Design tailored customer journeys to drive adoption and loyalty and improve lending outcomes. In particular, there are three key aspects for digital lenders to address:

Assisted onboarding. While MSMEs are becoming digitally savvy, most will be participating in digital lending journeys for the first time. More than **90 percent of MSME digital borrowers in the next five years will be first-timers.** Consequently, there will be more drop-offs as MSMEs become frustrated or confused by the journey and abandon their efforts. In our survey, **roughly 30 percent of MSMEs expressed increased comfort with digital lending when assisted.** It is critical for lenders to support these customers through call centers and chat messengers.

Financial education. Many MSMEs have limited understanding of formal financial services and the implications of poor financial discipline (e.g., the impact of missed payments on a credit score). This can be addressed through lender adherence to high standards of transparency and through customer education programs. The lending industry, in partnership with industry associations and other influencers, has the opportunity to build such customer education programs.

End-to-end design. Firms like Apple and Amazon, which place customer experience first, are constantly increasing customer expectations around design interface. Digital lenders must embrace similar design principles. Key components of a superior customer journey include a simple and intuitive interface, data auto-fill through APIs, real-time customization based on incoming data, and a seamless omni-channel (across online and offline) experience.

FIGURE 18

Top Digital Lending Discomforts and Mitigations



Factors that improve comfort level (% of MSMEs)



Source: Weighted BCG quantitative survey analysis

EXAMPLE



Superior Journeys: Delivering Unrivaled Experience to the Digital Customer

ZestMoney, working with online and offline merchants, offers consumers a fast and convenient payment option without the need for a credit card or a credit score.

While not an MSME lender, ZestMoney's digital consumer lending model serves as a powerful example of a tech-enabled customer experience. Customer journeys are optimized so that users experience a seamless credit purchase.



Hassle-free customer data collection

Absolute minimum information is collected from the customer, supplemented by merchant partner data and third-party sources.



Dynamic risk-based user experience

The best customers go through fast lane customer journeys, with vastly reduced number of screens and five times faster processing.



