

WhatsApp and Women's Livelihoods

**HOW EVERYDAY DIGITAL PRACTICES SHAPE
PATHWAYS TO ECONOMIC PARTICIPATION**



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How everyday digital practices shape pathways to economic participation

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Foreword

Women’s economic participation is fundamental to inclusive growth and to the well-being of families and communities. Yet across many settings, women’s work remains constrained by unequal access to resources, time, markets, and supportive networks. At the Gates Foundation, we partner with governments, civil society, and the private sector to expand women’s opportunities to earn and control income, and to ensure that the systems women rely on — from finance to connectivity — work for them.

Caribou’s report, *WhatsApp and Women’s Livelihoods*, contributes timely evidence to that mission. In many low- and middle-income countries, messaging platforms are not simply channels for communication — they are the places where buyers and sellers are connected, orders are arranged, advice is exchanged, and trust is built. Drawing on nationally representative surveys of 7,000 adults across India, Kenya, Nigeria, and Pakistan, as well as follow-on research with women who use WhatsApp for livelihood activity, the study offers one of the first large-scale estimates of how millions of low-income women rely on WhatsApp, as well as other messaging platforms, to earn income and how that use differs across sectors and income segments.

The study sheds light on women’s adoption and use of technology in these countries and a central insight is the distinction between adoption and effective use. While tens of millions of women use WhatsApp in some way to support their livelihoods, a smaller share uses it in sustained, multi-feature ways that translate into stronger business outcomes and greater confidence about growth.

The report shows that the barriers women face are not uniform: for some, the constraint is access to a smartphone or affordable data; for others, it is perceived relevance, digital confidence, safety, or the ability to navigate the social norms that shape visibility and participation. Recognizing these different “transitions” helps clarify what kinds of interventions can widen access — and what kinds can deepen impact.

We encourage readers to sit with the report’s broader framing: at scale, WhatsApp functions as a form of infrastructure within which livelihoods take place, even though it is privately owned and governed. That reality raises practical questions for everyone who shapes digital economies — platforms, policymakers, donors, and community intermediaries — about safety, affordability, accountability, and the complementary role that public systems can play. For the broader community working to support women’s economic participation, this also means recognizing WhatsApp as a channel through which training, mentorship, and market connections can reach women where they already are. Our hope is that this paper informs action that is grounded in women’s everyday practices: strengthening what already works, reducing the risks that limit participation, and ensuring that emerging capabilities — including business tools and AI — expand opportunity rather than deepen inequality.

Leesa Shrader

Deputy Director, Women’s Economic Opportunity
Gates Foundation

Executive summary

Caribou conducted an extensive study of women’s use of WhatsApp for livelihoods across India, Kenya, Nigeria, and Pakistan. WhatsApp is the specific focus because of its unique scale: Meta reports more than 3 billion monthly active WhatsApp users globally. It functions as the de facto messaging platform across many low- and middle-income countries.

Micro- and small enterprises make up more than 90% of all enterprises across these same low- and middle-income countries, and WhatsApp has become a primary communication layer for many of them. Yet there is little available evidence about how many women rely on it for their livelihoods, or how deeply. This research addresses that gap, combining nationally representative surveys of 7,000 adults, fielded by Ipsos in June 2025, with qualitative interviews conducted by [Turn.io](#). It examines how many women use WhatsApp for livelihood activities, how deeply these practices extend, and what factors shape the gap between casual use and effective use across income segments.

The data for this study was gathered with the support of the Gates Foundation. All analysis and conclusions are the responsibility of Caribou.

Key findings

Scale. In the nationally representative surveys, approximately 1 in 6 working-age women reported using WhatsApp to support their livelihoods. Extrapolated to the populations as a whole, this suggests 80–98 million women across these four countries alone. This is the first large-scale estimate of this phenomenon.



Effective use. We estimate that 27–39 million of those women are “effective users,” which we define as women who engage more frequently, use more WhatsApp features, and report relying more on WhatsApp for core business functions. Effective users are more likely to report business growth in the past year and confidence in future growth.



Income gradient. Both adoption and effective use correlate strongly with income. We group respondents into four segments from Base income to Top income, defined by international poverty lines. Among women with self-employment income in the Top segment, 29% qualify as effective users. In the Base segment, just 6% do.



Gender gap. Women are less likely than men to own a business or a smartphone. However, among women who have both, a similar proportion use WhatsApp for their business than men do. The gender gap is in access and opportunity, not in the propensity to use available tools.



Sectors. WhatsApp use spans retail, services, home-based manufacturing, and agriculture. Customer intensity drives depth of engagement: women in services and retail use the platform most actively for marketing and coordination; in agriculture, use centers more on group-based learning.



Use varies across countries. WhatsApp use for livelihoods is broadly consistent across India, Kenya, and Nigeria. Our results suggest Pakistan shows a different pattern, where three factors compound: women report lower rates of smartphone ownership, lower rates of self-employment income, and stronger social barriers to digital engagement. Together, these likely contribute to lower rates of WhatsApp use for livelihoods, both overall and as a proportion of those with self-employment income.



Two transitions. We identify two distinct barriers. The first is between non-use and use, driven by device access, data costs, and perceived relevance. The second is between use and effective use, shaped by digital confidence, social networks, and the ability to navigate features strategically. Access constraints weigh more heavily among lower-income women; utility and confidence gaps matter more as income (and the likelihood of having a smartphone) rises. Interventions supporting women’s WhatsApp use for livelihoods need to address both sets of barriers.



Safety shapes participation. Women navigating WhatsApp for livelihoods face two distinct risks: platform-wide threats, including fraud and scams, that affect all users, and gender-based harassment that falls disproportionately on women. Most women we spoke to reported strategies to manage both — leaving hostile groups, blocking unwanted contacts, preferring women-only spaces — rather than abandoning the platform. Clear group norms and active moderation are critical: with them, WhatsApp groups can function as genuinely empowering spaces for learning and commerce.



Peer support and trusted intermediaries drive adoption. Across our interviews, social networks and trusted intermediaries emerge as prominent factors in both initial adoption and the transition to effective use. Women frequently describe learning from others in their networks and being encouraged by trusted peers. Programs that can work through these existing relationships are likely to find more traction than those that target women individually.



WhatsApp Business shows potential, but has limited uptake. The standalone Business app offers features that directly address barriers women face, including separate business profiles, product catalogs, and automated messaging. Yet awareness and adoption remain low, particularly among lower-income women, who are least likely to know the app exists and yet likely to benefit from its tools.



AI awareness is emerging but uneven. Awareness and use of AI tools follow the same income gradient as effective WhatsApp use overall. Where women do use AI, use centers on practical tasks: drafting messages, generating captions, and polishing communication. Use remains low across all income segments. The concentration of early adoption among higher-income women suggests that without deliberate targeting, lower-income women risk being later to benefit as AI tools become more deeply embedded in WhatsApp.



WhatsApp as infrastructure. 94% of mobile internet users across the four countries have WhatsApp installed. At that level of penetration, the platform is not merely a tool people choose but a condition they are invited to inhabit. Women with self-employment income find customers, learn from peers, and conduct transactions within WhatsApp, not because it was designed for commerce, but because the suppliers, mentors, and customers they need to reach are already there. WhatsApp is not digital public infrastructure; it is a privately owned platform. But through its ubiquity and everyday practice, it has become infrastructure within which livelihoods take place. This has implications for intervention design, shaping the norms, practices, and support structures of an ecosystem that already mediates economic opportunity at scale.



Implications

These findings call for coordinated action.

WhatsApp, and platforms like it, can support women's existing practices by maintaining low-data functionality, strengthening safety and group moderation tools, and offering lightweight embedded assistance.

Policymakers can address foundational constraints: device affordability, data costs, digital safety, and connectivity.

Donors and implementers can build on the peer learning structures women already rely on, targeting the specific transition each woman faces, whether from non-use to use, or from use to effective use.

Communities and local intermediaries can anchor trust and support women in navigating digital participation safely.

As WhatsApp's capabilities expand through AI and business features, coordinated action across all four groups will shape whether new capabilities narrow or widen the gap between the 29% of higher-income women and the 6% of lower-income women who currently use the platform effectively.

Somwati communicates with the customers of her clothing enterprise using WhatsApp. Photo by Somwati via Story × Design.



Introduction

Around the world, women weave economic activity into the rhythms of daily life. Many have jobs, earning hourly or daily wages, or weekly or monthly salaries. Many others are self-employed, or run a business of their own.

Women's self-employment and entrepreneurial work takes many forms and spans many sectors, including small retail, tailoring, food preparation, beauty services, farming, and countless home-based enterprises. These activities are shaped by household responsibilities, community expectations, and the practicalities of movement, time, and safety. The success of these enterprises — big or small, formal or informal — is of profound importance to the households that depend on them, and of keen interest to the development community, which centers livelihoods and small enterprises as pillars of both poverty reduction and inclusive growth.¹

Research has documented how information and communication technologies support livelihoods, self-employment, and small enterprise. Writing in 1977, at the century anniversary of the telephone, Ithiel de Sola Pool documented how it was the telephone that enabled people to coordinate and share information faster than they could move their bodies.² Decades later, Duncombe and Heeks documented how small enterprises depended on the telephone to move businesses beyond survival and subsistence.³

But since the turn of the century, it is specifically the mobile phone that has delivered a step-change in the availability of these capabilities to tens of millions of small enterprises worldwide, helping them increase productivity, communicate with customers, and access information about prices and best practices.⁴

1 Mead and Liedholm, "The Dynamics of Micro and Small Enterprises in Developing Countries."

2 Pool, *The Social Impact of the Telephone*; Saunders et al., *Telecommunications and Economic Development*.

3 Duncombe and Heeks, "Enterprise Across the Digital Divide: Information Systems and Rural Microenterprise in Botswana."

4 Donner and Escobari, "A Review of Evidence on Mobile Use by Micro and Small Enterprises in Developing Countries."

Accessible by increasingly affordable and ubiquitous internet-enabled mobile handsets, social media and messaging platforms like WhatsApp represent valuable extensions of these capabilities. Messaging allows for synchronous and asynchronous communication, in text and in voice, for one-to-one exchanges and group discussions. There are many messaging platforms, including Signal, Telegram, and Facebook Messenger. Yet none match the reach of WhatsApp. As Meta reports more than 3 billion monthly active users as of 2025, it is the dominant messaging platform across low- and middle-income countries.⁵

Women already use WhatsApp to stay connected with family, friends, school groups, and community networks. Livelihood activities fold naturally into these communication flows. Customers ask questions through chat. Orders are confirmed in the midst of other responsibilities. Images and information circulate through groups where social and commercial conversation coexist. In many households, the mobile handset is shared, charged intermittently, or used in short pockets of time; and yet, WhatsApp remains a reliable place where coordination happens.

Women's use of WhatsApp for livelihoods varies widely. For some, it's occasional exchanges to arrange a pickup or answer a customer query. For others, it's participating in groups to learn, observe, and form new connections. A smaller group uses the platform more systematically, to track orders, maintain customer lists, or experiment with AI. Across these different levels of use, WhatsApp is shaped by women's own priorities, constraints, and sense of what feels manageable.

Over time, these practices accumulate. They influence how women find customers, how information moves, and how opportunities become visible. In many communities, WhatsApp groups function as shared spaces of learning and exchange. Status updates quietly expand a woman's presence beyond her immediate circle and one-to-one chats sustain the relationships her work depends on. These patterns are informal, adaptive, and grounded in lived experience.

This report examines and enumerates women's use of WhatsApp for livelihood activities, how they use it, how deeply these practices extend, and why engagement differs so markedly across different income segments. It also considers the structural and societal factors (like income, device access, digital confidence, household roles, safety, and trust) that shape digital choices. Finally, it explores early signs of AI-enabled assistance and reflects on how emerging technologies may shape the next phase of digital livelihoods.

⁵ Mehta, "WhatsApp Now Has More than 3 Billion Users a Month."

This study draws on more than 7,000 interviews across India, Pakistan, Kenya, and Nigeria. In each country, we drew on nationally representative household surveys conducted by Ipsos, a research firm. A follow-up study interviewed 400 women who actively used WhatsApp for their livelihoods in Kenya and India. We complemented this survey data with qualitative interviews (conducted over WhatsApp by [Turn.io](#)) with dozens of women in Kenya, India, and Pakistan.

Five topics organized our inquiry: the scope of WhatsApp use by women for livelihoods; the ways women use WhatsApp for livelihoods; the depth and intensity of use across economic sectors and income strata; the barriers and drivers affecting adoption and effective use of WhatsApp; and the use of leading-edge tools like the WhatsApp Business app and AI.

The four focus countries serve as bellwethers for patterns throughout the mobile-first world. India alone is home to perhaps the largest population of women with self-employment or enterprise income globally. Yet this study seeks to surface patterns of use that may exist throughout low- and middle-income countries — anywhere WhatsApp is available and widely downloaded, save China, North Korea, Yemen, and a few others. We discuss how these patterns might inform policy and innovation at a global level rather than a national or regional one. Where country-level differences emerge, we note them to illustrate broader patterns rather than as comparative analysis.

This study was originally conducted with the support of the Gates Foundation. Some of the findings are applicable to both men and women, and men are included in some of the data. The study's primary orientation, however, is toward understanding women's livelihoods across income segments. Additionally, studying a single for-profit service by name, instead of addressing a set of similar offerings, is unconventional. WhatsApp is not a unique "technology" nor a cluster of interconnected standards. It is one of several consumer-facing platforms offered by Meta. But, given its scale and its share of the messaging space, WhatsApp has come to occupy a unique role as the de facto messaging application for more than a billion mobile-first internet users. It is currently free to use, mostly free of algorithmically targeted advertising, and accessible to first-time phone owners and experienced users alike. Use begets use, and WhatsApp benefits from powerful network effects.

This report illustrates how, through these network effects and everyday practice, WhatsApp has become an infrastructure within which livelihoods take place, even though it remains privately owned and governed by commercial interests. It is not public infrastructure. But it is infrastructure nonetheless. WhatsApp's reach, and the dependencies it creates, is precisely why WhatsApp is worthy of study, and why this report is titled "WhatsApp and Women's Livelihoods" rather than "Social Media and Women's Livelihoods" or "Mobile Messaging and Women's Livelihoods." As we revisit in [section 5](#), this is a study of the status quo, not an endorsement of it.

Key definitions

The following terms are used throughout this report. They are defined here to ensure clarity for all readers, especially where everyday language may differ from survey or analytical usage.

Livelihoods refers to any activity through which women earn income, including formal jobs, informal work, farming, home-based production, side gigs, and small businesses. It includes both primary and supplemental income-generating activities.

Self-employment is work in which a woman runs her own business or income-generating activity, whether full time or part time, formal or informal, across agriculture, services, and manufacturing sectors. It includes home-based services, retail, tailoring, food preparation, tutoring, and reselling.

WhatsApp use for livelihoods entails any use of WhatsApp to support income generation. This includes contacting customers, sharing product information, posting updates, coordinating orders, participating in sector groups, or learning skills — regardless of scale.

“Regular” WhatsApp is the most commonly downloaded app, intended for personal one-to-one and group communication with no special business features. Most women in this study use this regular WhatsApp app, not the Business version.

WhatsApp Business (app) is a separate app, with free, easy setup that allows business profiles, catalogs, and labels to organize chats. Limited to one phone plus four linked devices; not suitable for high-volume automated messaging.

WhatsApp Business API (platform) is a service that allows multiple users to manage one number, integrates with customer relationship management programs (e.g., Salesforce), and enables AI bots. Requires third-party partners (BSPs) and approval for marketing messages, and charges per conversation.

WhatsApp groups, statuses, and broadcast lists

- **Groups** are shared chat spaces where many members exchange information. Women often use sector groups for visibility, learning, and referrals.
- **Status** is a temporary post visible for 24 hours; frequently used for product photos or availability updates.
- **Broadcast lists** are messages sent to multiple recipients privately; less commonly used.

Meta AI is an AI assistant integrated into WhatsApp in some markets. It can help generate messages, ideas, and lists. Awareness and uptake vary widely.

Digital public infrastructure (DPI) includes publicly governed digital systems, such as digital identity, interoperable payments, and data exchange frameworks, designed to serve broad public interest. Examples include India’s Aadhaar identity system and Brazil’s Pix payment platform (see [section 5.2](#)).

Effective use means sustained, multi-feature use of WhatsApp for livelihood activity. Effective users engage frequently, rely on WhatsApp for key business functions, and report stronger perceived benefits such as improved coordination, visibility, or customer reach.

Wave 1 / Wave 2: This study drew on two rounds of survey data (Wave 1 and Wave 2) conducted across India, Kenya, Nigeria, and Pakistan, complemented by qualitative interviews. Details are provided in [section 3](#).

Income segments: Base / Lower / Mid / Top

We apply four approximate income bands or “segments,” defined by international poverty lines, to situate WhatsApp use in a broader context of socioeconomic circumstance. The segments themselves, and the distribution of each country’s population across them, were drawn from an analysis conducted by the Gates Foundation, based in turn on World Bank estimates derived from national household surveys.⁶ The assignment of individual survey respondents to these segments was an approximation exercise, based on assets, education, employment type, and household characteristics (see [section 3.2](#)).

- **Base:** below the international poverty line for low-income countries, approximately US\$2.15 per day
- **Lower:** between US\$2.15 and US\$3.65 per day (the lower-middle-income poverty line)
- **Mid:** between US\$3.65 and US\$6.85 per day (the upper-middle-income poverty line)
- **Top:** above US\$6.85 per day

⁶ Income segment thresholds follow World Bank international poverty lines in 2017 PPP dollars. Country-level population shares derived from latest available national household surveys (see the World Bank Poverty and Inequality Platform). Segmentation framework provided by the Gates Foundation. These distributions are an input to our analysis design, not a product of our survey.

Evidence base and research questions

02-1

Literature review

Livelihoods as the intersection of self-employment, micro-enterprise, and small enterprise

Micro- and small enterprises (MSEs) are the core of low- and middle-income countries across the globe. In low- and middle-income countries, MSEs account for more than 90% of all enterprises and at least half of all employment — and an even higher share of employment for women and young people.⁷ MSEs also stimulate local entrepreneurship, by being able to adapt quickly to changing market conditions, and strengthen domestic supply chains by serving both local consumers and larger firms. By supporting economic diversification, MSEs contribute to greater economic resilience and help low- and middle-income countries broaden their productive base and reduce dependence on a narrow set of industries or external shocks.⁸

Informality of small enterprises

In low- and middle-income countries, MSEs operate along a spectrum between formality and informality.⁹ Some businesses gradually formalize to access finance or engage with larger firms and government programs, but many entrepreneurs see advantages in remaining informal, such as flexibility or autonomy.¹⁰ Similarly, distinctions between self-employment, entrepreneurship, gig work, and MSEs may matter more from the perspective of economic policy than from the perspective of earners *themselves*, who typically diversify livelihood strategies across multiple income-generating activities.

In this report, we do not distinguish sharply between entrepreneurs, self-employed workers, and business owners. Rather, we acknowledge that small enterprises with low barriers to entry and fractional self-employment are important contributors to many people's livelihoods, and these enterprises may formalize in some ways (e.g., paying taxes, using digital payment systems) while remaining informal in others.

7 ILO, *Small Matters: Global Evidence on the Contribution to Employment by the Self-Employed, Micro-Enterprises and SMEs*.

8 Bisht et al., "Role of Small Businesses in Emerging Economies as Drivers of Sustainability and Growth."

9 Mead and Liedholm, "The Dynamics of Micro and Small Enterprises in Developing Countries."

10 La Porta and Shleifer, "Informality and Development."

Phones/mobiles, livelihoods, and small enterprises

The relationship between telecommunications and economic development has been documented for decades. Saunders, Warford, and Wellenius, writing for the World Bank, established the macro-level case that investment in telecommunications infrastructure correlates with economic growth, including in low- and middle-income countries.¹¹ Hudson brought the question closer to the ground, examining what happens when telephones actually reach rural communities and the role they play in livelihoods and local economies.¹² At the enterprise level, Duncombe and Heeks showed that small enterprises in Botswana relied heavily on informal, social, and local information systems rather than on formal information and communication technologies (ICTs).¹³ Their insight was foundational: understanding how enterprises actually manage information is a prerequisite for assessing whether new technologies will help them.

