Caribou Digital

Advancing financial inclusion through platform-enabled financial services

Exploring key segments in low- and middle-income countries

Cover image © Mansi Midha/ Bill & Melinda Gates Foundation.
Linda Rosmaniar, a Grab driver for food and parcel delivery, poses for a photograph at the PEKKA office in Jakarta, Indonesia, on September 17, 2023.

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Finally, this report synthesizes our perspectives on platforms but is not a comprehensive synthesis of all the emerging literature. We conducted one such review in 2020, but the field has expanded considerably. For this report, we combined broad, conceptual approaches with deep dives and data gathering in three representative countries, blending desk research and interviews involving stakeholders ranging from global experts and platform operators to financial services organizations and individual micro-entrepreneurs.

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Caribou Digital delivers fund management, learning partnerships, and research, advisory, and evaluation services, supporting organizations worldwide to build more inclusive and ethical digital economies.

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Foreword

I am very pleased to introduce this report from the Caribou Digital Institute: *Advancing financial inclusion through platform-enabled financial services*. At the Bill & Melinda Gates Foundation we have seen how digital platforms are impacting livelihoods across the world, changing traditional livelihoods and introducing entirely new ones. Digital platforms give drivers, laborers, small-scale producers, and firms new ways to find work, reach customers, and access financial services. Platforms also expose them to new competition and demand new skills. In the foundation's work in agriculture, women's economic empowerment, and financial inclusion, digital platforms are increasingly relevant to how we reach communities.

While the changes to livelihoods and economies are generally considered to be inevitable, it is not inevitable that the digital transformation of economies and livelihoods will be inclusive, beneficial, or equitable for women, rural communities, or low-income segments. This report explores the intersection of platform livelihoods, poverty, and gender, defining the current realities for these segments and considering how platform livelihoods can be more inclusive and more empowering. How can a woman selling to her social circle through WhatsApp take the next step to grow her business? How can a small retailer leverage platform marketplaces to better serve offline customers? How can drivers manage risk?

The report highlights the actions that should be taken by countries, firms, and development actors to maximize the potential of digital platforms to contribute to low-income livelihoods and increase financial inclusion. First is the development and support of robust digital public infrastructure (DPI). This includes efficient and accessible digital identity systems, secure and interoperable payment systems, and comprehensive data-sharing frameworks that respect privacy while enabling innovation.

Moreover, the report stresses the importance of intentional service design by platform companies (abetted by thoughtful policy design by governments). If platforms wish to be as inclusive as possible, they will have to proactively design their services to reach and effectively serve women, low-income groups, and rural communities. This includes addressing barriers such as digital literacy, gender norms, trust in digital transactions, and accessibility challenges.

This report from the Caribou Digital Institute serves as a call for a coordinated effort among governments, private sector players, and civil society to be intentional in creating an inclusive digital future. It provides a roadmap for leveraging the power of digital platforms to create more equitable and prosperous economies, and shows where digital platforms can extend the reach and impact of financial services.

I am grateful to the Caribou Digital Institute and for the efforts of Marissa Dean, Jonathan Donner, Savita Bailur, and Mark Wensley to make this report a reality. Already, this report, and the research that informs it, are influencing how the Gates Foundation considers platforms in our investments in financial inclusion and women's economic empowerment and has further energized our focus on DPIs as foundations of inclusive economies, digital or otherwise. I hope that it informs your thinking, and actions, as much as it has mine.

Brooke Patterson

Indonesia Country Lead, Inclusive Financial Systems,
Global Growth & Opportunity Division
Bill & Melinda Gates Foundation

Executive summary

Platforms are having a global impact, with purpose-built marketplaces and general-purpose social media platforms acting as catalysts, enabling newcomers and established businesses to enter and navigate the digital economy. However, platform participation has not been equitable, with some evidence suggesting that platformization can exclude marginalized groups, perpetuate gender inequalities, and undermine the promised flexibility of work.

Despite these challenges, platformization can be shaped to be more supportive of the livelihoods and financial inclusion of low-income communities and women. Building and improving digital public infrastructure is one opportunity area that countries can pursue to this end.

This report is anchored to platform practices within three traditional, offline livelihoods.

In this report, we set out to explore the connections between the digital economy, livelihoods, and financial inclusion. We identified three traditional, offline livelihoods that are now being platformed with the strongest potential to engage and include low-income segments: *independent resellers*, *nanostores*, and *two- and three-wheel ride-hailing and delivery drivers (2/3-wheel drivers)*. These segments generally have lower barriers to entry and operate within localized or hyper-localized markets rather than competing on a global scale. They represent the most significant segments of micro- and small businesses and workers using platforms today in low- and middle-income countries (LMICs).

Within our key segments, we identified three crosscutting practices highlighting how individuals from low-income communities leverage platforms within their livelihoods:

1. **Selling goods and services on social messaging platforms (social selling).** Social selling is the most notable practice impacting low-income communities and women, particularly among independent resellers. Individuals leverage social media platforms' broad reach and interactive features to connect with potential customers, showcase their offerings, and curate transactions, enabling resellers to overcome trust barriers in digital transactions among consumers. Many independent resellers are "basic social sellers" who sell within their immediate networks through WhatsApp and maintain basic records. Some progress to become "advanced social sellers" who may adopt more sophisticated methods (e.g., upfront payments, expansion to distant markets), tools (e.g., bookkeeping, WhatsApp Business), and services (e.g., e-logistics). The participation of women in social selling is on the rise, driven by its flexible nature, income-boosting potential, and potential to overcome barriers that disproportionately hinder their ability to start and expand businesses. More broadly, social selling is a way for many from low-income communities to enter the digital economy.

2. **Sourcing inputs or goods through purpose-built B2B marketplaces to resell (platform sourcing).** Another significant practice involves using purpose-built business-to-business (B2B) marketplaces to source goods for resale or as inputs. These specialized platforms enable individuals to access a wide range of products, establish supplier relationships, and streamline procurement processes, empowering them to engage in profitable resale activities. Nanostores, in particular, benefit through data footprints that enhance access to credit, income opportunities from value-added services (e.g., top-ups, financial services), and improved organization through bookkeeping and other business services. Many nanostores are women-owned or women-operated, supplementing household income for non-discretionary expenses; however, cultural norms that inhibit smartphone ownership and internet use among women can still limit their use of B2B sourcing platforms.

3. **Working as 2/3-wheel drivers on ride-hailing and delivery platforms (platform ride-hailing and delivery).** Gig-work platforms have made significant inroads in urban ride-hailing and delivery livelihoods, attracting individuals to pursue vehicle-related work based on their preferences and availability. Ride-hailing and delivery platforms also support 2/3-wheel drivers to build their data footprints and access job-related financial services, including loans for motorcycle purchases, insurance coverage, and fuel and maintenance credit. Efforts have been made through pilot programs to attract more female drivers and riders, including gender-based matching for ride-hailing, safe restrooms for female drivers, and vehicle financing programs. However, several factors contribute to a need for more progress. A combination of platform-led gender-intentional policies and practices, social norms, and assured safety for women drivers will make ride-hailing more attractive for women.

While social selling, platform sourcing, and platform ride-hailing and delivery practices provide significant opportunities to enhance livelihoods for low-income communities, they are not without challenges. These vary based on the practice but broadly include challenges related to platform features and functionality, skills (e.g., digital, financial), safety (e.g., cyber, physical), access to resources (e.g., vehicles), financial constraints, technological requirements (e.g., relevant devices), and other requirements (e.g., business registration, KYC, drivers licenses). Challenges can also be more pronounced for women. Some of these challenges, such as access to vehicles or smartphone financing, can and are being addressed with financial services, and platforms are facilitating financial inclusion and access to products that are enhancing livelihoods. Moreover, the existence of inclusive Digital public infrastructure underpins how inclusive financial services can be in addressing the challenges.

The data created and the platform interface are facilitating and scaling financial services, opening new avenues for inclusion and empowerment.

Each platform practice described above contributes to building data footprints and connecting more low-income communities and women to financial services. We use the term "platform-enabled financial services" to describe the critical role that data and the platform interface play in facilitating and scaling financial services. Platform-enabled financial services can be digitally connected and customizable, seamlessly integrated into the user experience of a non-financial company's platform ("embedded") or products offered by a financial institution that a platform refers its clients to ("lead generation.") Both embedded finance and lead-generation business models benefit from reduced customer acquisition costs, opening new avenues for financial inclusion and empowerment among low-income communities and women.

Platform-enabled financial services encompass many products and use cases that cater to the diverse needs of consumers and small businesses. We focus on two embedded product categories (payments and credit) and one modality (platform-enabled lead generation) to explain the use cases for platform-enabled financial services within the livelihoods of focus.

1 **Embedded payments** streamline transactions for both buyers and sellers. Many purpose-built platforms have integrated payment features that allow customers to order and pay within one application. This functionality supports seamless digital payments to 2/3-wheel drivers and advanced social sellers using delivery platforms and payments by nanostores for orders. Social media platforms are starting to roll out embedded payments, which could support novel use cases. Meta has released integrated payments for WhatsApp in select markets (Brazil, India, Singapore); however, this feature is absent but needed in most markets.

2 **Embedded credit** supports small businesses to access working capital loans or credit lines directly through purpose-built platforms. It is enabled by the user data created on platforms, their mediation of cash flows, and their ability to seamlessly integrate credit services with income-generation opportunities. Important embedded use cases include: **1) earned wage access**, which enables platform workers such as 2/3-wheel drivers to more efficiently access earned wages, effectively manage finances, and bridge temporary cash flow gaps; **2) deferred payment**, which enables small businesses such as nanostores to effectively manage working capital by reducing the amount tied up in inventory; **3) asset financing**, which creates pathways for ride-hailing and delivery drivers to acquire newer vehicles; and **4) capital loans**, which enable drivers and other platform workers or small businesses to manage their financing requirements.

3 **Platform-enabled lead generation.** Unlike payments and credit, access to savings accounts, insurance, and bundled products isn't presently "embedded" within platforms, according to our analysis across India, Indonesia, and Kenya. Instead, platforms can serve as conduits, leveraging their extensive customer base to establish connections with partner banks, regulated providers, and fintech firms, facilitating accessibility to such products ("lead generation"). Although lead generation lacks the comprehensive advantages of data utilization and a seamless user experience, the ongoing innovation within provider strategies can still benefit 2/3-wheel drivers, resellers, and nanostores.

The introduction of platform-enabled financial services in LMIC regions is a relatively recent development, and thus, the impact evidence is still emerging. While the few available studies do not represent the number or diversity of currently available platform-enabled financial services, they provide encouraging early insights. In essence, it's evident that for some, platform usage has led to financial inclusion, and platform-enabled financial services have supported the adoption of other more complex financial services, with early and localized evidence of improvements in livelihoods. Furthermore, when embedded, we expect that platform-enabled digital financial services may provide first-time access and unlock greater utilization due to the bundling of the financial service with a livelihood platform, the data advantages of platforms, and especially in cases where specific tools like digital payments are mandated. However, there remains a question of uptake and concerns about risks such as fraud, predatory lending offers, and over-extension of credit when lending becomes more easily accessible. Existing lessons from expanding consumer digital credit in LMICs and embedded consumer lending in more mature markets can be used to inform productive embedded lending in LMICs. Many open questions remain about whether platform business models align with the development goal of inclusively and responsibly delivering financial services.

Policymakers are exploring strategies to leverage platform advantages for financial inclusion while addressing privacy and competition concerns, including applying existing regulations, adapting existing rules/adopting new regulations, and using a nuanced approach. Digital public infrastructure should also be on policymakers' agenda for not only financial inclusion generally but specifically within livelihoods.

Digital public infrastructure and messaging platforms are important for enabling the utilization of platform-enabled financial services by low-income communities and women for their livelihoods.

Platformization holds immense potential for transformative impact on the livelihoods of low-income communities and women; however, the seamless integration of platform-enabled financial services is impeded by foundational digital infrastructure challenges, hindering the realization of true inclusivity. When small businesses and workers can participate on platforms but cannot access platform-enabled financial services, they cannot fully leverage their income-generating potential.

Discussions with platforms and their financial partners have brought to light the pivotal role of foundational digital infrastructure in either enabling or constraining the utilization of financial services within the platform practices of low-income resellers, nanostores, and 2/3-wheel drivers.

- **Cost-effective and efficient identity verification** is pivotal in advancing platform livelihoods on purpose-built platforms, impacting nanostores and 2/3-wheel drivers.
- **A lack of data-sharing frameworks** constrains innovation and competition. Comprehensive and responsible data-sharing frameworks are key to unleashing the true potential of the data footprints created on platforms.
- **Interoperable digital payment systems** streamline transactions, reducing frictions that impede scale. This is especially important for social sellers.
- In addition, **enhanced small business e-commerce functionalities within messaging platforms** contribute to a more secure and streamlined experience. Policymakers and the private sector should carefully consider how to leverage the extensive adoption of WhatsApp as a marketplace, particularly among low-income communities and women, and improve its utility for economic activity.

We offer some concrete next steps for how policymakers, development practitioners, and private sector organizations can begin to engage around the four key action areas presented in this report.

Think strategically about platform livelihood segments and their DPI needs.

The most significant segments of micro- and small businesses and workers using platforms today in LMICs are independent resellers, nanostores, and 2/3-wheel drivers. Development practitioners concerned with digital economy livelihoods should focus programmatic activity within these three segments, which offer the greatest opportunities for low-income communities and women to realize the efficiencies, greater reach, and other positive outcomes afforded by digital platforms today. By partnering with the private sector to develop inclusive and sustainable platform models and responsible platform-enabled financial services, development practitioners can begin to address the factors working against broad-based and equitable participation in the platform economy.

Furthermore, policymakers and development practitioners that are developing digital public infrastructure (DPI) should consider how their solutions impact or could impact the livelihoods of low-income communities and women. This report highlights the specific needs and issues for nanostores and independent resellers operating digitally, and how these relate to inclusive DPI: for example, easier e-KYC for lower-income nanostores, reduced payments friction for women social sellers, and data sharing to support lower-income 2/3-wheel drivers to affordably access newer vehicles. In particular, millions of micro-entrepreneurs in LMICs use their personal WhatsApp accounts as their digital storefront. Their pain points command attention, particularly as social selling is the bridge supporting micro-enterprises' entry into the digital economy. Meta could take actions to support and nurture this segment further, including exploring the feasibility of using the same phone number for both personal WhatsApp accounts and WhatsApp Business accounts; supporting initiatives that address digital skills gaps among low-income communities and women; and supporting them to create virtual storefronts on their personal WhatsApp accounts, build skills and confidence, and transition to WhatsApp Business.

Design marketing, onboarding processes, interfaces, and financial services for women.

There is significant potential to improve women's livelihoods in LMICs through all three key platform livelihood segments, but specific challenges must be addressed. Collaboration among development practitioners and platforms could design onboarding processes and platform interfaces, including those for accessing platform-enabled financial services, that account for women's needs and contextual realities. Greater attention to clear and transparent information around fees, recourse mechanisms, and other information related to financial offerings is also important as part of design and marketing.

Photo above
Woman sitting at sewing machine in Kenya in October 2001.

Liz Gilbert / Bill & Melinda Gates Foundation

Moreover, platforms and development practitioners need to focus initiatives to address the issues affecting participation in gendered livelihoods holistically. This includes encouraging policymakers to put in place stronger protections to mitigate fraudulent activity to which women are particularly at risk and supporting broad initiatives that address digital skills gaps. Partnering with trusted women's organizations will be important for both onboarding to platforms and building skills and confidence that enable women to increase earnings.

Involve stakeholders and experts early in the DPI design process.

Many countries are currently trying to develop DPI, and issues that could prevent inclusivity should be raised and addressed during design. This includes the design of inclusive digital ID and e-KYC systems that rely on these databases. The consultation process should involve stakeholders and experts in inclusive DPI strategy early and continuously during the design phase, so that the services can be built with diversity and inclusion from the start, as well as ensure that lessons learned in other country implementations can be incorporated so that the systems can maximize the potential for greater digital economy participation.

Think more about the role of marketplaces as DPI or closely related to DPI.

The discourse on DPI has largely been on social services and not as much on economic opportunities. For that reason, marketplaces have probably not been discussed as much as they should have been. Identity, payments, and data exchange are indeed three foundational digital network systems that enable access to goods and services. A portion of these that are livelihood activities are delivered through marketplaces. While many marketplaces, as we discuss in this report, are purpose-built e-commerce platforms, there is a set of marketplace platforms that are nearly universal in coverage and usage, namely social media and communications platforms and specifically WhatsApp and Facebook. At this very moment, they are functioning as the fourth foundational system enabling economic activity for millions of low-income people in LMICs. Because they already exist, the conversation around Meta's marketplaces should be around improvement for inclusion, including but not limited to building on the other foundational DPI elements. Moreover, both the private sector and the development community share an interest in fostering the novel commercial activity that is occurring. Policymakers and development practitioners could collaborate with Meta to work on some of the issues we identify in this report that would make social commerce transactions more streamlined, such as through the integration of inclusive payment systems. There's also conversations to be had about giving individuals that participate on these platforms more control over their data, so that they can prove their creditworthiness to a potential creditor or insurance underwriter.

By making strides to address the remaining challenges and opportunities with digital public infrastructure and to enhance messaging platforms, platform-enabled financial services can be extended to many more individuals beyond the three key livelihood segments highlighted in this report across a wide range of economies. This, in turn, has the potential to impact financial inclusivity and income generation at a substantial scale, particularly for women.

Introduction

This report brings together three key themes and perspectives in "digital economies," identifying key action areas which, if engaged now, can leverage trends in **platformization** to improve the livelihoods of millions of people around the world. To do so, it draws on the idea of **platform livelihoods**—how, around the world, millions of people rely on digital marketplaces and social media services to work, sell, and earn a living.

From a **livelihoods perspective**, platformization can offer *breadth*. Platformization offers new forms of work and sales, already widespread and entrenched enough to begin to impact the livelihoods of low-income communities in many low- and middle-income economies. Similarly, platformization is broad enough that there are significant new livelihood opportunities for women in sectors that have traditionally skewed male, in sectors that have traditionally skewed female, and in sectors where gender norms have not been as salient.

From a **financial inclusion perspective**, platformization can offer *depth*. Platforms don't only connect buyers and sellers, workers and clients; they provide financial services. The global wave of platformization has generated a suite of what this report calls "platform-enabled financial services" that are providing deep value to platform workers and sellers, beyond simple cash transfers.

And from an **infrastructure perspective**, platformization can offer *transformation*: an opportunity to shift away from bespoke, fragmented, private solutions to more common digital public infrastructures (DPIs). The "DPI conversation" illuminates a path through which these platform-enabled financial services can be strengthened, broadened, and made more useful to more people experiencing poverty and to more women engaged in platform livelihoods.

The destination. This document weaves together these broad perspectives to identify four key focus areas for policymakers and the broader digital development community:

1. **Promoting cost-effective and efficient identity verification** to help platform workers and sellers transact safely and competently.
2. **Developing and strengthening data-sharing frameworks** to allow data to move to, from, and between platforms in ways that are safe, accountable, transparent, and value-creating for individuals and the ecosystem as a whole.
3. **Catalyzing further interoperability between digital payment systems** to streamline transactions, reducing frictions that impede scale.
4. **Enhancing small business e-commerce functionalities within messaging platforms** to create a more secure and streamlined experience for individuals, including potentially vulnerable workers and sellers.

Photo below
Ibu Idah (30 years) at her sister's shop in Makassar, Indonesia, on November 12, 2015.

Prashant Panjiar / Bill & Melinda Gates Foundation

Each of these can convert lofty offers and aspirations into concrete promises and results, and help shape the digital economy toward one which helps more people earn a living.

The journey. To build the case for these four focus areas, this paper draws on primary and secondary research, bringing its readers through several interconnected analyses.

The first section offers critical background, drawing on existing research literature to describe platformization in more detail.

The following section digs more deeply into the livelihoods perspective, demonstrating how digital platforms are enhancing traditional offline livelihoods in low- and middle-income countries (LMICs). To build the case for these four focus areas, this paper introduces primary and secondary research spanning three large and rapidly platformizing segments: *independent resellers*, *nanostores*, and two- *and three-wheel ride-hailing and delivery drivers (2/3-wheel drivers)*. We describe how platformization is progressing in these segments in three diverse markets—Kenya, India, and Indonesia. Developments in each economy are important and unique on their own, yet each, as a relatively early adopter in platformization, also represents part of the overall tapestry of the emerging digital economy and points a way to greater inclusion and participation for poor people and women around the world. The analysis triangulates early insights into the drivers of exclusion and examines how low-income communities and women in these three distinct and growing subsegments engage with and derive benefits from platforms, potentially progressing in their livelihoods.

Next, we explore the considerable opportunities for financial inclusion created by platform usage and the spread of platform services. This section dives deep into emerging forms of platform-enabled financial services and, drawing across the segments in the first analysis, provides insights into use cases for platform-enabled financial services.

Finally, the report concludes with unique synthesis and articulation of those four key action areas. Specifically, the conclusion discusses the role of digital public infrastructure and enhanced messaging platform functionality in enabling inclusive access to platform livelihoods and the financial services they can enable. We draw attention to the three areas of digital public infrastructure (identity, payments, and data sharing) and introduce messaging platforms as a fourth important (albeit not public) foundational digital infrastructure element for low-income communities and women in LMICs. We'd suggest readers go on the full journey to arrive at this section, but it can be read in isolation.

The first step on this journey, then, is to talk about the era of platformization, and what it might mean for individual livelihoods around the world.

The era of platformization

Digital platforms, and the platformization of various economic sectors, have had a significant and transformative influence globally.