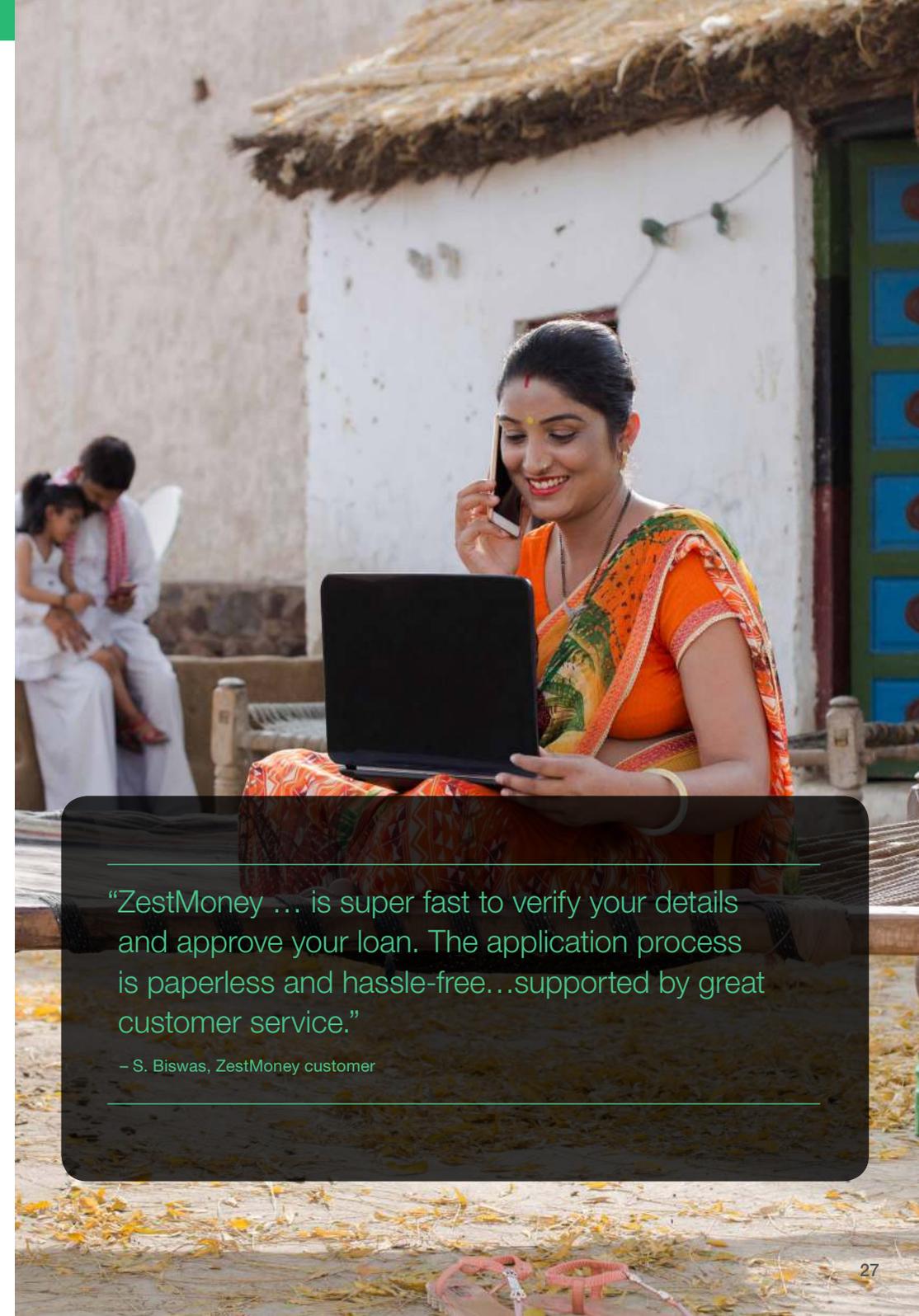
Risk-based pricing

Cohort-based pricing approaches based on risk algorithms that are continuously refined.



Superior online to offline hand-off

Consistent omni-channel experience across online and offline in both credit purchase (i.e., customer journeys) and credit fulfillment (i.e., purchase online, use offline).



“ZestMoney ... is super fast to verify your details and approve your loan. The application process is paperless and hassle-free...supported by great customer service.”

– S. Biswas, ZestMoney customer

Building for Future Growth: Regulator Recommendations

Government plays a pivotal role in enabling—or inhibiting—the right conditions for MSME credit growth. India’s regulators can help digital MSME lending reach its full potential by continuing to facilitate data sharing with consent and by incentivizing formalization for smaller MSMEs. Some proposed solutions are outlined below.

1. FACILITATE DATA SHARING WITH CONSENT: Access to MSME data is critical to the success of digital finance models. India’s regulators have been instrumental in building the infrastructure for digital MSMEs, and there are further steps that can be taken.

Enforce open, standardized API frameworks. The ability to seamlessly and securely share data is critical for encouraging the growth of digital lending—not just for improved underwriting, but also for ongoing monitoring and servicing. MSME digital data is currently proprietary to the system where it is generated and stored. The government must mandate that all entities with customer data share it through standard API frameworks, with customer consent (as illustrated in Figure 19).