The arrival of mobile phones changed the landscape. Mobiles were affordable, personal, and accessible in ways that landlines and computers were not. The Grameen Village Phone program in Bangladesh offered an early and influential case where ICT itself became the enterprise, with women operating shared mobile phones as income-generating businesses.¹⁴ The program demonstrated both the potential and the limits of intermediated access models, and foregrounded gender as central to how technology adoption and enterprise interact. Jensen documented how Kerala fishermen used mobile phones to identify better markets for their catch, reducing price dispersion and waste.¹⁵ Aker and Mbiti reviewed the broader evidence from Africa, finding that mobiles improved market efficiency and information flows but cautioning that they could not serve as a “silver bullet” for development.¹⁶ Donner and Escobari synthesized 14 early studies of mobile use by MSEs and reached a similar conclusion: the benefits accrued mostly to existing enterprises, amplifying existing informational and material flows rather than transforming them.¹⁷ As mobile handsets gained internet capability, the affordability and ubiquity that made basic mobile telephony valuable extended to mobile money,¹⁸ messaging, social media, and platform-based commerce, setting the stage for the patterns this study documents.

11 Saunders et al., *Telecommunications and Economic Development*.

12 Hudson, *When Telephones Reach the Village: The Role of Telecommunications in Rural Development*.

13 Duncombe and Heeks, “Enterprise Across the Digital Divide: Information Systems and Rural Microenterprise in Botswana.”

14 Bayes et al., “Village Pay Phones and Poverty Reduction: Insights from a Grameen Bank Initiative in Bangladesh”; Aminuzzaman et al., “Talking Back! Empowerment and Mobile Phones in Rural Bangladesh.”

15 Jensen, “The Digital Provide.”

16 Aker and Mbiti, “Mobile Phones and Economic Development in Africa.”

17 Donner and Escobari, “A Review of Evidence on Mobile Use by Micro and Small Enterprises in Developing Countries.”

18 Suri and Jack, “The Long-Run Poverty and Gender Impacts of Mobile Money.”

Social media and livelihoods

More recent research shifts focus from the technology itself to the practices that emerge around it. The evidence base on social media and livelihoods in low- and middle-income countries shows how women use platforms such as WhatsApp and Facebook to manage micro-enterprise activity, build visibility, and navigate social and economic constraints. We examined more than twenty academic and practitioner sources about women and *social commerce*, the buying and selling of goods and services through social media platforms. A set of recurring themes emerges: access and infrastructure shape who can participate; trusted relationships underpin meaningful use; gender norms influence both opportunity and risk; and local adaptation determines how global tools take root in informal economies.

Social commerce is seen by some as having certain advantages over e-commerce, one being the flexibility of electronic payments versus cash on delivery.¹⁹ Many women who use social commerce also use bank accounts, but not always their own, and some of the biggest growth areas in social commerce are in places where there are strong preferences for cash payments.²⁰ DAI found that, in Brazil, the adaptiveness of social commerce was particularly valuable given the market changes brought by COVID-19.²¹

Digital access, infrastructure, and technological capability

Across the literature, adoption of social media-enabled commerce depends on foundational access conditions, including digital literacy, device capability, data affordability, and reliable connectivity. Studies show that ICT access and digital skills strongly influence whether users can engage in e-commerce at all, while literacy gaps remain widespread.²² In many African contexts, digital growth continues to be tempered by logistical and connectivity challenges, as well as persistent gaps in digital capability.²³ Platform design also plays a significant role: complex or time-consuming interfaces discourage participation, particularly among rural or first-time users.²⁴ Ease of use and perceived usefulness shape adoption decisions, and women often encounter connectivity and security concerns that limit regular engagement.²⁵ Recent work from Zimbabwe demonstrates how conversational WhatsApp-based chatbots can lower usability barriers by providing

19 CGAP, “S-Commerce Landscape – Bangladesh”; Abubakar and Dasuki, “Empowerment in Their Hands: Use of WhatsApp by Women in Nigeria.”

20 Theis and Rusconi, *Social Commerce Entrepreneurship and New Opportunities for Women’s Financial Inclusion in India and Indonesia*.

21 DAI, “Insights from Emerging Markets: MSMEs and Digital Tool Use Amidst the COVID-19 Pandemic: Brazil Country Brief.”

22 Alhassan and Adam, “The Social Impacts of Information and Communication Technology on Sustainable Development.”

23 Njathi and Watkins, “Africa: An Introduction to a Growing Digital Market.”

24 Al-kfairy and Alyafei, “Social Commerce in Rural Jordan: Analyzing Adoption Factors Through the Lens of Innovation Diffusion and Perceived Risks.”

25 Mashishi and Primus, “Determinants of M-Commerce Platform Adoption Among Individuals in South African Township Communities.”

intuitive, low-bandwidth pathways for customer interactions.²⁶ Taken together, these studies underscore that meaningful use relies not only on access, but on technologies that align with the everyday digital environments in which women operate.

Trust, safety, and social connections

Trust appears consistently as the central foundation for social commerce.²⁷ Studies show that when trust is limited, women avoid certain types of transactions, particularly higher-value exchanges,²⁸ and that gaps in institutional regulation heighten perceived risk.²⁹ Research from South Africa highlights how transparency, social support, and predictable interactions contribute to small-business success,³⁰ while findings from Tanzania show that offline word-of-mouth and demonstrated service quality continue to shape purchase intention in digital spaces.³¹ Peer ties on WhatsApp further reinforce credibility and confidence in transacting,³² and reselling networks rely heavily on interpersonal relationships to establish legitimacy and reduce uncertainty.³³ Across these contexts, women participate more readily when familiar relationships, clear norms, and visible signals of reliability are present.

Gender, empowerment, and entrepreneurship

The relationships between gender and communication technologies are complex, but well documented. Rakow showed that women's telephone use in rural communities performed essential but undervalued work: maintaining relationships, coordinating care, and sustaining local economic and social networks.³⁴ Wallis documented a similar dynamic among young migrant women in Beijing, whose mobile phones enabled participation in urban economic life while structural barriers of gender, class, and place remained in place.³⁵

These insights frame persistent patterns, reflected in more contemporary research on social commerce, with women using digital tools to create openings for economic participation by building agency, confidence, and entrepreneurial activity.³⁶ An experimental study in Jordan found that when

26 Mhiribidi et al., "Conversational Commerce: Designing and Evaluating a Whatsapp-Based e-Commerce Chatbot."

27 Shahid, "Scaling E-Commerce in Africa: Why Trust Is Key."

28 Al Jamil and Ahmed Ismail, "The Use of 'Ecommerce' and 'Social Commerce in Emerging Markets': Omani Female Millennials' Experiences."

29 Gibreel et al., "Social Commerce Development in Emerging Markets."

30 Kallee, "The Importance of Trust, Social Support, and Platform Usage as Drivers of Social Commerce for Small Businesses in South Africa."

31 Charles and Kanani, "Antecedents of Social Commerce Purchase Intention: Evidence from Tanzanian Social Media Users."

32 Nyazabe et al., "SNS-Based Exposure Influence on Consumers' Purchasing Behavior: The Evidence from WhatsApp."

33 Joshi and Mudliar, "Reselling Practices in a Textile Bazaar: Translating E-Commerce Platforms to WhatsApp."

34 Rakow, *Gender on the Line: Women, the Telephone, and Community Life*.

35 Wallis, *Technomobility in China: Young Migrant Women and Mobile Phones*.

36 DFS Lab and RiSE Indonesia, Pathways through Platform Livelihoods in Indonesia; Zarilli, "The Rise of Women Entrepreneurs in Social Commerce in Developing Countries."

mobility-constrained female entrepreneurs were given access to virtual storefronts and digital marketing training, they achieved higher business survival and revenue, with the strongest effects among women least able to leave their homes.³⁷ Evidence from Khartoum shows that smartphones can strengthen women's social and economic empowerment by enabling income generation from home.³⁸ Studies from the Philippines and The Gambia show women using ICTs and social media in their small enterprises to reach wider markets, increase sales, and strengthen business networks.³⁹

Other studies link women's success in social commerce to an entrepreneurial mindset, perceived value of digital tools, and growing social commerce literacy.⁴⁰ Research with youth-owned MSEs highlights how AI integration and a culture of innovation can improve enterprise performance, suggesting that digital adoption interacts with broader entrepreneurial capabilities.⁴¹ Work on WhatsApp-based reselling networks shows how women use platform-enabled micro-business models to build income and navigate local constraints.⁴² These gains are meaningful, yet uneven, and are shaped by persistent challenges such as limited financial autonomy, safety concerns, and time pressures — areas that remain underexplored in comparative, gender-disaggregated research.

Local adaptation and informal economies

Social commerce in low- and middle-income countries is shaped by how users adapt global platforms to local social, cultural, and informal economic practices.⁴³ Studies document WhatsApp's role in textile bazaars as a locally adapted alternative to formal e-commerce, and in Mozambique as a tool traders use to mediate fashion trends and assert digital agency.⁴⁴ Research on "social agriculture" illustrates how social media becomes integrated into rural livelihood systems in Kenya, supporting information exchange and market visibility.⁴⁵ Other work highlights that digital commerce can expand opportunity while also introducing safety and cultural tensions.⁴⁶ Across these cases, social commerce functions within hybrid economies that blend online and offline practices, reflecting local norms, languages, and trust structures.

37 Al-Horr, "Virtual Windows Through Glass Walls? Digitalization for Low-Mobility Female Entrepreneurs."

38 Steel, "Navigating (Im)Mobility: Female Entrepreneurship and Social Media in Khartoum."

39 Bacasmas et al., *E-Commerce Adoption and Its Impact on the Performance of Women-Led MSMEs in Metro Manila*; Manneh et al., "Ties That Bind and Platforms That Amplify: How Social Networks and Social Media Enable the Growth of Gambian Women Entrepreneurs."

40 Al Omoush, "Fostering Women Entrepreneurs: Exploring the Drivers of Successful Social Commerce Business Adoption Among Women."

41 Muhammad et al., "Digital Transformation in Youth Owned MSMEs: A Mixed Method Exploration on the Impact of Contemporary Social Commerce on Sustainable Performance."

42 Joshi and Mudliar, "Reselling Practices in a Textile Bazaar: Translating E-Commerce Platforms to WhatsApp."

43 Joshi and Mudliar, "Reselling Practices in a Textile Bazaar: Translating E-Commerce Platforms to WhatsApp."

44 von Pezold, "Global China and Everyday Mediation in the Global South: Selling Chinese Fashion in Mozambique via WhatsApp."

45 Schoemaker et al., "Social Agriculture."

46 Das, *Application of Digital Marketing for Life Success in Business*.



Economic outcomes and enterprise performance

Evidence on economic outcomes points to positive but context-specific effects. Active use of social media has been shown to increase SME sales, strengthen brand equity, and expand customer engagement.⁴⁷ Research with youth-owned enterprises indicates that social commerce adoption can improve sustainability and performance, particularly when combined with adaptive management and innovation-oriented practices.⁴⁸ At the same time, studies highlight concerns related to security, inequality, and uneven access to the ecosystem conditions that shape participation.⁴⁹ Benefits tend to be strongest where supportive infrastructure, regulation, and connectivity enable consistent digital engagement.

Rekha communicates with customers of her garment business on WhatsApp. Photo by Rekha via Story × Design.

47 Hassan and Shahzad, "The Impact of Social Media Usage on Small and Micro Social Commerce Enterprises in Malaysia."

48 Muhammad et al., "Digital Transformation in Youth Owned MSMEs: A Mixed Method Exploration on the Impact of Contemporary Social Commerce on Sustainable Performance."

49 Women's World Banking, "Digital Financial Services for Women Micro-Entrepreneurs in India."

Effective use

Research on ICTs and development has long recognized that access alone does not guarantee meaningful outcomes. The early framing of a “digital divide” treated technology adoption as binary: connected or not connected, user or non-user. This approach proved insufficient for understanding how people actually benefit from technology. As Michael Gurstein argued in 2003, what matters is whether people can use technology effectively to achieve their goals, not simply whether they have access. Gurstein distinguished between basic access (owning a device, having connectivity) and *effective use*, which requires “the knowledge, skills, and supportive organizational and social structures to make effective use of that access and that e-technology to enable social and community objectives.”⁵⁰ This framework recognizes a spectrum: those with no access, those with some access and occasional use, and those whose use is sustained, purposeful, and aligned with their priorities. In the context of women’s livelihoods, effective use happens when WhatsApp becomes a reliable tool for earning income rather than simply a platform women happen to access.

“ICTs, when used effectively, provide significant resources/tools for transforming one’s condition — economic, social, political, cultural — whether through obtaining the means for effective use of information and communications capabilities and tools; reaching new markets for small and micro-enterprises; providing the means to bring together dispersed linguistic communities; giving amplification and global voice to unheard minorities (or majorities); for facilitating informed participation in remotely managed political and other decisions; and, for obtaining the interactive services (if remotely) of skilled practitioners.

The key element in all of this is not ‘access’ either to infrastructure or end user terminals (bridging the hardware ‘divide’). Rather what is significant is having access and then with that access having the knowledge, skills, and supportive organizational and social structures to make effective use of that access and that e-technology to enable social and community objectives.”



**Gurstein’s definition
of effective use**

This shift from binary access frameworks to effective use frameworks has become central to digital inequality research. Warschauer demonstrated that meaningful technology adoption requires not just infrastructure but literacy, skills, and supportive social structures.⁵¹ Hargittai’s empirical work on the “second-level digital divide” showed that people with internet access differ dramatically in their online skills and the

⁵⁰ Gurstein, “Effective Use: A Community Informatics Strategy beyond the Digital Divide.”

⁵¹ Warschauer, *Technology and Social Inclusion*.

benefits they derive from use.⁵² Van Dijk specified how different types of digital skills (operational, informational, strategic) enable or constrain the outcomes users can achieve.⁵³ Toyama’s work on technology amplification demonstrated that technology magnifies existing human capacities rather than creating capability from scratch.⁵⁴ For women using WhatsApp for livelihoods, these insights are critical. A woman who opens WhatsApp once a week to confirm a pickup has access, but her use differs markedly from a woman who manages customer lists, posts product updates to groups, coordinates orders through chat, and learns new techniques from peers. Both are users, but only the latter has integrated WhatsApp into the core operations of her enterprise in ways that support income generation.

This distinction between access and effective use has important implications for understanding barriers and drivers. As we examine in [section 4.4](#), women face one set of barriers to adoption (affordability, connectivity, digital confidence, household permission) and a separate set of barriers that prevent occasional users from becoming effective users (limited literacy, time constraints, social norms around visibility, safety concerns in customer interactions). Similarly, drivers operate at both stages: factors that encourage initial WhatsApp adoption differ from factors that enable sustained, multi-feature engagement. Recognizing this two-stage process allows us to distinguish interventions that can expand access from interventions that can deepen use.

In this study, we operationalize effective use as sustained, multi-feature engagement with WhatsApp for livelihood purposes. We measure this in the surveys through self-reported frequency of use, perceived importance to livelihood activities, and the range of features employed (groups, status updates, one-on-one chat, broadcast lists, and emerging tools like AI). This operationalization is necessarily approximate. We worked with available survey data rather than longitudinal observation, and we rely on women’s own assessments of importance and benefit. We do not claim to have definitively captured what effective use means in all contexts. Rather, we have identified patterns that distinguish women who use WhatsApp occasionally from those who depend on it as central infrastructure for their economic activity. As Gurstein emphasized, effective use is ultimately about whether a technology like WhatsApp provides “significant resources for transforming one’s condition” (economic, social, political, cultural).⁵⁵ For the women in this study, that transformation is most visible in their capacity to reach customers, coordinate work, and sustain livelihoods.

52 Hargittai, “Second-Level Digital Divide: Differences in People’s Online Skills.”

53 van Dijk, *The Deepening Divide: Inequality in the Information Society*.

54 Toyama, *Geek Heresy: Rescuing Social Change from the Cult of Technology*.

55 Gurstein, “Effective Use: A Community Informatics Strategy beyond the Digital Divide.”

02-2

Research questions

From evidence to action

Decades of research demonstrate that mobile phones support small enterprises by enabling coordination, reducing search costs, and improving market access. The shift from basic mobiles to smartphones and social media platforms has amplified these capabilities, with WhatsApp emerging as particularly important given its low cost, ease of use, and ubiquity across low- and middle-income countries.

Several key insights emerge from this evidence base.

- Access does not guarantee usability; connectivity, affordability, digital literacy, device capability, and ease of use all shape whether women can sustain meaningful engagement with digital platforms.
- Trust is foundational to social commerce, requiring safety mechanisms, verification processes, peer validation, and reliable interactions that reduce perceived risks.
- Women's empowerment pathways differ from men's; they are shaped by how digital practices interact with social norms, household dynamics, and autonomy.
- Success depends heavily on local adaptation, as women integrate global platforms into informal economies and hybrid digital-offline routines, tailoring tools to local languages, trust structures, and economic practices. And while improved visibility and sales are demonstrated for some women, broader economic transformation depends on structural enablers (like infrastructure, regulation, connectivity, financial autonomy) beyond individual enterprise behavior.
- Critically, research shows that barriers to initial adoption differ from barriers that prevent occasional users from becoming effective users, a distinction with important implications for intervention design.

Yet critical questions remain unresolved, particularly for those designing interventions to support women's livelihoods. The literature establishes that social media and messaging platforms matter for small enterprises, and that effective use differs from mere access. But we lack systematic, nationally representative evidence on fundamental questions that practitioners, policymakers, and platforms need answered. Most existing research treats "social media" generically or focuses on specific platforms in isolation; large-scale evidence on how (and how many) women actually use messaging apps for livelihoods remains scarce. This study focuses on WhatsApp given its role as the de facto messaging platform across many low- and middle-income countries, though the

patterns we identify likely extend to other messaging apps and to the increasingly blurred boundaries between messaging and social media more broadly. Understanding these patterns requires moving beyond what we know conceptually to what we can measure empirically across diverse contexts and user populations — which is why this multi-country, nationally representative study is well timed.

Research questions

To address these gaps and inform the design of interventions, whether policy reforms, platform features, or programmatic support, this study examines five questions:

- **How many women (and men) rely on WhatsApp for their livelihoods?**
Establishing national-level prevalence helps seize the opportunity and identify which populations would benefit most from targeted interventions.
- **In what ways does WhatsApp support women’s livelihoods?**
Understanding specific business functions, communication workflows, and customer engagement practices reveals what women actually do with the platform and where further support might be most helpful.
- **How does WhatsApp use vary across sectors, countries, and income segments?**
Cross-country, cross-sector, and income-based variation shows whether interventions should be universal or tailored to specific contexts.
- **Which barriers and drivers shape adoption and effective use?**
This question examines both barriers to initial adoption and the separate barriers that prevent occasional users from becoming effective users.
- **What are emerging signals related to the WhatsApp Business app and AI?**
Understanding awareness, uptake, and utility of new capabilities informs whether to promote these tools or address gaps preventing their effective use.

To answer these questions, the analysis integrates survey data from nationally representative surveys, follow-on surveys, and qualitative interviews with women using WhatsApp for livelihoods.

Methods and primary data

03-1

Data sources

This report draws on three complementary streams of evidence: nationally representative surveys, deep-dive user surveys, and qualitative research inquiries, each designed to illuminate different aspects of women's WhatsApp use for livelihoods. The survey components were implemented by Ipsos across four countries (nationally representative in India, Pakistan, Nigeria, and Kenya); the follow-on surveys were conducted by Ipsos in Kenya and India. Two qualitative inquiry panels were conducted remotely over WhatsApp by [Turn.io](https://turn.io), one with women in Nigeria and Kenya, the second with women in India.