Platforms are having a global impact, leaving their mark on countries and regions in diverse ways influenced by factors like market size, consumer base, technological innovation, and the concentration of economic activities across different geographies. Leading the charge are prominent early movers like eBay, Amazon, Facebook, Google, and Uber, originating from the United States but now operating globally. They have been joined by industry giants from China (e.g., Alibaba, Tencent, JD.com) and prominent players from India (e.g., Flipkart, Zomato). These powerhouses coexist and compete with regional players of all shapes and sizes, including Southeast Asia's decacorns Grab and GoTo, e-commerce behemoths like MercadoLibre in South America and Jumia in sub-Saharan Africa, and countless aspiring startups.[1]

Digital platforms are technical systems that host transactions or interactions between parties, *facilitating*, *shaping*, and often *profiting* from them without entirely *controlling* them. Indeed, the concept of a "digital platform" has various meanings.[2] Many platforms are multi-sided marketplaces, forging connections between buyers and sellers. Others, like massive social media sites, offer prime real estate for advertisers to vie for users' attention, while lightweight messaging platforms such as WhatsApp or Telegram are ever-evolving their business models built around the chat thread. Additionally, there are flexible software systems, like Android and Salesforce, that serve as hosts for third-party applications. Notably, some companies like Google,

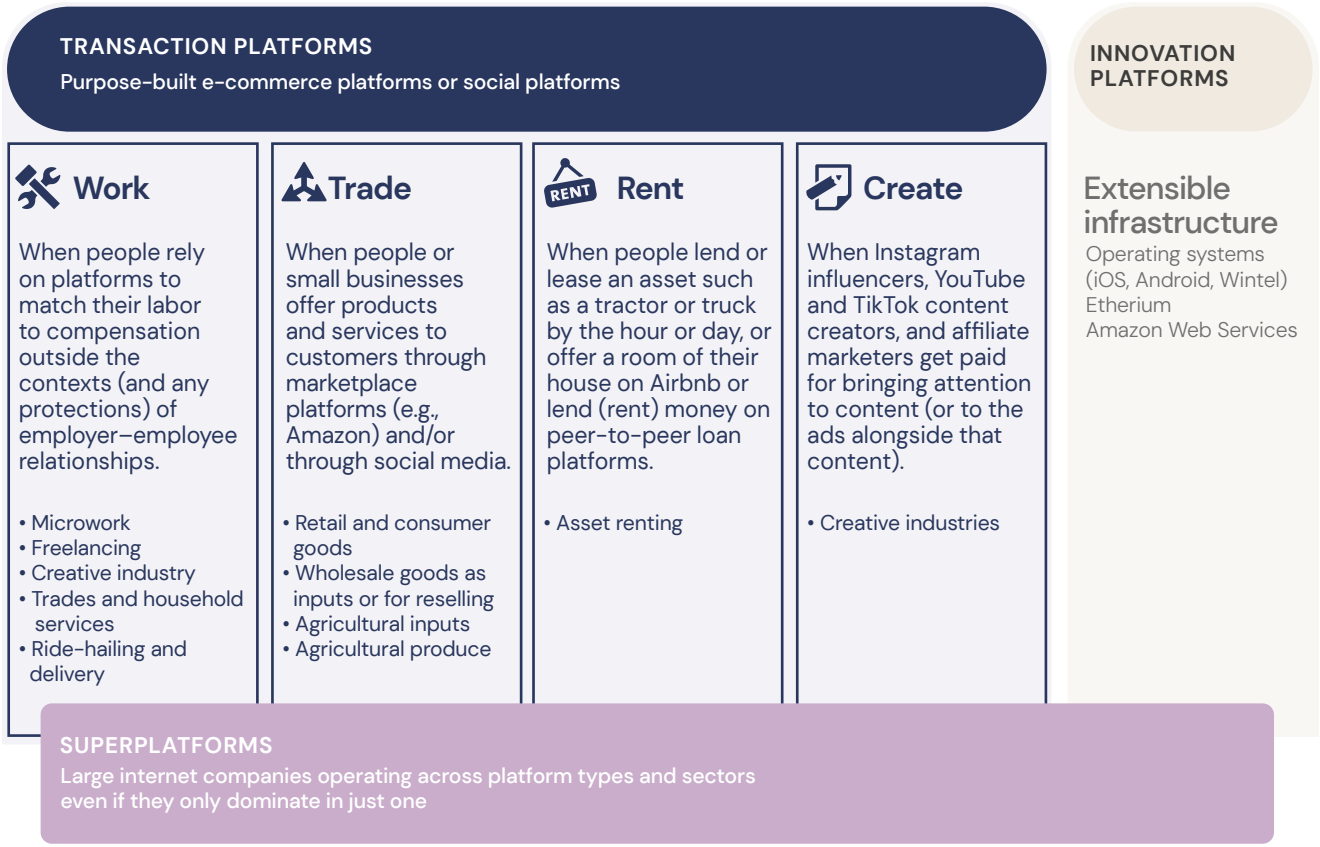
1 For example, in 2018 Insight2Impact counted 300+ platforms active in 8 Sub-Saharan Countries. The model is truly global. Makuvaza, Johnson, and Smit, "The Rise of African Digital Platforms."

2 Cusumano, Gawer, and Yoffie, *The Business of Platforms*.

Meta (formerly Facebook), and Tencent have taken platform functionality to new heights by combining various elements, culminating in hybrid "super platforms."[3] Furthermore, a company can operate a single platform or multiple platforms. It can engage in horizontal investments, such as in financial institutions, or vertical integration by, for example, owning its own logistics company. The result is a dynamic landscape with platforms striving to monetize their digital real estate and navigating the risks associated with a winner-takes-all economic framework in which only a few platforms will dominate at the expense of smaller ones that won't survive.

Figure 1 ▾

Digital platforms typology



Draws on contributions by: Donner, "Platform Livelihoods: Working, Trading, Renting, and Creating in Digital Marketplaces"; Cusumano, Gawer, and Yoffie, *The Business of Platforms*; Porteous and Morawcynski, "The Super Platforms Are Coming."

Across this diverse landscape, a common thread of efficient and streamlined principles and strategies emerges. These relatively asset-light organizations link, connect, source, and match—orchestrating transactions and interactions while emphasizing simplicity and effectiveness in their operations. They find ways to generate revenue from these exchanges, leveraging the scale, breadth, and frequency of engagement to thrive. Additionally, the abundance of data they gather about users and transactions creates opportunities for secondary revenue streams.

3 Porteous and Morawczynski, "The Superplatforms Are Coming."

Platform logics extend their reach beyond conventional boundaries, permeating various economic sectors. From revolutionizing asset sharing, expanding access to goods and services, capturing attention, and even reshaping labor dynamics through digitally enabled gig work, platforms have left virtually no sector untouched by their transformative influence. Indeed, platform logics have been deepening and reconfiguring the global digital economy for almost 20 years.[4] Collectively, their spread and influence can be called "platformization."[5]

Platforms expand market access and facilitate the flow of vital market information. Both purpose-built marketplaces and general-purpose social media platforms act as catalysts, enabling newcomers and established businesses to enter and navigate markets effectively, facilitating repeat transactions and fostering ongoing engagement between buyers and sellers. Labor platforms are valuable gateways that connect job seekers with diverse employment opportunities. Moreover, platforms serve as sources of market insights, providing users with information on product innovation, pricing dynamics, and emerging demand patterns. They also foster peer-to-peer knowledge exchange, empowering individuals and businesses to stay informed and adapt to market trends.

Platform livelihoods are the ways people earn a living by working, trading, renting, or creating in digital marketplaces.

We define "platform livelihoods" as the ways people rely on marketplace and social media platforms to earn a living, working, trading, renting, or creating in digital marketplaces. For the past several years, Caribou Digital has worked on several projects under the umbrella of the "Platform Livelihoods Project," exploring the structural transformations associated with the rise of platforms to the experiences, challenges, and opportunities facing workers, entrepreneurs, and the self-employed, particularly in low- and middle-income countries, and particularly among low-income and vulnerable communities.[6] This is, intentionally, a frame that includes but is broader than gig work. Formal and informal e-commerce resellers, asset renters, and even content creators can be mediated by the same platform logics and assisted by the same infrastructures as well-known forms of gig work, including freelancers, microtaskers, and ride-hailing drivers.

4 Cusumano, Gawer, and Yoffie, *The Business of Platforms*.
5 Poell, Nieborg, and Dijck, "Platformisation."
6 Caribou Digital and Qhala, "Platform Livelihoods Framework."

Quantifying the extent of platform livelihoods, especially among low-income communities, poses a considerable challenge, as platform livelihoods have yet to be clearly defined or consistently measured in official labor statistics. There are several reasons for this measurement challenge: People can "multihome"—distributing income-earning activity across multiple platforms. People can also earn fractionally, using platforms in combination with offline or other sales channels to find work or sell goods and services.[7] Furthermore, there are data gaps concerning conventional livelihood segments that currently utilize or are poised to adopt platform services. For instance, national statistics do not report the number of micro-, small, and medium-sized retailers, such as *dukas* ("shop" in Swahili, used to describe a small neighborhood retail store.) While India reports home-based producers, Indonesia does not, making comparisons challenging. Moreover, sex-disaggregated livelihood data is severely lacking in almost all geographies.

Despite issues with inconsistencies and reliable segmented data, a few recent studies have tried to provide directional sizing. A 2021 flagship study by the ILO focused on the global footprint of platform work, drawing on a review of the existing literature to suggest that across the US and Europe, the percentage of people who earned at least a fraction of their income from platform-mediated work or sales was as low as 1.6% (in Switzerland), or as high as 20% (in the US). These proportions are not from the same studies, however, and are likely just as reflective of distinctions in definitions and measurement as actual differences in the distribution of platform-mediated work and sales in those markets.[8] Another recent literature scan, carried out by our colleagues at the DFS Lab and RISE Indonesia, suggests that nearly 1 in 5 working-age Indonesians rely on a platform for at least some of their income. Most of this activity is concentrated in varying degrees of e-commerce, mainly using social media and communication platforms.[9]

There are significant factors currently working against broad-based and equitable participation in the platform economy; some evidence suggests that platformization can exclude marginalized groups, perpetuate gender inequalities, and undermine the promised flexibility of work.[10] Platforms can potentially disrupt the livelihoods of low-income communities by changing markets and favoring certain actors rather than fostering inclusion. There is a risk of not just being left behind, but being actively excluded, particularly in a market landscape where shareholders exert influence on platforms to prioritize profitability over inclusivity.

7 Caribou Digital and Qhala, "Platform Livelihoods Knowledge Map: Fractional Work."
8 ILO, World Employment and Social Outlook 2021: The Role of Digital Labour Platforms in Transforming the World of Work.
9 DFS Lab, RISE Indonesia, and Caribou Digital, The Contribution of Platform Livelihoods to an Inclusive Digital Economy in Indonesia: Literature Review and Stakeholder Consultations.
10 Heeks, "Digital Inequality beyond the Digital Divide"; Caribou Digital and Qhala, The Quality and Experience of Platform Livelihoods: A Literature Review for Digital Development.

Moreover, platforms can reinforce and perpetuate gender inequalities instead of dismantling barriers. Occupations like ride-hailing and beauty/care work remain predominantly male and female, respectively. Even in social selling, women often require approval from a male figure and the use of their bank details to get started.[11] Female freelancers often earn less than men in similar roles, exacerbating the gender wage gap.[12] The prevalence of winner-takes-all markets, reputation systems, and a race-to-the-bottom on pricing further disadvantage low-income communities and small businesses, who lack the assets and unique skills rewarded in such environments. Mere registration on a platform does not guarantee a stable or well-paying livelihood, particularly for low-income communities. The invisible behaviors on platforms, such as "hidden hierarchies" where individuals (often male) use a single online presence to then subcontract (often informally) work or employ assistants (often female) for a smaller share of earnings than if they had their own online presence and the practice of buying accounts reveal the complex dynamics shaped by the interplay of "capitals" (including capabilities, assets, and connections) and market power.[13] Additionally, while access to a larger market is touted as a benefit, it often entails a more competitive landscape in which "algorithmic management" rewards those that operate on razor-thin margins and are constantly available, posing challenges for women and low-income communities. Female platform workers, in particular, must balance domestic responsibilities alongside their platform work, often experiencing a sense of disillusionment as the flexibility associated with platform work turns out to be more of a myth.[14]

The utilization of platforms also presents unique challenges, particularly for marginalized groups. Like many digital transformations, the adoption of platforms is not without its hurdles, giving rise to specific challenges that disproportionately affect the participation of low-income communities and women. These obstacles encompass a variety of factors that demand attention and concerted action. First, individuals must possess the necessary skills and digital literacy to effectively navigate platforms. Additionally, the processes of acquiring and presenting identification documents required for registration and establishing financial accounts to facilitate online transactions and earnings can be time-consuming or impossible tasks. Furthermore, the accessibility of devices and reliable internet connectivity plays an important role in one's ability to engage on these platforms. Notably, women often face additional difficulties in obtaining identification and meeting Know Your

11 Bailur and Smertnik, "Women, Work and ID."

12 A4AI, The Costs of Exclusion: Economic Consequences of the Digital Gender Gap.

13 Within any platform livelihood, some are better positioned due to capitals (including capabilities, assets, and connections) than others to differentiate, survive, and thrive. See Solesbury, Sustainable Livelihoods: A Case Study of the Evolution of DFID Policy; Chambers and Conway, "Sustainable Rural Livelihoods: Practical Concepts for the 21st Century"; Heeks, "Digital Inequality beyond the Digital Divide"; Caribou Digital and Qhala, "Platform Livelihoods Knowledge Map: Hidden Hierarchies"; Bailur and Sharif, "The Inclusivity of Crowdsourcing and Implications for Development"; Anwar and Graham, "Hidden Transcripts of the Gig Economy: Labour Agency and the New Art of Resistance among African Gig Workers."

14 Bailur and Ongoma, "'I Feel Empowered...But You Have to Have a Thick Skin.'"

Customer (KYC) requirements compared to their male counterparts.[15] For platforms struggling to make a profit, intentional inclusion at this level is often not a priority.

Despite these challenges, platformization can be shaped to be more supportive of the (a) livelihoods and (b) financial inclusion of low-income communities and women. Evidence indicates that some platforms can and do innovate to meet the needs of low- and middle-income economies. For instance, marketplace and social media platforms are actively creating and adapting innovative business models to address the specific requirements of these regions, including strategies to attract consumers and methods to onboard small businesses and workers. An exemplary case in point is the collaboration between India NGO Self Employed Women's Association (SEWA) with Airbnb and Amazon, which prepares women entrepreneurs for successful integration onto their platforms.[16] Development programs are also forging partnerships with platforms to tackle financial inclusion challenges. Others are diligently working to raise awareness about the collection and responsible use of women workers' data, seeking to ensure greater data security and accountability, mitigating potential risks and vulnerabilities.[17]

While we see inclusion innovation efforts like these and other examples detailed in this report, not enough are intentional or supportive of use cases that impact many low-income people's livelihoods, like nanostores and social sellers. Moreover, there remains substantial scope for further collaboration among development practitioners, policymakers, and the private sector to address foundational digital infrastructure barriers that hinder platform livelihood participation and financial inclusion, as well as build the necessary digital infrastructure for low-income communities to benefit from streamlined social commerce transactions.

15 Bailur, "Women and ID in a Digital Age"; Dahan and Hanmer, "The Identification for Development Agenda: Its Potential for Empowering Women and Girls."

16 Airbnb, "Airbnb and SEWA: Empowerment through Partnership"; Nair, "Amazon Launches 'Saheli' Programme to Empower Women Entrepreneurs in India."

17 "Ranjitha Kuma at ILO's 8th Regulating Decent Work Conference."

How digital platforms are enhancing traditional, offline livelihoods in LMICs

This analysis centers on three traditional, offline livelihoods that are now being platformized with strong potential to engage and include low-income segments: *independent resellers*, *nanostores*, and *two- and three-wheel ride-hailing and delivery drivers (2/3-wheel drivers)*. These livelihoods generally have lower barriers to entry in terms of skills, assets, network connections, and family/social support than other platformed segments (e.g., highly skilled tradespeople or car ride-hailing). Each also primarily operates in localized or hyperlocalized markets rather than competing globally. Of course, these are not the only segments of platform livelihoods where women and low-income individuals participate. Trades and household services, including domestic workers or repairmen, are also significant. However, based on our analysis, resellers, nanostores, and 2/3-wheel drivers represent the largest segments of platformed small businesses and workers and, therefore, offer the greatest opportunities for scaled impact. Moreover, these segments present intriguing portraits of platform practices to form the basis of our financial services opportunities analysis. We briefly introduce the three segments and then explain their platform practices using examples from India, Indonesia, and Kenya.

Figure 2 ▾

Summary of three livelihoods of focus

Independent resellers are home-based micro-enterprises selling a wide range of products within their networks.

Independent resellers are creative micro-enterprises showcasing and selling an impressive range of products, including unbranded, ready-made apparel, everyday accessories, and homemade food products. Their operations typically involve trading only a few types of goods that are either produced at home or sourced elsewhere, including online. In Indonesia, an independent reseller might buy scarves from a home-based garment workshop in her hometown during periodic trips throughout the year and then sell them within her social network. In Kenya, a reseller might buy fresh fruits from the market to prepare and sell fresh juice to her community during the week.[18]

As informal micro-enterprises, independent resellers typically manage the order-to-cash process by themselves—researching and gauging demand for orders, sourcing and procuring inventory using their own working capital, marketing and promoting products, addressing customer inquiries and concerns, customizing orders and managing logistics, and closing sales, including accepting payment, occasionally digitally. This reselling activity is termed "independent" to distinguish it from other reselling arrangements where individuals may earn commissions or operate without utilizing their working capital. Such contracts are increasingly common among suppliers of branded goods on digital marketplaces, and these resellers are called "social resellers,"[19] agents, and influencers.[20]

The independent retailer subsector plays a significant role in many LMICs. While precise estimates for the size of this subsector are challenging to obtain, it is clear that it involves a substantial number of individuals. One study suggests that approximately 224 million individuals in LMICs are own-account home-based workers participating in retail sales, services, crafts, and trade activities, with women representing 57% of this workforce.[21]

Furthermore, independent resellers generate a critical secondary income source for the household. While earnings may not be substantial, especially as they encounter unpredictable demand and rising input costs, this additional income is essential for keeping households above the threshold of extreme poverty.[22] Also, the flexibility of this work allows individuals to balance their livelihood with caregiving responsibilities for children and elderly family members.

18 Partnership for Finance in a Digital Africa, "Meet the Micro-Entrepreneurs: Faith."
19 Naghavi, Social Commerce in Emerging Markets: Understanding the Landscape and Opportunities for Mobile Money.
20 Yau, "Social Commerce: The New Growth Engine in Indonesia Ecommerce?"
21 Bonnet et al., "Home-Based Workers in the World: A Statistical Profile."
22 WEIGO, "Home-Based Workers."

Nanostores are small family-run independent neighborhood stores that sell packaged foods, beverages, toiletries, groceries, and digital goods.

Known locally as *kiranas*, *dukas*, and *warungs*, nanostores are small independent neighborhood stores operating in both urban and rural areas globally.[23] They specialize in selling fast-moving consumer goods (FMCGs), including non-durable goods such as packaged foods, beverages, and toiletries, as well as groceries and digital goods. The physical size of nanostores can vary significantly, but they are typically small establishments, occupying spaces ranging from 50 to 300 square feet and commonly located in economically disadvantaged areas, serving as an essential presence in the community.

These small family-run businesses serve as the primary source of income for the household, and a substantial portion of them are owned or operated by women. Among nanostore owners, around half are driven by necessity, relying on the business to meet basic needs. Another third find stability in their operations, while the remainder demonstrate a growth-oriented mindset, aiming to expand their business and increase profitability.[24] Notably, many nanostores are women-owned, particularly in countries like Peru,[25] Kenya,[26] and Indonesia,[27] where female micro-entrepreneurs play a vital role in the local retail sector.

This segment is also significant in LMICs. There are estimated to be around 50 million nanostores in LMICs in megacities alone.[28]

23 Escamilla, Fransoo, and Tang, "Improving Agility, Adaptability, Alignment, Accessibility, and Affordability in Nanostore Supply Chains."
24 World Bank Office Jakarta, Women Entrepreneurs in Indonesia: A Pathway to Increasing Shared Prosperity
25 Casanova et al., "Credit to Merchants: Tienda Pago's Digital Solution for Fast-Moving Consumer Goods."
26 TechnoServe, Smart Duka: Lessons Learnt in Developing Kenya's Micro Retail Sector.
27 Salyanty and Askar, "Economic Resilience and Digital Adoption among Ultra Micro Entrepreneurs in Indonesia."
28 Fransoo, Blanco, and Mejia-Arhueta, Reaching 50 Million Nanostores.

2/3-wheel drivers provide transportation and delivery services using motorcycles and tuk-tuks.

2/3-wheel drivers (e.g., motorcycles and tuk-tuks) are a significant share of the ride-hailing and delivery services industry in LMICs. They offer a compelling alternative to cars and trucks due to their lower cost and enhanced agility, making them highly desirable for consumers and service providers. Importantly, this subsegment is more accessible for low-income communities and women and thus provides an important means of income generation.

2/3-wheel drivers are not a homogenous group and represent a diverse range of individuals with varying backgrounds and motivations:[29] young people seeking additional income to achieve specific financial goals;[30] those who aspire to join car ride-hailing; part-time drivers who balance driving responsibilities with childcare duties; and full-time drivers committed to specific companies.[31]

Gender norms play a significant role in shaping the dynamics of ride-hailing and delivery services, where driving has traditionally been seen as predominantly male-oriented work. This historical perception has led to a minimal representation of women in LMICs' workforce within this sector. In research studies, female ride-hailing drivers have expressed not only their concerns about the sector,[32] but also those of female passengers.[33] When women do participate in these livelihoods, they are often cautious about their work hours, with some expressing a preference for delivering goods over transporting passengers due to the reduced interaction it entails.[34] While 2/3-wheel vehicles may be more accessible, female 2/3-wheel drivers often aspire to own cars, as they offer greater safety and minimize uncomfortable physical contact with passengers.[35]

29 See Caribou Digital's research in Kenya: Caribou Digital, "App-based Motorcycle Drivers."
30 See David's story as part of Caribou Digital's research in Ghana: Caribou Digital, "David, the Delivery Driver."
31 Centre for Financial Health, "The Gig Economy and Financial Health: A Snapshot of Malaysia and China."
32 IFC and Accenture, Driving Toward Equality: Women, Ride-Hailing, and the Sharing Economy.
33 Caribou Digital, Women in the Platform Economy: Women's Experiences of Platform Livelihoods in Ghana, Kenya, and Nigeria.
34 Caribou Digital, Women in the Platform Economy.
35 Some stories shared include those of Nangahami Premawathi in Sri Lanka (Caribou Digital, Women in the Platform Economy) and Dathive in Uganda (Caribou Digital, "Dathive, the Delivery Driver").

Platforms have significantly affected the livelihoods of independent resellers, nanostores, and 2/3-wheel drivers, with crosscutting practices shaping a dynamic platform landscape within low-income communities and among women.

Platforms have remarkably impacted the work experiences within these segments. We identify three crosscutting behaviors that highlight how low-income individuals and women leverage platforms within these key livelihoods.