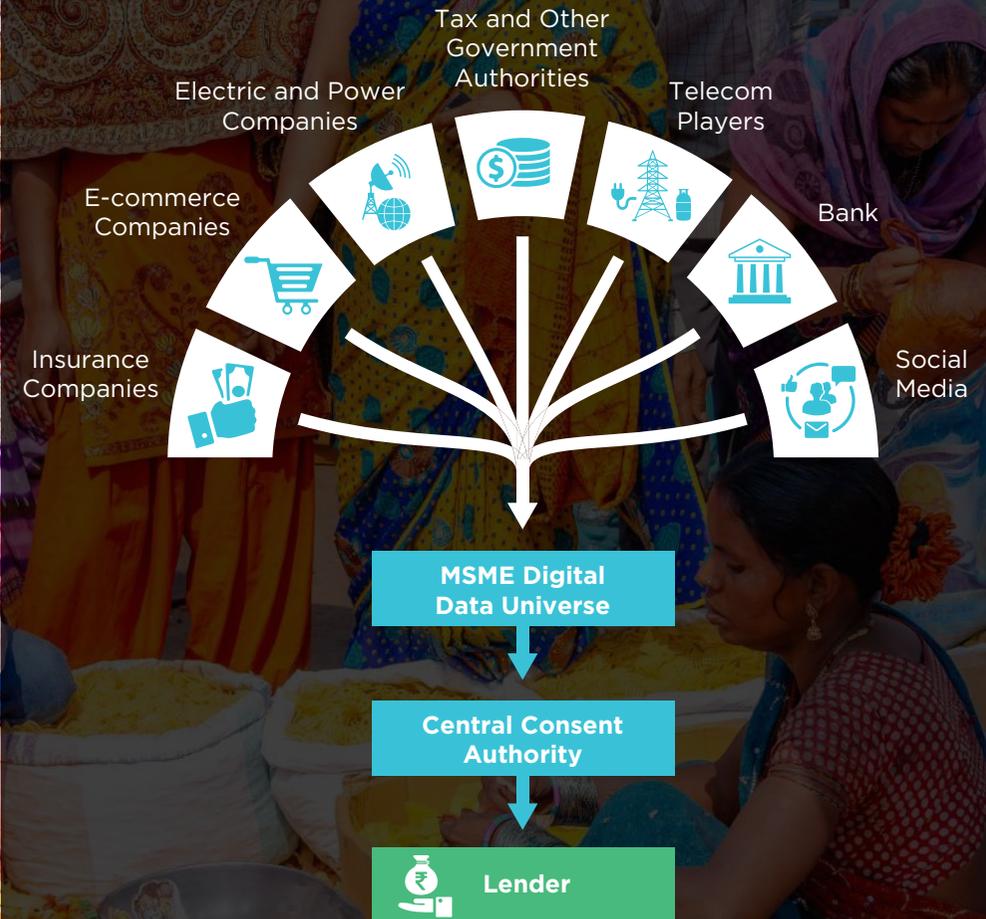
Institute a seamless tax data consent process. Currently, MSMEs can share data with lenders during the loan application and underwriting process, including manually sharing GST data. To improve monitoring, servicing, and renewals, regulators should institute mechanisms that allow MSMEs to give consent for ongoing tax data collection and allow digital lenders to build tools to sit on top of the tax network for seamless data access.

Enable online access to collateral records. Most digital MSME lending today is focused on unsecured business loan products, given the challenges of verifying the collateral. MSME mortgages are not centrally recorded today, which leads to borrower fraud with multiple mortgages on the same property. Digitizing land records on a centralized system would allow lenders to record mortgages against these records, eliminating fraud and increasing the underwriting accuracy for collateralized loans.

Expand credit bureau scoring methodology. Consumer and MSME credit have seen significant advances driven by the government mandate that banks and NBFCs must share borrower data with credit bureaus. The government can further advance credit bureau scoring accuracy and expand eligibility for first-time borrowers by mandating that surrogate customer data (e.g., utility and telco payments) be shared as well. This supplemental data would enhance existing credit scoring and qualify new-to-credit MSMEs with no current financial score.