WAVE 1

Nationally representative surveys

Wave 1 aimed to establish how many women and men rely on WhatsApp for livelihood activities and to identify patterns of use across demographic and economic segments. Data collection in June 2025 consisted of nationally representative household surveys conducted by Ipsos in Kenya, Nigeria, and India (n=2,000 each) and Pakistan (n=1,000). Geographic coverage spanned 17 states in India, 8 regions in Kenya, 18 states across 6 regions in Nigeria, and 4 provinces in Pakistan. These surveys employed a random route quota design with 140–200 sampling points in the larger countries and 70–100 sampling points in Pakistan. Sampling units were wards or districts, purposively selected to ensure coverage across urban and rural areas. Samples were stratified 50/50 by gender and by urban/rural residence, with quotas set on age to ensure representation of the adult population and monitoring quotas on education, socioeconomic classification, and literacy.

Data was collected through computer-assisted personal interviews conducted in local languages: 9 languages in India (Hindi, Bengali, Tamil, Kannada, Marathi, Oriya, Telugu, Assamese, Gujarati), Swahili in Kenya, 4 languages in Nigeria (Hausa, Yoruba, Pidgin, Igbo), and 3 languages in Pakistan (Urdu, Sindhi, Pashto). Average interview length was

approximately 15 to 20 minutes. Survey weights correct for sampling design and non-response within each country.⁵⁶

Survey content covered employment type, side gigs, and informal work; sector of self-employment; business size and contribution to household income; phone ownership and use; WhatsApp use for both personal and business purposes; barriers to adoption; use of additional platforms; and demographics including literacy, education, household composition, and asset ownership.

WAVE 2

Deeper dive with WhatsApp users (India and Kenya only)

The second wave of data collection, again by Ipsos, focused exclusively on women who actively use WhatsApp for livelihood activities. In June 2025, Wave 2 interviews were conducted in India (n=400) and Kenya (n=400), targeting adult women who use WhatsApp to support self-employment or a business they operate, even if seasonal or part time. Eligibility was screened at the outset of the interview, prior to collecting household background information.

Data was collected through computer-assisted personal interviews in local languages (9 languages in India; Swahili in Kenya). Average interview length was 20 to 25 minutes. The study employed 40–60 sampling points stratified by urban and rural location (wards or villages) with 50/50 distribution across urban and rural areas. Sampling combined random route approaches with referrals, purposive sampling, and recontact interviews with qualifying Wave 1 participants where practical. While no strict quotas were set, recruitment aimed for a spread of ages and business types (home-based versus other locations), informed by Wave 1 findings. Weights were adjusted to match Wave 1 rural-urban distributions to enable comparison across waves.

Wave 2 built on Wave 1 content with additional modules focused on livelihood practices and platform features. New topics included: separate phone ownership for business; detailed business function mapping and impact assessments; customer contact patterns via WhatsApp; business growth or decline over the past 12 months; challenges, including harassment, fraud, and online gender-based violence; use of groups and status updates; photo and identity-sharing behaviors; awareness and use of AI features; and awareness and use of payment features. These additions enabled deeper examination of how effective users integrate WhatsApp into daily work routines and what barriers constrain fuller adoption of platform capabilities.

56 For cross-country aggregate analysis, weights were adjusted by the ratio of actual adult population (18+) to sample weight sum within each country, using adult population totals of 1.0 billion (India), 139.8 million (Pakistan), 117.6 million (Nigeria), and 30.7 million (Kenya). This has the effect of skewing the “overall” frequencies and distributions on any reported item towards whatever was observed in India, and is the reason we often present charts and tables with the countries broken out separately.

Qualitative interviews

To complement survey data, Caribou partnered with [Turn.io](#) to conduct qualitative interviews via WhatsApp in Kenya, Nigeria, and India. [Turn.io](#) developed a recruitment protocol delivered via WhatsApp chatbot, which was shared with [Turn.io](#) Chat for Impact Accelerator partners in all three countries. Applicants were screened against recruitment profiles and invited to review participant consent information, which could be accessed in long form, short form, or audio formats via the chatbot. Consenting participants joined private WhatsApp groups where [Turn.io](#) facilitators posed questions on weekdays over a 3- to 4-week period (4 weeks in Kenya and Nigeria; 3 weeks in India). Participants were remunerated at project end and had ongoing access to anonymous feedback forms and consent information throughout the study. This approach enabled sustained, asynchronous engagement with women using the same platform they rely on for livelihood activities.

A total of 46 women participated across the three countries: 29 in Kenya and Nigeria (57% Nigerian, 41% Kenyan) and 17 in India. The Kenya and Nigeria sample skewed slightly older (59% aged 25–34; 28% aged 35+) and more educated (70% having started higher education, more common in Nigeria), with approximately 30% using shared phones. The Indian sample was more economically and educationally diverse (39% aged 18–24; 33% aged 25–34; 27% aged 35+), with 50% holding university degrees and 50% below university level. Critically, recruitment in India intentionally focused on including lower-literacy and lower-income participants to ensure broader representation: 33% earned below ₹5,000 per month (approximately US\$60) and 67% earned between ₹5,000 and 80,000 per month (approximately US\$60–950), reaching into the Base, Lower, and Mid segments that were underrepresented in the Kenya and Nigeria samples, which skewed more prosperous.

Participants engaged in diverse livelihood activities supported by WhatsApp. In Kenya and Nigeria, these included beauty and fashion services (cosmetics, tailoring, hairdressing), food and catering, dropshipping, affiliate and product marketing, phone sales and mobile money agency, online tutoring, and hospitality management. In India, activities included beauty services, selling groceries and handmade jewelry, agricultural products, tailoring, henna application, tuition, task-based work via community/NGO apps, and self-help groups selling handmade goods. The facilitated conversations explored how women integrated WhatsApp into daily work routines, what features they used and why, what barriers they encountered, and how platform practices shaped business outcomes and income generation.

03-2

Analytical segmentation

Ascertaining household income in brief interviews with strangers is notoriously difficult, particularly in contexts where income is irregular, seasonal, or derived from multiple informal sources. Yet understanding where along the income spectrum WhatsApp use for livelihoods is concentrated remains essential for targeting interventions and understanding variation in access, capability, and opportunity. Rather than asking respondents to report daily or monthly income (a question that yields unreliable data), we used a stack-ranking approach that orders respondents from lowest to highest economic status based on observable proxy indicators, then proportionately cuts this distribution at internationally recognized poverty line thresholds.

The stack-ranking combined three data sources. First, we constructed an asset index from self-reported ownership of 12 durable goods and housing characteristics (0–12 scale), with the presumption that higher asset ownership corresponds to higher income. The index included: running water from tap, flush toilet, washing machine, refrigerator, gas stove, installed water heater, air conditioner, TV, broadband internet, laptop/desktop computer, car/van, and motorcycle/scooter.⁵⁷ This measure is straightforward to collect and relatively comparable across countries, and avoids the sensitivity and recall challenges of income questions. Second, we used World Bank poverty line thresholds (US\$2.15, US\$3.65, and US\$6.85 per day in 2017 PPP) to determine where to cut the ordered distribution in each country. Because the proportion of each country's population living below these thresholds differs (World Bank data suggests Nigeria has higher poverty rates than Kenya, for instance), the segment boundaries occur at different points in each country's asset distribution. Third, where additional granularity was needed to assign respondents with the same asset count within the same income band, we used education level and Ipsos's socioeconomic classification (assigned by enumerators based on household observations) as tiebreakers.⁵⁸ This approach mapped all respondents in the survey to these income bands (segments): Base (below US\$2.15/day), Lower (US\$2.15–3.65/day), Mid (US\$3.65–6.85/day), and Top (above US\$6.85/day). The resulting segment distributions varied by country, reflecting differences in national poverty rates.

57 The questionnaire asked about 15 items. We indexed items for correlation and removed 3 of the 15, resulting in a 12-item index with Cronbach's $\alpha = 0.80$.

58 Ipsos enumerators assigned country-specific socioeconomic classification (SEC) codes to respondents based on standard market research criteria for urban and rural households, reflecting occupation, education, consumption patterns, and household characteristics. Classification criteria vary by country; the Indian framework is available via [Wikipedia](#). Comparable country-specific systems were applied in Kenya, Nigeria, and Pakistan.

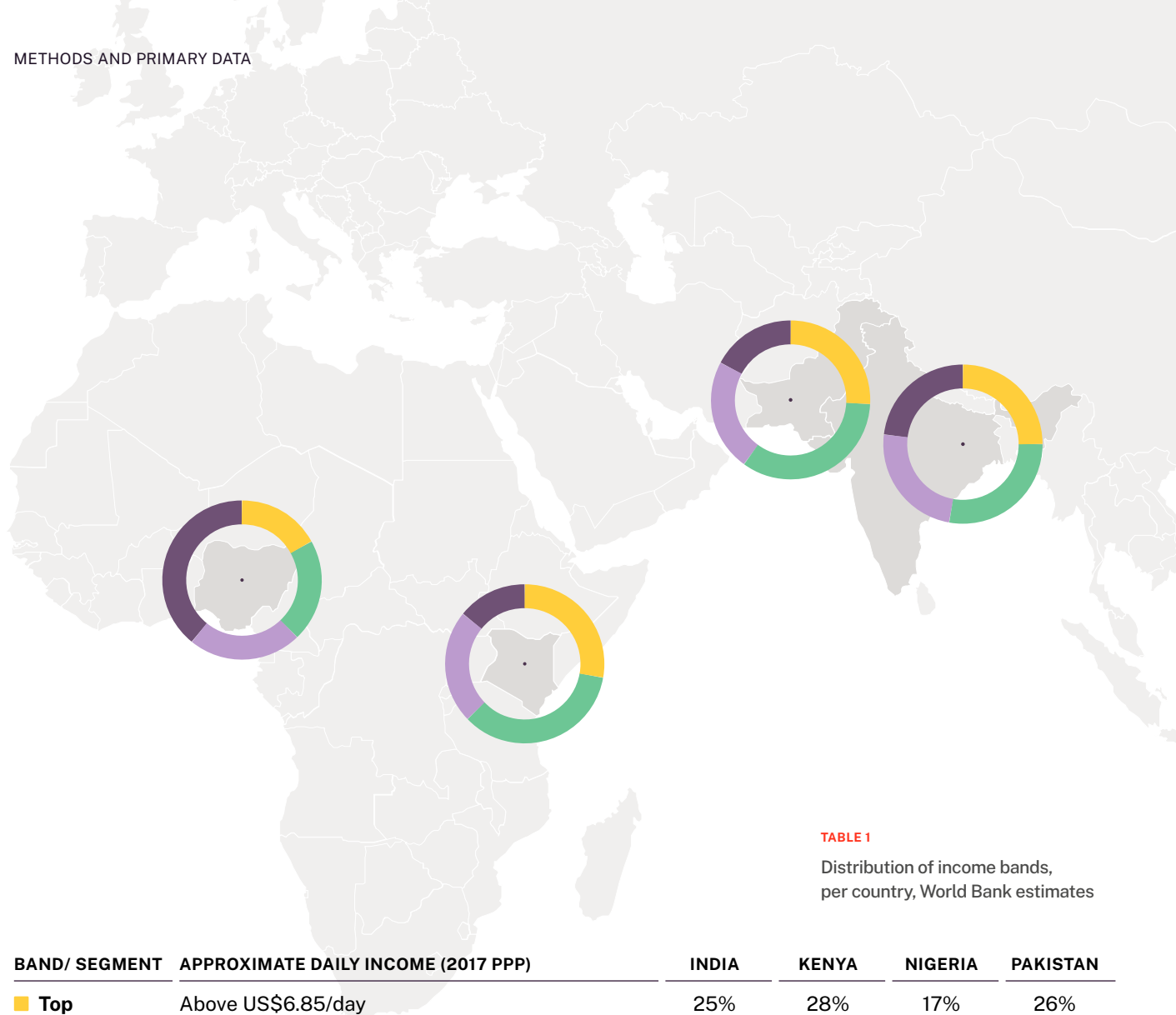


TABLE 1

Distribution of income bands, per country, World Bank estimates

BAND/ SEGMENT	APPROXIMATE DAILY INCOME (2017 PPP)	INDIA	KENYA	NIGERIA	PAKISTAN
■ Top	Above US\$6.85/day	25%	28%	17%	26%
■ Mid	US\$3.65–6.85/day. Above the lower-middle-income poverty line (US\$3.65), extending toward the upper middle-income poverty line (US\$6.85).	28%	35%	21%	34%
■ Lower	US\$2.15–3.65/day. Above the lower-income poverty line (US\$2.15), extending toward lower middle-income poverty line (US\$3.65).	24%	23%	23%	23%
■ Base	Below US\$2.15/day. International poverty line for low-income countries.	23%	14%	39%	17%

Note: Income segment thresholds follow World Bank international poverty lines in 2017 PPP dollars. Country-level population shares derived from latest available national household surveys (see [World Bank Poverty and Inequality Platform](#)). Segmentation framework provided by the Gates Foundation. These distributions are an input to our analysis design, not a product of our survey.

Results

04-1

How many women (and men) rely on WhatsApp for their livelihoods?

To determine how many women and men use WhatsApp for their livelihoods, we divided this question into two parts. First, we needed to establish what proportion of adults in each country have access to smartphones capable of running WhatsApp. Second, we needed to determine what proportion have self-employment income — earnings from their own business, farm, or independent work rather than wages from an employer. Because our surveys used nationally representative samples of adults, we could address these questions in either order. We elected to establish WhatsApp's role as a platform first, then examine self-employment prevalence, before analyzing their intersection.

Emarti shares a photo of her knitwork via WhatsApp. Photo by Emarti via Story x Design.

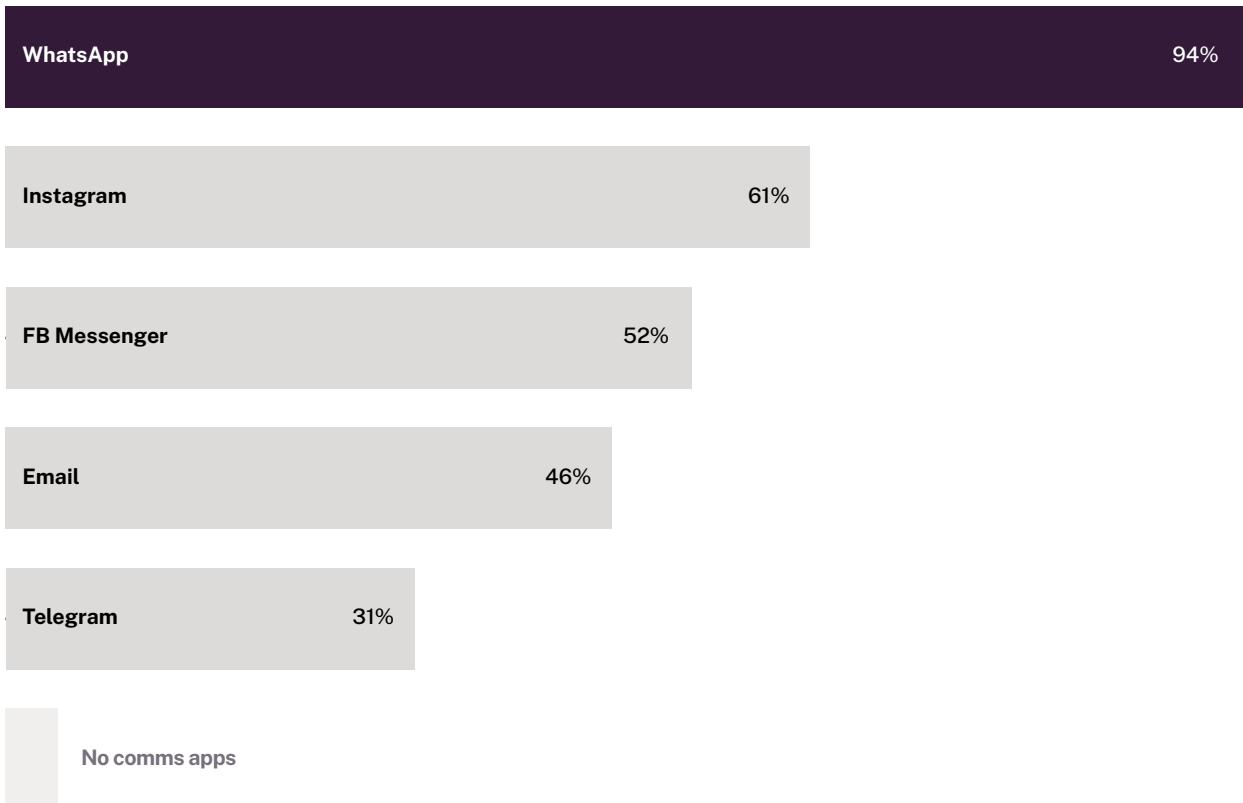


WhatsApp's near-ubiquity

WhatsApp is not just an app. It functions as a shared communications infrastructure across India, Kenya, Nigeria, and Pakistan. Among internet users in these four countries, 94% report having WhatsApp installed on their phones. This penetration exceeds that of Instagram, Facebook Messenger, email applications, and Telegram. For some smartphone owners in these contexts, WhatsApp may feel like connectivity itself.

FIGURE 1

WhatsApp is the dominant communications app among mobile internet users



Note: Weighted percentage of smartphone users who have each app installed (N=4,578). Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); Total weighted sample N=7,000 (unweighted n=7,572), Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distributions, age, education and other socio-demographics from national census. For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA's [World Population Prospects 2024](#). Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

Self-employment

Self-employment income, whether from operating a small shop, providing services, farming, or manufacturing goods at home, is widespread in these four economies. Across the countries, 41% of adults report having some form of self-employment income. This includes full-time entrepreneurs, part-time business operators, farmers selling produce, and individuals earning money through informal economic activities alongside formal employment.

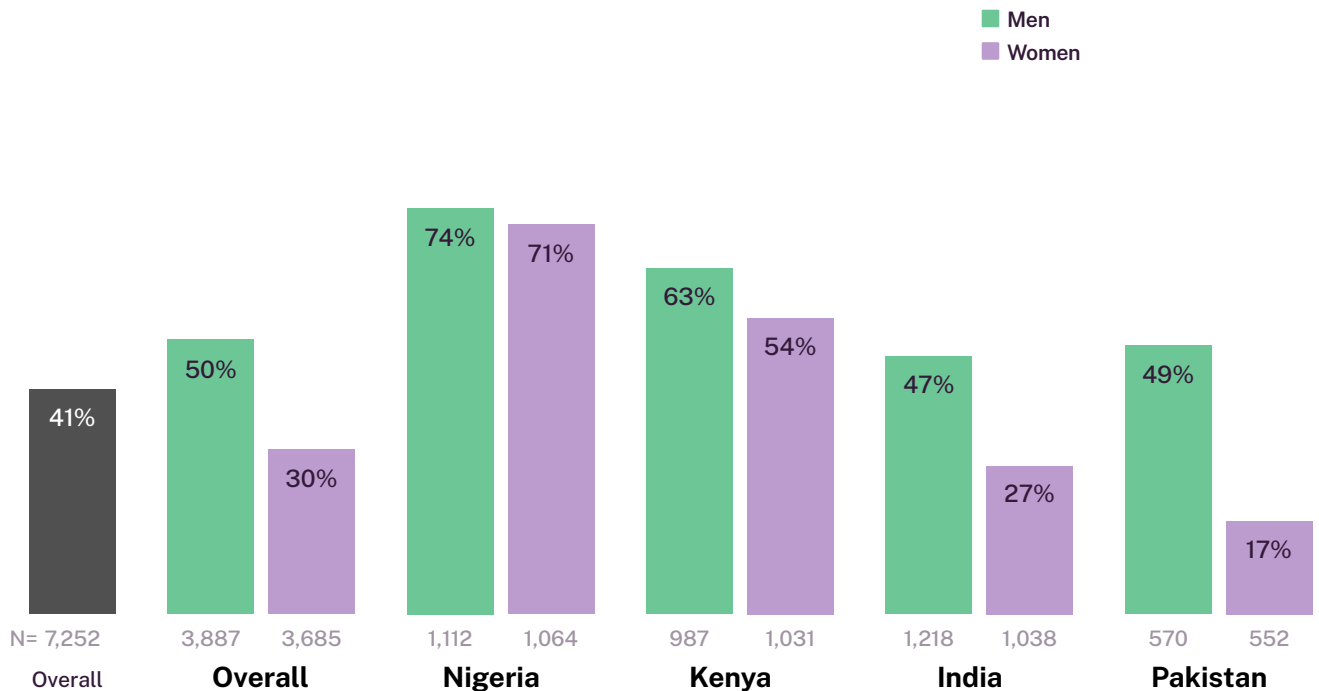
Women’s self-employment rates are lower than men’s, but still substantial. Thirty percent of women report self-employment income, compared to 50% of men. These gender differences reflect broader patterns of economic participation, formal employment access, and household responsibilities that shape women’s livelihood opportunities.