1 **Selling goods and services on social messaging platforms (social selling):** Social selling is the most notable practice that low-income communities and women have embraced. People from agronomists to artisans use social messaging platforms to sell goods and services. While "social selling" encompasses a wide range of practices, we focus on unaffiliated individuals who leverage their networks for selling purposes. This group contains a significant number of "basic social sellers" who operate as social shopkeepers, utilizing platforms like WhatsApp to effectively market goods and services within their social circles, whether immediate contacts or more distant acquaintances, such as a friend's neighbor or extended family. By leveraging the power of social media and personal relationships, these resellers can widen their customer base and create opportunities to engage with potential customers, promoting trust and familiarity that can convert into sales. To illustrate this behavior, we draw insights from independent resellers' WhatsApp activities while recognizing that many other livelihoods also participate in social selling activities.

Some individuals exhibit "advanced" social selling practices, such as upfront payments and expanded reach to distant locations, which can increase overall income. They also utilize various other applications, including e-logistics services, B2B sourcing platforms, bookkeeping tools, digital financial services, and third-party keyboards.[36] By integrating additional platforms and apps into their operations, advanced social sellers can achieve partial automation and streamline processes, empowering them to handle higher transaction volumes more efficiently, thereby increasing their incomes.

Figure 3 ▲
Basic vs. advanced social sellers

2 **Sourcing inputs or goods through purpose-built B2B marketplaces to resell (platform sourcing):**[37] Another significant practice involves using purpose-built B2B marketplaces for sourcing goods to resell or obtain necessary inputs. These specialized platforms enable individuals to access a wide range of products, establish supplier relationships, and streamline their procurement processes, empowering them to engage in profitable resale activities. Various B2B marketplace platforms have emerged to serve small businesses in Africa, India,[38] and Indonesia[39] across FMCGs, construction, pharmacies, agriculture, aquaculture, manufacturing, and fashion. To showcase the impact of this behavior, we explore the practice of nanostore inventory replenishment through B2B marketplace platforms, such as Wasoko in Kenya, Bukalapak in Indonesia, and Udaan in India, which have emerged as prominent players in facilitating efficient and cost-effective inventory management for nanostores.

36 Apps that can be installed on a mobile device that provide additional features and functionalities that can integrate with specific apps, like WhatsApp, enabling app-like functionality within WhatsApp all from within the keyboard.

37 While social media and communications platforms are also "platforms," the terms "platform sourcing" and "platform selling" refer to purpose-built e-commerce platforms distinct from "social platforms," such as Facebook and WhatsApp.

38 Stellaris Venture Partners, "B2B Commerce Landscape."

39 Saison Capital, "B2B Commerce Landscape in Indonesia."

3 **Working as 2/3-wheel drivers on ride-hailing and delivery platforms (platform ride-hailing and delivery):** Gig-work platforms have made significant inroads in certain service segments, although they have yet to penetrate all areas where low-income communities and women engage. Notably, the surge in popularity of ride-hailing and delivery platforms (e.g., Grab, GoTo, Bolt, Ola) in urban areas has opened doors for individuals to pursue vehicle-related work based on their preferences and availability. While it is controversial whether platformed ride-hailing and delivery lead to increased overall income (compared to traditional driver livelihoods or alternatives), increased and organized demand is resulting in opportunities for drivers to expand their existing networks. We shed light on the opportunities and barriers within platformed labor by examining 2- and 3-wheel platformed ride-hailing and delivery.

While we distinguish social selling, platform sourcing, and platform ride-hailing and delivery as separate use cases, selling and sourcing are crosscutting for nanostores and resellers. For instance, a nanostore owner may utilize a B2B platform to source inventory, sell that inventory in their physical shop, and promote it through their networks via social platforms. Interestingly, certain purpose-built marketplaces have integrated social platforms as a means for B2B customers to communicate, clarify orders, and interact with the marketplace's agents, further blurring the boundaries between social and purpose-built platform use cases. Moreover, independent resellers may rely on delivery platforms for their logistics needs. All these factors contribute to a dynamic and ever-evolving landscape of platform usage within low-income communities.

Figure 4 ▾

Spectrum of practices using social and purpose-built e-commerce platforms

Shading indicates focal areas of this report.

			LOWER-INCOME MICROBUSINESSES		HIGHER-INCOME MICROBUSINESSES	
Activity	**Practice**	**Underlying platform used**	**Independent resellers**	**Nanostores**	**Independent resellers**	**Nanostores**
Sourcing	Social sourcing	Social platform	**Yes**	Yes	Yes	Yes
	Platform sourcing	B2B e-commerce	Yes	**Yes**	Yes	Yes
Selling	Social selling	Social platform	**Yes**	Yes	Yes	Yes
	Platform selling (national, global)	B2C e-commerce			Yes	

Social selling is the most accessible platform practice, with low barriers and potential pathways to more formal livelihoods.

Social selling on platforms like WhatsApp offers significant livelihood opportunities, especially in regions like Indonesia, India, and Kenya, where social platforms are highly pervasive and widely used for buying and selling activities.

Within dedicated chat groups, social sellers leverage social media platform features and functionalities to showcase their offerings, utilizing targeted nudges to encourage browsing and engagement among group members.[40] Photographs that showcase products or services are key, leading some social sellers to view the camera as the second most important feature on the mobile device after WhatsApp.[41] When a customer expresses interest, conversations transition from group threads to one-on-one chats. This personalized exchange allows resellers to respond to inquiries, address concerns, and guide customers toward completing the purchase. Such interactions provide additional options and information that customers value when making buying decisions, including negotiation of terms, flexibility in product pickup, and preferred payment methods such as cash or installment plans.

In contrast to purpose-built e-commerce platforms with standardized processes, social platforms enable a tailored approach, fostering personalized interactions and flexibility that low-income and low-trust resellers and consumers value. Trust and convenience are further established as social sellers personally deliver items or rely on trusted contacts, allowing for cash payments upon successful delivery. This personalized approach enhances customer experience and fosters stronger reliability and assurance. Direct conversations enable resellers to build rapport, address specific customer needs, and forge long-term relationships, leading to repeat business and positive word-of-mouth referrals. Moreover, social selling involves less risk-taking and greater flexibility, as resellers can establish demand for a specific item before risking working capital. This type of interaction is generally not available through purpose-built platforms. Social selling can support starting a reselling business or growing an existing business to serve more customers by enabling resellers to overcome risk aversion through greater market information. These activities may, in turn, reduce poverty for households that manage to sustain their businesses.

40 Thakur, "The $70B Opportunity in India's Emerging Social Commerce Sector." While activity within chat groups dominates, our research also uncovered that social sellers reach out to potential buyers with bespoke and targeted messages.

41 Internal research by Caribou Digital.

Low- and middle-income consumers often have reservations about purpose-built e-commerce platforms, as revealed in a study conducted in India. Over 400 million people have not engaged with or choose not to participate in purpose-built e-commerce platforms. Among their concerns, 76% cited a lack of trust in finding the right product and preferred more reliable offline options, while 62% expressed concerns about the inability to return items. Surprisingly, only 38% considered e-commerce too complicated. Negative experiences such as receiving poor quality products or experiencing delayed delivery led 75% of previous online purchasers to discontinue their engagement. Connectivity issues were cited as a deterrent by only 11%.[42] These findings underscore the significance of trust in shaping consumer behavior and highlight the relevance of social selling within low-income communities and among consumers seeking reliable and trustworthy purchasing experiences.

Moreover, social platforms have low barriers to entry and user-friendly interfaces that seamlessly integrate into users' daily lives. Personal social communication platforms like WhatsApp have minimal onboarding requirements and provide a user-friendly experience, making them more accessible and easier to navigate than unfamiliar purpose-built e-commerce platforms. Individuals spend approximately two hours each day on social media and messaging apps, making them the most-used applications on mobile devices; most of this usage is concentrated in WhatsApp.[43]

Lower-income consumers and resellers continue to grapple with the perception of high data costs,[44] while numerous mobile operators extend free WhatsApp usage when a customer purchases a data bundle. Women social sellers adopt various strategies to maximize their data, such as using a profile photo or status feature to update products and services or flash messages to potential customers at key times (e.g., 2:30 pm, in time to take snack orders for children returning home from school at 4:00 pm).[45] If an interaction originates on an Instagram post, the conversation swiftly transitions to WhatsApp for these reasons. Social platforms also have large existing user bases that resellers can tap into. Notably, a significant portion of the social platform user base in India (32%) is women from small towns who are attracted to the diverse range of products available and the sense of connection with their peers.[46] Small business owners also look to resellers on social platforms for purchases—30% of social platform users in India are small business owners, allocating around 6%–7% of their budget to purchases on these platforms.[47] These factors collectively—personal connections, direct conversations, minimal onboarding requirements, ease of use, and existing user bases—contribute to the appeal and accessibility of social platforms for a wide range of resellers and consumers, particularly women and low-income communities.

42 Sheth et al., Unlocking the Future of Commerce in India.
43 Sheth et al., Unlocking the Future of Commerce in India.
44 Internal research by Caribou Digital.
45 Venkatraman, "Women Entrepreneurs and WhatsApp."
46 Sheth et al., Unlocking the Future of Commerce in India.
47 Sheth et al., Unlocking the Future of Commerce in India.

More broadly, social selling is particularly significant for low-income communities' entry into the digital economy, benefiting from trusted social sellers within their circles who can reach them within their local communities. In Indonesia, reliance on social platforms for buying and selling activities is nearly three times higher than on purpose-built e-commerce platforms. Even among users of purpose-built platforms, a remarkable 90% also engage with social platforms for transactions, leaving only a small fraction that rely exclusively on purpose-built platform channels.[48] The pervasiveness of social platform use in India is even more remarkable: 92% of small and medium businesses utilize WhatsApp as their primary tool for business. This figure is four times the number who sell on Flipkart and Amazon, popular purpose-built e-commerce marketplaces in the country.[49]

Social platforms' overwhelming presence and influence in the buying and selling landscape underscore the immense opportunities they offer for businesses in these regions. Currently, an estimated 10 to 15 million MSMEs in India leverage social platforms, with the potential for up to 40 million businesses to benefit from their utilization.[50] In Kenya, the widespread adoption of social platforms among MSEs contributes to a vibrant social selling landscape, and 9 of every 10 MSEs that utilize digital tools rely on popular apps such as Facebook, Instagram, YouTube, and WhatsApp for essential business functions.[51] Only 3 of 10 turn to purpose-built platforms like Jumia, while informal enterprises are even more likely to rely exclusively on social platforms, perceiving platforms like Jumia as catering primarily to formalized MSEs.[52]

48 Based on SAKERNAS survey from August 2019 of 37 million adults. World Bank, *B*eyond Unicorns: Harnessing Digital Technologies for Inclusion in Indonesia.
49 Thakur, "The $70B Opportunity in India's Emerging Social Commerce Sector."
50 Sheth et al., Unlocking the Future of Commerce in India.
51 Caribou Digital, "Digital Behaviors of Kenyan Micro-Entrepreneurs."
52 Caribou Digital, "Digital Behaviors of Kenyan Micro-Entrepreneurs."

Why are social sellers hesitant to sell on purpose-built e-commerce platforms?[53]

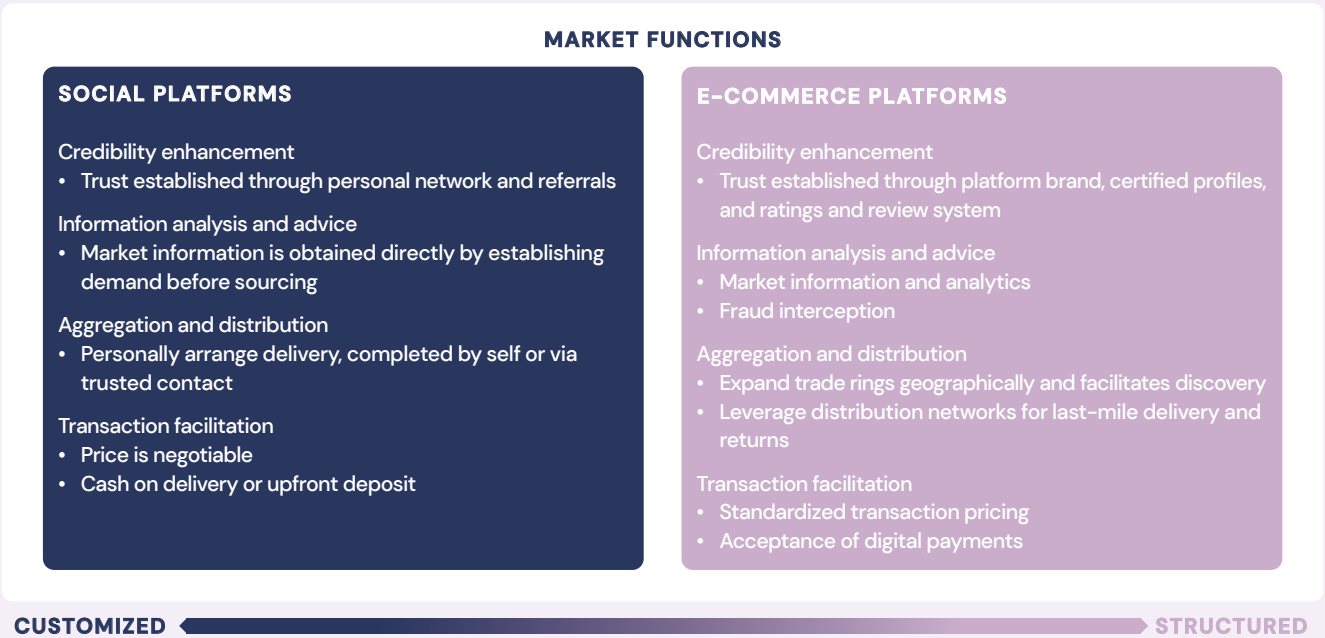
- **Working capital risk:** Social sellers prefer to establish demand before risking their capital purchasing particular items. This level of risk mitigation is usually not available on purpose-built e-commerce platforms, except in limited cases where the reseller has strong digital marketing skills and can partner with a drop-shipper.
- **Brand identity concerns:** Social sellers fear losing their unique brand identity and hesitate to let a platform represent their products.
- **Flexibility considerations:** Some resellers encountered challenges with e-commerce platforms, such as feeling compelled to frequently update product listings or promptly process orders or returns to meet high execution standards. They also found alternatives for cash flow management, such as partnering with friends who offer delayed payment terms to their customers.
- **Lower profit margins:** E-commerce platform fees impact profit margins. Moreover, social sellers provide convenient delivery services to customers in nearby areas.
- **Risk aversion:** Social sellers fear returns or non-acceptance of goods when selling to customers outside their extended networks.

Why might social sellers leverage purpose-built e-commerce platforms?

- **Simpler customer sourcing and more safety:** With purpose-built platforms, there is less pressure to find customers and recourse mechanisms if anything goes awry.
- **Growth mindset:** Social sellers with strong digital skills and support for their business activity might be more attracted to e-commerce platforms because of the potential for growth beyond their immediate social circles and geographic areas.
- **Complex sales:** Social sellers in Indonesia explained that, even when a sale originates on social media, they may selectively leverage an e-commerce platform's offerings to complete a more complex sale. This can include leveraging the platform's e-logistics or escrow services.

Figure 5 ▾

Social platforms vs. e-commerce platforms



53 Key informant interviews with social sellers.

Jackline

Independent reseller

Age
30

Location
Kenya

Household income
Low-middle

Digital literacy
High

Growth orientation
Medium

Risk tolerance
Medium

PERSONA[54]

Independent reseller engaging in social selling

Meet Jackline, a resilient 30-year-old entrepreneur based in Kenya who has found her niche selling window coverings online. Jackline's journey began when she decided to leverage her sewing skills to support herself and her two young children after coming out of a long-term relationship. Operating from her home workshop, she specializes in selling custom-made window coverings and throw pillow covers.

Before selling online, Jackline relied on personal contacts and word-of-mouth referrals to generate orders. However, with the onset of the COVID-19 pandemic, demand plummeted. That's when she realized the potential of social media as a marketing and sales channel. Jackline swiftly adapted and started using popular platforms such as Facebook, WhatsApp Business, Twitter, and YouTube to promote her offerings.

To streamline her operations, Jackline embraced the power of WhatsApp Business, allowing her to track and manage incoming orders efficiently. She has several strategies to manage her workflow. She devised a clever system of color-coding orders for different stages in the process, and she partnered with a reliable delivery provider who ensures safe and secure deliveries to her valued customers.

For payments, Jackline predominantly relies on M-PESA, a widely used mobile money service in Kenya. Most of her customers are comfortable with digital payments and complete their transactions seamlessly using M-PESA. However, for new customers who may have concerns about online transactions, Jackline offers the option to pay a deposit up front and settle the remaining cash upon delivery. On the other hand, trusted customers choose the convenience of paying the entire sum through M-PESA.

Despite juggling her responsibilities as a mother and entrepreneur, Jackline remains dedicated to providing exceptional customer service. She diligently manages her social media accounts, promptly responding to inquiries and keeping her customers updated on their orders.

As Jackline's business continues to flourish, she recognizes the need to deepen her usage of digital financial services. She envisions streamlining her reconciliation processes between services rendered and payments received. Additionally, she seeks easy and secure payment solutions that offer features like one-time payment links. Tracking outstanding payments and generating professional invoices are also important aspects that would enhance her business operations.

54 There are a range of personas across each livelihood type (resellers, nanostores, drivers.) This report spotlights three high digital literacy personas within low- and middle-income households to showcase the platform practices among livelihoods that are "low capital." CGAP's Focus Note on informal online commerce has great examples of Social Seller personas across a greater variety of digital literacy levels and incomes. Roest and Bin-Humam, "Business Her Own Way."

With such significant levels of adoption of social media applications for selling, this activity could play a role in poverty alleviation if demand- and supply-side challenges can be addressed.

Social sellers highly value WhatsApp to market products and services and communicate with clients, but the app lacks essential post-sales support features and doesn't scale to higher volumes of transactions. After confirming an order, a seller must manually organize logistics, track and monitor deliveries, and reconcile final payments. This process becomes increasingly time-consuming as the business grows. Delivery, in particular, is difficult to automate. Geolocation pins in WhatsApp are known to be inaccurate, requiring resellers to relay manual directions to delivery drivers. Even pre-sales activities can be challenging to manage, with a high volume of chats leading to potential mistakes and missed sales opportunities. Notifications can be difficult to keep track of effectively, particularly because individuals in LMICs live with pervasive "digital fraud," receiving many bogus messages through WhatsApp throughout the day. Establishing which messages or payment screenshots are legitimate adds further friction. Additionally, access to a customer's prior sales history for future marketing is not readily available. These limitations may lead resellers to decline sales if they are unsure about their ability to deliver or if the customer is deemed low-trust and is unwilling to make an upfront payment. Dealing with low-trust customers creates added stress, as resellers fear the possibility of payment reversals after the goods have been delivered. Challenging such reversals can be a hassle.

Ultimately, while social selling is an onramp, these inefficiencies impose a growth ceiling for resellers operating on WhatsApp looking to move beyond micro-enterprise, and addressing these constraints is an important part of advancing economic empowerment.

While consumers and sellers' lack of trust in digital payments and purpose-built digital platforms makes social selling on WhatsApp highly compelling, it also creates barriers to advancement. Basic social sellers rely heavily on WhatsApp as their primary platform because it matches their skill levels, because their buyers are cost-sensitive, or because they do not want further exposure. They may use other popular platforms like Instagram, Facebook, or YouTube (applications that can require potentially more public exposure or incur data costs) for inspiration, but they don't transact over them. Expanding sales beyond immediate networks becomes challenging when they rely solely on self-delivery or have limited availability to leave their homes because of caregiving responsibilities, social expectations, and, in some countries, cultural constraints on movement. Moreover, their sourcing options are

limited, making competing with the offers available on digital marketplace platforms difficult. Additionally, if these resellers do not personally browse and select products from e-commerce platforms, they must rely on family members, limiting their autonomy in running their businesses. Lastly, while they may maintain basic records, their financial management is often disorganized; they lack the necessary support and tools to efficiently manage accounts receivable and working capital. These limitations highlight the importance of improving digital skills and accessing additional digital tools to unlock the full potential of these sellers' businesses.

Despite the improved reach and efficiency of advanced social sellers, using a combination of solutions still requires considerable effort and work-arounds. Engaging in online e-commerce apps for sourcing products demands higher levels of digital skills and confidence. Relying on someone else to source products online can put the individual at risk for scams as intermediaries can potentially buy cheaper goods, charge a higher rate, add extra costs, or adulterate products. Due to steep learning curves, using auto-text functions can be challenging. Moreover, currently, available apps assume a certain level of general and digital literacy, which may pose barriers for individuals with limited technological proficiency. For instance, installing a third-party keyboard specifically for use in WhatsApp can be quite complicated. Innovators in the social platform space tend to focus on higher-income segments, unintentionally neglecting the need for inclusive design that caters to users with vernacular language preferences, low literacy levels, and high-touch onboarding needs. Consequently, these solutions may not be easily accessible or usable for individuals with lower levels of digital literacy. Additionally, advanced social sellers often face challenges with the availability of e-logistics platform delivery drivers, which can impact the overall customer experience. Reconciliation and bookkeeping processes often involve manually reviewing each account to verify payments, as the lack of open banking standards or infrastructure limits automated and streamlined approaches in these areas.

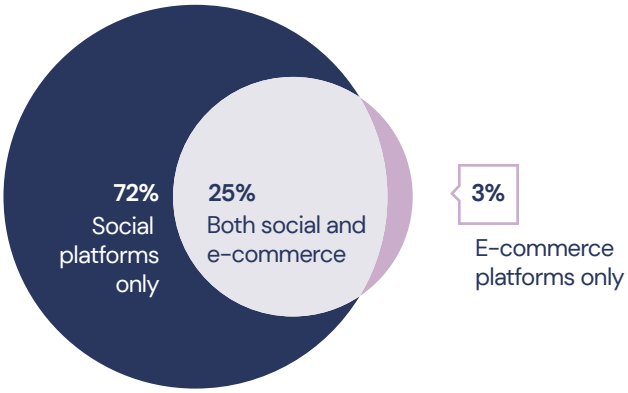
There are a number of interventions targeting demand-side barriers, such as digital skills training or micro-entrepreneurship training that focus on selling digitally. In the final section of this report, we discuss how improvements in digital infrastructure and social media platforms can alleviate some of the friction that social sellers are facing, potentially inspiring more individuals to grow their businesses. In particular, interoperable digital payment systems and enhanced small business e-commerce functionalities within messaging platforms can contribute to a more secure and streamlined experience for both social sellers and their customers.