FIGURE 19

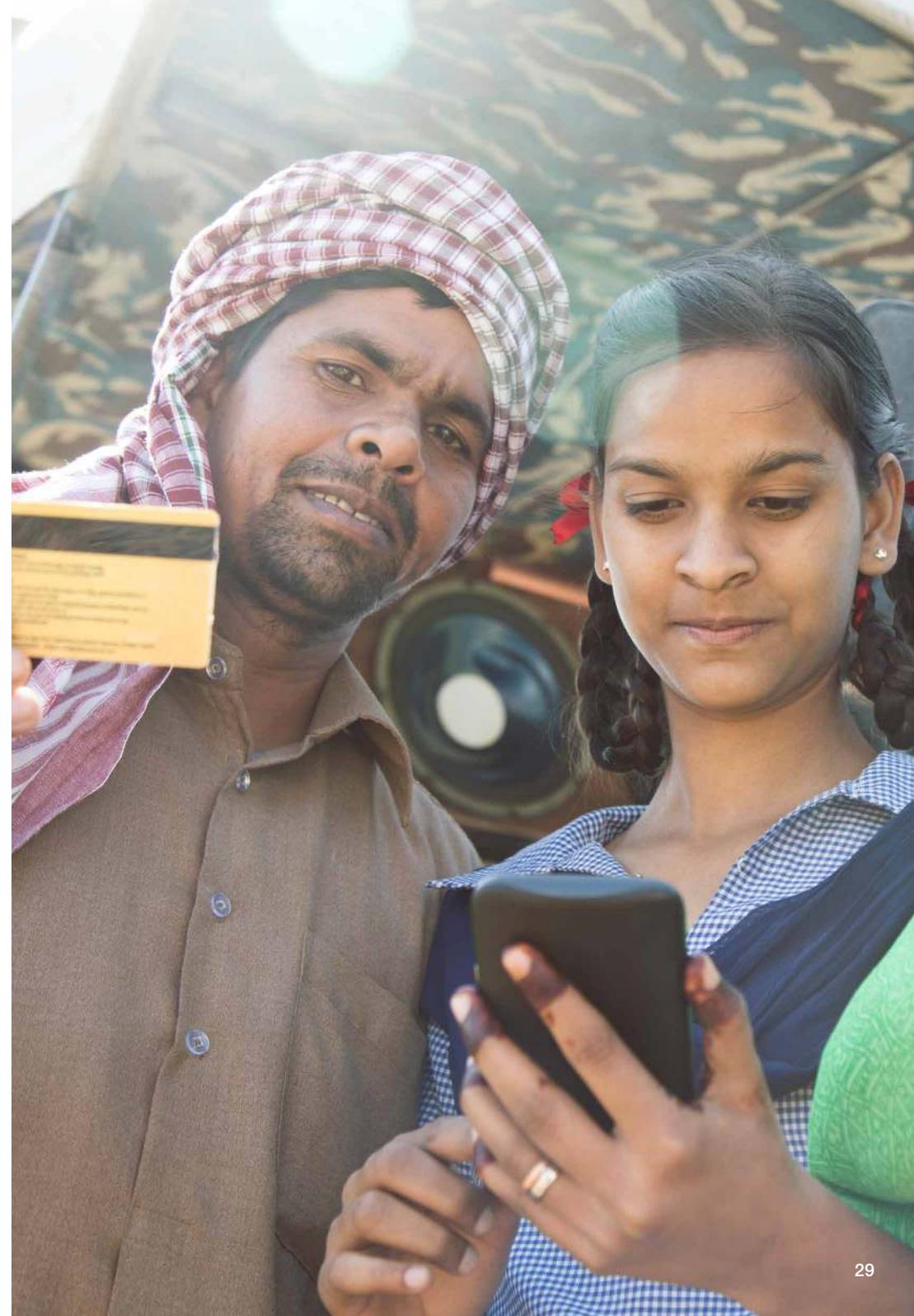
Illustration: Open API Universe for MSME Digital



2. INCENTIVIZE FURTHER FORMALIZATION: While GST has led to great strides in India's MSME formalization, nearly 40 percent of businesses with 3-10 L annual revenue are still informal (see Chapter 2). Regulators can encourage registration for these MSMEs through government loan refinancing and by modifying business registration processes.