Among adults with self-employment income, roughly half (22% of all adults across the four countries) use WhatsApp to support those livelihood activities. This figure reflects two overlapping patterns: not all adults have self-employment income, and not all who do use WhatsApp for it. The gender gap at this level is visible but varies by country: in Nigeria, 48% of men and 41% of women report self-employment income alongside WhatsApp use for livelihoods, while in Pakistan the figures are 26% and 8%, respectively.

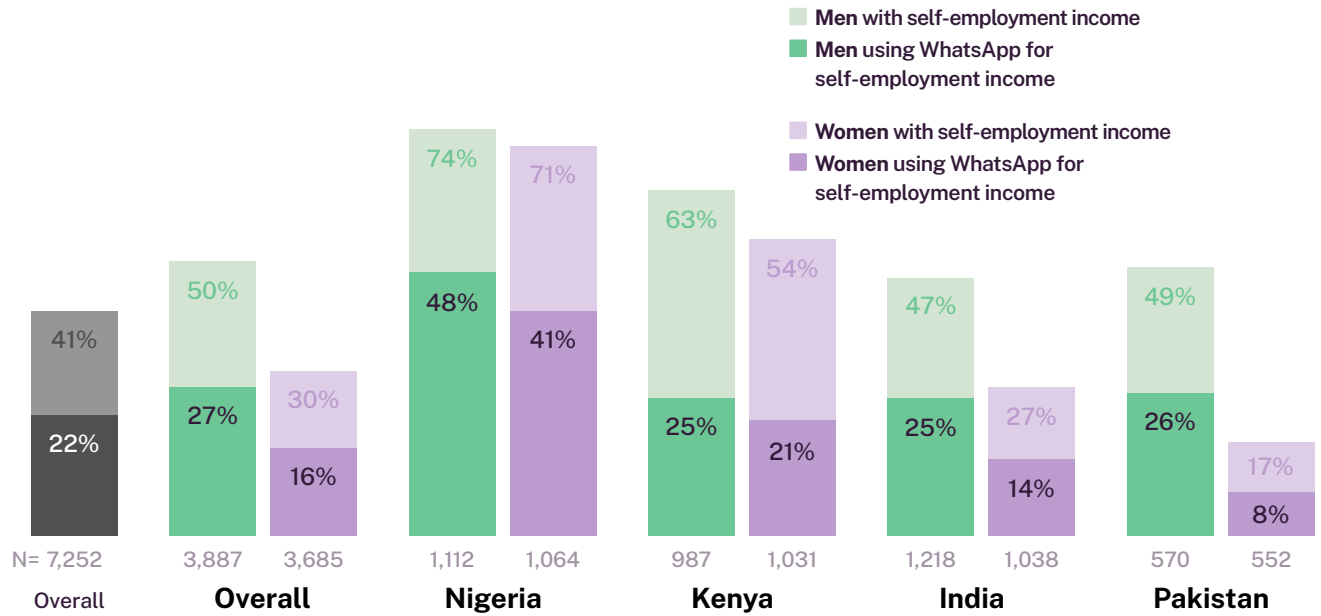
When we restrict the frame to include only those with self-employment income, the picture shifts, and it becomes easier to see that the relative proportion of women with self-employment income using WhatsApp for livelihoods is much closer to men’s: 53% of self-employed women overall, compared to 54% of self-employed men. It is also clearer that self-employed adults use WhatsApp for livelihoods in more consistent proportions across countries, ranging from 39% of women in Kenya to 65% of men in Nigeria. The consistent finding is that among women who already have self-employment income, WhatsApp adoption for livelihood purposes is substantial across all four countries.

FIGURE 2A

Two in five adults report some form of self-employment income



Note: We use a broad definition of livelihoods/self-employment income, including formal and informal enterprise, full-time careers and part-time incremental earning, and both farm and non-farm activities. There is a separate app called “WhatsApp Business” but unless otherwise noted, the results focus on the basic, personal WhatsApp application used for livelihood purposes.



Note: The nationally representative survey asked adults 18+ whether they had any self-employment income. These estimates thus include full and part time, formal and informal, farm and non-farm.

FIGURE 2B

One in five adults with self-employment income uses WhatsApp to support livelihood activities

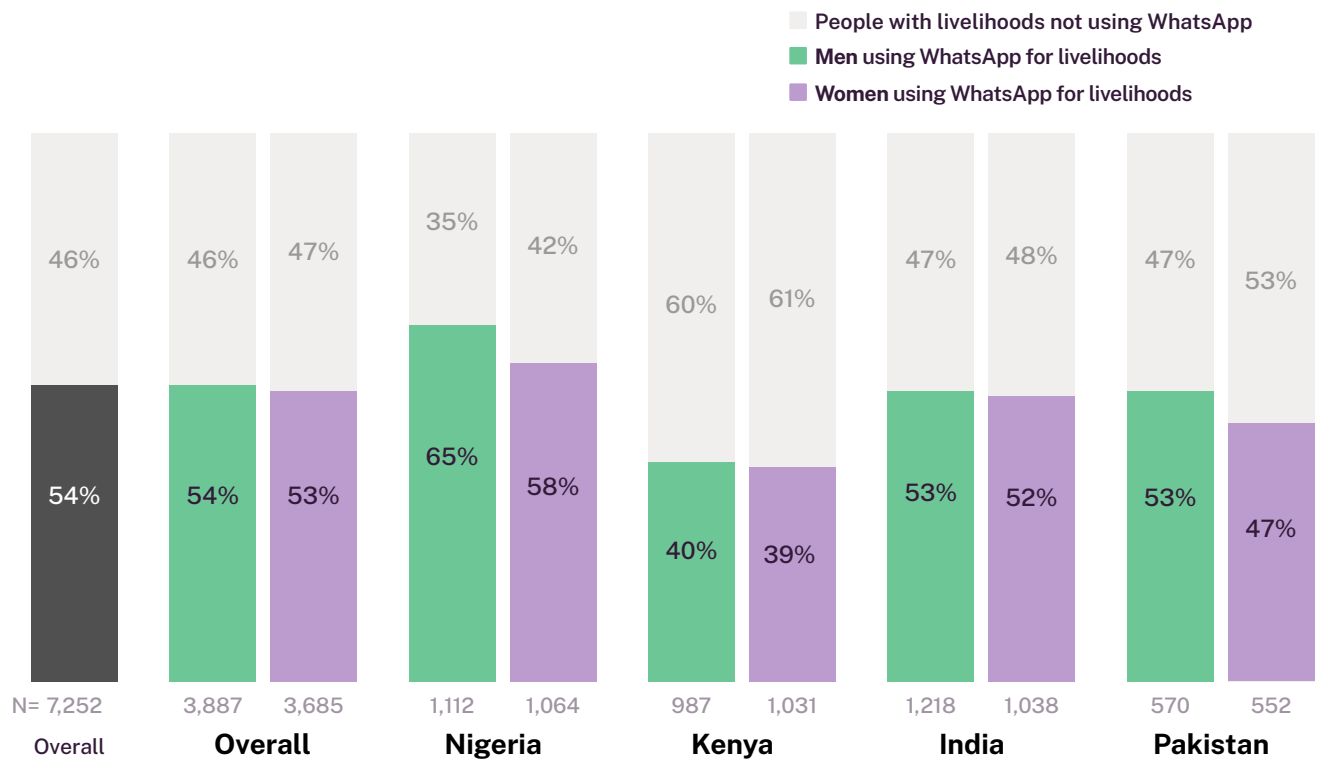


FIGURE 2C

More than half of men and women with income from self-employment use WhatsApp to support their livelihoods

Source: Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); Total weighted sample N=7,000 (unweighted n=7,572), Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distributions, age, education and other socio-demographics from national census). For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA World Population Prospects 2024. Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

For women, these survey results translate to a striking figure represented in figure 8: across India, Kenya, Nigeria, and Pakistan, we can extrapolate that an estimated 89 million (80–98 million) working-age women use WhatsApp to support their livelihoods.⁵⁹ That represents roughly one in six women in these countries.

These totals emerge from very different country contributions. India accounts for nearly 58 million users despite having lower adoption rates, simply because of its massive population. Nigeria, with higher adoption rates but smaller population, contributes approximately 24 million users.

90m

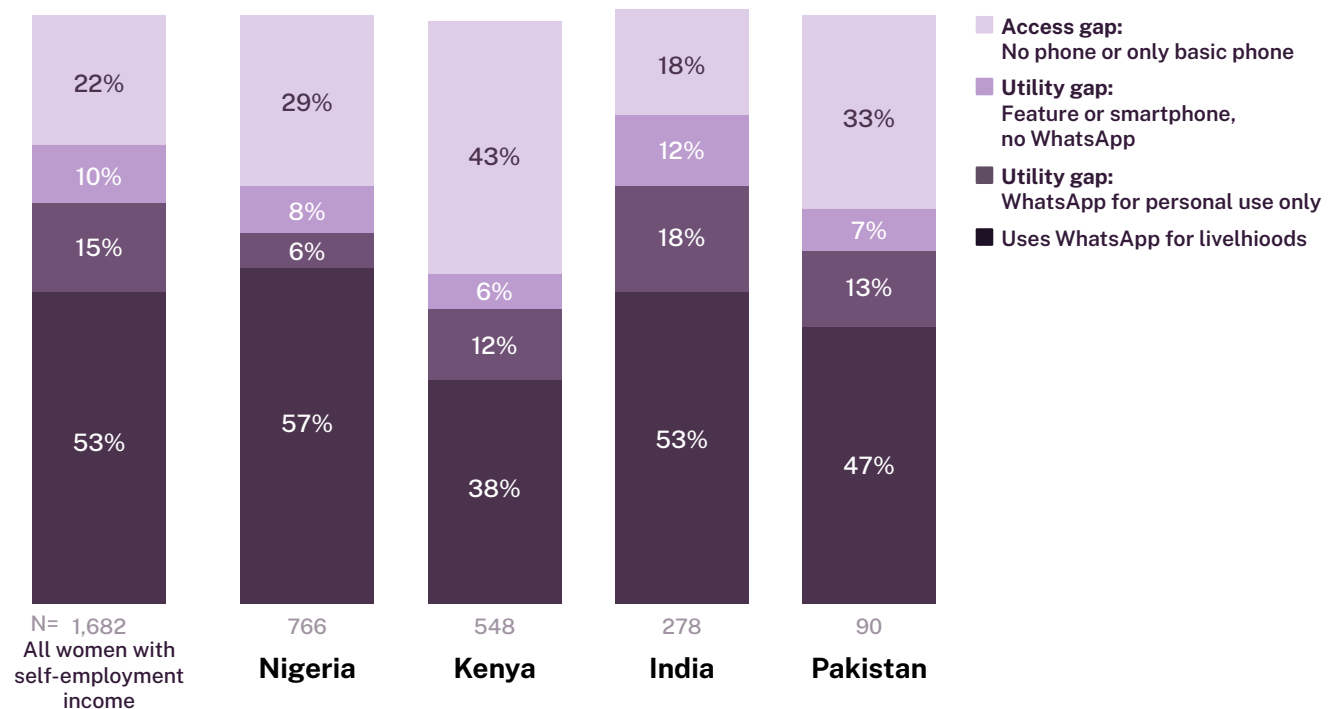
Nearly 90 million women — roughly 1 in 6 — across India, Kenya, Nigeria, and Pakistan use WhatsApp to support their livelihoods.

WhatsApp use (and non-use) among women with self-employment income

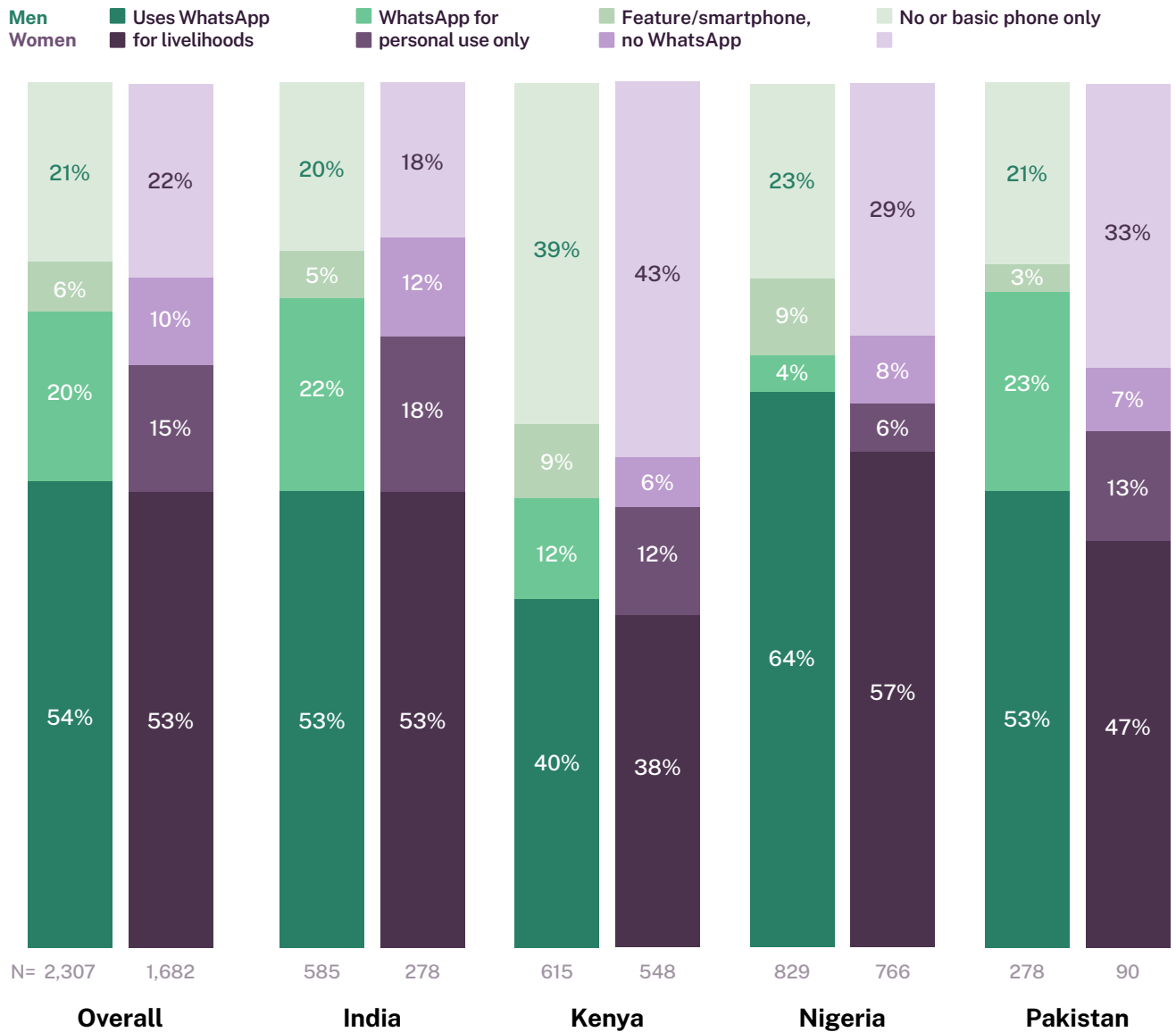
To understand why only half of women with self-employment income use WhatsApp for those activities, we can examine two sequential constraints: device access and platform adoption decisions.

Among women who report self-employment income, smartphone ownership varies significantly by country, ranging from a low of 56% in Kenya to a high of 83% in India. Without a smartphone, women cannot access WhatsApp, regardless of whether they might find it useful for their livelihoods. Device access remains a fundamental barrier, particularly for women in lower income segments.

FIGURE 3A
Device access remains a barrier, particularly for lower-income women



⁵⁹ Population estimates were derived by applying country-level weighted prevalence rates to working-age population figures, then summing across countries. Confidence intervals were calculated separately for each country using standard binomial sampling error applied to each country’s weighted prevalence rate and sample size, then scaled to the population. The combined interval reflects 95% confidence. All figures are indicative rather than precise counts.



Note: The nationally representative survey asked adults 18+ whether they had any self-employment income. These estimates thus include full and part time, formal and informal, farm and non-farm.
 Source: Weighted percentage of smartphone users who have each app installed (N=4,578). Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); Total weighted sample N=7,000 (unweighted n=7,572), Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distributions, age, education and other socio-demographics from national census. For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA's World Population Prospects 2024. Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

FIGURE 3B
 Device access drives lower rates of WhatsApp use among women

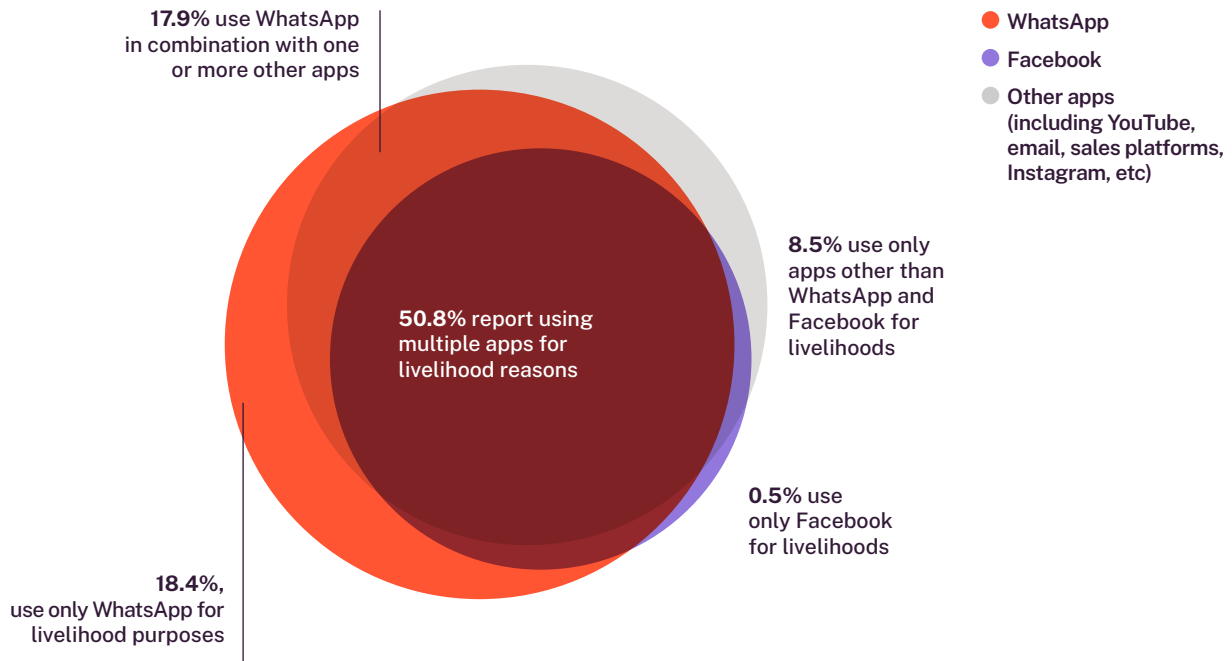
Among women who have both self-employment income and a smartphone, WhatsApp adoption for livelihood purposes is high but not universal. Even among women with device access and income-generating activities, roughly 30% choose not to use WhatsApp for their livelihoods. As we explore in section 4.4, this reflects perceived utility constraints (many women do not see how WhatsApp could help their particular type of work) as well as concerns about time, harassment, and managing the boundary between personal and commercial use of the platform.