Women are increasingly engaged in social selling and are three times more likely to sell via only social media than both social and e-commerce platforms.

The participation of women in social selling is on the rise, driven by its flexible nature and income-boosting potential. While exact estimates are not available, World Bank Indonesia's *Beyond Unicorns* report, which relied on national labor force statistics, found that, while men are almost twice as likely to be using the internet at work, 38% of women who use the internet for their primary jobs are active online sellers.[55] Notably, most women selling online prefer using social platforms. In Indonesia, for instance, among women using the internet for e-commerce, three times as many women sell via social media only than via both platforms and social media.[56] This preference becomes even more pronounced when online selling serves as a supplementary income stream and for low-income women, as indicated by women-specific studies of active sellers who own a smartphone.

Figure 6 ▾

Social platforms are 3× more prevalent than the use of e-commerce platforms[57]



Source: World Bank, Beyond Unicorns: Harnessing Digital Technologies for Inclusion in Indonesia.

Additionally, social selling can help reduce the impact of some obstacles, even as those obstacles remain and present barriers to growth.[59] These challenges can include limited access to capital, mobility restrictions, constricted social networks, inheritance and property rights limitations, and managing childcare and household responsibilities.

While social platforms meet women's basic social selling needs, women do face risks associated with going online, particularly on social media platforms. Although social media and communication platforms present lower entry barriers for women than traditional platforms, they offer comparatively less protection. The absence of governance amplifies harassment and enables predatory behavior, counterfeits, and fraudulent

55 World Bank, Beyond Unicorns.
56 World Bank, Beyond Unicorns.
57 Theis and Rusconi, "Social Commerce Entrepreneurship and New Opportunities for Women's Financial Inclusion in India and Indonesia."
58 Our analysis includes women who earn online as primary and secondary income sources. There is slight variation depending on whether the income source is primary or secondary. Notably women who earn online as a secondary income source rely on e-commerce platforms even less (1% vs. 3%).
59 Theis and Rusconi, "Social Commerce Entrepreneurship and New Opportunities for Women's Financial Inclusion in India and Indonesia."

nonpayment incidents. Reports likely undercount the reality of scams experienced among female small business owners; efforts to protect them through regulation and supervision are important. Furthermore, some women prefer final transactions in cash due to its perceived trustworthiness compared to digital payments, which can be subject to fraudulent reversals.[60]

Addressing both scams and fraud is important because they not only inhibit the future activity of the woman experiencing them, but also raise the specter of risk in platform livelihoods more broadly in her circle, including male family members that may seek to protect female family members from these experiences. Moreover, while it may be impossible to police all fraudulent activity and scams, certainly enabling more secure payments to sellers could help. Specifically, payment service providers might take more steps to combat chargeback fraud and fraudulent payment reversals. To this end, India has created a mechanism for dispute redressal related to UPI transactions involving various service providers and ultimately the Banking Ombudsman and/or the Ombudsman for Digital Complaints if necessary.

Stratification can also limit women's opportunities. Limited social mobility among low-income women may hinder their access to higher-income and higher-trust customer segments. Gender-related challenges persist in storing and transporting inventory,[61] where negotiations for hiring space and reliance on male deliverers create potential imbalances.[62]

These observations underscore the trade-offs that women face as social sellers. While social platforms offer them numerous advantages and opportunities, there are limitations to their progression and potential risks associated with this choice. Not all of these barriers are specific to social selling, but rather are barriers faced by women across all livelihoods and in their daily lives. Seamless integration of secure DPI systems with prominent social platforms, as demonstrated by the successful collaboration of UPI and WhatsApp in India, can support social sellers to better manage payments frictions. However, for women to benefit, it is imperative to prioritize inclusive DPI design and onboarding processes.

New variations on social selling are emerging to empower agents and resellers, although shifting business models may impact the sustainability of these opportunities.

Several new business models are emerging, riding on the pervasive use of social platforms among consumers and the social selling practices of resellers. This section highlights two interesting examples, drawing attention to emerging platform-enabled financial services use cases.

60 Level One Project, "5. Gender Impact."
61 See video on Zumunta, a Caribou Digital research participant. Caribou Digital, "There Is No Straight Path. Not for Women – Zumunta, the Agripreneur."
62 Steel, "Navigating (Im)Mobility: Female Entrepreneurship and Social Media in Khartoum."

TuShop empowers its agents to generate income by leveraging their networks, particularly in densely populated areas.

Tushop promotion

Credit: TuShop on Facebook.

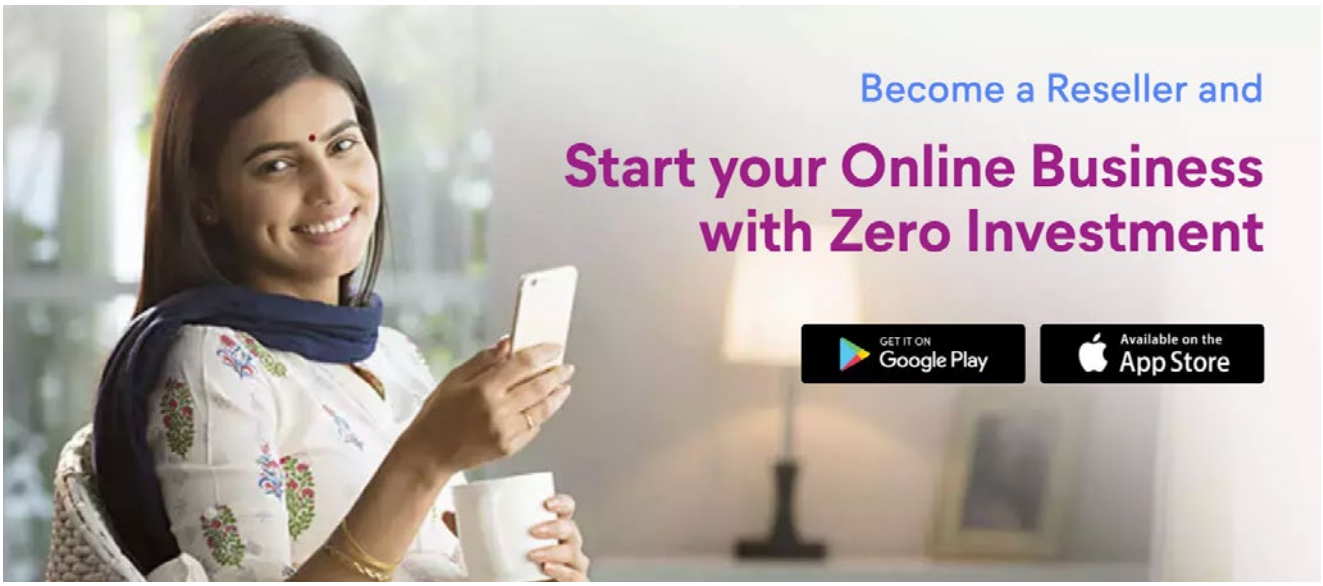
TuShop is a social commerce platform in Kenya that enables group buying. Agents play a pivotal role by aggregating orders and serving as a convenient point of delivery. Leveraging platforms like WhatsApp as their primary tool, they utilize digital catalogs to showcase various grocery items. Through WhatsApp, they coordinate payment and delivery. In this collective buying model, TuShop agents act as single bulk purchasers, pooling together individual orders to unlock access to lower prices and exclusive deals. By harnessing the power of group purchasing, customers benefit from reduced costs typically associated with bulk buying while also enjoying the convenience of doorstep delivery.

TuShop provides a mutually beneficial ecosystem where agents generate income by leveraging personal networks, customers benefit from cost savings, and suppliers gain access to a larger customer base. By fostering collective buying, TuShop offers a promising avenue for income generation among women who play a prominent role in their neighborhoods and helps community members save money.

However, global research suggests that models like TuShop present working capital challenges to agents, compounded further by payment conventions where agents take all the risks. Platforms could mitigate the capital burden by providing credit options. They could also explore other business models, such as Pinduoduo's Duo Duo Grocery service, where the agent shares the deal within their network to benefit from bulk pricing, but delivery isn't provided.[63] Moreover, capital requirements can be lower, and thus potentially more inclusive, in categories with higher turnover, such as FMCGs and groceries. These categories typically involve faster sales and shorter replenishment cycles, reducing the need for large upfront payments. Furthermore, some companies are experimenting with group buying *by* women *for* women, with a product mix of staple groceries, FMCGs and feminine hygiene, and children's products for a more attractive proposition to the female market.[64]

Business models like this that are unable to embed credit or deferred payments directly are ripe for partnership with banks or nonbank financial institutions (NBFIs). As discussed in the next section, in "lead generation" strategies, clear data-sharing frameworks can create opportunities for more partnerships as the liability for personal data management becomes clearer and supporting technology is in place.

Meesho opportunities for resellers and suppliers
Credit: Meesho website.



63 Dewez, "Look East, Not West – Pinduoduo's New Grocery Business."
64 Internal research by Caribou Digital.

Meesho resellers connect consumers and vendors within the social commerce ecosystem.

Meesho supports a network of 2 million women resellers in tier 1, 2, and 3 cities[65] that sell fashion, beauty, and personal care items from its social commerce catalog. More than 75% are homemakers or self-employed and earning INR 5K to 10K per month by reselling through the platform.[66] These resellers leverage their social networks to initiate sales and establish prices, acting as intermediaries between buyers and vendors. Unlike independent resellers, Meesho's resellers do not put capital at risk. Instead, they collaborate with Meesho, which provides streamlined drop shipment services and digital payment support, ensuring a smooth and convenient customer transaction process. Meesho resellers earn commissions based on the successful transactions they facilitate, creating a mutually beneficial relationship for all parties involved.

Evolving business models may jeopardize the income stability of agents and resellers, underscoring the dynamic and uncertain nature of platform livelihoods.

Agents and resellers may face challenges posed by shifts toward direct-to-consumer business models. Such shifts may occur as platforms seek to establish stronger consumer relationships or optimize operational efficiency. This highlights the uncertain nature of some platform livelihoods and how business models may evolve in ways that cut off nascent opportunities or reduce incomes.

Platform sourcing relieves a large pain point for nanostores and provides additional benefits.

B2B platforms are enhancing nanostore livelihoods, but expanding reach to smaller towns and tier 3 cities is challenging due to higher acquisition costs and logistical complexities.

Platforms are revolutionizing sourcing for nanostores, offering convenience, better pricing, and a wider selection of goods. Sourcing is a significant

65 There are no common standards to segment cities by tiers. Commercial analysis of opportunities for digital platforms typically focuses on tier 1 cities, which are densely populated metropolitan areas in which a large share of the middle class resides. Tier 2 and tier 3 cities may be large, but they typically have a smaller share of the middle class and lower rates of digital and logistical infrastructure development. For example, in Indonesia, there are an estimated 15 tier 1 cities, while there are 177 tier 2 and tier 3 cities. Another 322 cities are tier 4.

66 Sheth et al., Unlocking the Future of Commerce in India.

challenge for nanostores as they contend with irregular supply, limited product variety, limited market information, high prices (with opaque promotions or suppliers not passing along discounts), extended delivery times, and a shortage of credit options to purchase additional inventory.[67] Furthermore, the smallest nanostores often face difficulty obtaining credit or available delivery services from suppliers due to their limited purchasing volumes.[68] Consequently, some nanostore owners resort to buying at retail prices from larger retail stores, significantly eroding their profit margins.

Some nanostores have turned to B2B marketplace platforms to overcome these obstacles. By utilizing mobile catalogs on these platforms, nanostores can access a diverse range of goods and conveniently place orders for rapid delivery to their premises. This value proposition is transformative for nanostore owners who previously had to close their shops to restock. Moreover, platforms offer more reliable inventory sources than their current distributors, often providing better pricing and promotional opportunities. While traditional suppliers often do provide at least some sort of payment terms for goods, and for example, in Indonesia, platforms have struggled to match the extension of credit or delayed payment terms offered by existing suppliers, the combined value proposition of B2B platforms is compelling. With convenience, credit options, price transparency, and expanded item selection, nanostores leveraging B2B platforms become more competitive in their markets.[69]

Figure 7 ▾

Popular nanostore sourcing apps in various geographies

67 Agarwal, "All Roads Lead to Kirana"; DealStreetAsia, "Presenting the Warung-Tech Index"; Mogollón Linares and Stimpson, "The Impact of Trade Credits in Nanostore Distribution."

68 Agarwal, "All Roads Lead to Kirana."

69 DealStreetAsia, "Presenting the Warung-Tech Index"; Mogollón Linares and Stimpson, "The Impact of Trade Credits in Nanostore Distribution."

Besides the sourcing value proposition, platforms offer three additional benefits to nanostores.

1 **Building data footprints**

Most importantly, nanostores can develop their data footprint as they buy on platforms. Reducing information asymmetries affects nanostores' ability to access credit, as discussed in the following section; however, realizing this potential lags its promise due to challenges in leveraging transactional data effectively. Comprehensive and responsible data-sharing frameworks are important and will help unlock this benefit.

2 **Offering additional income opportunities**

Platforms are also seeing opportunities to leverage nanostores' physical presence as already-established infrastructure resell digital goods, intermediate e-commerce, or offer value-added digital services such as top-ups, financial services, and digital tickets. This practice is called B2B2C e-commerce or offline-to-online (O2O) e-commerce, and it can generate commissions, enabling an additional income stream for nanostores. For example, Bukalapak, an Indonesian sourcing platform, allows its users to offer 42 digital and financial services, including money transfers and bill payments.[70] O2O e-commerce establishes nanostores as financial inclusion agents within their communities.[71] Moreover, income generation opportunities can be quite significant—in Indonesia, a study found that these opportunities can be almost 18% of the revenue generated by some nanostores.[72]

3 **Providing bookkeeping services**

Some platforms also provide bookkeeping solutions and other business services that enable micro-entrepreneurs and small businesses be better organized. These services, in turn, also provide platforms with additional business information about nanostores, such as store revenues and net profits, and can potentially lower origination costs for providing credit. In Indonesia, BukuWarung provides bookkeeping technology, payment facilitation, financial services, and commerce for small and medium-sized businesses.[73]

70 Arifin, "Stepping Up Warung Digitalization Through Mitra Bukalapak's Multiple Capabilities."
71 Bukalapak, "The Transformation Tale of Indonesian Warungs With Mitra Bukalapak."
72 Behera, "Indonesia eB2B–Reviving the 'Warungs' in a Post COVID World | Part 1."
73 Shu, "Meet BukuWarung, the Bookkeeping App Built for Indonesia's 60 Million 'Micromerchants.'"

What is the difference between B2B and B2B2C e-commerce?

B2B sourcing is the practice of consumer-facing businesses, notably nanostores, buying inventory on digital marketplaces.

B2B2C e-commerce, or offline-to-online (O2O), leverages agents, including nanostores, to intermediate customer sales. O2O e-commerce includes value-added services like top-ups, financial services, and digital tickets, and extends to physical goods.

Expanding B2B platforms to tier 2 and 3 cities benefits both nanostore owners and the communities they serve, as nanostores support communities to access the products they need, fostering economic growth and enhancing overall well-being.[74] This expansion holds great potential for development, as research indicates that consumers in these cities have lower e-commerce engagement rates and B2B platforms can bridge the gap between low-trust consumers and the availability of diverse products and services.[75] As an illustration, Bukalapak recently disclosed that more than 70% of its transactions stem from areas outside tier 1 cities.[76] Working through nanostores may also give platforms a more effective way to reach consumers in tier 2 and 3 cities and a more viable business model than directly serving them. This is because, while a platform's end-consumer acquisition costs are higher in tier 2 and 3 cities, acquisition costs are typically lower for nanostores than for retail consumers.

Expanding B2B platforms into tier 2 and 3 cities and beyond presents challenges, leading to a relatively slow pace of expansion. The high costs associated with acquiring customers with low digitalization, inefficient and unreliable logistics, and narrow product margins contribute to the complexities of operating in these regions. In many geographies, B2B platforms build and operate their logistics infrastructure, which demands significant capital investment. Competition with existing distribution networks further adds to this complexity, as traditional local distributors already extend their reach deep into tier 2 and 3 cities, particularly catering to FMCGs.

74 Margaronis and Kenny, "Bukalapak.Com (BUKA IJ): Digitalizing Indonesia's Backbone."
75 In Indonesia, gross merchandise value will grow five times in five years (in ~180 cities). Tjan et al., "Unlocking the Next Wave of Digital Growth: Beyond Metropolitan Indonesia."
76 Bukalapak, "The Transformation Tale of Indonesian Warungs With Mitra Bukalapak."

Despite these inherent obstacles, some B2B platforms recognize the untapped potential for growth and development in tier 2 and tier 3 cities. They continue to explore innovative strategies to overcome these challenges, aiming to expand their presence and better serve these communities. Some B2B platforms are partnering with third-party warehouses strategically located in tier 2 and tier 3 cities in Indonesia. For instance, Bukalapak has collaborated with local logistics providers to set up warehouses in key tier 3 cities and remote areas.[77] By leveraging the expertise of local logistics partners, a platform can navigate the challenges of reaching remote markets and minimize the capital investment required to build a proprietary logistics infrastructure.

Additionally, B2B platforms serving nanostores are exploring credit as a way to improve the economics of working in tier 2 and tier 3 cities. Credit products can yield significant revenue; for instance, an Indian marketplace platform reported four times more revenue from loans than from sales of goods in 2019. Interestingly, digital credit is also bolstering the business models of traditional distributors, who can partner with platforms like Indifi (India) and LendingKart (India), which utilize data from various sources to assess small businesses' creditworthiness and performance.[78]

Informal micro-entrepreneurs who lack registration documents can still source online. In India, the women-led micro-entrepreneurs surveyed by Women's World Banking active in "e-commerce" (19%) were sourcing online through platforms such as Udaan and Jumbotail and then selling through social media.[79] Regulation requiring micro-entrepreneurs selling online to be GST (Goods and Services Tax) registered creates an additional barrier for informal enterprises.[80] However, those same enterprises do not require a license or GST number to *buy* online, as is the case for consumers. This discrepancy contributes to more nanostores adopting online sourcing behaviors before using purpose-built platforms to expand sales.

However, it is worth noting that certain B2B platforms may be influenced by investor pressure to realize profits in the current funding environment, leading to operational decisions that prioritize short-term profitability over long-term growth. Consequently, some platforms deprioritize tier 2 and tier 3 city expansion to focus on more lucrative product or service lines. This divergence in approach reflects the complexities and trade-offs involved in platform business models that cater to nanostores.

77 Gabriela and Marcella, "Bukalapak.Com: First-Mover in Ex-Tier 1 Cities' e-Commerce."

78 Ghosh, "Distribution Supply Chain Financing in India."

79 Theis and Rusconi, "Social Commerce Entrepreneurship and New Opportunities for Women's Financial Inclusion in India and Indonesia."

80 Meesho's platform sells goods from over 100,000 suppliers—it rejects more than 70% of small suppliers due to their lack of GST registration. It claims its supplier base would be 3 times larger if consistent GST requirements were in place. Bhandari and Joshi, B-Commerce Soars: Digitizing India's Storefront Retail.

Haryam

Nanostore owner

Age
40

Location
Indonesia

Household income
Low-middle

Digital literacy
High

Growth orientation
Medium

Risk tolerance
Low

PERSONA

Nanostore owner sourcing inventory through platforms

Haryam, a dedicated mother of two, is the proud owner of a *warung* in Indonesia. Previously, she operated a bamboo snack stand in a bustling area, selling sausages and powdered drinks. However, her entrepreneurial journey took a transformative turn when she discovered the power of the Warung Pintar app. With this platform, Haryam expanded her offerings to include digital services like bill payment and remittances, as well as sourcing basic household staples, enabling her to increase her earnings.

In the past, Haryam faced challenges with irregular supplies from local distributors, leading to time-consuming sourcing and suboptimal prices. She often received spoiled perishable goods, impacting her inventory management. Limited access to credit meant she struggled to keep essential items in stock. By utilizing Warung Pintar, Haryam now enjoys numerous benefits that contribute to her financial success.

Through the app, Haryam discovers better prices from multiple suppliers, gains insights into consumer demand, and establishes relationships with reliable suppliers. She can source a greater variety of items, including high-margin value-added services such as digital products, and facilitated O2O deliveries. Utilizing the built-in bookkeeping feature saves her valuable time, while access to financing options helps her overcome cash shortfalls and expand her business.

Haryam's shift toward selling digital services reduces her reliance on perishable goods and accelerates her understanding and adoption of digital financial services and credit. This transition has brought her more confidence and resilience, particularly during the challenging times of the COVID-19 pandemic, allowing her to maintain sales and provide for her family.

With her determination and the support of platforms like Warung Pintar, Haryam continues to thrive as an empowered microbusiness, providing for her family and embracing the opportunities of platforms.

Challenges to participation on B2B platforms encompass digital literacy, identity inclusion, and gender disparities, while challenges limiting growth opportunities for smaller nanostores revolve around access to inventory financing.

The barriers to joining B2B platforms are significant and encompass several factors.

- Buyers need an appropriate device, digital literacy, and skills crucial to navigating apps or websites and effectively placing orders.
- Financial inclusion (owning a mobile money account, bank account, or credit card) is dependent on identity inclusion. To register for any of these, an identity document (ID) is critical, and many low-income segments typically experience greater ID exclusion than other demographics.
- Whether registration occurs in a woman's name or that of a male family member, men often manage the banking relationship, which creates dependency for the female actor.[81]

Even if businesses have successfully onboarded to platforms and started using them, they may encounter challenges, particularly concerning business growth. A primary issue arises in the access to inventory financing offerings provided by these platforms. In countries like Indonesia, nanostores must fulfill e-KYC requirements through a third party, leading to delays for nanostores and a significant drop in platforms' loan conversion funnel. Moreover, relying on expensive third-party services for identity verification disincentivizes platforms from offering smaller loans, meaning that loans are not fit for purpose or available for all who would like them. Instead, platforms are more inclined to work with larger nanostores that place substantial orders and have an established history. These challenges can further limit growth opportunities for smaller businesses.

Efficient, cost-effective, and inclusive consent-based processes for identity verification could enable B2B platforms be more inclusive in their credit offerings if they enable a multitude of actors, such as platforms, to utilize the system. Moreover, the identity systems that e-KYC processes rely on need to be widespread and inclusive, so that existing credit offerings on B2B platforms can be taken advantage of by more women and more lower-income communities.