Revamp government loan refinancing programs to include newly established digital lenders and to focus on small, new-to-finance MSMEs. The government refinances MSME loans at a subsidized lower rate through the SIDBI and MUDRA programs. However, the current programs do not serve the riskiest, new-to-credit MSMEs where support is most needed. This can be addressed by relaxing capitalization rate and ticket size restrictions to allow the participation of digital lenders with small unsecured loans, and by prioritizing refinancing based on MSME borrower classification, with more favorable rates for the smallest MSMEs. This would in turn encourage smaller MSMEs to formalize, as formal registration is required to access this program.

Modify MSME registration processes. Two examples are MSME checking account registration and Ministry of Corporate Affairs (MCA) proprietor registration. A significant percentage of MSMEs in India continue to rely on proprietor (personal) savings accounts for their business transactions: Less than half of MSMEs have an active checking account. Regulators should simplify the process to open a checking account and make it easier to operate them. Similarly, the government should consider registering proprietorships and partnerships in the Ministry of Corporate Affairs (government company registrar). MCA filings are an increasingly useful way for lenders to authenticate and underwrite MSME borrowers, and the extension of this registration to all MSMEs would do much to help formalize these businesses.



Endnotes

- 1 World Bank 2017 Databank
- 2 Press Information Bureau, Government of India, 2014; OECD Scoreboard, 2016; U.S. Small Business Administration Small Business GDP Update, 2012
- 3 Total MSME credit demand estimated based on credit required per MSME size (annual revenue) and sector type
- 4 Loan taken under entity's name (working capital or terms loan)
- 5 Loans taken in individual name empirically assessed as for business purposes (e.g., in products such as LAP, gold loans, etc.)
- 6 Convergences 2018 Microfinance Barometer
- 7 MOSPI (Ministry of Statistics & Program Implementation) 73rd round enterprise survey '16 (3L MSME sample) and MSME ministry census '07 (17L MSME sample). Analysis of granular bureau data done in partnership with TransUnion CIBIL.
- 8 "Formal" defined as existence of a formal record through registration with any government act or authority such as GST, EPFO, Factory Act, or municipal or local corporation
- 9 "Digital" defined as those MSMEs who have adopted digital tools across any one of accounting processes (i.e., usage of technology like Tally) or payments (>30% payment receipts through online banking, wallets, UPI apps, cards), or online sales (sales on e-commerce platforms and websites)
- 10 Economic Survey, 2017-18, Government of India
- 11 Smartphone refers to 4G models
- 12 Credit Card, Debit Card, PPI, and UPI transactions included for calculation; Nov '16 line corresponds to demonetization announcement
- 13 WhatsApp for biz. comm. includes using WhatsApp for basic communication with suppliers and customers
- 14 Payments considered to be 'digital' if more than 30% of payment receipts happen through online banking/wallet apps/UPI apps/cards
- 15 Percent of MSMEs using online banking payment modes (NEFT, RTGS)
- 16 Presence of online aggregator where sales/transactions take place like e-commerce website, excludes listing platforms or online directories
- 17 "Others" include quality of service, processing fees, flexibility in loan options
- 18 OTP based eKYC permitted only for loans INR <60 K; refer to page 12 for more detail on the 2018 Supreme Court Aadhaar judgment
- 19 Cost advantage estimate based on average of "digital partnership" and "direct digital" models
- 20 Numbers from quantitative survey analysis (N=1514), post educating MSMEs about digital lending
- 21 Data for borrowers in commercial bureau only
- 22 Formalization projection based on BCG quantitative survey and analysis
- 23 Weighted BCG quantitative survey analysis. Based on rank 1 responses only. "Others" include fear of penalties, fear of eviction, need for credit to run the business.
- 24 Data as of July 2018. Funding includes only equity-based funding. Timeframe bucketing based on first round of funding.
- 25 As a percentage of ticket size, unit cost analysis performed assumes similar spread across traditional and digital models
- 26 BCG case experience; lender interviews