Access

The gender gap is driven by differences in access and opportunity, not by the propensity to use available tools.

WhatsApp in digital livelihood repertoires

While WhatsApp dominates messaging and livelihood communications in these four countries, it is important to note that relatively few people rely on WhatsApp exclusively. Among those who use any app for livelihood purposes, 18% report using WhatsApp alone. Roughly half (51%) use WhatsApp alongside other platforms such as Facebook, Instagram, or e-commerce and payment applications.



Note: Installed apps reported to be used for livelihood purposes (excluding banking and mobile money apps; weighted sample restricted to respondents who report any business use of apps, N=3,989).

This pattern echoes a broader dynamic observed in mobile internet use. In 2015, Donner distinguished between “mobile-only” internet users (those whose sole point of connectivity is a mobile device) and “mobile-centric” users (who primarily use mobile devices but occasionally access other platforms).⁶⁰ Applied to this context, we can identify “WhatsApp-only” users (those who rely exclusively on WhatsApp for livelihood activities) and “WhatsApp-centric” users (those for whom WhatsApp is the primary platform within a broader app repertoire).

This distinction matters because it shapes how women experience platform dependency and flexibility. WhatsApp-only users have no alternative channels if the platform fails, changes its policies, or proves inadequate for particular tasks. WhatsApp-centric users can shift activities to other platforms depending on the situation — perhaps using Facebook for broader marketing reach, specialized e-commerce apps for catalog management, or payment apps for financial transactions.

60 Donner, *After Access: Inclusion, Development, and a More Mobile Internet*.

RESULTS

Our survey did not probe deeply into how women and men decide which app to use for which business purposes. Understanding these app-switching decisions and the trade-offs users make across their digital repertoires represents an important direction for future research. For now, the critical insight from this study is that for most women using apps for livelihoods, WhatsApp functions as a central — but perhaps not always solitary — tool within a broader set of digital practices.

Lucy, an agriculturalist, uses WhatsApp on her laptop. Photo by Lucy via Story x Design.



Variation across countries

As detailed in the appendix, WhatsApp use for livelihoods varies across the four countries, though not dramatically. Among women, prevalence ranges from 12% in Pakistan and Nigeria to 18% in India, with Kenya at 16%. Among men, rates range from 17% in Pakistan to 27% in India. These differences primarily reflect variation in underlying self-employment rates and access conditions rather than differences in WhatsApp adoption patterns among those with businesses. Cross-country comparisons of this kind warrant caution: differences in survey administration, cultural norms around self-reporting, and variation in how respondents interpret terms like “self-employment” or “livelihood use” introduce measurement and interpretation challenges that only repeated surveys could fully resolve.

Nigeria stands out for both high WhatsApp penetration and high livelihood use. One likely explanation is that the country’s ecosystem of small-scale retail, services, and home-based production aligns well with WhatsApp’s strengths as a communication-first tool; effective use is more common here than in any other country in the study.

Kenya shows a similar but less pronounced pattern; WhatsApp is widely used among urban women, but rural women face more visible device access gaps, and sectors with high female participation such as farming show lower WhatsApp integration.

India presents a different picture: WhatsApp use is extremely high among both men and women, yet the transition from personal use to livelihood use is more limited. This large “personal use only” group represents a latent opportunity where the digital foundations are in place but WhatsApp has not yet become embedded in women’s commercial routines.

Pakistan reflects the steepest constraints. Women are less likely to have smartphones, are more likely to rely on shared or basic phones, and face stronger gendered barriers to digital engagement. Even among women who run small-scale enterprises, few incorporate WhatsApp into their business practices.

These cross-country differences map closely onto income segments. Women in the Mid segment are consistently more likely to use WhatsApp for livelihoods and to do so effectively. Women in the Lower segment show more selective adoption, while women in the Base segment have the lowest usage across all four contexts. The variation is real but should not be overstated: across all four countries, roughly half of women with self-employment income and smartphone access use WhatsApp for those activities.

We triangulated these findings against national labor force surveys, the GSMA Mobile Gender Gap Report (2024), the World Bank Global Findex (2024), and country-level studies of MSE digital adoption.⁶¹ Where estimates differ, the differences likely reflect methodological variation in question wording, sampling frames, and timing rather than substantive disagreement.

Though less likely to have self-employment income, women are more likely to use WhatsApp for livelihoods

Among women with self-employment income specifically, approximately half use WhatsApp for those livelihood activities. Interestingly, this proportion appears slightly higher than for men with comparable self-employment and smartphone access, suggesting some affinity between women’s livelihood patterns and the platform’s affordances. This pattern is notable precisely because women are less likely than men to report self-employment income in the first place. Several factors could contribute to this alignment. Women’s self-employment tends to concentrate in sectors like retail, services, and home-based production, which are activities where communication with known customers and management of personal networks may be particularly valuable. WhatsApp’s design around conversational interaction and group coordination might align well with how women conduct business within their existing social networks. We did not investigate these mechanisms deeply in this study, but the observed pattern, where women with self-employment appear more likely than comparable men to adopt WhatsApp for those activities, merits further exploration. The next section examines the specific ways women use WhatsApp for livelihoods, which may help illuminate why this alignment exists.

61 Self-employment prevalence aligns with World Bank/ILO estimates: 84.7% in Nigeria (2023), 61.4% in Kenya (2022), 57.1% in Pakistan (2023); India’s Periodic Labour Force Survey (2023–24) reports 58.4%. WhatsApp for livelihoods estimates are consistent with country-level findings: 46% of Nigerian MSMEs use WhatsApp for marketing (World Bank, “Nigeria MSME Digital Services Survey,” 2022); 49% of Kenyan small businesses rely solely on social media for online sales (GSMA); 34% of women micro-entrepreneurs in urban Bangalore use personal WhatsApp for business (Women’s World Banking, “Digital Financial Services for Women Micro-Entrepreneurs in India”). Smartphone ownership and internet use figures were compared with GSMA’s *Mobile Gender Gap Report 2024* and World Bank’s Global Findex Database (2024). Triangulation included conversations with Ipsos, GSMA, and researchers at the Oxford Internet Institute and the World Bank. Where Caribou/Ipsos estimates differ from external sources, the differences reflect timing (Caribou data reflects 2025 fieldwork; comparison datasets are largely 2023–2024), question wording (Caribou/Ipsos asks about sole or main use of a mobile phone; GSMA measures primary SIM use at least monthly; Findex measures ability to make and receive calls; Digital Gender Gaps uses modeled distributions), measure definitions (smartphone and internet access constructs vary across surveys), and sampling (Caribou/Ipsos n=7,000 nationally representative; some external datasets rely on smaller or modeled samples). Despite these differences, all sources reinforce the same directional patterns, particularly around the gender gap in device access and the centrality of WhatsApp in women’s digital routines.

04-2

In what ways does WhatsApp support women's livelihoods?

Having established how many women (and men) use WhatsApp for livelihoods, we now turn to how and why they use the platform in practice. To answer these questions, we draw on qualitative interviews conducted with women across India and Kenya, complemented by survey data on communication patterns and feature use. These interviews provide rich detail about the everyday communication routines, platform features, and digital behaviors that underpin livelihood activity across diverse contexts. While our interview sample cannot claim statistical representativeness, the patterns that emerged consistently across dozens of conversations help illuminate the practices behind the prevalence numbers documented in the previous section.

Women's use of WhatsApp for livelihood activity reflects the close relationship between communication routines and economic life. Much women's work, whether selling goods, preparing food, providing services, or coordinating agricultural activities, depends on maintaining trust, managing relationships, and responding to the needs of customers and suppliers. WhatsApp fits easily into these patterns. It is familiar, easily accessible, and part of the rhythm of daily conversation. This section explores the key practices and features that anchor women's livelihood use, showing how digital behaviors emerge within the constraints and possibilities of home, community, and work.

Women's livelihood activity on WhatsApp unfolds across multiple communication modes, four of which emerged as particularly significant in our interviews: groups for coordination and learning, status updates for visibility, one-to-one messaging for customer relationships, and network-embedded commerce with known contacts. These practices blend into daily routines rather than requiring dedicated business hours, with livelihood messages flowing alongside household and social communication. Customers follow up on market conversations, suppliers share available stock, and peers check in with updates — all within the same conversational spaces where women manage family, community, and personal relationships.

One-to-one messaging as the backbone of commercial relationships

Across income segments and countries, one-to-one messaging forms the backbone of livelihood activity on WhatsApp. Private chats are the primary space where customers ask about availability, negotiate prices, confirm quantities, schedule appointments, and arrange pick-up and delivery. These exchanges feel personal, predictable, and aligned with the relational expectations of local markets.

Private messaging is especially important for women who prefer to keep a lower digital profile due to safety concerns, community norms, or household expectations. Many describe one-to-one chats as the safest and most manageable way to conduct business, particularly when dealing with new customers initially encountered in groups. Over time, repeated private interactions often evolve into long-term customer relationships that provide stability for small enterprises.

“Customers are people from the neighborhood and acquaintances. They often bring others along. I talk to them via call or WhatsApp messages.”

Jharkhand, India (35–44)

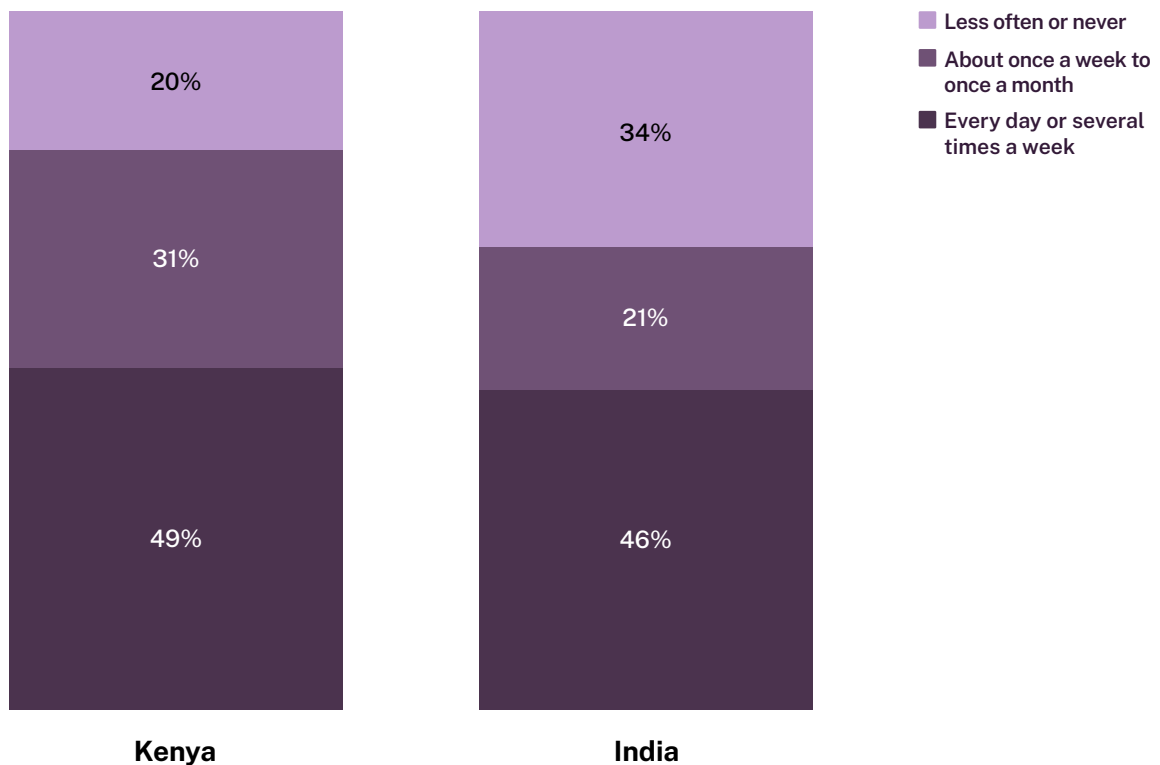


FIGURE 5

Roughly half of women using WhatsApp for livelihoods update their status daily or several times per week

Source: Data by Ipsos (lower-resource women in Kenya and India (unweighted n=141 in Kenya and n=272 in India) (Wave 2, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distributions, age, education, and other socio-demographics from national census. The Top segment (estimated approx. income >US\$6.85 per day) is excluded.

Groups as shared spaces of coordination and learning

Groups are a central part of how information, opportunity, and support circulate. Women participate in a wide range of groups: neighborhood buy-and-sell forums, church or mosque circles, school groups, village committees, sector or skill-based groups (e.g., tailors, beauticians, farmers), and informal community networks. Commercial and social content coexist, creating an environment where learning is often observational.

Many women first encounter livelihood possibilities by watching others: seeing peers post products, ask for suppliers, or share customer inquiries. This exposure frequently precedes more active engagement. Group participation varies widely by confidence, familiarity, and comfort with public visibility. Some women observe more than they contribute, learning by watching without posting their own content. Others post selectively and respond to direct inquiries when they feel confident. Still others participate actively across multiple groups, using them to find customers, source goods, and stay updated on local demand.

Well-moderated groups, with clear rules, active administrators, and norms discouraging spam or inappropriate behavior, are especially valued. In contrast, poorly moderated groups can become overwhelming or unsafe, prompting women to leave quietly or mute conversations. These patterns mirror the role of trust and social proximity in offline marketplaces.

“ I was part of an NGO group that brought a big change in my life. I learned how to use a phone from that group. The group was called Digital Sarthak. They gave us phones and internet and taught us how to use them. They even gave us a printer, which helped us grow our livelihoods. That led to income.”

Haryana, India (34–44)

“ The group will majorly help in scaling impacts, and can be used for testing on a brand or item before officially launching it or introducing it to the market. If you share a product with the group members and most of them are in need of a particular design or product, then that would mean produce it in large amounts [and] increase supply due to high demand. I find groups a better way of interacting with clients and receiving all types of feedback from different people, both constructive and destructive feedback, and through that, I can make a certain service or product better. When group members engage in conversations about a specific service or product, it serves as an eye-opener for many other things.”

Nairobi, Kenya (25–34)

“ On WhatsApp status I share variety of media, including videos, photos, texts, and GIFs. Each group is organized around specific interests or customer types. For example, one is focused on women’s fashion, another on bulk/wholesale buyers. This helps me send targeted updates that are more relevant to each group.”

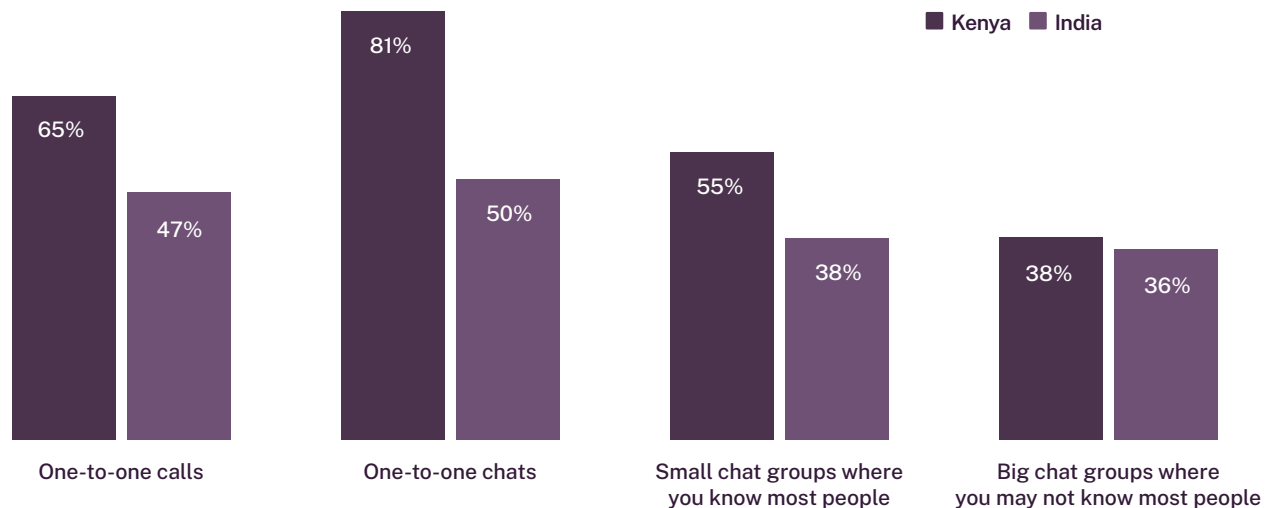
Mombasa, Kenya (35–44)

Status updates for visibility and soft marketing

Status updates offer a low-pressure way for women to maintain visibility without committing to a public commercial presence. Women describe statuses as a natural extension of social sharing, used to showcase a new batch of snacks, recently finished clothing, hairstyles, fresh produce, or seasonal goods. Statuses allow women to experiment with soft marketing: sharing brief photos or notes that feel manageable even with limited data.

FIGURE 6

One-to-one chats and calls form the foundation of WhatsApp livelihood activity



Source: Data by Ipsos (lower-resource women in Kenya and India (unweighted n=141 in Kenya and n=272 in India) (Wave 2, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distributions, age, education, and other socio-demographics from national census. The Top segment (estimated approx. income >US\$6.85 per day) is excluded.

Statuses are particularly important for women with limited mobility and those managing enterprises from home. They help maintain a digital presence within the community without requiring physical visibility. Because statuses are seen primarily by existing contacts, they reduce exposure to unwanted attention and help women gauge interest before expanding their efforts. Many women refine their promotional practices based on what generates inquiries or responses.

“ By putting items on WhatsApp status, everyone can see them. Some give likes, some ask for prices, and few make a purchase.”

Karnataka, India (45–54)

Business within social networks

Women’s WhatsApp livelihood activities concentrate within existing social networks rather than anonymous markets. In our interviews, women described conducting business primarily with family members, friends, church contacts, and neighbors — people they already knew through personal relationships.

This pattern appears across sectors: home-based producers selling to neighbors, service providers serving their communities, retailers drawing customers from church or neighborhood groups. The platform’s design around personal contacts and group chats aligns well with this network-embedded approach to commerce, allowing women to blend social connection and economic activity within the same conversational spaces.

Fitting WhatsApp into the gendered norms of daily life

Women’s use of WhatsApp for livelihoods unfolds inside the gendered routines, expectations, and social arrangements that shape their daily lives. Across Kenya, Nigeria, and India, the platform is often taken up in ways that fit around household responsibilities and community norms rather than disrupt them. Women value WhatsApp because it offers flexibility, allowing income-generating activity to happen from home, between chores, or alongside caregiving, while families often act as both gateways and gatekeepers, supporting digital engagement when it complements domestic duties. At the same time, women navigate privacy concerns, safety risks, shared device use, and the emotional work of balancing customer communication with expectations to “hold the home together.” These lived realities shape when and how women engage online, which groups feel safe or useful, and how confidently they participate in WhatsApp-based livelihood activity.

Mobility, time, and daily rhythms

Across contexts, women integrate livelihood activity into routines already shaped by household responsibilities and gendered expectations. The qualitative evidence shows that WhatsApp is valued because it can fit into the flow of domestic life rather than competing with it. Many of the women we spoke to emphasized convenience, noting that the platform allows them to coordinate orders, respond to customers, and manage business tasks while remaining at home and available for caregiving. WhatsApp’s speed and flexibility help women work around cooking, childcare, school runs, self-help group commitments, and extended family obligations — tasks that continue to define much of their daily rhythm in Kenya, Nigeria, and India.