While a significant number of nanostores are women-owned, cultural norms may hinder women's involvement in these platforms.

A significant number of nanostores are women-owned, supplementing household income for non-discretionary expenses.[82] However, the precise

81 Liew, "Power in Practice–or Only on Paper?"
82 Indraswari, "Women and Warung in an Urban Kampung."

extent of such women's involvement in B2B platforms remains uncertain. Cultural norms that inhibit smartphone ownership and internet use among women can still limit women's participation on B2B platforms. For example, in India, women's smartphone ownership (at 29%) lags that of men by 19 percentage points.[83] Often, device cost and family attitudes are not the only barriers, but also the fear of women interacting with strangers online.[84] Making the business case for utilizing B2B platforms clearer for women could have an impact in both her and her household's willingness to participate.

Platform ride-hailing and delivery is the most pervasive non-trade livelihood that is significantly attracting participation from low-income communities.

Ride-hailing and delivery platforms offer 2/3-wheel drivers new work opportunities, primarily in urban areas.

Ride-hailing and delivery platforms serve as intermediaries, connecting 2/3-wheel drivers with on-demand ride or delivery requests. These platforms provide drivers a significant advantage by facilitating connections with new and previously unknown customers. This process is made seamless through a standardized digital user interface, enabling drivers to discover and match with work assignments easily. Drivers can access various work opportunities by enrolling on multiple ride-hailing and delivery platforms, enhancing income generation and fostering resilience.

In addition to the job-matching value proposition, ride-hailing and delivery platforms offer two additional benefits compared with more traditional ways of finding work as a delivery or taxi driver in LMICs.

1 **Building data footprints**

Similar to sourcing platforms, 2/3-wheel drivers can build their data footprints on ride-hailing and delivery platforms as they fulfill trip requests. This information becomes especially relevant regarding drivers' eligibility for accessing larger amounts of credit, such as to purchase a motorcycle, a topic further explored in the next section.

83 Jeffrie et al., The Mobile Gender Gap Report 2023.

84 Srinivasan et al., "The Poverty of Privacy: Understanding Privacy Trade-Offs From Identity Infrastructure Users in India."

2 Accessing job-related financial services

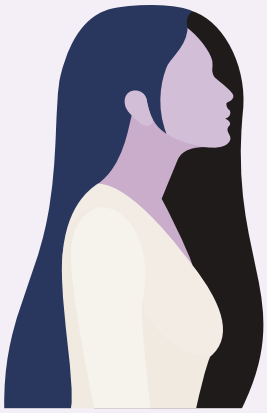
Many platforms also support the financial well-being of 2/3-wheel drivers on their platforms. One common action is providing drivers insurance coverage, ensuring a safety net in case of accidents while reducing the platform's liability. Some platforms even extend access to small amounts of credit, enabling drivers to refuel their vehicles or do necessary servicing without financial strain. These financial services enhance drivers' overall welfare and cash flow stability, fostering a mutually beneficial relationship between drivers and platforms.

Larger ride-hailing and delivery platforms have expanded their operations into new areas, primarily focusing on tier 1 and tier 2 cities, with local clones emerging in tier 3 and smaller cities. Onboarding 2/3-wheel drivers to these platforms is a critical operational challenge, especially regarding KYC requirements and general onboarding procedures. In-person onboarding is crucial in ensuring drivers are properly equipped to operate on the platforms. Additionally, there are significant literacy gaps in digital skills and reading/writing among drivers, many of whom come from rural areas and have had to leave school to support their families. Nevertheless, ride-hailing and delivery platforms offer them accessible job opportunities, as they can easily rent motorcycles and transport goods or passengers, and the platforms provide essential training on using smartphones and maps, as well as other necessary skills.[85]

While ride-hailing and delivery activities are also present in rural areas, they are often not yet platformed. In rural Kenya and other regions, motorcycle ride-hailing and delivery services are common due to impassable roads and the demand for motorcycle transport. However, the absence of 2/3-wheel drivers using platforms in rural areas can be attributed to various challenges. Many drivers in rural areas lack official driving licenses and insurance, making it difficult for platforms to onboard them. The risk of taking on drivers without proper documentation is a major concern for platforms. Additionally, the rural market may not support the price premium that a platform would impose for most use cases. As a result, most rural demand continues to be met by informal motorcycle stages. The lack of readily available partners that can plug in digitally, in turn, creates a challenge for rural B2B and B2C e-commerce business models since they depend on logistics.

Nonetheless, there is potential for platforms to address the need for timely and well-recorded B2B deliveries in rural areas. Businesses requiring reliable delivery services to move goods between shops or warehouses can benefit from platformed services that ensure efficiency and transparency. However, informal stages will likely remain the primary choice for other types of demand. To support this activity, it is essential that digital ID systems are widespread and inclusive, and that efficient and cost-effective KYC procedures support platforms with consent-based access.

85 Caribou Digital, Platform-Led Upskilling: How Marketplace Platforms Can Transform Emerging Markets by Investing in Skills Development.



Radha

2/3-wheel driver

Age
25

Location
India

Household income
Low-middle

Digital literacy
High

Growth orientation
Medium

Risk tolerance
High

PERSONA

2/3-wheel driver working for ride-hailing and delivery platforms

Meet Radha, a tuk-tuk driver for Ola in India. Before becoming a tuk-tuk driver, Radha utilized her skills in clothing and bag-making, selling her creations to local shops. However, due to low sales, she transitioned to the world of tuk-tuk driving.

Radha dedicates over 12 hours daily to her work, setting a personal target of earning $20 before returning home to her family. To achieve this goal, she carefully assesses trip requests on ride-hailing apps and accepts trips or parcel delivery requests. She usually declines short trips or deliveries with minimal earnings, as the time spent traveling to pick up the customer outweighs the potential earnings, resulting in a loss. While drivers on Ola have the freedom to choose which requests they accept, Radha is aware that declining too many trips can negatively impact her rating. She has heard that long-distance trips are prioritized for riders with higher ratings, emphasizing the importance of managing her acceptance rate to maximize her income.

Radha embraces the opportunity to deepen her usage of DFS to enhance her livelihood. She envisions a comprehensive financial solution that combines a savings account bundled with insurance to cover maintenance and repairs while also providing short-term credit options to address unexpected expenses related to maintenance, repairs, and fuel costs, offering her financial security. Radha's ultimate goal is to save and access credit that would allow her to purchase her tuk-tuk. She recognizes the importance of her mobile phone for work and seeks a savings account that includes insurance for mobile phone repair or replacement.

Challenges to participation and progression

Women and low-income communities do participate in platformed ride-hailing and delivery, but the barriers associated with joining them can be substantial. First, aspiring drivers must have access to a 2/3-wheel vehicle, which can be challenging. Ownership of a vehicle also plays a crucial role in determining whether the livelihood is successful or precarious, as those who need to pay for a vehicle, either through loan repayment or rental fee, which is the least desirable, often end up giving away a substantial portion of their earnings. According to ILO country surveys of car and 2/3-wheel ride-hailing and delivery drivers in eleven countries, 69% of ride-hailing drivers who use platforms own their vehicles, with 70% of those having taken out a loan. Thus, for around half (52%) of ride-hailing drivers, platform work carries higher risks due to a significant portion of earnings being allocated towards car loan repayments.[86]

Additionally, 2/3-wheel drivers need a relatively newer device capable of running the platform's driver application and sufficient working capital to cover fuel and data expenses. An IFC report on women in the ride-hailing economy identifies working capital costs as a major barrier, highlighting a significant opportunity for platforms to address this through credit.[87] Notably, 2/3-wheel drivers in Rwanda are estimated to spend around US$2,000 annually on fuel and maintenance.[88] Furthermore, evidence suggests that newer and more powerful devices have an advantage in algorithmic matching processes. Such devices enable drivers to receive and process service requests more quickly, potentially increasing their chances of securing rides. Newer and more powerful devices are more expensive than more basic or used devices. Additionally, drivers must possess a valid driver's license, national identity card, and a bank account or mobile wallet to receive their earnings.

Beyond these explicit requirements, implicit skills are necessary for success. Proficiency in the country's dominant language is crucial to communicating with customers and navigating delivery apps effectively. Moreover, 2/3-wheel drivers must have digital literacy to use the platform's applications efficiently. Skillful driving and navigation abilities are also essential for safe and reliable service, alongside professional customer-facing skills to provide a positive rider experience. Collectively, these barriers encompass a range of factors, including access to resources, financial constraints, technological requirements, and specific skills, which must be addressed to facilitate greater participation in ride-hailing and delivery platforms.

Progression in ride-hailing and delivery is achieved through vehicular ownership, leading to greater take-home income. Previous Caribou Digital

86 ILO, World Employment and Social Outlook 2021.
87 IFC and Accenture, Driving Toward Equality.
88 Bright, "Rwanda to Phase out Gas Motorcycle Taxis for E-Motos."

research revealed that some accomplish ownership goals through savings and others through loans.[89] Many platforms now offer loans through their balance sheets or in collaboration with partners, utilizing platform data to inform lending decisions. However, without data-sharing frameworks and APIs, platforms and their partners are limited to offering synthesized credit scores or verifying data points, which can limit the potential to customize financial products to be more appropriate for low-income communities.

There are also complex issues regarding whether vehicle loans genuinely improve livelihoods. For example, Julie Zollman's detailed work with drivers in Nairobi underscores how the razor-thin profit margins in the (algorithmically managed) ride-hailing sector create distinctions between individuals who own their vehicles outright and those who work as drivers for others or carry substantial debt loads on their vehicles. Her research also showed that loans taken out based on prior earnings can suddenly become unaffordable if platforms change compensation rates, as has happened in multiple geographies. [90]

Moreover, 2/3-wheel drivers face the risk of working hard, or harder, to earn less as platforms offer drivers less for each ride. Ride-hailing and delivery are highly standardized and commoditized activities, where the majority of matching between drivers and consumers is orchestrated by algorithms, while the platforms exercise control over pricing and payout policies. As a result, 2/3-wheel drivers face limited opportunities to differentiate themselves, as customers do not have a direct choice of drivers. Rather, the algorithm assigns drivers based on factors, such as proximity. A batching optimization process adds complexity—the apps assign drivers not necessarily based on which delivery is closest to them but through a series of calculations that ensures every customer receives their order within a roughly comparable waiting time. The algorithm also considers drivers' reputation, including the number of deliveries or trips completed and customer ratings. Additional factors like the time served as a driver, delays en route to the pick-up location, total weekly payout, cancellation and acceptance rates, and daily earnings impact the selection process. While drivers strive to perform well to maintain higher ratings and increase their chances of receiving orders, there is uncertainty and a lack of transparency in how platforms assign drivers to specific trips. Moreover, algorithmic management practices can disadvantage women, who may opt for shorter, more localized rides at specified times and in specific areas, impacting their future work allocation.[91]

89 Caribou Digital and Story × Design, "Platform Livelihoods and Covid-19: Young People's Stories of Resilience (Project Page)."

90 Norman, "What Does Ride-Hailing in Kenya Show Us about the Prospects for Digitally-Mediated Work in Africa?"

91 Caribou Digital, Women in the Platform Economy.

Women's inclusion in 2/3-wheel ride-hailing and delivery on platforms

Safety concerns are a significant factor contributing to the lower participation of women in ride-hailing and delivery services. A Caribou Digital study in Kenya revealed that some women express a preference for delivering goods over transporting passengers due to safety considerations.[92] Moreover, women have reported turning down jobs that involve working after dark or in distant locations, further highlighting their safety concerns.[93] The issue of personal security is not the only aspect; road safety also plays a crucial role. In another research study conducted by Caribou Digital for IADB in Chile, Ecuador, and Peru, a male bicycle driver empathized with the challenges women drivers face, acknowledging that riding a 2/3-wheeler can be unsafe, particularly when rapid delivery expectations from platforms can lead to risk-taking and accidents.[94] These findings underscore the complex interplay of safety considerations impacting women's ability to pursue ride-hailing and delivery work opportunities.

It will take a combination of platform-led gender-intentional policies and practices, social norms, and assured safety for women drivers to make ride-hailing more attractive to women. Initiatives tackling women's concerns have gained little traction. A few factors are at play here. Some female drivers say that platforms are rolling back women's incentives without explanation.[95] Second, the lack of broader safety support (e.g., from police) continues to be discouraging for women.[96] Finally, financial and social capital are interconnected for women, as family members, influenced by social norms, may discourage entry or withhold financial support, impacting women's participation in these activities. Even with dedicated policies implemented to attract female drivers, such as those by Uber in Saudi Arabia after 2018, uptake has been low.[97] Social networks and role models will also be vital to empower women to enter this sector. Ola Mobility Institute reports that 83% of women working in the transport sector in India heard about job opportunities through friends and family.[98] By focusing initiatives to address the issues affecting participation in gendered livelihoods like ride-hailing and delivery more holistically, development practitioners will increase the likelihood of achieving greater participation by women.

92 Caribou Digital, Women in the Platform Economy.
93 Bailur and Ongoma, "'I Feel Empowered...But You Have to Have a Thick Skin.'"
94 Internal research by Caribou Digital.
95 Siddiqui, "Women Were Celebrated as the Face of Gig Work in Pakistan. They're Quitting the Industry."
96 Caribou Digital, Women in the Platform Economy.
97 Winick, "Saudi Arabian Women Are Getting Gigs as Ride-Hailing Drivers."
98 Ola Mobility Institute and Children's Investment Fund Foundation, "Women in the Platform Economy: Breaking Barriers & Driving Inclusive Growth."

Figure 8 ▾

Summary of challenges to participation on platforms and progression in livelihoods

Participation	Progression	Both
Social media and messaging platforms		
• Sourcing products at a competitive price is a challenge for basic sellers. For women with limited mobility, delivery from platforms can open new opportunities.* • Needing to source reliable transportation for deliveries.	• Cumbersome and time-consuming business and financial planning/management.* • High instances of fraud. • Needing to develop a network of interested customers/clients. Expanding sales beyond friends and family is difficult if they rely on self-delivery or have limited time to leave home.* • Number of WhatsApp accounts that can be associated with device or business account.	
Purpose-built e-commerce platforms		
• Rural exclusion. • Inability to meet financial account requirement to join platforms.* • Inability to meet identity documentation requirement to join platforms.* • Lengthy process to join platforms (including licensing of vehicles, certifications, etc.). • Inability/social norms in operating a vehicle, navigating, using a map, etc.*	• Friction shuffling between cash and digital accounts. • Algorithmic management inhibits flexibility, rewards top performers (large volumes, long history), skews ratings.* • Commodification (versus accrual of differentiable skills) and inability to earn more aside from working longer hours.	
Both		
• Gender norms may prevent interaction with male customers, couriers, or suppliers.* • Gender norms on women's work (including role models, autonomy, and flexibility to work out of the home).* • Ability/flexibility to work and balance home and family responsibilities.* • Feeling unsafe while performing platform work.* • Lack of access to transportation that is safe, reliable, and affordable.* • Lack of a smartphone, poor signal coverage and high-cost data bundles.*	• Extreme responsiveness is required to capture sales or work prospects.* • Fractional participation can slow down progression. • Inability to mitigate livelihood shocks.*	• Lack of investment capital for startup or growth due to requirements.* • Lack of digital literacy/skills and how to apply them to specific platforms in a basic way as well as to progress (e.g., knowledge of digital marketing, how to keep ratings high, etc.).*

* indicates more binding for women

Sources: Das et al., "The Digital Archipelago: How Online Commerce Is Driving Indonesia's Economic Development"; Schoemaker et al., "Social Agriculture: Examining the Affordances of Social Media for Agricultural Practices"; Bailur, "Women and ID in a Digital Age"; Budiman, "Financial Inclusion Story of Ride-Hailing: Stories from Gojek and Grab Drivers in Indonesia"; Singh, Deshpande, and Murthy, "Women in the Platform Economy: Emerging Insights"; Chen et al., "The Disembedded Digital Economy"; Hunt et al., "Women in the Gig Economy: Paid Work, Care and Flexibility in Kenya and South Africa"; Theis and Rusconi, "Social Commerce Entrepreneurship and New Opportunities for Women's Financial Inclusion in India and Indonesia"; Dina and Dewaranu, "Regulatory Reforms to Increase Women Micro-Entrepreneurs Participation in E-Commerce"; studies summarized in Caribou Digital and Qhala, "Platform Livelihoods Knowledge Map: Objectivity and Professionalism"; Gray and Suri, *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass*; IFC and Accenture, Driving Toward Equality: Women, Ride-Hailing, and the Sharing Economy; studies summarized in Caribou Digital and Qhala, "Platform Livelihoods Knowledge Map: Earnings"; Graham, Hjorth, and Lehdonvirta, "Digital Labour and Development: Impacts of Global Digital Labour Platforms and the Gig Economy on Worker Livelihoods"; Bailur and Ongoma, "'I Feel Empowered… You Have to Have a Thick Skin,'"; Athreya, "Bias in, Bias out: Gender and Work in the Platform Economy"; Steel, "Navigating (Im)Mobility: Female Entrepreneurship and Social Media in Khartoum"; Bailur, "Female Livelihoods in the Gig Economy: Tensions and Opportunities"; company websites; Caribou Digital, key informant interviews with stakeholders.

Connecting platform practices to financial inclusion

These three key practices—social selling, platform sourcing, and platform ride-hailing and delivery—across independent resellers, nanostores, and 2/3-wheel drivers reveal plenty of opportunities and potential to innovate to promote gender-intentional and pro-poor functionality. Financial services are a perfect focal area because of their centrality to livelihoods. The following section introduces the concept of platform-enabled financial services and outlines various ways platforms can facilitate financial inclusion and access to products that enhance livelihoods.

Photo below
Women selling food in the street of Kangemi, Nairobi on June 24, 2016.

Riccardo Gangale / Bill & Melinda Gates Foundation

Digital platforms create opportunities for financial inclusion

Each platform practice described in the previous section—social selling, platform sourcing, and 2/3-wheel driving for platforms—contributes to building data footprints and connecting more low-income communities and women to financial services. We use the term "**platform-enabled financial services**" to describe the critical role that data and the platform interface play in facilitating and scaling financial services. Platform-enabled financial services can be digitally connected and customizable, seamlessly integrated into the user experience of a non-financial company's platform ("embedded"), or products offered by a financial institution that a platform refers its clients to ("lead generation.") In the case of non-embedded products, the platform primarily functions as a lead generator for another financial institution rather than directly offering financial services at the most opportune moments for users. However, both benefit from reduced customer acquisition costs, opening new avenues for financial inclusion and empowerment. The interconnected and customizable nature of embedded finance and lower acquisition costs make it promising for underserved groups, such as low- and middle-income resellers, nanostores, and 2/3-wheel drivers, who have faced limited support from traditional financial institutions.

Platform-enabled financial services encompass many products and use cases that cater to the diverse needs of consumers and small businesses. For consumers, these offerings range from digital payment solutions to flexible buy-now-pay-later (BNPL) credit services. Consumers also benefit from insurance products, safeguarding their purchases. Embedded credit supports small businesses to access working capital loans or credit lines directly through platforms, while digital payment solutions enable swift and secure transactions. The concept of bundled products is also gaining traction: platforms package various financial service products or combine a financial service with a non-financial value-added service like small business accounting training.

This analysis focuses on two embedded product categories for small businesses, payments and credit, alongside one specific modality, platform-enabled lead generation for savings, insurance, and bundled products. While we will explain the use cases for platform-enabled financial services within the livelihoods of focus, the significance of platform-enabled financial services extends to many livelihoods. This section establishes the connections between these services and our focal livelihoods while also suggesting broader implications for platformed workers and small businesses.

Embedded payments streamline transactions across various platforms, but this feature is not yet available for many independent resellers.

Embedded payments streamline transactions for both buyers and sellers. Today, many purpose-built platforms have enabled embedded payments, allowing customers to place an order and pay within one application. In LMICs, some platforms have implemented embedded payments by introducing mobile wallets that banked customers can easily fund from their accounts. In Indonesia, this approach has become standard practice. For instance, GoTo provides a digital wallet through GoPay, enabling its customers to pay GoTo merchants and drivers digitally while also giving customers tools to pay bills, top up airtime, and transfer funds. Companies like Shopee and Grab have also partnered with digital wallet providers to offer similar convenience. Other platforms collaborate with online payment service providers that facilitate a smooth payment experience, embedding popular payment modalities such as bank accounts and digital wallets. For small businesses, this functionality supports seamless digital payments to 2/3-wheel drivers and advanced social sellers using delivery platforms and payments by nanostores for orders.

Social platforms are an important area for further expansion of embedded payments. Caribou Digital's limited survey of social sellers yielded insightful findings regarding novel payment use cases. For instance, a social seller requests a deposit to confirm a customized order or to book an appointment slot, especially before paying for transit when home visits are required. Integrating these transactions seamlessly within WhatsApp chat threads could significantly enhance the ability of social sellers to reconcile payments received with corresponding orders.

While Meta has released integrated payments for WhatsApp in select markets like Brazil, India, and Singapore in cooperation with their central banks, most markets still lack this feature, resulting in friction for resellers. Currently, resellers must, for example, share bank account information with customers through chat or status updates to accept payments, which introduces the risk of manual errors. The absence of automated payment notifications forces sellers to request screenshots of bank transfers from customers, which not only may disclose private information but also adds further complexity as customers may use different names (that do not match names stored on the seller's phone) or use family members' accounts for payments. Moreover, recent regulation in Indonesia prevents social platforms from engaging in direct selling. The regulation primarily targeted TikTok Shop, now closed in Indonesia. But it was also understood to limit the integration of payments and logistics into social platforms like WhatsApp. While Bank Indonesia was already reluctant to allow payments integration with WhatsApp, this regulation would seem to make it yet more unlikely in the near future.

The amount of economic activity occurring on WhatsApp needs to be recognized by policymakers and the development community because it's where many low-income communities and women are participating, and as mentioned in the previous section, it's the on-ramp to the digital economy. Policymakers and the development community should encourage the integration of inclusive payment systems that foster trust in digital payments with Meta's products, so that these communities can more easily scale their online business activities and potentially generate higher revenues.

Embedded credit, facilitated by user data and seamless integration, enhances the value of platforms by providing convenient access to financial tools while also benefiting platforms and their partners.