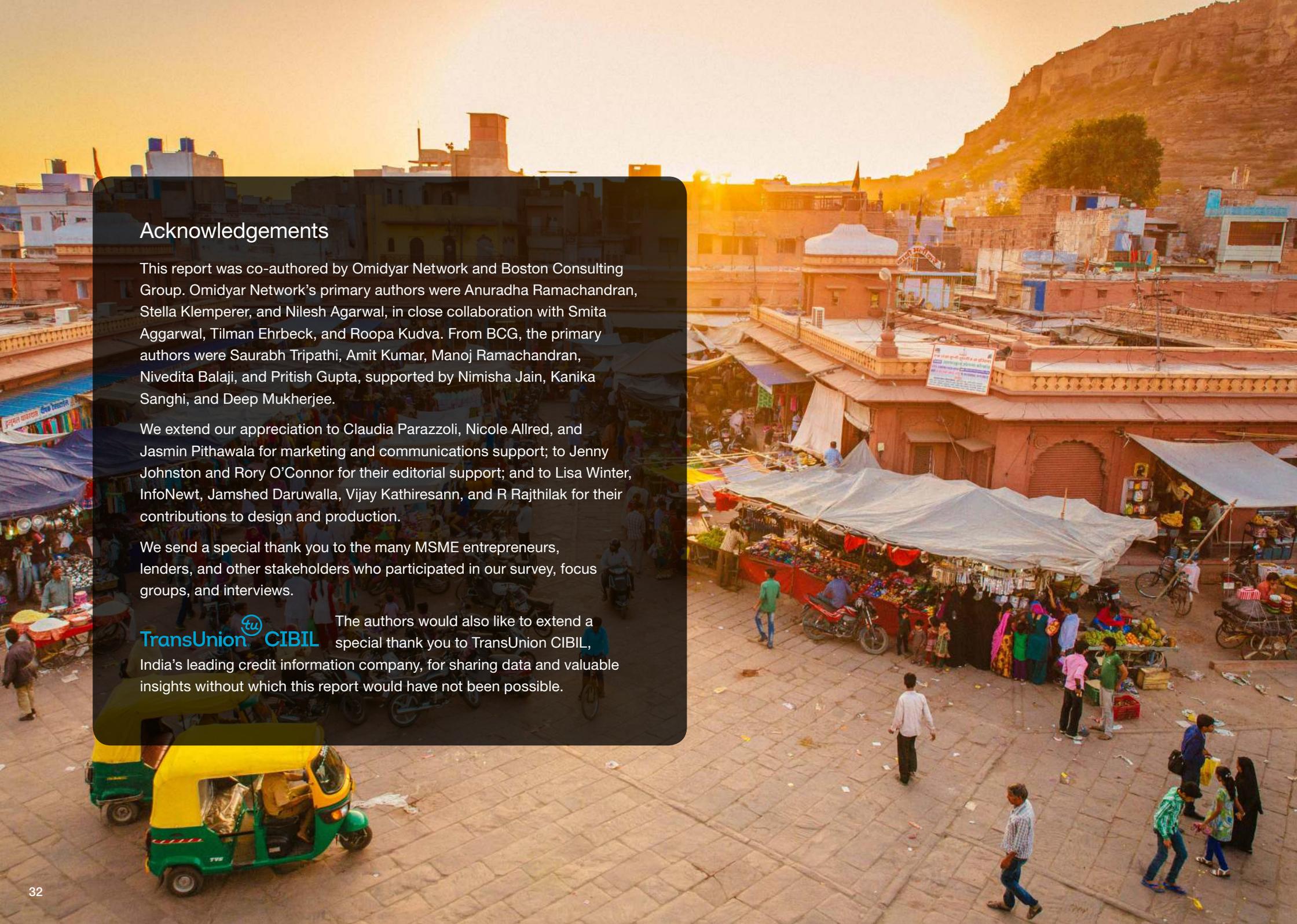
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