Support from family members often enables this integration, though it is generally conditional. Husbands, mothers-in-law, and older children may help with photos, devices, or household duties, but only when business activity fits comfortably within established domestic roles. Women rarely

report open conflict over their phone use; instead, they describe a need to balance business with the ongoing expectation to “hold the home together,” even when income generation requires sustained digital engagement. This blending of responsibilities means that livelihood activity often happens in short intervals before school, between chores, or late in the evening, allowing women to maintain income while meeting the demands of family life.

Women also describe a form of “emotional juggling,” managing customer communication alongside invisible labor within the home. While the platform expands economic possibilities, it does not lessen traditional expectations around caregiving, nor does it remove the pressure many women feel to appear constantly available to their families. Instead, WhatsApp supports small, continuous moments of work within routines that remain centered on domestic care.

“ I wish it could also capture the mental and emotional juggling act of running a phone-based business, especially as a woman in Africa ... There’s often an unspoken pressure to ‘hold the home together,’ no matter what else you’re doing. Even if I’m running a business from my phone and working all day.”

Lagos, Nigeria (25–34)

Privacy, safety, and managing visibility

Women’s participation on WhatsApp is strongly influenced by how safe and respectful different digital spaces feel. Across contexts, women described staying active in groups where admins are vigilant, members behave respectfully, and interactions remain focused. When these norms hold, groups feel empowering and provide opportunities to promote products, learn from peers, and build connections. But the same spaces can quickly become uncomfortable when unsolicited messages arrive or when men become overly familiar or dismissive. In these situations, women protect themselves by leaving groups, muting conversations, blocking individuals, or shifting to broadcasts and direct messages where they maintain greater control. Their decisions about posting, responding, or joining new groups reflect continuous assessments of safety, privacy, and group culture, which balances the benefits of visibility with the need to manage exposure and avoid unwanted interactions.

“ Many times I feel uncomfortable: When unnecessary personal messages are sent. When male members try to become overly friendly. When a woman’s opinion is taken lightly. But if the group is safe and respectful: Admins are alert. All members respect each other. No abuse or flirting is tolerated. Then WhatsApp groups can become a strong and empowering space.”

Madhya Pradesh, India (18–24)

04-3

How does WhatsApp use vary across sectors, countries, and income segments?

In [section 4.1](#), we estimated that approximately 89 million women across the four countries use WhatsApp to support their livelihoods.⁶² Understanding the distribution of use within and across countries requires examining patterns across both economic strata and sectors of activity. Income shapes not only whether women adopt WhatsApp for their businesses but also how effectively they use the platform's features and capabilities. Sector variation exists, but these larger categories contain dozens of diverse livelihoods that blur together at the aggregate level. The more revealing lens is income: the correlation between economic status and platform use illuminates questions of digital inclusion and opportunity for women at different points in the income distribution.

Thus, this section begins with income segmentation, examining how WhatsApp adoption and effective use vary from women in the Base segment (living below US\$2.15 per day) through Lower and Mid segments to those in the Top segment (above US\$6.85 per day) — see [section 3.2](#) for segmentation methodology. We then turn briefly to sectoral patterns, noting variation across economic activities while acknowledging the limitations of broad categorical distinctions.

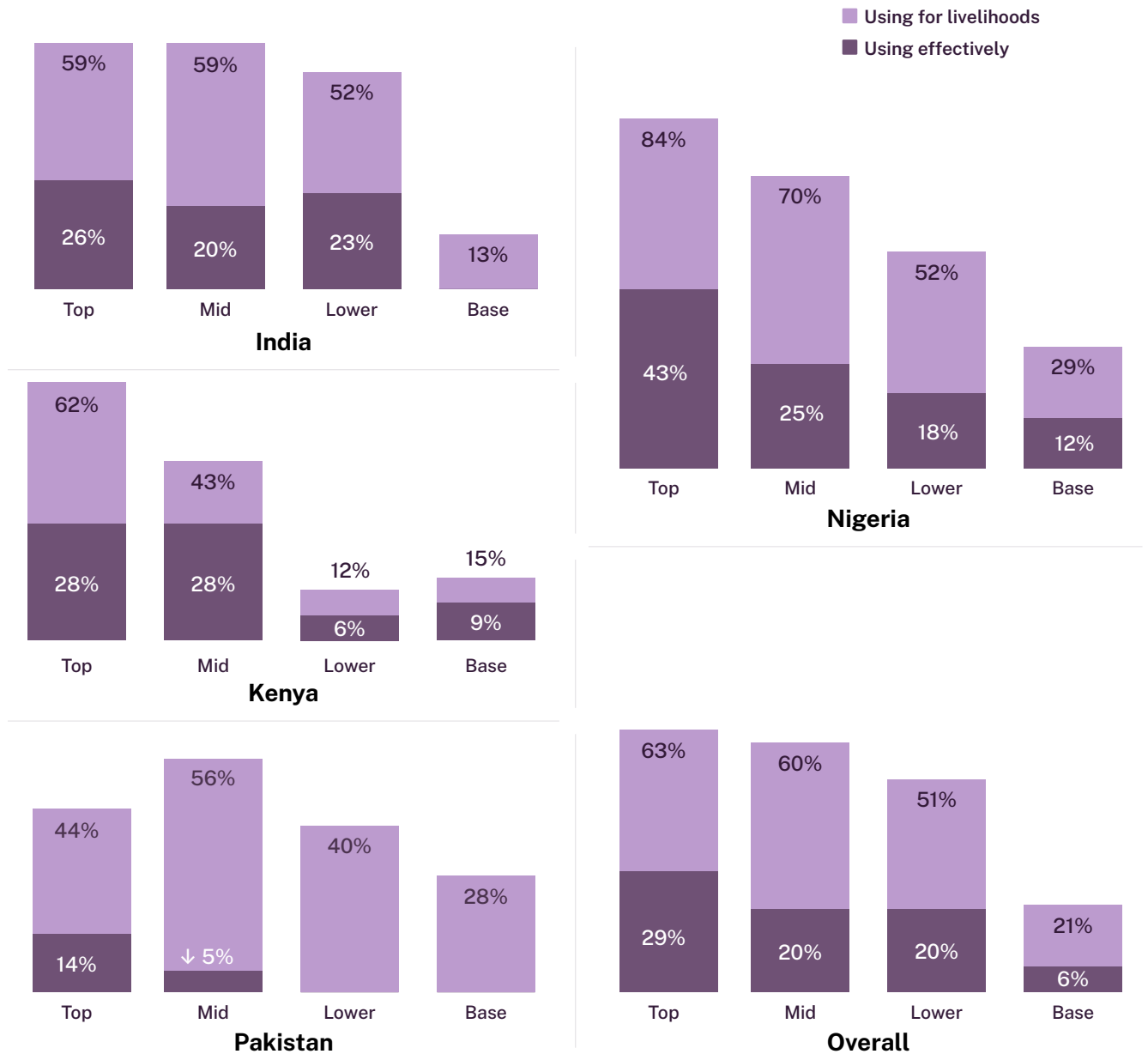
We define effective users as those who engage in multiple livelihood activities per week, use advanced features like voice notes and images, and demonstrate depth of platform engagement; see [section 4.4](#) for a further discussion of drivers of effective use.

Income and economic status

The correlation between income and WhatsApp use

Both initial adoption for livelihoods and effective use of the platform correlate with income. Women across all three lower-income strata report using WhatsApp for livelihoods. Across all four countries, women in higher income segments are more likely to use WhatsApp for their businesses, and among those who use it, higher-income women demonstrate greater depth and sophistication in how they employ the platform's features. This pattern holds consistently from the Base segment through the Lower and Mid segments to the Top segment, revealing how economic resources shape digital opportunity.

⁶² Confidence interval calculated using the same methodology as the overall estimate above. All figures are indicative rather than precise counts.



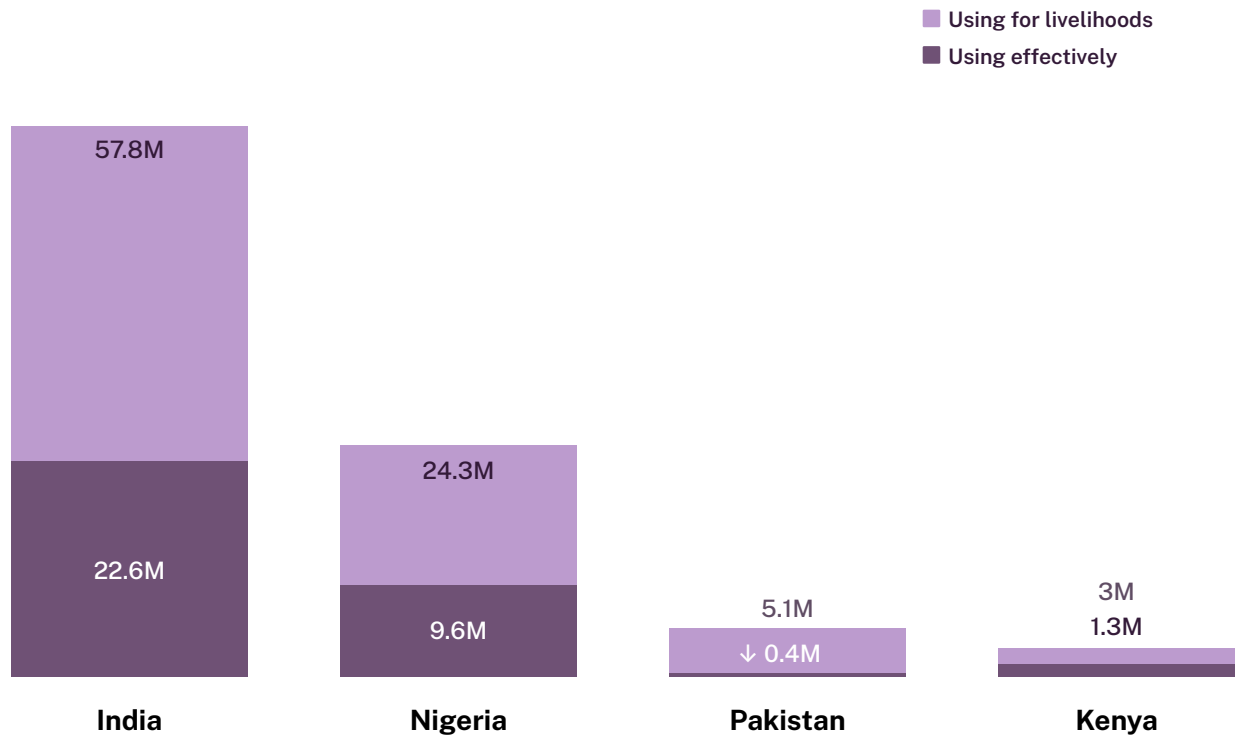
Note: Data from nationally representative surveys conducted in Kenya, Nigeria, India, and Pakistan. Percentages shown are among women who report self-employment income. Clear upward correlation between income and both adoption and effective use is visible across all four countries.

Source: Data by Ipsos. Sample restricted to women with self-employment income (n=1,682): India (n=278), Kenya (n=548), Nigeria (n=766), Pakistan (n=90) (Wave 1, June 2025). Results weighted to adjust for rural/urban distribution, age, education, and other socio-demographic factors based on national census data. Income segments derived from asset ownership quartiles within each country. “Uses WhatsApp” reflects self-reported use for livelihood activities. “Partial adopter” and “Effective user” are classified based on breadth and frequency of WhatsApp business use.

FIGURE 7

Effective use of WhatsApp increases with income

Figure 7 shows the observed patterns from our nationally representative surveys. In Nigeria, 84% of women in the Top segment with self-employment income use WhatsApp for their livelihoods, compared to just 29% in the Base segment. India shows a similar gradient, from 59% in the Top segment to 13% in the Base segment. The pattern of effective use (described in detail in [section 4.4](#)) is even more pronounced: across countries, effective use rates in the Top segment are typically double or triple those in the Base segment.



Note: Population estimates based on survey prevalence rates applied to UN population projections for women aged 15–64. Figures rounded to nearest hundred thousand. These estimates represent our best approximation of scale but should be interpreted as indicative rather than precise counts.

Source: Data by Ipsos. Sample restricted to women with self-employment income (n=1,682): India (n=278), Kenya (n=548), Nigeria (n=766), Pakistan (n=90) (Wave 1, June 2025). Results weighted to adjust for rural/urban distribution, age, education, and other socio-demographic factors based on national census data. Income segments derived from asset ownership quartiles within each country. “Uses WhatsApp” reflects self-reported use for livelihood activities. “Partial adopter” and “Effective user” are classified based on breadth and frequency of WhatsApp business use.

FIGURE 8

An estimated 89 million women use WhatsApp for livelihoods across the four countries

Base income segment: Known networks and basic features

Women in the Base segment face the steepest barriers to WhatsApp adoption for livelihoods. With limited smartphone access, constrained data budgets, and often lower digital literacy, many women in the Base segment either cannot access WhatsApp or choose not to use it for business purposes. Those who do use the platform tend to concentrate their activities within known networks of family, friends, and immediate neighbors. They rely primarily on basic features like one-to-one messaging and small trusted groups, rarely venturing into status updates, broadcasts, or more advanced capabilities. Business activities stay anchored in personal relationships where trust already exists, limiting scale but providing security.

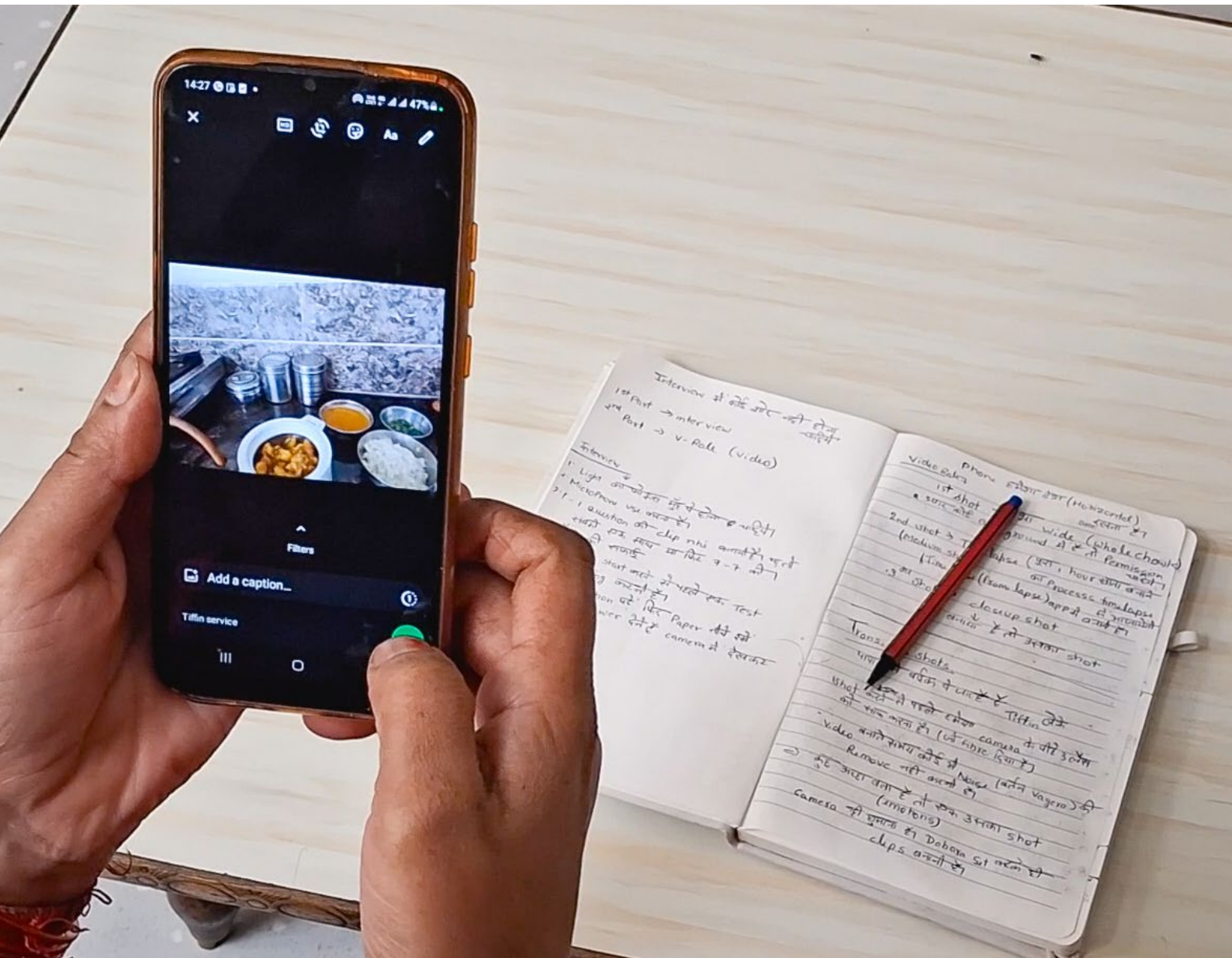
Across the four countries, an estimated 3.1 million women in the Base segment use WhatsApp for livelihoods, with fewer than 900,000 using it effectively, almost all in Nigeria. While these numbers are modest compared to higher income segments, they still represent millions of women for whom the platform provides livelihood support, despite significant constraints.

Lower income segment: Expanding visibility

The Lower segment shows substantially higher adoption rates than the Base segment. Approximately 28.5 million women in the Lower segment use WhatsApp for livelihoods, with 11.3 million using it effectively. Some women in this income range more consistently have smartphone access and can afford modest data packages, removing some of the fundamental access barriers. Their WhatsApp use begins to extend beyond immediate personal networks, incorporating neighborhood groups, community forums, and church or mosque circles where commercial and social content coexist.

Status updates are more common behavior among women of this income level, offering a low-pressure way to maintain visibility within these extended networks. Women describe using status to share new products, seasonal offerings, or availability updates, gauging interest before investing more effort in promotion. However, use of more advanced features like broadcasts or WhatsApp Business remains limited.

Anju uses WhatsApp to share photos of her cooked meals. Photo by Anju via Story x Design.



Mid income segment: Active multi-platform engagement

The Mid segment accounts for approximately 34.4 million WhatsApp users for livelihoods, with an estimated 11.8 million using it effectively. Some women in the Mid segment demonstrate notably more sophisticated platform use. They participate actively across multiple groups, use status updates strategically, and increasingly experiment with features like broadcasts to reach customers beyond their immediate networks. Some begin exploring WhatsApp Business features, though adoption remains modest even at this income level.

Women in the Mid segment more frequently combine WhatsApp with other platforms like Facebook or Instagram for customer outreach, using each for different purposes within their broader digital strategy. They show greater comfort expanding their customer base beyond known contacts, though concerns about fraud and harassment still constrain how far they venture from trusted networks.

Top income segment: AI support and professional polish

Women in the Top segment show the highest rates of both adoption and effective use. An estimated 18.3 million women in the Top segment use WhatsApp for livelihoods, with 8.1 million using it effectively. With reliable smartphone access, generous data budgets, and higher digital literacy, they face fewer technical barriers to platform engagement. Their WhatsApp use sometimes extends to exploring AI tools like ChatGPT or Meta AI for business support: generating marketing copy, creating professional imagery, drafting customer communications, or seeking business advice.