Embedded credit is enabled by valuable user data created on purpose-built platforms, their mediation of cash flows, and their ability to seamlessly integrate credit services with income-generation opportunities. These features effectively mitigate lending risks for the platform or third-party providers, enabling the provision of credit solutions that were previously unfeasible. Currently, many purpose-built platforms leverage transactional data to prequalify or screen small businesses and workers and sometimes

send offers to those who meet specific eligibility criteria. Although product customization is currently more of an aspiration, incorporating additional transactional data in underwriting processes holds the potential for further product personalization. Innovation in this area could also lead to greater outcomes, as some evidence from microfinance suggests that more flexible payment terms can boost business profits or household income.[99] Tool kits such as Financial Confidence Playbook on flexible repayments offer design principles that help people stay on track with their payments and allow for flexibility and forgiveness within limits.[100]

Furthermore, some platforms can automatically deduct loan repayments, enhancing perceived risk management for providers. This feature is especially prominent in labor-centric platforms like ride-hailing and delivery services, where the platforms control workers' earnings distributions. B2B sourcing platforms can also direct funds toward productive goods offered through the platform. Similarly, credit partnerships can be established within ride-hailing and delivery platforms with fuel stations and maintenance providers, ensuring drivers utilize the credit provided for productive purposes. Collectively, these practices reduce customer acquisition and loan servicing costs, unlocking opportunities to expand credit access to underserved populations, particularly low-income communities.

Embedded credit also enhances the value of platforms by providing convenient access to financial tools at the point of need. It seamlessly integrates credit within the platform experience, empowering businesses such as nanostores to optimize their operations, manage cash flow effectively, and leverage opportunities for growth. For instance, by presenting options like deferred payment during the order completion process, platforms enable nanostores to take full advantage of timely and easy replenishment, ultimately driving their income-earning potential.

There are four important embedded credit use cases for nanostores that source through B2B marketplaces and 2/3-wheelers that drive for ride-hailing and delivery platforms.

1 **Earned wage access.** Earned wage access (EWA) loan products offer 2/3-wheel drivers a convenient and accessible way to access their earned wages to manage their finances more effectively and bridge temporary cash flow gaps. Many ride-hailing and delivery platforms offer these loans, either directly or through partners, to provide credit to drivers for fuel expenses, vehicle maintenance, and other business-related needs. For instance, KarmaLife provides financial services to gig and blue-collar workers, including 2/3-wheel drivers, through EWA, credit lines, personal loans, and insurance in partnership with leading marketplace platforms. The credit lines are roughly

99 Aragón, Karaivanov, and Krishnaswamy, "Credit Lines in Microcredit: Short-Term Evidence from a Randomized Controlled Trial in India"; Barboni and Agarwal, "How Do Flexible Microfinance Contracts Improve Repayment Rates and Business Outcomes?"

100 Last Mile Money, "Repayments."

one-third of workers' monthly income, and repayment is flexible through regular deductions or convenient transfers.[101]

2 **Deferred payment.** Deferred payment products provide nanostores with greater repayment flexibility, enabling them to manage their working capital more effectively by reducing the amount tied up in inventory. Nanostores can delay paying for their purchases with deferred payment options, allowing them to allocate their funds strategically (perhaps even to meet household or emergency needs) and optimize cash flow. Rupifi, a financial services provider, offers a productive BNPL solution specifically designed for B2B marketplace platforms. This innovative offering allows nanostores to make essential purchases while deferring the payment, thereby assisting with their working capital management.[102]

3 **Asset financing**. Asset financing options create pathways for 2/3-wheel drivers to acquire newer vehicles, enhancing the overall appeal to passengers and the platform. Newer vehicles can also increase uptime for drivers on the platform, as older vehicles are more prone to breakdowns and longer periods of service downtime for repairs. In this financing model, the asset itself serves as collateral for the loan, mitigating risk for the lender and potentially resulting in more favorable financing terms for the borrower. Platforms play a crucial role by providing valuable data and information about borrower's on-platform behavior. By leveraging this data, lenders gain greater transparency, which, in turn, minimizes uncertainties and enables them to make well-informed decisions regarding potential risks associated with the assets being financed. While most platforms today take a "lead generation" approach (introduced in the next subsection) to asset financing for motorcycles, this could be a promising area for embedded credit expansion.

4 **Capital loans.** Capital loans are another financial assistance product designed to help 2/3-wheel drivers and other livelihoods manage their finances. They can be an accessible financing option to individuals seeking funds to seize growth opportunities or address financial challenges. Despite being categorized as unsecured personal loans, these financing solutions can support productive activities without the need for collateral or stringent restrictions. For example, Urban Company offers Gold Plus partner loans specifically designed for qualified service professionals who have achieved a certain level of performance and reliability on the platform. By providing short-term financial assistance, these loans enable workers on Urban Company's platform to address immediate needs or make necessary investments in equipment and tools.[103]

101 KarmaLife, "KarmaLife AI"; BFA Global, "Impact Performance: KarmaLife"; Ghosh, "KarmaLife Is Unleashing Financial Revolution For 40 Crore Blue Collared Employees."

102 Rupifi Technology Solutions, "Rupifi."

103 Urban Company, "We've Got Their Back. Always."

Lead generation for other financial services

Platform usage has the potential to enable access to a diverse range of financial services beyond payments and credit, including savings, insurance, and bundled products. Unlike payments and credit, access to these products isn't presently "embedded" within platforms according to our analysis across India, Indonesia, and Kenya. Instead, platforms can serve as conduits, leveraging their extensive customer base to establish connections with partner banks, regulated providers, and fintechs catering to these services, facilitating accessibility to such products ("lead generation"). Notably, platforms may also refer customers for payments and credit; however, platforms do so using a different business model than embedded financial services. The platform takes on the role of a lead generator, channeling users to a third-party entity that operates outside of the platform's user interface.

Although lead generation lacks the comprehensive advantages of data utilization and a seamless user experience, ongoing innovation within provider strategies still benefits livelihoods. Many small firms and gig workers, previously invisible to lenders, become discoverable and more accessible through platforms. Platform-based lead generation can lower customer acquisition costs and interest rates, while data from platforms, although not embedded, can assist in underwriting and risk assessment, offering potential cost reduction opportunities. Some providers have curated a suite of financial services that complements platform worker livelihoods, filling product gaps and reaching segments that traditional institutions were not serving. These offerings are typically linked to retention strategies, as generating substantial revenue is seldom their primary objective. For example, KarmaLife, an Indian fintech offering various financial services to gig workers, including 2/3-wheel drivers, via partnerships with the platforms they work for, has taken an innovative approach around bundling financial services aimed at diminishing dependence on short-term credit. The company initiates its financial support journey by providing earned wage access. Customers with consistent earnings histories can access short nano loans. Customers with positive repayment patterns access progressively more substantial credit products over time. For workers capable of generating an income surplus, KarmaLife has introduced a digital savings product. This product offers customers attractive interest rates without enforcing any minimum contribution prerequisites. The platform has also introduced affordably packaged insurance, including personal accident, health, and "hospicash," to expand the portfolio of financial services available.[104]

104 KarmaLife, "KarmaLife AI"; Ghosh, "KarmaLife Is Unleashing Financial Revolution For 40 Crore Blue Collared Employees."

Designing bundled services to reduce the reliance on and cost of short-term credit.

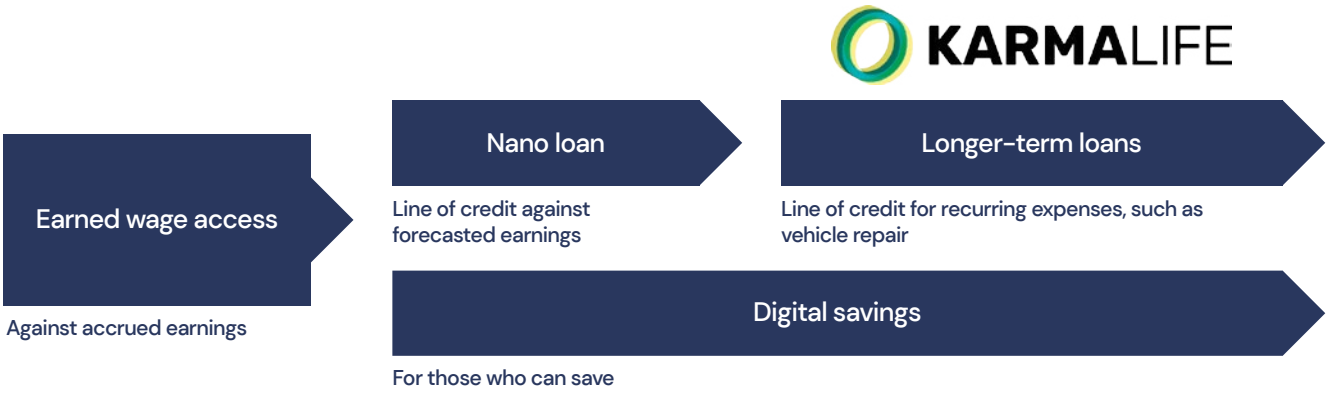


Figure 9 ▲

KarmaLife's bundled services

While platforms such as KarmaLife offer products in certain regions like India, there is a demand for these products across LMICs. Platforms need appropriate, affordable, and effective financial products offered by partnering institutions. In consultations, platforms candidly highlighted their challenges in sourcing affordable and fitting products for their user base, emphasizing the crucial imperative for innovation in order to be able to deepen financial inclusion with more low-income platform users. In particular, savings and insurance products add additional complexity because they are regulated, necessitating collaborative partnerships to deliver such offerings.

Figure 10 ▼

Summary of platform-enabled financial services benefits

	Embedded financial Services *Digitally connected and seamlessly integrated into the user experience of a non-financial company's platform*	**Lead generation Financial Services** *Products offered by a financial institution that a platform refers its clients to*
Customers	• Access to working capital or credit lines directly through the platform, which can be bundled with a transaction at checkout. • Benefits to thin file customers seeking credit through (a) additional data utilization to assess risk, prequalify, and screen, and (b) enhanced risk management through access to cash flows or credit partnerships. • Streamlined payments, enabling customers to place and order and pay within one application.	• Curated financial services, including credit, savings, insurance, that have been tailored for platform livelihoods. • Access to affordable insurance products that can be difficult to obtain otherwise. • For thin file customers, referral and screening data can unlock opportunities to build credit profiles and graduate to longer-term loans.
Platforms	• Enhanced value proposition by providing convenient access to financial tools at the point of need. • Generate additional revenue streams. • Drive core business. • Improved retention.	• Improved retention.
Financial institution partners	• Reduced customer acquisition costs. • Reduced loan servicing costs.	• Reduced customer acquisition costs.

Early insights on inclusivity and responsible delivery of platform-enabled financial services

Platform-enabled financial services offer various opportunities, including promoting financial inclusion, extending access to credit, and enhancing livelihoods.

The introduction of platform-enabled financial services in LMIC regions is a relatively recent development, and thus impact evidence is still emerging. While the few available studies do not represent the number or diversity of currently available platform-enabled financial services, they provide encouraging early insights. In essence, it's evident that for some, platform usage has led to financial inclusion, and platform-enabled financial services have supported the adoption of other more complex financial services, with early and localized evidence of improvements in livelihoods. Furthermore, when embedded, platform-enabled digital financial services may provide first-time access and unlock greater utilization due to the bundling of the financial service with a livelihood platform and the data advantages of platforms, especially in cases where specific tools like digital payments are mandated. Some of these hypotheses rest on the evidence of the impact of digital financial services on small businesses while new studies on embedded finance are being generated.

Platform usage can foster financial inclusion.

- **Using marketplace and social media platforms can foster account ownership**. In regions where regulatory conditions permit, platforms streamline the process of opening digital wallets and may even offer the option of obtaining bank accounts.[105] For example, in Indonesia, 60% of merchants on the GoTo platform adopted e-money for their business activity for the first time when they joined.[106] Particularly noteworthy is that women-run MSMEs with e-commerce experience are 30% more likely to have a formal financial account, 62% more likely to have internet banking/mobile e-money, and 53% more likely to have heard of online financing services compared to those without such exposure.[107] Merchants reported using digital payments because of their widespread prevalence among customers (partly motivated by the use of promotions accessed through the e-money wallet), their convenience for customers, and their enhanced security.[108] A comprehensive study conducted by Women's World Banking sheds light on the profound implications of social selling in generating dynamic use cases for digital payments.[109]

105 "Riset LD FEB UI."
106 Budiman, "Financial Inclusion Story of Ride-Hailing: Stories from Gojek and Grab Drivers in Indonesia."
107 Taufik et al., "E-Commerce Platforms as a Path to Women's Financial Inclusion."
108 Taufik et al., "E-Commerce Platforms as a Path to Women's Financial Inclusion."
109 Theis and Rusconi, "Social Commerce Entrepreneurship and New Opportunities for Women's Financial Inclusion in India and Indonesia."

Platform-enabled financial services can deepen inclusion.

- **Platforms extend credit to SMEs otherwise marginalized by the formal financial system.** A Bank for International Settlement (BIS) study highlighted a case study from Argentina, where 30% of borrowers associated with the online marketplace Mercado Libre would be classified as "high risk" and consequently rejected by traditional banks. Yet, the observed loss rate within this segment is 2.8%, a figure similar to that among premium SME customers of traditional banking institutions.[110] Moreover, for lower-income segments and/or women, platforms may provide access to credit for the first time. In Indonesia, an encouraging example comes from Bukalapak, which reports that its Mitra platform has provided access to financing to 2 million women, although the report doesn't specify uptake or whether this was the first time that the female nanostore MSME owners had credit options.[111]
- **The use of marketplace platforms can unlock more flexible financing.** BIS's study also emphasized that it is platform-generated data that enables them to lend to previously excluded resellers and provide flexible, productive financing to diversify and grow.[112] Leveraging their customer acquisition cost and data advantage, platforms can offer smaller loans as low as US$50 (for in-kind credit).
- **Credit provided by marketplace platforms can lead to active use cases for digital payments or intensify digital payment usage.** A study by the ILO found that MSEs with access to supplier trade credit are more likely to adopt mobile money as a payment instrument with suppliers.[113] While this impact was observed with mobile money and traditional suppliers, the findings may also be relevant for deepening financial inclusion through platform-enabled financial services.

Platform-enabled financial services have livelihood impacts.

- **Credit provided by marketplace platforms increases the merchant's product offering and sales.** The BIS study found that firms that did use the credit lines on Mercado Libre, on average, sold a larger basket of products at a higher value than those that were approved but didn't use credit lines. Furthermore, they experienced a 75% increase in sales value the following year. Not only is this growth correlated with credit, but they also increased their sourcing of online products (by 13% to 15%). These dynamics were also observed in China for merchants on Alibaba.[114] A study on the impact of trade credits for nanostores, although not specifically looking at digital credit or digital suppliers, showed that introducing credit to an order resulted in a 60% increase in sales and a 33% increase in SKU variety.[115] A case study of Tienda Pago—a digital credit platform for merchant inventory—found that merchants using Tienda Pago could experience a 15%–25% increase in sales.[116]

110 Frost et al., "BigTech and the Changing Structure of Financial Intermediation."
111 Bukalapak, "Impact."
112 Frost et al., "BigTech and the Changing Structure of Financial Intermediation."
113 ILO, "Small Goes Digital: How Digitalization Can Bring about Productive Growth for Micro and Small Enterprises."
114 Frost et al., "BigTech and the Changing Structure of Financial Intermediation."
115 Mogollón Linares and Stimpson, "The Impact of Trade Credits in Nanostore Distribution."
116 Casanova et al., "Credit to Merchants: Tienda Pago's Digital Solution for Fast-Moving Consumer Goods."

- **Digital financial services that complement gig work on digital enterprise platforms protect against shocks and increase resilience**. A majority (82%) of customers with KarmaLife—a digital credit provider for gig workers including 2/3-wheel drivers—have experienced improvements in quality of life. Improved resilience was a key theme in the outcomes reported, e.g., 32% reported better management of household bills, 28% reported ability to deal with emergencies, and 15% reported having a more dependable source of money than before.[117] Evidence suggests an unmet need for insurance products suitable for low-income and female platform workers.[118] Moreover, the 2/3-wheel ride-hailing and delivery sector is highly vulnerable to work accidents, with motorcycle accidents being the highest.

Challenges associated with platform-enabled financial services include low uptake of credit lines, risk of overindebtedness, transparency issues, and predatory digital lenders.

This analysis has discussed platform-enabled financial services as potentially transformative, but there is still a question of uptake. BIS's study found that despite the large funding gap for SMEs in Argentina and China, the use of credit lines remained relatively low. In Argentina, 45% of Mercado Libre merchants were approved for 1-year credit lines (of US$13,000), yet they were only used by 6% of approved merchants. In China, half of Taobao's merchants were approved, but a similar amount to those reported by Mercado Libre used the credit lines (of US$2,040).[119] Even with platform sourcing, which can be expected to directly increase digital financial services usage (especially when credit is offered), uptake of embedded lending depends on the nanostore's comfort with credit.[120] Moreover, women are generally more risk averse and either take loans less frequently than male peers, or take smaller loans that might be optimal for business outcomes.

Additionally, embedded finance introduces many similar risks that occur when lending is made more easily accessible digitally. Existing lessons from expanding consumer digital credit in LMICs can inform the assessment of risks for productive embedded lending. The high uptake of short-term credit, along with low awareness of the terms and conditions, is already a growing concern, as evidenced by low repayment rates and the corresponding erosion of consumers' credit history.[121] Moreover, some studies suggest that digital credit may be too fast. For example, one digital lender finds that introducing friction by doubling the time it takes to deliver credit from 10 to 20 hours decreases the probability of default by 21%.[122] A growing chorus of industry

117 BFA Global, "Impact Performance: KarmaLife."
118 Singh and Murthy, "On Gig Platforms, Women Workers Face Triple Barriers to Inclusion."
119 Frost et al., "BigTech and the Changing Structure of Financial Intermediation."
120 Villa, Escamilla, and Fransoo, "Supplying Cash-Constrained Retailers"; FIBR, "The Sweet Spot: Designing Credit Solutions for Small Merchants: Leveraging Suppliers to Deliver Working Capital to Shopkeepers."
121 Robinson, Park, and Blumenstock, "The Impact of Digital Credit in Developing Economies: A Review of Recent Evidence."
122 Burlando, Kuhn, and Prina, "Too Fast, Too Furious? Digital Credit Delivery Speed and Repayment Rates."

and consumer voices and associations are championing more responsible market conduct and regulation for digital lending.[123] Their recommendations to mitigate the risks of digital lending must also evolve to consider the risks for platform livelihoods and to promote responsible embedded lending.

While consumer-related BNPL is substantially different from business-related productive BNPL for a number of reasons, including limited potential to support improved outcomes for microbusinesses and households, recent lessons from embedded consumer BNPL in more mature markets are relevant for productive embedded lending in LMICs. A recent review of consumer BNPL in the US and Europe finds alarming rates of defaults driven by a lack of transparency, issues with speed, and insufficient market monitoring, which may be similar or worse for LMICs.[124]

- Around 30% of American BNPL users have missed payments. Part of the difficulty that borrowers face is tracking their level of BNPL debt from multiple providers.
- Fees and penalties for late repayment are difficult to understand, as they are available in terms and conditions that are lengthy and complex. This is complicated by the marketing of BNPL products as "interest free."
- The simplicity and speed of paying with BNPL contribute to consumers' misunderstanding of how products are regulated and what safeguards are in place. It would take at least an hour to read these terms and conditions.
- Fintech providers of BNPL rely on "soft" credit checks and limited affordability assessments, raising the concern of overindebtedness among borrowers.
- Reporting requirements for fintechs to regulatory bodies are inconsistent, which can mask mounting issues from market monitoring activities.

Furthermore, the opacity of embedded finance can hinder the ability of customers to seek recourse if they need to challenge errors or report misconduct. While a financial service is distributed by a platform (e.g., a non-financial provider), typically a third-party bank or non-bank (e.g., fintech) provider originates the customer. The different roles that each of these providers plays may not be clear to the customer, making it difficult to determine which provider is responsible for what aspects of the service.[125] Moreover, this concern is unique to embedded finance and appears untested. Indeed, more research in this area might modify the global development community's understanding of the extent to which the impact observed with DFS for small businesses is relevant for embedded financial services.

Finally, a significant challenge undermining trust in platform-enabled financial services is widespread fraudulent activities on WhatsApp and predatory digital lenders. While this issue is not exclusive to platform livelihoods or platform-

123 CGAP, "An Ecosystem Approach to Consumer Protection: What, Why and How?"
124 Milanesi, "Buy Now, Pay Later ("BNPL") Under Regulatory Scrutiny – The Evolving Regulatory Landscape for BNPL in the United States, the United Kingdom, and Europe."
125 Ozili, "Embedded Finance: Assessing the Benefits, Use Case, Challenges and Interest Over Time."

enabled financial services, it compounds the difficulties of scaling a social selling business and erodes confidence in legitimate offers. People earning livelihoods on platforms report a high incidence of perceived and actual digital fraud. For example, in the Philippines, 64% of women selling on platforms cite having to deal with fraudulent accounts and bogus buyers, contributing to 7% of women feeling unsafe when conducting digital transactions and another 25% feeling neutral (not unsafe or safe).[126] Key informant interviews identified digital fraud as a key risk limiting sellers and consumers from using digital payments for online transactions in India, Indonesia, and Kenya. Managing this risk has introduced a significant opportunity cost for resellers.[127] Additional case studies highlight how this contributes to eroding confidence among women to assess legitimate financing offers for financing through WhatsApp.[128] The proliferation of predatory digital lending firms is additional challenge; their applications can harass debtors and their contacts through WhatsApp.[129] According to a report from the Reserve Bank of India's digital Lending Working Group, the Google Play Store has identified and delisted over 600 unlawful apps in India. However, the problem persists as new apps replace the ones removed. Identifying predatory apps is challenging for users, especially since these apps often adopt names similar to well-established and reputable applications. For instance, a predatory app named "Udhaar Loan" in India (sounding similar to fintech app Udhaar) offered loans at extremely high interest rates.[130] The Digital Lending Working Group conducted an analysis on private information demanded by lending apps, revealing that 30% of these apps demanded read permission access to location data and the camera, while 21% sought access to user contacts.[131] Disturbingly, highly predatory tactics are employed to inflate owed amounts, and borrowers are subjected to immense pressure, including public humiliation or even requests for explicit content, resulting tragically in cases of suicide.[132] As a response to the Indian government and Reserve Bank's concerns, Google has made it mandatory for fintech companies to provide a declaration form confirming that they are either licensed by the Reserve Bank to provide personal loans (including submitting a copy of the license) or confirm that they only provide a platform to facilitate money lending by duly licensed lenders.[133]

126 Bacasmas, Carlos, and Katigbak, "E-Commerce Adoption and Its Impact on the Performance of Women-Led MSMEs in Metro Manila."
127 Haugh, Sethi, and Leroux, "No Reward Without Risk: Addressing the Economic Impacts of Misinformation and Other Digital Harms on MSMEs."
128 Jagadeesh, Dasgupta, and Bhatt, "#18 Farah | Silver Lining of Cloud Kitchens."
129 Agarwal, Sonar, and Hegarty, "Inside the Deadly Instant Loan App Scam that Blackmails with Nudes."
130 Ajmal, "Google Pulls Down Another 'Rogue' Lending App."
131 Reserve Bank of India, "Report of the Working Group on Digital Lending Including Lending through Online Platforms and Mobile Apps."
132 Singh, "Apple Purges Predatory Lending Apps in India Following Scrutiny"; Bansal, "Shame, Suicide and the Dodgy Loan Apps Plaguing Google's Play Store"; Singh, "Predatory Loan Apps in India Driving Some Users to Suicide."
133 Mathur, "Strict Rules for Lending Apps, Combating Malware Underline Google's Play Store."

Proposals suggest that India Stack, which includes Aadhaar Authentication Services, could play a pivotal role in authenticating digital lenders to mitigate these trust-related concerns. Women can be particularly vulnerable to embarrassing tactics from fraudsters; as a result, they can be more comfortable participating in a group loan where there is added trust as opposed to offers that they might receive digitally from a fintech company.[134] This issue necessitates focused attention due to its increasing occurrence on WhatsApp. The potential consequences of these activities could further exacerbate gender and social divides, underscoring the urgency of addressing this problem.

While platform-enabled financial services may align with business interests, the extent to which platform business models support the development goal of delivering financial services inclusively and responsibly raises a series of unresolved questions.

Platform-enabled financial services are a priority for many platforms; however, the initial motivation behind their implementation can vary. We identified three business objectives based on a literature review and conversations with B2B sourcing, ride-hailing, and other labor-based platforms:

1 **Generate additional revenue streams.**

Some platforms offer financial services to directly increase revenue. B2C marketplaces, especially, turned to this strategy due to insufficient profits from sales and e-money wallets. For instance, in Indonesia, platforms added BNPL offerings to customer e-money wallets to earn a share of loan revenue. Similarly, B2B marketplaces serving nanostores sought financial products like credit to improve their business model and generate more income. There is mixed information on whether these strategies are successful in yielding significant revenue. For instance, Indian marketplace platform Udaan reported four times more revenue from loans than from sales of goods in 2019;[135] however, a recent analysis of GoTo's business found that their efforts to expand credit weren't translating into increased revenue.[136]

2 **Drive core business.**

Other platforms leverage credit to boost platform sales. For instance, in the ride-hailing industry in Indonesia, platforms offer driver loans to upgrade their motorcycle fleets, attracting more passengers and increasing business. Embedded credit complements the core business model in the B2B marketplace sector catering to nanostores. Typically, these credit offers are short-term and tailored to order patterns. Although a comprehensive analysis of this strategy's effectiveness is lacking, a study in Argentina found that providing credit to resellers increased item

134 Jagadeesh, Dasgupta, and Bhatt, "#18 Farah | Silver Lining of Cloud Kitchens."
135 Suresh, "Fintech and SaaS-The Perfect Marriage Couple for Growth."
136 Anindya, "Goto's Growing Loan Book Isn't Translating into Revenue."

diversity and revenue growth.[137] Embedded finance may have the potential to not only drive platform sales but also optimize unit economics for B2B marketplaces. Research suggests that lending, in particular, can lead to operational expenditure (OPEX) savings by improving order completion rates (reducing order rejections due to lack of cash) and optimizing route efficiency (reducing field agent stop durations).[138] While the study focused on MOLISAC, a Latin American distribution firm that is not a marketplace platform, the results may have bearing on the business case for platforms to expand flexible and smaller amounts of credit to underserved nanostores.

3 **Improve retention.**

Finally, platforms utilize financial services as a retention tool in hyperlocal sectors. Ride-hailing and delivery platforms, for example, heavily invest in acquiring and retaining a dependable pool of drivers, which is essential for attracting customers. Minimizing driver turnover is a top priority, and platforms achieve this by emphasizing loyalty and retention. Embedded financial services serve as a compelling incentive to reinforce driver loyalty further.

As platforms have shifted their focus from expanding the customer base to prioritizing profitability, promotions and incentives have tapered off. Interviews with platforms suggested a new emphasis on targeting merchants directly within their digital banking strategies, recognizing their loyalty and their reduced sensitivity to promotions. For instance, GoTo recently launched a standalone app, encouraging digital payment adoption beyond its ecosystem, with plans to deepen integration with its digital banking partner, Bank Jago, in the future.[139]

However, many open questions remain about whether platform business models align with the development goal of delivering financial services inclusively and responsibly.

- How are platforms compensated for encouraging the adoption and promotion of financial services? Are there perverse incentives? Is there a risk of lock-in for platform workers and sellers?
- Are there strong enough business drivers for platforms to offer productive credit to low-income communities?
- Are user data and privacy safeguarded while provisioning and delivering these services?
- Given the opacity of embedded financial services, are platforms communicating how their data is used, to whom to go for recourse, etc.?
- Is the emergence of platform-enabled financial services reducing competition?

137 BIS, "Big Tech in Finance: Opportunities and Risks."
138 Mogollón Linares and Stimpson, "The Impact of Trade Credits in Nanostore Distribution."
139 Huang, "What GoPay's New Standalone App Says about GoTo's 'Super-App' Strategy."

Spotlight on retention business drivers and KarmaLife

Platforms with hyperlocal business models invest in retention strategies and often introduce financial services to help platform workers, such as 2/3-wheel drivers, manage cash flows, sometimes extending beyond livelihood support to personal and household financial services.

Platforms that provide goods or services to customers within a small, localized geographic area find it easier to capture the market and harder to keep it, leading them to focus on entrenching their positions within specific cities. Retention becomes crucial for improving unit economics, and platforms make significant upfront investments in workers' skills development during onboarding. These platforms are more inclined to introduce financial services as a retention tool, helping workers manage cash flows and remain on the platform.

In an examination of the type of products on offer by such firms, we found that their offerings often extended beyond livelihood support to personal and household financial services.

Interestingly, specialist fintechs focused on platform worker retention have emerged in some markets; in others, platforms attempt to provide credit products. In such cases, platforms might face challenges in scaling offerings, lacking in-house expertise. In the former instance, platforms may not be able to fully ensure inclusivity and responsibility if handed off to a third party. Aligning incentives becomes crucial in these situations.

One notable example of a fintech provider that has emerged to support platform retention strategies is KarmaLife. KarmaLife offers real-time access to credit for gig workers in India based on their payroll account via partnerships with the platforms they work for.

Interestingly, KarmaLife generates revenues from both the client and the platform, aligned with its goals of driving retention. It has pioneered a SaaS-type financing solution for platforms whereby the platforms pay a subscription fee for KarmaLife to provide financing to qualified workers. While commercial terms are not public, KarmaLife communicates that this arrangement makes credit less expensive for the worker.[140]

In a recent impact study by 60 Decibels, 85% of customers surveyed said they could not easily find a good alternative for credit, and 82% of customers reported improvements in quality of life because of KarmaLife.[141]

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140 KarmaLife, "KarmaLife AI"; Ghosh, "KarmaLife Is Unleashing Financial Revolution For 40 Crore Blue Collared Employees."

141 BFA Global, "Impact Performance: KarmaLife."

Policymakers are exploring strategies to leverage platform advantages for financial inclusion, all while addressing privacy and competition concerns. In advanced markets, they adopt several approaches that might be informative for LMICs.[142]

1. **Apply existing regulation.** Policymakers foster private sector innovation by using activity-based regulations within existing financial, antitrust, and privacy frameworks. This approach ensures a level playing field for traditional banking institutions and non-bank entities but may face challenges when novel issues arise or market concentration concerns emerge.
2. **Adapt and adopt regulation for new challenges:** Some policymakers proactively adapt existing rules and introduce new measures to address emerging risks and promote financial inclusion. Examples include digital bank licenses in Singapore and regulation of digital lending in China. These regulations often include inclusion mandates and prioritize data portability to enhance access to payment and credit services, diversify service providers, and reduce service costs.
3. **Balance activity-based and entity-based approaches:** Several countries take a nuanced approach, combining activity-based and entity-based regulations to address platform-specific anti-competitive practices effectively. This approach, seen in the UK and China, allows for responsive regulation in the dynamic platform-enabled services landscape.

Digital public infrastructure should also be on policymakers' agenda for not only financial inclusion generally but specifically within livelihoods. The next section discusses the connections among livelihoods, financial inclusion, and foundational digital infrastructure, including DPI.

142 Croxson et al., "Platform-Based Business Models and Financial Inclusion."

Inclusive digital public infrastructure enhances platform livelihoods and boosts participation in the digital economy.

Platformization holds immense potential for transformative impact on the livelihoods of low-income communities and women; however, the seamless integration of platform-enabled financial services is impeded by foundational digital infrastructure challenges, hindering the realization of true inclusivity. Primary access issues such as inadequate identity documentation, lack of smartphone access, limited digital skills, and gender norms can prevent workers and small businesses from initially onboarding to platforms. But when they successfully participate but cannot access platform-enabled financial services, they cannot fully leverage the income-generating potential of these platforms.

Discussions with platforms and their financial partners have brought to light the pivotal role of foundational digital infrastructure in either enabling or constraining the utilization of financial services within platform livelihoods across India, Indonesia, and Kenya.

- **Streamlined identity verification is an enabler.** Cost-effective and efficient identity verification is pivotal in advancing platform livelihoods on purpose-built platforms, impacting nanostores and 2/3-wheel drivers. In regions like India, where DPI such as UPI exists, numerous relying parties can conduct e-KYC seamlessly and at minimal expense.[143] This infrastructure has empowered customers by fostering competition among financial services providers, including those that work with platforms, and opened doors for smaller-denominated loans.
- **A lack of data-sharing frameworks constrains innovation and competition.** Comprehensive and responsible data-sharing frameworks are key to unleashing the true potential of the data footprints created on platforms. Despite its immense promise, transactional data on purpose-built platforms is often underutilized, as it is primarily used to screen customers but not to tailor products. The lack of clear guidelines on data-sharing liability, particularly in geographies like Indonesia, contributes to this discrepancy.

143 Hong, "Explainer: What Is Digital Public Infrastructure?"

- **Interoperable digital payment systems streamline transactions, relieving some friction impeding growth.** Interoperable payment systems can reduce friction and operational costs, thereby promoting inclusivity. They enhance convenience and eliminate the need for platform workers and small businesses to juggle multiple wallets or merchant accounts. In contrast, closed-loop payment ecosystems can be especially inconvenient for low-income communities and women, as they face additional friction and cash-out costs. India's UPI, for instance, has made substantial strides in reducing payment friction by zero-rating the merchant discount rate, effectively driving down transaction costs. This move has had broad-reaching impact, affecting all of the key segments in this study and the broader landscape of platform livelihoods, as facilitating transactions is a core function of digital marketplaces.

In addition, **enhanced small business e-commerce functionalities within messaging platforms, like WhatsApp, contribute to a more secure and streamlined experience.** Policymakers and the private sector should carefully consider the implications of the extensive adoption of WhatsApp as a marketplace, particularly among low-income communities and women. In markets like India, where WhatsApp has integrated payments within its platform, the resulting convenience and security, further facilitated by UPI, have streamlined online resellers' transactions and related operational practices.

This section summarizes how these three areas of DPI—identity, payments, and data sharing—complemented by enhanced messaging platform functionality, collectively serve as foundational infrastructure influencing opportunities and constraints within the three key livelihood segments. While each country's context is unique, the technologies and platforms are often global. This commonality presents an opportunity for cross-country peer learning, which the international development community can proactively foster and support.

Efficient, cost-effective, and inclusive consent-based processes for identity verification are pivotal for low-income communities and women to access platform-enabled financial services.

As B2B marketplace platforms expand into tier 2 and tier 3 cities, there is a unique opportunity to onboard underserved nanostores, which often struggle with limited access to traditional banking services. These nanostores typically have lower income and thin credit histories and lack collateral, rendering them inherently riskier and costlier to serve. In regions where the efficiency of identity verification fails to offset these risks and costs, the KYC process becomes financially burdensome for providers and disjointed for both platforms and applicants. This discouraging experience often deters applicants from completing their applications and benefiting from the financial services offered.

While some regions have infrastructure initiatives relevant to onboarding and origination processes, much work remains to simplify and cost-effectively facilitate remote origination at scale. Countries are at various stages of developing national identity databases accessible to relying parties. Gaps in the enabling environment create disincentives for smaller-denominated digital credit, as the costs associated with e-KYC and customer due diligence remain prohibitively high. When platforms do not control the entire financial service user journey, all partners must complete KYC processes separately, as data cannot be seamlessly transferred, and each partner must satisfy verification requirements. Even in cases where entities shared a common holding company ownership structure, as was reported in Indonesia for example, data-sharing limitations prevented the platform entity from sharing KYC information collected by its e-money issuer or fintech lender with its digital bank for account opening.

In India, regulated entities with AUA/KUA (Aadhaar User Agency/e-KYC User Agency) licenses can efficiently utilize the Aadhaar-based e-KYC process for digital customer onboarding, significantly reducing onboarding costs. The Reserve Bank of India (RBI) has recently expanded the scope of KUA licenses, even permitting non-banking financial companies (NBFCs) to apply, enabling direct authentication against the Aadhaar database. Importantly, the INR 60,000 loan amount limit associated with e-KYC does not impose constraints for most platform-enabled financial services use cases assessed in this analysis. The RBI has also sanctioned regulated entities to conduct customer due diligence via a video-based customer identification process when onboarding new customers.

In contrast, despite the widespread ownership of national IDs by 96% of adults in Indonesia, e-KYC remains a persistent barrier to remote onboarding for platforms. As most e-money accounts are unregistered, platforms must conduct higher-tier KYC to enable cross-selling. Platforms cannot directly access the national database for ID verification and instead rely on expensive third-party services. This constraint limits the efficiency and timeliness of embedded offerings and disincentivizes platforms from working with smaller nanostores seeking lower-denomination loans. These challenges lead to a significant drop-off point in the conversion funnel for nanostores seeking access to credit. The World Bank Group (WBG) is supporting the upgrade of Dukcapil (the national identity database) to address reliability issues. Yet, additional measures are required to promote equal access for non-bank entities like platforms. Moreover, harmonized, activity-based KYC regulations are essential, given the variation among providers. While some platforms have invested in banks to navigate these challenges, the lack of updated regulation still limits the participation of fintech companies focusing on key platform segments like low-income communities or women. To this end and given some of the limitations in the existing digital ID infrastructure, fintechs were also attempting to get sandbox regulatory approval for facial recognition in order to validate that the person presenting the ID documentation was, in fact, the person listed.

In Kenya, KYC and onboarding to purpose-built platforms more broadly are challenging and highly capital intensive. Operating models targeting low-income communities require high-touch approaches, potentially limiting the feasibility of digital-only solutions. 2/3-wheel drivers that have come from rural areas to work for ride-hailing and delivery platforms operating in major cities can have significant digital and general literacy gaps. Additionally, conversations with nanostores and resellers revealed that they missed out on opportunities to enroll in Safaricom business accounts due to a lack of carrying identification documents.[144] Although third-party identity verification via private-sector entities like Smile Identity is plausible, platforms and fintech firms perceive these services as costly, resulting in varying availability by country.

Furthermore, efficient and cost-effective KYC procedures that work for everyone rely on inclusive digital ID systems, which have the potential to grant individuals access to their rights, entitlements, and essential services. However, it's crucial to recognize that digital ID systems are not ends in themselves and are inherently political. As highlighted by Whitley and Schoemaker: *"they are developed by institutions as part of their pursuit of specific goals."*[145] The design of inclusive digital ID systems matters. Even though development institutions often frame their efforts regarding civic rights and empowerment, many of the systems they promote remain exclusive to those with technological access and capabilities. These systems

144 Caribou Digital, key informant interviews with social sellers.

145 Whitley and Schoemaker, "On the Sociopolitical Configurations of Digital Identity Principles."

may also reinforce the state's demand for traditional credentials, albeit in digital format, perpetuating exclusion and discrimination of marginalized populations.[146]

To truly achieve inclusivity, digital ID systems should be accessible to everyone, irrespective of whether they possess formal credentials or legal status. Additionally, these systems should be technologically agnostic, as complex systems relying on advanced devices and data dependencies can create barriers for those who already face challenges accessing technology. Inclusive digital ID systems should also be human-centered, ensuring individuals have control over their data, including the rights and means to amend or revoke it. Data collection and management should be governed by informed consent, ensuring that data subjects are fully aware of what data they are sharing, why it is being shared, and what will happen.

Finally, while e-KYC processes offer convenience, in-person verification may need to continue as an option, particularly for individuals uncomfortable sharing their identity information digitally or in contexts where organizations cannot cross-reference identity documentation against the national database.

What to watch for

- Extension of Aadhaar-based e-KYC to NBFCs in India
- Upgrade of Dukcapil and extension of e-KYC to NBFCs in Indonesia
- Indonesian banks launching "credentials-as-a-service" as part of broader BaaS offerings
- Integration of business and user identity information with other government databases in Kenya, along with the implementation of e-KYC and tiered KYC regulations through the Kenya National Personal Identification System
- Lessons learned from the rollout of digital ID and verification initiative Huduma Namba in Kenya[147]

146 Schoemaker, Martin, and Weitzberg, "Digital Identity and Inclusion: Tracing Technological Transitions."

147 Burt, "Kenyan Rights Groups Warn Digital ID Program Repeating Past Mistakes"; Abuya, "Kenya Discontinues Huduma Namba, Takes Another Try at Digital Identities"; Zollmann, "A Plea for Reflection on Digital Public Infrastructure (DPI)."

Comprehensive and responsible data-sharing frameworks are key to unleashing the true potential of the data footprints created on platforms.

Data footprints created on purpose-built marketplaces hold great potential to reduce asymmetries and unlock credit opportunities that can help lower-income platform workers and small businesses advance in their livelihoods. However, realizing this potential lags its promise due to challenges in leveraging transactional data effectively. What is needed is comprehensive and responsible data-sharing frameworks that prioritize customers' privacy and security, ensuring transparency and consent-driven processes among platforms, financial institutions, and other stakeholders.

Data-sharing limitations and liability concerns have become roadblocks for banks and platforms, preventing the creation of tailored financial products and introducing privacy and security risks through the reliance on fintech "scrapers." The absence of formal, consent-driven data-sharing frameworks hinders platforms' ability to share most personally identifiable data, and banks are often hesitant to utilize available data due to liability concerns. Without data-sharing frameworks and APIs, platforms and their partners are limited to offering synthesized credit scores or verifying data points. This may improve targeting but falls short of enabling the customization of financial products, such as flexibility on repayment terms. Furthermore, in some regions, partnering financial institutions resort to fintech "scrapers" for collecting transactional and other data, introducing privacy and security risks.

India stands out with a progressive data-sharing framework that facilitates the flow of personal and transactional data. Under the Data Empowerment and Protection Architecture (DEPA), which outlines guidelines for collecting, sharing, and processing personal data, individuals can consent to share their financial data alongside transactional data. NBFCs have been issued licenses to serve as Account Aggregators (AAs) to intermediate the flow of financial data between individuals and firms. Roughly 4.5 million individuals and companies have benefited from easier access to financial services through AAs since they were first launched in August 2021, and adoption is increasing rapidly.[148] However, challenges remain, including enforcing data usage restrictions, addressing privacy issues, and managing provider costs. Moreover, the AA framework primarily operates within the financial sector, and it remains to be seen how similar models will emerge in other sectors.

148 Alonso et al., "Stacking up the Benefits: Lessons from India's Digital Journey."

Indonesia and Kenya have adopted different approaches to data sharing, each with its own set of challenges. In Indonesia, the absence of a direct and consent-driven data-sharing mechanism between platforms and banks hinders data utilization. Without such guidance, platforms' have been constrained in their ability to embed services from third parties or tailor financial products, prompting their pursuit of digital banks. Additionally, the absence of open banking standards and certification has impeded banks' adoption of fintech infrastructure and platform integration.

In East Africa, specifically Kenya, fintechs take the lead in platform data aggregation and credit score development, while traditional banks lag in utilizing alternative data. The relatively relaxed regulations have allowed NBFCs and fintechs to thrive, actively aggregating and developing credit scores for many platform livelihoods, including nanostores and 2/3-wheel drivers. Traditional banks, however, have been slower to adapt risk models to leverage alternative data.

Despite significant innovation, the lack of frameworks and standards in East Africa raises concerns related to data privacy, cybersecurity, and consumer protection. Some fintech companies offer screen scraping services, which enable data sharing among parties that typically lack access to shared data. While consent-based, screen scraping introduces cybersecurity and consumer protection risks, as aggregators collect and store credentials, making them potential targets for cyberattacks or data breaches.[149] Screen scraping also allows aggregators to access data attributes beyond what's strictly necessary, potentially exposing customers to a higher risk of fraudulent activity.

What to watch for

- Guidance from OJK, the Indonesian Financial Services Authority, on data sharing in Indonesia
- Market-wide initiatives to establish open banking-related standards in collaboration with Bank Indonesia
- Data portability frameworks in Kenya
- Implementations of the newly developed Open Credit Enablement Network (OCEN), enabling platforms to operate as lightly regulated loan service providers offering sellers and earners a marketplace with credit options in India
- Authentication of digital lenders, leveraging AAs in India

149 Aibangbee, "A Short Prescription for Ensuring Responsible Open Banking in the United States."

Payment ecosystems that foster healthy competition and interoperability among providers streamline transactions and relieve some friction that impedes growth.

Many platforms have introduced digital wallets (or e-wallets) with embedded payment mechanisms, aiming to foster loyalty and incentivize the use of their services. These closed ecosystems initially facilitated spending on the platform, supported by the ability to top up and cash out from various accounts. Incentives and promotions, major cost drivers, especially for hyperlocal platforms during their initial growth phase, have been channeled to users through these digital wallets to bolster user retention. As platforms have shifted priorities from growth to profitability by reducing incentives, their thesis for a closed-loop payment system that rests on the drawing power of their digital ecosystem alone has been challenged. GoTo, for example, which had established a leading position among digital wallets in Indonesia with its closed-loop system, has recently retooled its GoPay app for use beyond its ecosystem. It has started allowing the e-wallet to initiate outbound off-system payments or receive inbound off-system payments. While not full interoperability, this strategic move has significantly enhanced the e-wallet value proposition, fostering a surge in digital transactions and enhancing convenience.