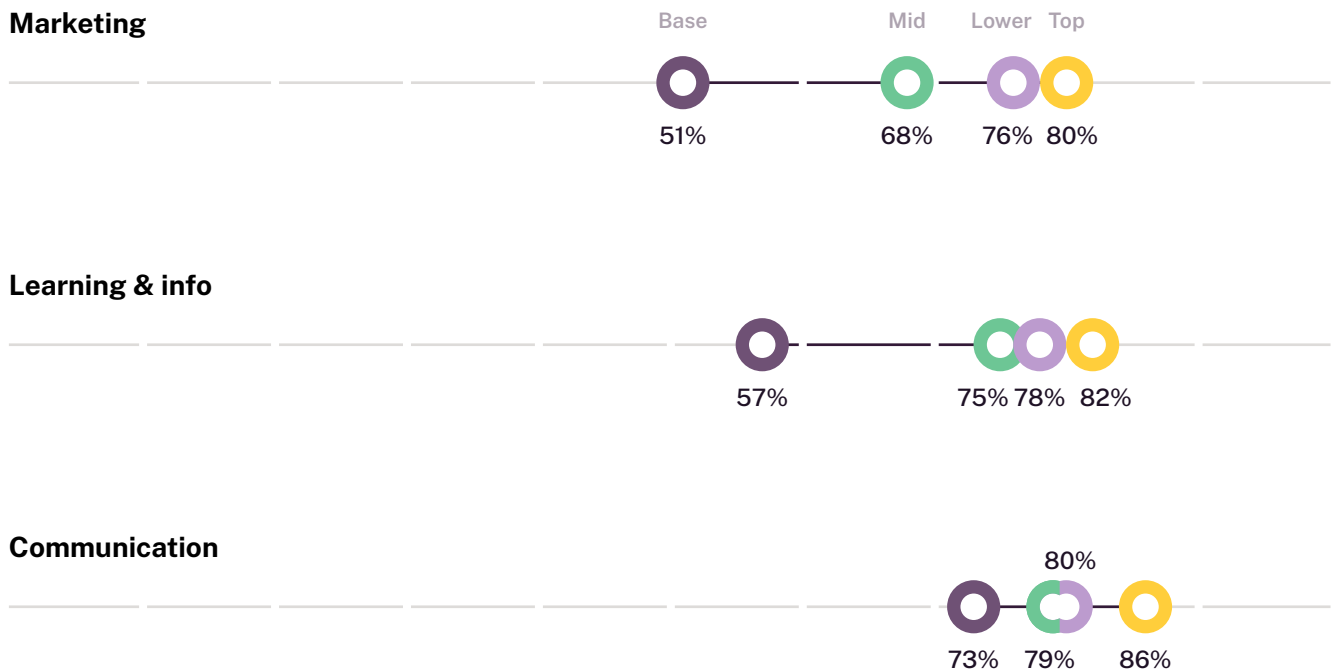
The qualitative interviews suggest that women in the Top segment more frequently use WhatsApp Business features, paid status boosts to extend reach beyond WhatsApp to other Meta platforms, and sophisticated catalog management. Some maintain larger customer bases, engage more confidently with strangers, and demonstrate greater willingness to invest time and money in platform-based business development.

What income patterns mean for digital inclusion

The strong correlation between income and WhatsApp use for livelihoods presents both opportunities and challenges for development policy. On one hand, the platform clearly reaches women across the income distribution. Even in the Base segment, millions of women find WhatsApp valuable enough to overcome significant access and resource constraints. This suggests WhatsApp meets real needs for women trying to earn income with limited alternatives.

On the other hand, the steep gradient in both adoption and effective use means that WhatsApp may reinforce rather than reduce existing economic inequalities. Women who already have more resources, better devices, more data, higher literacy, and larger networks, extract more value from the platform. Those with the least are least likely to benefit, and when they do use WhatsApp, they use it in more constrained ways that may limit their economic potential.

FIGURE 9
Women across income segments rely on WhatsApp most for customer and supplier communication



Source: Data by Ipsos (866 women WhatsApp users with livelihood income across all income segments, Wave 1, June 2025).

Sectors

Women use WhatsApp for livelihoods across a wide range of economic activities. Our analysis grouped these into four broad sectors: retail and sales, services, home-based manufacturing, and agriculture. While some variation in platform use appears across these categories, the distinctions are less pronounced than income-based patterns. Each sector contains dozens of diverse micro-livelihoods — tailoring and catering both fall under “services,” for instance, as do hairdressing and event planning — and when aggregated to these broad categories, specific differences blur together. The patterns described below offer general observations rather than sharp sectoral divides.

FIGURE 10

Women’s WhatsApp use for livelihoods is most common in services and least common in agriculture



Source: Data by Ipsos (lower-resource women in Nigeria, Kenya, India, and Pakistan (Wave 1, June 2025); Kenya and India (Wave 2, June 2025)). Analysis by Caribou. Results weighted to adjust for rural/urban distributions, age, education, and other socio-demographics from national census. The top income segment (out-of-scope group, estimated approx. income > US \$6.85 per day) is excluded. For women overall, survey weights were further rescaled so that each country’s sample reflects its adult (18+) female population, where estimates are derived from UN DESA World Population Prospects 2024. Estimates are calculated as: total females – females aged 0–14 – 60% of females aged 15–19, to exclude those under 18. Rounded to the nearest 0.5–1 million to reflect source precision. Pooled results represent female adults across Kenya, Nigeria, Pakistan, and India. The Wave 2 “>50% of customers” item reflects self-stated estimates from women who use WhatsApp for livelihoods, across all income strata.

Retail and sales

Women engaged in retail and sales, whether operating small shops, selling goods door-to-door, or reselling products within their communities, commonly use WhatsApp to communicate with customers and manage orders. They share product photos via status updates or in groups, respond to inquiries about availability and pricing through one-to-one chats, and coordinate pickup or delivery logistics. Group posts and status updates serve dual purposes, blending social connection with commercial messaging. A retailer might share photos of new clothing items in a church group where members already know and trust her, allowing commercial content to circulate within social spaces without requiring a separate business presence.

For many retail-focused women, WhatsApp provides infrastructure for business conducted through ongoing dialogue rather than formal transactions. Customers ask questions, negotiate, place orders, and arrange payment through the same messaging threads where they discuss family news or community events. This integration of social and commercial communication feels natural to women whose businesses are embedded in their personal networks.

Services

Women providing services (hairdressing, tailoring, catering, beauty treatments, tutoring, event planning, etc.) report using WhatsApp for appointment scheduling, customer communication, and showcasing their work. Status updates feature completed hairstyles, finished garments, or photos from events they organized, serving as informal portfolios visible to their contacts. One-to-one messaging handles the details: confirming appointments, discussing customer preferences, sending pricing information, or following up after service delivery.

Service providers particularly value WhatsApp's voice messaging and image sharing capabilities. A beautician can send voice notes explaining hair care instructions, a tailor can share photos of fabric options, a caterer can show examples of previous events. These asynchronous exchanges accommodate service providers' schedules, allowing them to respond between appointments or during breaks rather than requiring real-time conversation.

Group participation varies among service providers. Some join sector-specific groups — tailors sharing techniques, beauticians discussing products — primarily for learning and peer support rather than direct customer acquisition. Others participate in neighborhood or community groups where they maintain visibility and occasionally receive customer referrals.

Home-based manufacturing

Women engaged in home-based manufacturing, making food products, crafts, clothing, or other goods from home, use WhatsApp to reach customers, source materials, and coordinate production. Like retailers, they share product images through status updates and group posts, often highlighting seasonal items, new designs, or bulk availability. The home-based nature of their work makes WhatsApp particularly valuable: they can maintain a commercial presence and communicate with customers without requiring physical shop space or regular market attendance.

For food producers, WhatsApp can enable preorders and just-in-time production. A woman making snacks or prepared foods can post availability on status, take orders via chat, and produce based on confirmed demand rather than making goods speculatively. This reduces waste and working capital requirements. Similarly, craft producers can show samples, gauge interest, and produce to order rather than maintaining inventory.

Material sourcing also happens through WhatsApp, with manufacturers using groups and personal networks to find suppliers, compare prices, or coordinate bulk purchases with other producers. These supply-side uses blend seamlessly with customer-facing activities in the same conversational spaces.

Agriculture

Among women engaged in agriculture, WhatsApp use patterns differ somewhat from other sectors. While some agricultural producers use WhatsApp to sell products — sharing photos of available produce, coordinating deliveries to regular customers, or arranging market pickups — a more common pattern involves participation in agricultural groups focused on learning and information sharing.

Women in farming communities join groups where they discuss weather patterns, share advice about pest management, learn about new cultivation techniques, or receive updates about input availability and prices. These groups may include agricultural extension officers, NGO staff, or experienced farmers who provide guidance. The learning dimension often takes precedence over direct commercial activity, with WhatsApp serving primarily as an information channel rather than a sales platform.

When commercial activity does occur, it may involve coordination with known buyers or intermediaries rather than direct consumer sales. A farmer might confirm harvest timing with a regular buyer, share photos of crop quality, or arrange collection logistics. The more interpersonal, relationship-based nature of agricultural value chains shapes how WhatsApp gets used — less emphasis on individual marketing and more on coordination within existing commercial relationships and learning networks.

Overall, customer intensity may explain much of the sectoral variation

Where work depends on frequent interaction with customers, WhatsApp becomes indispensable. Where work is more intermediated, seasonal, or oriented toward production rather than sales, WhatsApp plays a more peripheral or observational role. These sectoral differences are consistent across countries, highlighting where WhatsApp already functions as an essential business tool and where structural and workflow-related barriers continue to limit adoption.

FIGURE 11

45% of women in Kenya and India use WhatsApp to talk to at least half their customers



Source: Data by Ipsos (Wave 2 June 2025). Analysis by Caribou.

04-4

Which barriers and drivers shape adoption and effective use?

Previous sections (4.1 and 4.3) established which women use WhatsApp for livelihoods and revealed substantial variation by income segment and sector. This section examines why some women adopt the platform while others do not, and why some users employ WhatsApp more effectively than others.

Figure 15 illustrates two distinct transitions. The first, from non-use to use for livelihoods, requires both access to the platform and perceived utility for business. The second transition, from use to effective use, depends on different factors including skills, support networks, and platform familiarity.

Technology adoption follows well-established patterns. Rogers's diffusion of innovations framework emphasizes that adoption requires behavioral acceptance alongside physical access.⁶³ In this case, we identify access challenges in devices and data costs, and attitudinal barriers around perceived utility. Women must see WhatsApp as relevant to their specific business before they invest time and resources in learning to use it commercially.

Our data illuminates the first transition clearly. We can identify what prevents WhatsApp adoption and document why women with personal accounts choose not to use the platform for business. The progression from use to effective use proves more elusive. We observe income gradients in effective use, and our qualitative interviews suggest roles for peer support, skill-building, and trusted intermediaries, but the mechanisms enabling women in constrained circumstances to develop sophisticated platform use remain partially understood.

Access barriers

Women cannot use WhatsApp for their businesses without a capable device and affordable data. Figure 15 illustrates how these barriers prevent WhatsApp adoption by many women and constrain its effective use among others.

Device barriers

Approximately 22% of women with self-employment income lack access to smartphones or feature phones capable of running WhatsApp. This

⁶³ Rogers, *Diffusion of Innovations*.

Relevance

Among women who have WhatsApp but do not use it for livelihoods, perceived relevance is often the primary barrier: many do not see how the platform applies to their work. Device and data costs matter more for women in lower-income segments and in Kenya and Nigeria.

proportion varies by country: 43% in Kenya, 33% in Pakistan, 29% in Nigeria, and 18% in India. An additional 10% have compatible devices but have not installed WhatsApp, citing insufficient memory or processing power, or data affordability concerns.

Device ownership patterns differ across countries. In India, 44% of women with self-employment income report sharing a phone, compared with under 30% in Kenya and Nigeria. In Kenya and Nigeria, old or basic phones and weak connectivity dominate explanations for non-use.

Data costs

Among women without personal WhatsApp access, data costs rank as the top barrier: 53% in Nigeria, 37% in India, and substantial proportions in Kenya and Pakistan. These barriers concentrate among Base and Lower income segments. In Kenya, 87% of women in the Base segment who do not use WhatsApp for livelihoods fall into the non-installer category. In Pakistan, 24% report unreliable internet connections.

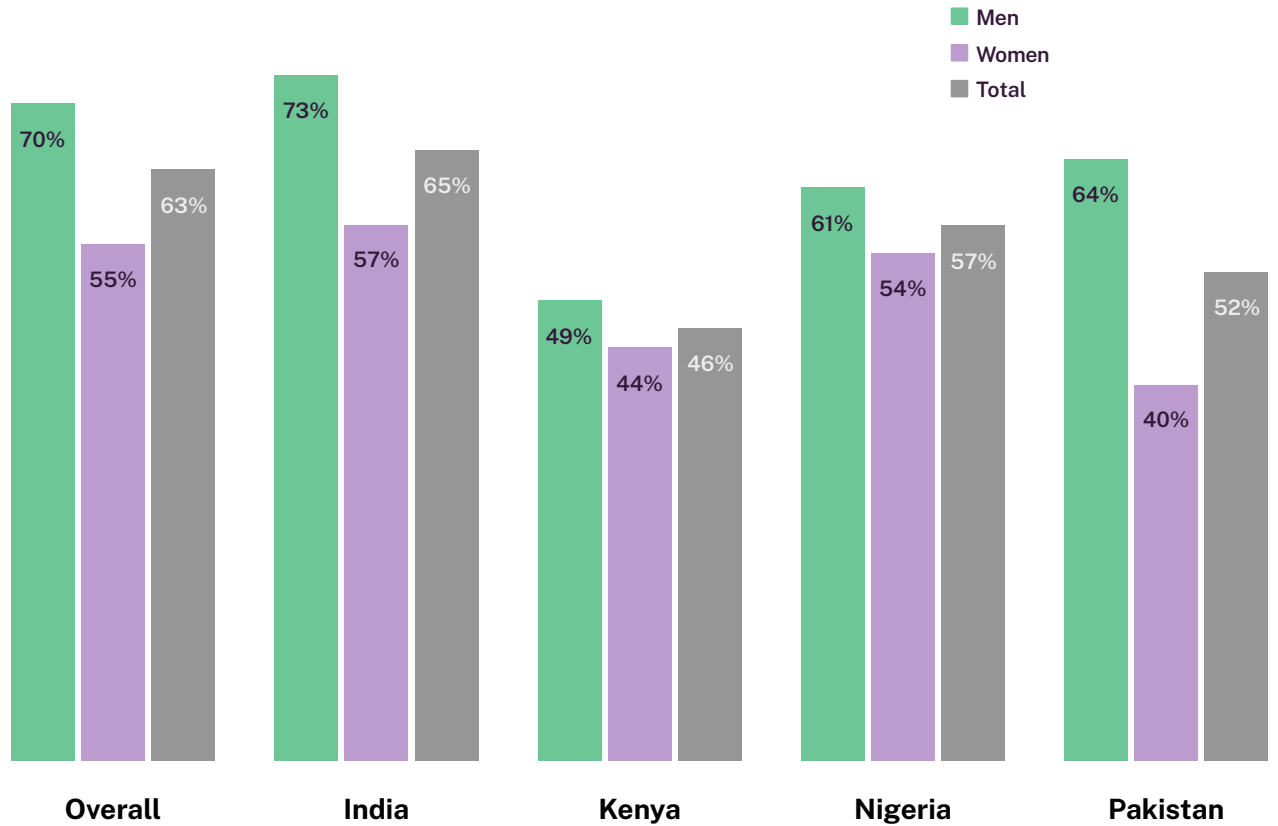
Data constraints persist beyond adoption. Some women in lower-income segments describe a metered mindset,⁶⁴ rationing data usage, limiting activity to text messages and avoiding images, video, or voice notes. Status updates feel like luxuries when data budgets are constrained. Participation in multiple groups becomes expensive when notifications and shared media accumulate.

These ongoing constraints mean some women who technically “use” WhatsApp for livelihoods do so in limited, intermittent ways that prevent effective engagement. They check messages once daily rather than responding quickly to customer inquiries. They skip posting to status or groups, missing visibility opportunities. They avoid voice or video features that could enhance customer communication but carry higher data costs. Access is graduated rather than binary: women may have enough access to adopt WhatsApp but insufficient access to use it effectively.

Gendered dimensions

Gender gaps in device ownership persist across all four countries, with women less likely than men to own smartphones. Data costs burden women more heavily when they earn less or control fewer household resources. Women’s concentration in lower-earning livelihood activities means the same data package represents a larger proportional expense than for male counterparts.

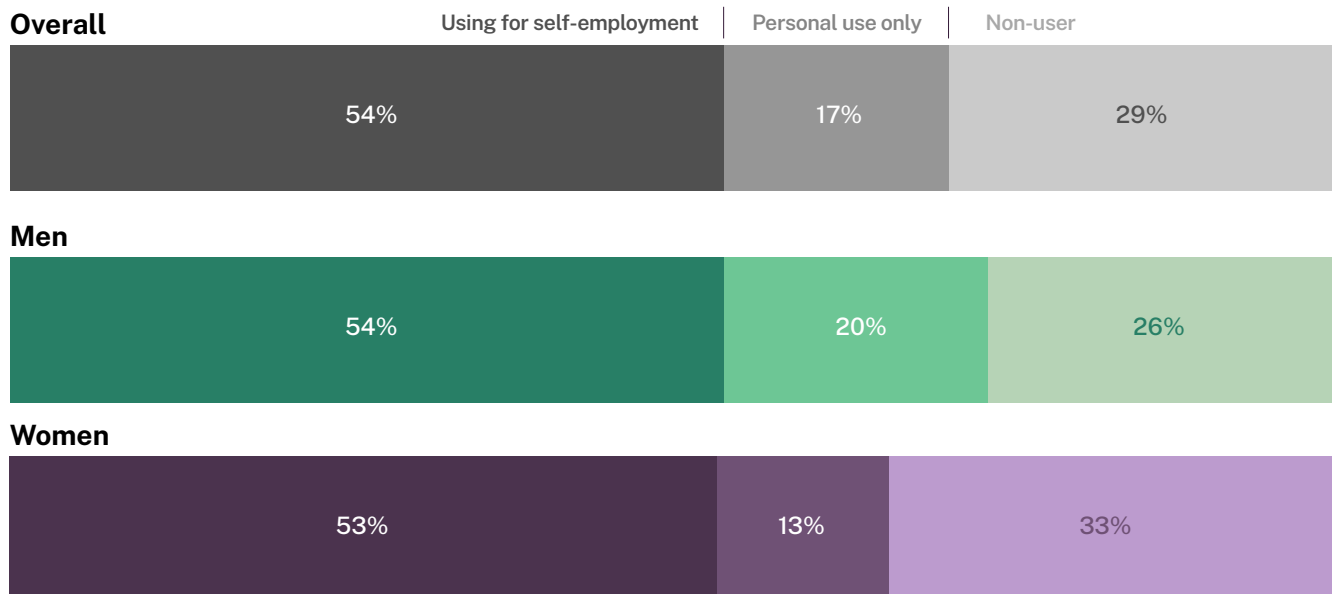
64 Donner, *After Access: Inclusion, Development, and a More Mobile Internet*.



Source: Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); total weighted sample N=7,000 (unweighted n=7,572) Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distribution, age, education, and other socio-demographics from national census). For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA World Population Prospects 2024. Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

FIGURE 12

Women are 15 percentage points less likely than men to own or have main use of a smartphone



Source: Data by Ipsos (non-WhatsApp users (N=744), Wave 1, June 2025). Analysis by Caribou.

FIGURE 13

More than half of self-employed men and women use WhatsApp for livelihoods

Perception barriers

A second group consists of women who have WhatsApp but use it only for personal communication. These “personal-use only” users may be unconvinced that WhatsApp will help their businesses. The barriers behind this vary by geography and income level.

Relevance and utility doubts

Approximately one in four women who don’t use WhatsApp for their livelihoods say WhatsApp is “not relevant to my business.” In Nigeria and Kenya, 36% and 48% of women respectively view WhatsApp as irrelevant to business, significantly higher than in India (26%) and Pakistan (28%).

Digital confidence and knowledge gaps

In India and Pakistan, confidence gaps emerge as meaningful constraints. In India, 21% of women who don’t use WhatsApp for their livelihood report that WhatsApp is difficult to use and 22% say they don’t know enough about it. Similar patterns appear in Pakistan (18% feel they don’t know enough, 16% find it difficult). These women are confident with personal WhatsApp use but unsure how to translate those practices into commercial activity.

Safety and harassment concerns

Approximately 15% of women with personal WhatsApp access cite safety concerns as reasons for not using the platform for business. WhatsApp groups expose phone numbers to strangers, creating risks of spam, scams, or inappropriate contact. Women describe unwanted messages, men becoming overly familiar in groups, and concerns about maintaining professional boundaries. Concerns about professionalism and safety weigh more heavily in India and Pakistan.