The UPI has emerged as a transformative force in streamlining transactions within India. The Indian government played a proactive role in promoting payment interoperability, with the introduction of UPI in 2016 representing a pivotal moment for banks and payment service providers. To encourage UPI adoption, the Reserve Bank of India initially implemented a zero-rated Merchant Discount Rate (MDR). In 2022, the Finance Ministry contemplated reintroducing MDR but ultimately decided to continue fee exemption for UPI transactions, recognizing it as a "digital public good" that delivers significant convenience and boosts productivity.[150] PhonePe and Google Pay have emerged as dominant players in the UPI landscape, collectively capturing an impressive 84% share of UPI transactions.[151] To maintain market equilibrium, the National Payments Corporation of India (NCPI) introduced a market share cap by volume, restricting each third-party application provider to a 30% share.[152] WhatsApp made substantial strides after integrating payments and recently was able to expand its customer limit for UPI transactions from 20 million to 100 million rupees, a move anticipated to streamline transactions for more people, particularly

150 Menon, "India's Digital Payments Market Looks Beyond Its Borders."
151 Mundhra, "PhonePe, Google Pay & WhatsApp Record Over 15% MoM UPI Growth In March 2022."
152 Nair, "NPCI Imposes Cap On Share Of UPI Transactions."

benefiting social sellers.[153] Additionally, OCEN is poised to offer customers various payment options, including UPI.

Indonesia is actively pursuing the development of an interoperable payments ecosystem. Offline transactions using e-money payments already benefit from interoperability through the widely adopted Quick Response Code Indonesian Standard (QRIS).[154] However, achieving interoperability for online payments remains a work in progress. Customers often face payment gateway fees or resort to bank transfers as they are already banked, incurring substantial fees. To address this, Bank Indonesia aims to launch an innovative UPI-like service called IPI by 2025, heralded as a potential game-changer for embedded finance and financial inclusion. Recognizing the value of payment data harnessed through IPI, Bank Indonesia is actively championing the open banking initiative, unlocking the potential for tailored credit product offerings. While the launch of IPI is pending, other puzzle pieces are falling into place, with QRIS volumes on the rise and the pilot phase underway for the FAST retail payment system.

In Kenya, mobile money providers, notably M-PESA, play a pivotal role in promoting interoperability, given their widespread adoption. In July 2022, Kenya announced full interoperability of mobile money services, including paybill and merchant payments.[155] Kenyans can now make payments across networks, regardless of the network affiliation of the recipient, vendor, or biller. The Central Bank of Kenya also introduced a QR code standard in 2023 (Kenya Quick Response Code Standard 2023), empowering merchant businesses like resellers and nanostores to accept payments from multiple channels, including banks, mobile money wallets, and other payment processors.[156] Consequently, merchants no longer need to install multiple paybill systems, streamlining their payment processes.

What to watch for

- Revised UPI transaction volume caps, particularly for WhatsApp
- IPI launch in Indonesia
- Single integrated national switch in Kenya to support money movements across any mobile money provider or banking institution promptly and at reduced cost[157]

153 Singh, "WhatsApp Users in India Can Now Pay Businesses with Credit Card, Other UPI Apps."
154 Market Intelligence, "Indonesia Digital Payment."
155 Business Quest, "Full Interoperability of Mobile Money Operators Becomes Effective."
156 Abuya, "Kenya Boosts Payments Interoperability with State-Backed QR Codes."
157 Central Bank of Kenya, *National Payments Strategy 2022–2025*.

Enhanced small business messaging platform functionality contributes to a more secure and streamlined e-commerce experience.

Meta, with its vast network of over two billion users, has recognized the potential of WhatsApp as a powerful tool for social sellers to tap into expansive audiences and promote their products and services. However, the challenge for low-income communities using WhatsApp for economic activity has been bridging the gap between the support offered for pre-sales activities and the post-sales services provided by purpose-built e-commerce platforms.

Meta has made significant strides in enhancing WhatsApp Business, particularly for small businesses. One notable advancement is the integration of interactive message templates, a feature designed to streamline chat-based interactions for businesses on the platform. These templates encompass both dynamic and fixed content and support various communications, including location sharing, authentication through one-time passwords, utility templates for specific transactions, and marketing templates.[158]

Meta has also successfully rolled out payment features in specific regions, including India, Brazil, and Singapore. These functionalities include peer-to-peer payments within WhatsApp and seamless checkout options for businesses utilizing WhatsApp Business. Meta has taken a different approach to payment facilitation in each market, using the BHIM UPI system in India, MetaPay in Brazil, and Stripe Connect and Stripe Checkout in Singapore.[159] WhatsApp Business checkout features are not free—businesses are charged per 24-hour conversation with a WhatsApp user under the current pricing model.[160]

158 Nair, "WhatsApp Business New Interactive Template - Location Sharing"; Meta for Developers, "Template Categorization - WhatsApp Business Platform."

159 WhatsApp, "WhatsApp Payments"; Stripe, "WhatsApp and Stripe Help Singapore Businesses Accept Payments Directly in Chats."

160 WhatsApp, "Business Platform Pricing."

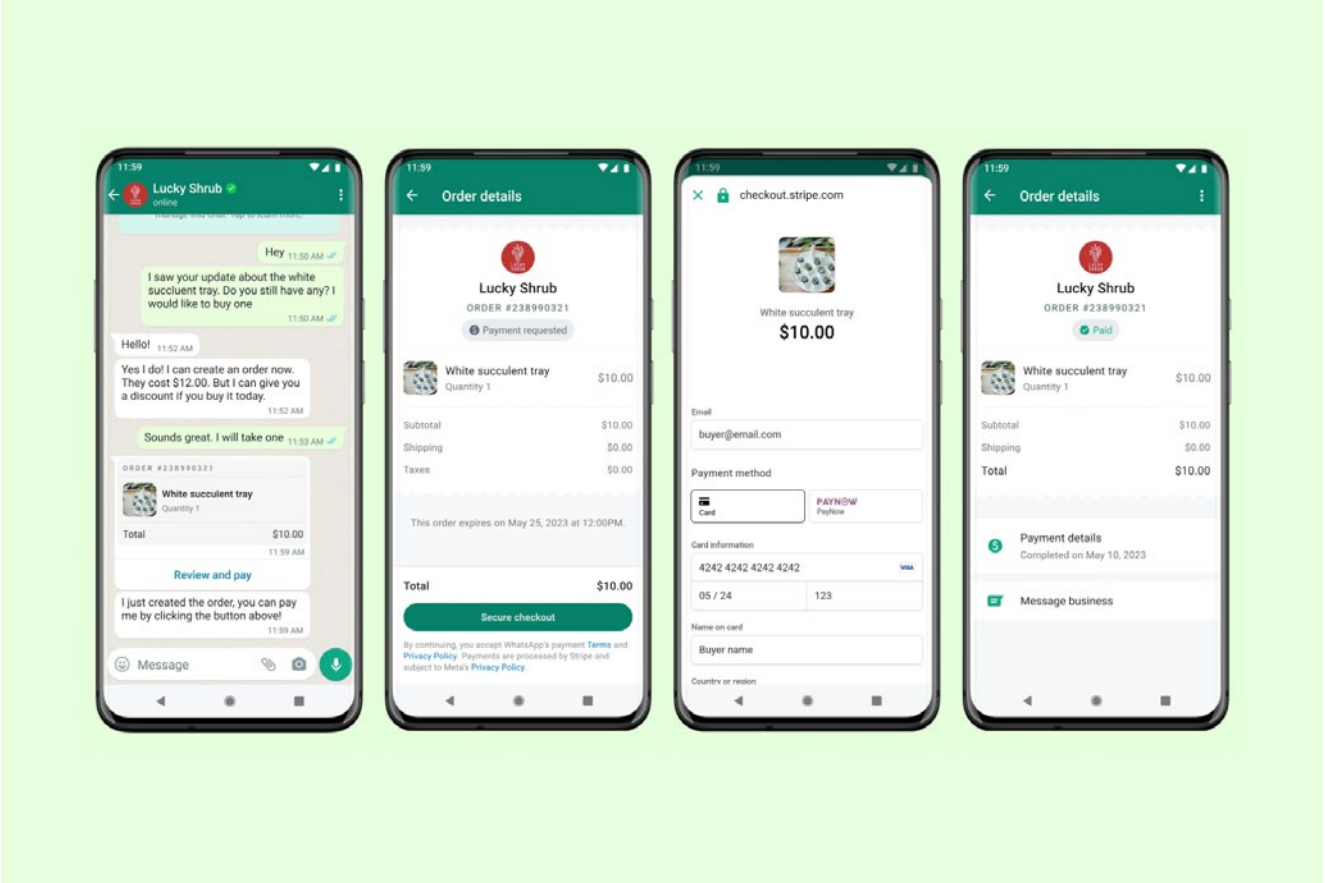

Figure 11 ▲

Checkout process in WhatsApp enabled by Stripe
Stripe website

Despite these advancements, enhanced features like templates and checkout are accessible only within the WhatsApp Business application, excluding many social sellers who rely on personal WhatsApp accounts for their businesses. Those who do adopt WhatsApp Business are "advanced social sellers" that are using multiple channels including Instagram, Facebook, and Twitter. Certainly, a higher digital skill set is necessary to effectively use WhatsApp Business. For lower-income communities, digital skills and confidence using them may explain why fewer micro-businesses are using WhatsApp Business. There is also the fact that WhatsApp Business requires an additional phone number different from that used for the personal version of WhatsApp. Those who were aware of WhatsApp Business but hadn't adopted it yet noted that they were saving up for a dual-SIM device that would allow them to run both applications.[161] Moreover, even the WhatsApp Business application still has gaps in post-sales activities, notably integration with logistics providers. Interviews with social sellers uncovered that even those that used WhatsApp Business still use their personal WhatsApp account as a sales channel with friends and family and to coordinate delivery details with customers, emphasizing that even when WhatsApp Business is used, personal interactions that build trust between buyers and sellers are still extremely important.[162]

161 Caribou Digital, key informant interviews with social sellers.
162 Caribou Digital, key informant interviews with social sellers.

Selly in Indonesia features a third-party keyboard for accessing its functions directly within WhatsApp and a standalone mobile app with a dashboard for monitoring/managing. It is supported by Midtrans, a payment processing company that was acquired by GoTo Financial.

Key product features:

- Auto-text
- Check delivery fees
- Create invoices
- Check transaction status and send reminders
- Track deliveries

Setu in India enables a seller to share a payment link in a WhatsApp thread. WhatsApp UPI payments are capped, so Setu's functionality enables a workaround. Users can select any UPI app when they click the pay button. The seller is notified when the transaction is completed. Setu has also developed a prototype to enable applying for credit through chat. India's consent-driven data sharing, AAs, and UPI make this possible.

Key product features:

- UPI payment links
- KYC
- E-sign
- Account aggregator
- Fixed deposits
- Lending journey

Figure 12 ▲

Examples of third-party applications that support social sellers

Some companies are developing third-party applications to address these challenges tailored for social sellers using WhatsApp. One notable example from Indonesia is Selly, which enhances native WhatsApp chat functionality with features like auto text, integration with GoTo's GoSend logistics services, and payment facilitation. On the other hand, in India, Setu enables resellers to share payment links within WhatsApp threads, offering a workaround for capped WhatsApp UPI payments.

Meta's approach to payments in Singapore hints at a strategy that could involve direct partnerships with payment service providers, potentially expanding payment features to other markets. This approach holds promise for greater inclusivity, especially if Meta collaborates with local payment gateways that support widely used payment methods, including mobile money systems prevalent in many countries. The emergence of Stripe-like platforms also offers alternatives for delivering similar functionalities and expediting the rollout of in-chat payments and checkout in LMIC regions.

What to watch for

- Peer-to-peer and WhatsApp Business payments rollout in more regions
- Payments functionality implemented within groups and communities
- Progress addressing payment or lending scams perpetrated through WhatsApp (or WhatsApp Business)
- Meta to address a major progression constraint—an additional phone number to register for WhatsApp Business

Final remarks

The analyses presented in this report shed light on the impact of marketplace and social media platforms on three key livelihoods and the considerable opportunities for financial inclusion created by platform usage and the spread of platform services. These final remarks offer some concrete next steps for how policymakers, development practitioners, and private sector organizations can begin to engage around the four key action areas presented in this report.

Think strategically about platform livelihood segments and their DPI needs.

The most significant segments of micro- and small businesses and workers using platforms today in LMICs are independent resellers, nanostores, and 2/3-wheel drivers. Development practitioners concerned with digital economy livelihoods should focus programmatic activity within these three segments, which offer the greatest opportunities for low-income communities and women to realize the efficiencies, greater reach, and other positive outcomes afforded by digital platforms today. By partnering with the private sector to develop inclusive and sustainable platform models and responsible platform-enabled financial services, development practitioners can begin to address the factors working against broad-based and equitable participation in the platform economy.

Furthermore, policymakers and development practitioners that are developing DPI should consider how their solutions impact or could impact the livelihoods of low-income communities and women. This report highlights the specific needs and issues of nanostores and independent resellers operating digitally, and how these relate to inclusive DPI: for example, easier e-KYC for lower-income nanostores, reduced payments friction for women social sellers, and data sharing to support lower-income 2/3-wheel drivers to affordably access newer vehicles. In particular, millions of micro-entrepreneurs in LMICs use their personal WhatsApp account as their digital storefront. Their pain points command attention, particularly as social selling is the bridge supporting micro-enterprises' entry into the digital economy. Meta could take actions to support and nurture this segment further, including exploring the feasibility of using the same phone number for both personal WhatsApp accounts and WhatsApp Business accounts; supporting initiatives that address digital skills gaps among low-income communities and women; and supporting users to create virtual storefronts on their personal WhatsApp accounts, build skills and confidence, and transition to WhatsApp Business.

Design marketing, onboarding processes, interfaces, and financial services for women.

There is significant potential to improve women's livelihoods in LMICs through all three key platform livelihood segments, but specific challenges must be addressed. Collaboration among development practitioners and platforms could help to design onboarding processes and platform interfaces, including those for accessing platform-enabled financial services, that account for women's needs and contextual realities. Greater attention to clear and transparent information around fees, recourse mechanisms, and other information related to financial offerings is also important as part of design and marketing.

Moreover, platforms and development practitioners need to focus initiatives to address the issues affecting participation in gendered livelihoods holistically. This includes encouraging policymakers to put in place stronger protections to mitigate fraudulent activity to which women are particularly at risk and supporting broad initiatives that address digital skills gaps. Partnering with trusted women's organizations will be important for both onboarding to platforms and building skills and confidence that enable women to increase earnings.

Involve stakeholders and experts early in the DPI design process.

Many countries are currently trying to develop DPI, and issues that could prevent inclusivity should be raised and addressed during design. This includes the design of inclusive digital ID and e-KYC systems that rely on these databases. The consultation process should involve stakeholders and experts in inclusive DPI strategy early in the process and continuously during the design phase, so that the services can be built with diversity and inclusion from the start, as well as to ensure that lessons learned in other country implementations can be incorporated so that the systems can maximize the potential for greater digital economy participation.

Think more about the role of marketplaces as DPI or closely related to DPI.

Discourse on DPI has largely focused on social services rather than economic opportunities. For that reason, marketplaces have probably not been discussed as much as they should be. Identity, payments, and data exchange are indeed three foundational digital network systems that enable access to goods and services. A portion of these that are livelihood activities are delivered through marketplaces. While many marketplaces, as discussed in this report, are purpose-built e-commerce platforms, there is a set of marketplace platforms that are nearly universal in coverage and usage, namely social media and communications platforms, and specifically WhatsApp and Facebook. At this very moment, they are functioning as a fourth foundational system that enables economic activity for millions of low-income people in LMICs. Because they already exist, the conversation around Meta's marketplaces should concern improvement for inclusion, including but not limited to building on the other foundational DPI elements. Moreover, both the private sector and the development community share an interest in fostering the novel commercial activity that is occurring. Policymakers and development practitioners could collaborate with Meta to work on some of the issues identified in this report that would streamline social commerce transactions, such as through the integration of inclusive payment systems. There's also conversations to be had about giving individuals who participate on these platforms more control over their data, so that they can prove their creditworthiness to a potential creditor or insurance underwriter.

By making strides to address the remaining challenges and opportunities with digital public infrastructure and enhance messaging platforms, platform-enabled financial services can be extended to many more individuals beyond the three key livelihood segment highlighted in this report across a wide range of economies. This, in turn, has the potential to impact financial inclusivity and income generation at a substantial scale, particularly for women.

Terminology

2/3-wheel drivers	Individuals who use motorcycles or three-wheeled vehicles for ride-hailing and delivery services, often associated with gig economy platforms.
AA	account aggregator
algorithmic management	The use of algorithms to manage and monitor workers' activities on gig-work platforms.
API	Application Programming Interface
BaaS	Banking-as-a-Service, a model where licensed banks integrate their digital banking services directly into the products of non-bank businesses.
B2B	Business-to-Business, platforms used for sourcing products or services.
B2B2C	Business-to-Business-to-Consumer, a business model where an intermediary, such as a nanostore, facilitates transactions between businesses (suppliers) and end consumers.
BNPL	buy now, pay later
bundled products	Financial service offerings where multiple financial products are packaged together or combined with nonfinancial value-added services.
COVID-19	The coronavirus disease pandemic that began in 2019.
DFS	Digital Financial Services, financial services delivered through digital channels, such as mobile banking and mobile payments.
digital footprint	The digital trail left by individuals or businesses as they engage in online activities, which can include data related to their preferences, behaviors, and transactions.
DPI	Digital Public Infrastructure, solutions and systems that effectively provide essential society-wide functions and services in the public and private sectors (for example, India Stack).
drop-shipping	A business model where a retailer doesn't keep products in stock but instead transfers customer orders to a manufacturer or wholesaler, who then ships the products directly to the customer.

e-logistics services	Logistics services accessed through the internet.
e-KYC	e-Know Your Customer, a process wherein a person's identity is verified electronically by a national identity system.
embedded finance	A type of platform-enabled financial service where financial products are integrated into the user experience of a nonfinancial company's platform.
EWA	earned wage access
FMCGs	fast-moving consumer goods, products sold quickly and at a relatively low cost, such as food, beverages, and personal care items.
GST	Goods and Services Tax
hyperlocal	Small community or geographical area.
inclusive digital infrastructure	Digital infrastructure designed to include and benefit low-income communities and women, facilitating their participation in the digital economy.
independent reseller	Retailer that purchases inventory (or supplies) and then resells items online, typically using social media.
KYC	Know Your Customer, the process of verifying the identity of customers, required by financial institutions and platforms for security and compliance purposes.
LMICs	Low- and middle-income countries
M-PESA	A widely used mobile money service in Kenya
MSE, MSME or SME	Micro- or Small Enterprise; Micro-, Small or Medium-size Enterprise, or Small or Medium-Size Enterprise. In this report, our convention is to use the term associated with the work when we reference a study's findings.
Multihoming	Distributing income-earning activity across multiple platforms.
Nanostores	Small neighborhood stores that typically sell everyday items, groceries, and digital goods (*e.g., warung, duka, kirana*).
NBFCs	Non-banking Financial Companies
NGO	A not-for-profit organization organized locally, nationally, or internationally to address issues supporting the public good.

O2O	offline-to-online, the practice of using offline, physical infrastructure (such as nanostores) to facilitate online transactions or services.
open banking	The provision to enable access to customer data in a readable manner (that facilitated its transfer and use) to third-party providers.
OPEX	operational expenditure
platforms	Refers broadly to (a) two-sided or multi-sided marketplaces for goods and services or (b) social media and messaging services where hosts benefit from advertising and data insights. A third platform type is a (c) software system or operating system on which third-party programs and applications can run (Salesforce, Android, etc.). Type three is not discussed in this report, unless the reader were to consider WhatsApp itself an emerging operating system and front door to the internet for many mobile-only users.
platform-enabled financial services	Financial services that are facilitated and scaled through the use of data and platform interfaces. These services can be digitally connected, customizable, and seamlessly integrated into nonfinancial company platforms.
platform ride-hailing and delivery	The use of gig-work platforms for ride-hailing and delivery services.
platform sourcing	The practice of using purpose-built B2B marketplaces to source goods for resale or obtain necessary inputs.
platform livelihoods	Refers to how people earn a living through digital platforms, such as online reselling or ride-hailing.[163]
platformization	The transformation of an economic or social sector by marketplace and/or social media platforms. For example, while the platformization of urban taxi markets is almost complete, the platformization of agriculture has just begun.
purpose-built e-commerce platforms or marketplaces	The term "purpose-built" distinguishes platforms built to conduct e-commerce from general-purpose social media platforms that can be used to conduct trade.

163 See Caribou Digital, "Platform Livelihoods", Caribou Digital, "Platform Livelihoods: Working, Trading, Renting, and Engaging in Digital Marketplaces"; Caribou Digital and Qhala, *The Quality and Experience of Platform Livelihoods: A Literature Review for Digital Development*.

reputation systems	Mechanisms used by platforms to assess and display the reputation or trustworthiness of users based on their past interactions and performance.
shared data	The ability to distribute the same sets of data resources with multiple users or applications while maintaining data fidelity across all entities consuming the data.
social platforms	Social media and communications platforms.
social selling	The practice of engaging potential customers within one's network on social platforms to promote and sell products or services.
Sustainable Livelihoods Framework	A conceptual framework used for understanding and analyzing the livelihoods of individuals and communities, considering various factors such as assets, capabilities, and market power.
third-party keyboard	A software application installed on a mobile device to replace the default keyboard and provide additional features and functionalities. Third-party keyboards can integrate with specific apps, like WhatsApp, allowing users to access external functions directly within the keyboard interface. This enables app-like functionality within WhatsApp, such as creating invoices and tracking deliveries, all from within the keyboard. These add-on solutions have the potential to enhance the efficiency of social commerce channels, but further improvements are necessary to optimize their functionality for less digitally savvy users, as discussed in the section on social sellers.
tier 1/2/3 cities	Distinction varies by country. Tier 1 cities have the highest population and the most advanced infrastructure.
UPI	Universal Payments Interface
user data	Information generated and collected from platform users, often used for underwriting and personalization of financial products.
WhatsApp	A popular social media and communications platform owned by Meta that enables voice and video calls and sharing of images, documents, user locations, and other content.

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