As described in [section 4.2](#), women who do use WhatsApp for business develop strategies to manage these risks: blocking unwanted contacts, leaving groups where men “misbehave,” and preferring women-only groups when available. The viability of mixed-gender groups depends on clear norms and active moderation. Women stay in groups where administrators enforce respectful behavior and remove problem members quickly. Most women develop strategies to manage harassment rather than abandoning the platform entirely, but the need for constant vigilance represents a persistent cost of participation.

Figures [15](#) and [16](#) show clear geographic patterns: in Kenya and Nigeria, access exclusion dominates through old devices and weak connectivity, while in India and Pakistan, affordability and low digital confidence matter more alongside professionalism and safety concerns.

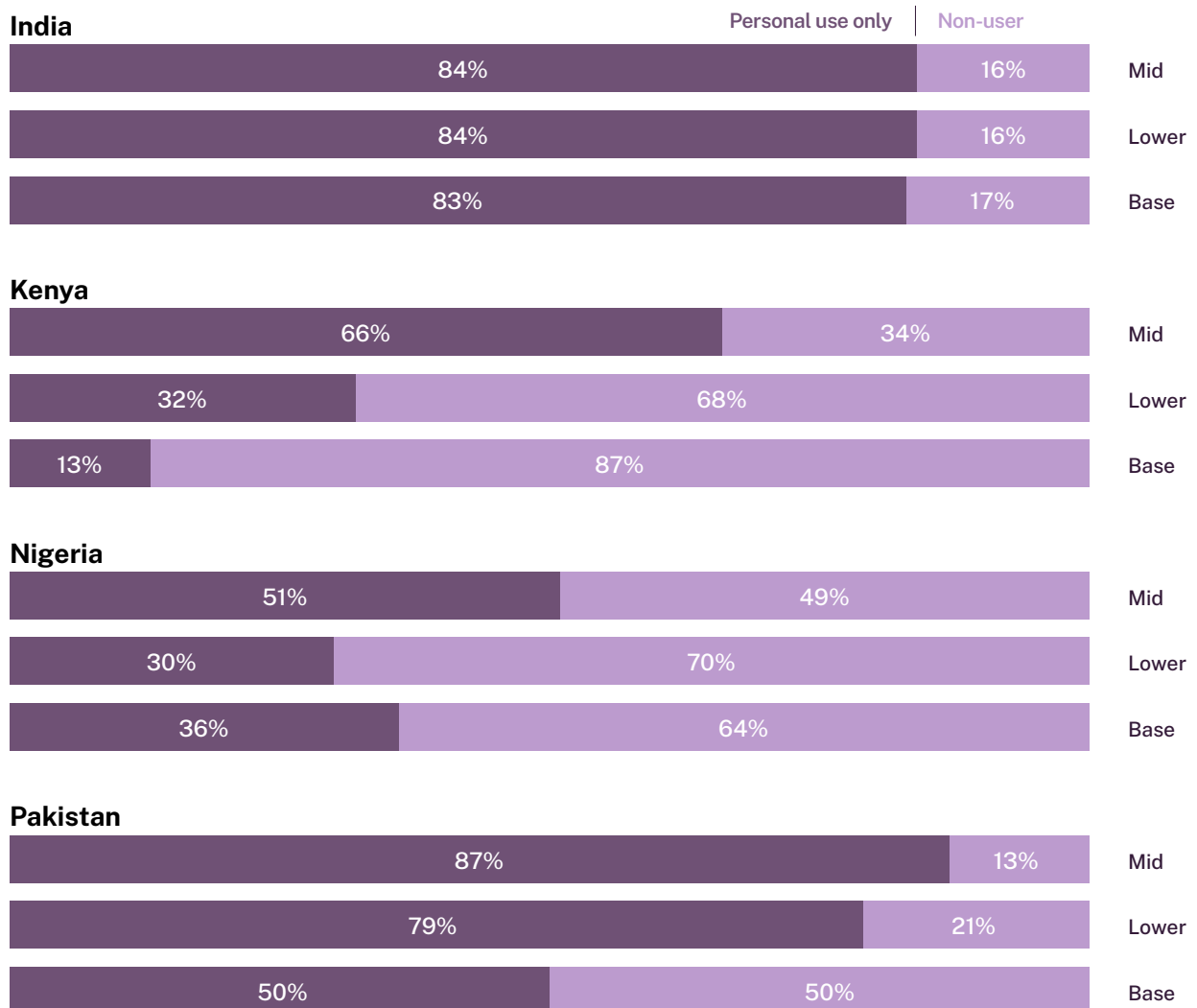
Country and income differences in barriers

Figure 14 illustrates how barriers vary by country and income segment. In Kenya and Nigeria, access exclusion dominates: non-installers represent the majority across all income segments, reflecting infrastructure gaps. In India and Pakistan, the pattern shifts toward personal-use-only women, particularly in higher income segments, suggesting that utility perceptions and confidence gaps matter more than device access alone.

Income patterns reveal how barriers evolve. Among women in the Base segment, non-installers dominate in Kenya (87%) and Nigeria (64%), while India and Pakistan show more even splits between non-installers and personal-use-only women. In the Lower and Mid segments, personal-use-only women increase across all countries, reflecting transitions from structural exclusion toward utility judgments. Women at higher income levels have overcome access barriers but many remain unconvinced that WhatsApp will benefit their businesses. This progression suggests that different interventions matter at different income levels: connectivity and devices for lower segments, demonstrations of business value for higher segments.

FIGURE 14

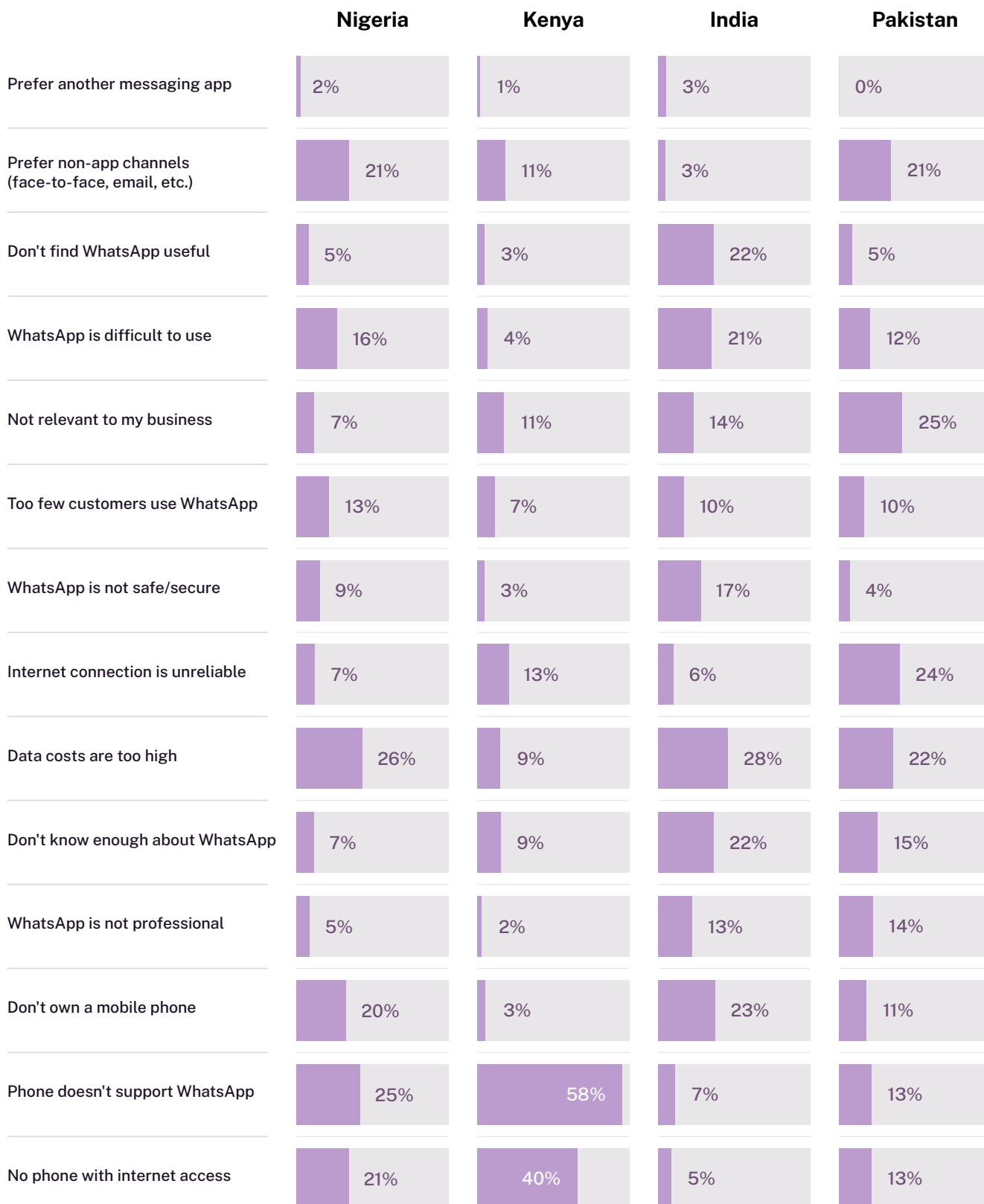
Among self-employed women: Non-installers vs personal-only users by income segment



Source: Data by Ipsos (non-WhatsApp users (N=744), Wave 1, June 2025). Analysis by Caribou.

In Kenya and Nigeria, old devices and weak connectivity dominate, while in India and Pakistan affordability and low digital confidence matter more.

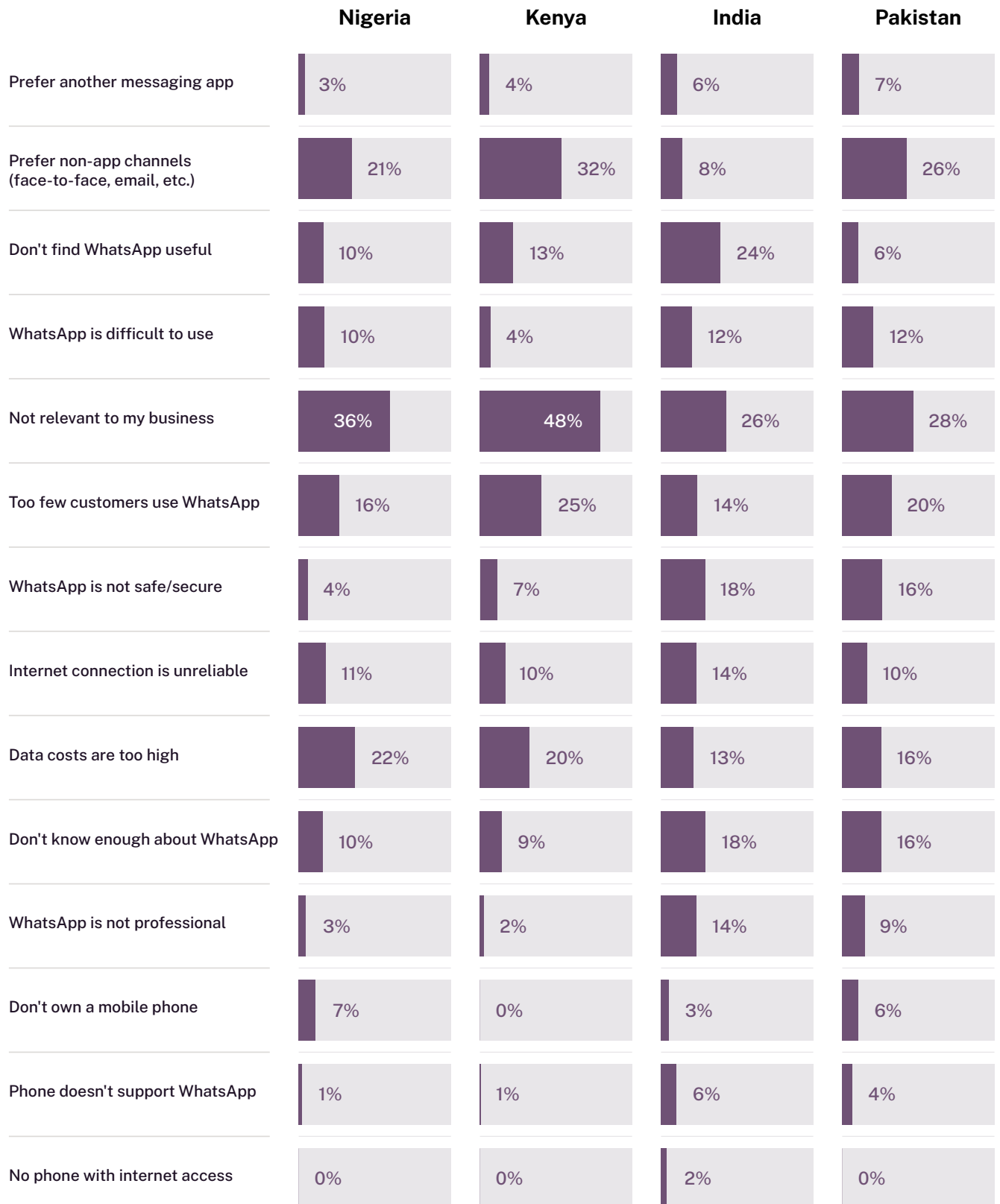
FIGURE 15
Reasons for WhatsApp non-use among women with self-employment income



Source: Data by Ipsos (non-WhatsApp users (N=744), Wave 1, June 2025). Analysis by Caribou.

In Kenya and Nigeria, many women with self-employment income see WhatsApp as irrelevant to business. In India and Pakistan, concerns about professionalism and safety are prevalent.

FIGURE 16
Reasons women who use WhatsApp personally do not use it for their livelihoods



Source: Data by Ipsos (non-WhatsApp users (N=744), Wave 1, June 2025). Analysis by Caribou.

Toward effective use

Women’s use of WhatsApp for livelihoods varies substantially. Consider two women, both of whom rely on the platform for their businesses:

“Customers are people from the neighborhood and acquaintances. They often bring others along. I talk to them via call or WhatsApp messages.”

Jharkhand, India (35–44)

“Mostly I use WhatsApp status to do the advertising. But sometimes I go an extra mile of ‘boosting’ the status, an option [in WhatsApp Business] provided by Meta, so that the status reaches more people, even those not in my contacts. That’s people from other Meta platforms like Facebook and Instagram.”

Nyamira, Kenya (25–34)

The first woman conducts business through basic messaging and calls within her immediate neighborhood network. The second woman employs status updates for marketing, invests in paid promotional boosts, uses WhatsApp Business features, and extends her reach across Meta’s platforms to audiences beyond her contact list. Understanding what separates basic connectivity from effective engagement matters because the distinction shapes what women can accomplish through WhatsApp.

What constitutes effective use

Based on Gurstein’s approach, we operationalized effective use through three dimensions: frequency of engagement, feature sophistication, and breadth of activities.⁶⁵ Effective users engage in livelihood activities on WhatsApp multiple times per week, employ features beyond basic messaging (status updates, voice notes, images, group administration), and demonstrate breadth across activity types (marketing, customer communication, order management, learning, network building).

By this measure, approximately 34 million women (27–39 million⁶⁶) qualify as effective users, representing 38% of the 89 million women overall, though this figure masks substantial variation by income segment.

65 Effective use is a constructed variable based on Gurstein derived from survey responses across three dimensions: self-reported frequency of WhatsApp use for livelihood activities, self-reported reliance on WhatsApp for core business functions, and the number of platform features respondents reported using. No single survey item captures effective use directly. Gurstein, “Effective Use: A Community Informatics Strategy beyond the Digital Divide.”

66 Confidence interval calculated using the same methodology as the overall estimate. All figures are indicative rather than precise counts.



The income gradient in effective use

Effective use correlates strongly with income. Among women in the Top income segment who use WhatsApp for livelihoods, approximately 29% qualify as effective users. This proportion drops to 20% in the Lower segment and 6% in the Base segment. This gradient mirrors well-established patterns in technology adoption where economic resources, digital literacy, safe spaces to experiment, and early exposure create advantages that accumulate over time. The knowledge gap hypothesis and theories of technological amplification⁶⁷ both describe this pattern and key risk: those who already have more may benefit more from new technologies.

Emarti self-records her knitting work.
Photo by Emarti via Story × Design.

Exceptions, opportunities, and possibilities

The gradient is not absolute. Millions of lower-income women use WhatsApp effectively despite facing steeper barriers. In our interviews, we encountered women in the Base and Lower segments who posted regularly to groups, maintained active status updates, coordinated with customers across neighborhoods, and demonstrated sophistication in managing their platform presence. They did this while navigating constrained data budgets, shared devices, lower literacy, and household responsibilities that limited their available time.

Their stories demonstrate that effective use does not require high income, advanced devices, or extensive formal education. Something enabled them to overcome barriers that constrain many peers in similar economic circumstances. Peer support, community training, family encouragement, personal determination, business necessity — these factors create paths to effective use even when economic resources are limited.

67 Tichenor et al., “[Mass Media Flow and Differential Growth in Knowledge](#)”; Toyama, *Geek Heresy: Rescuing Social Change from the Cult of Technology*.

Effective use and reported livelihood outcomes

While the survey was not designed to measure financial earnings directly, proxy indicators show strong associations between effective WhatsApp use and enterprise outcomes.

Across pooled Wave 2 results:

- Past 12-month growth: 78%–88% of effective users in the Lower and Mid segments report business growth, compared to 46%–51% of partial adopters.
- Future growth expectations: Nearly 90% of effective users expect to grow in the next year, reflecting greater confidence and stronger demand signals.
- Perceived income impact: 92%–94% of effective users say WhatsApp has helped them make money, versus 64%–69% of partial adopters.

These differences do not imply causation, but they suggest that deeper digital integration aligns with more sustained commercial activity, greater customer engagement, and stronger forward-looking optimism.

FIGURE 17

Effective WhatsApp users report stronger business outcomes



Source: Data by Ipsos (among WhatsApp users in Kenya (n=404) and India (n=461); pooled, unweighted n=865 (Wave 2, June 2025)). Analysis by Caribou.

How effective use reflects capability and constraint

Women’s digital practices reflect the tools they have, the networks they rely on, and the responsibilities they must navigate. Those with stable device access, autonomy over time, and broader customer networks use WhatsApp more frequently and broadly. Those with intermittent access, limited privacy, and/or heavy household workloads engage in shorter, more selective ways.

Non-use of advanced features can reflect risk management. Women avoid visible posts when worried about unwanted contact, limit media sharing when data is scarce, and choose one-to-one messaging to maintain control over interactions. Effective use reflects women’s calibration of time, exposure, and digital comfort.

These dynamics may help explain why effective use concentrates in sectors and income bands with stronger customer-facing activity and greater digital autonomy.

“ WhatsApp groups are not that safe because everyone in the group gets your number—even those you didn’t intend to share it with. That’s why there’s always a chance of getting unnecessary messages.”

Jharkhand, India (35–44)

Drivers of women’s effective use of WhatsApp for livelihoods

Peer learning, trusted intermediaries, and social networks

Peer support and trusted intermediaries accelerate both adoption and effective use. Women in our interviews described learning WhatsApp business practices from friends, neighbors, or family members rather than discovering features independently. Community-based training programs and peer educators play particularly important roles in demonstrating how to use status updates, manage groups, or navigate business features. This social learning pathway means that women with access to digitally skilled peers advance more quickly than isolated users.

Women build their digital presence through social spaces that feel safe, familiar, and predictable. Most participation begins in trusted circles — family groups, self-help groups, neighbors, school communities, and close friends — where women already share norms and expectations. These groups allow women to mix personal coordination with subtle business activity, introduce products gently, and test what resonates with people they know. Early referrals and status views often come from these circles, giving women confidence and early demand signals.

Beyond these known networks, women also participate in extended groups that broaden visibility and open access to new customers, ideas, and learning. The move into larger community groups, sector forums, and entrepreneur spaces is meaningful: it requires women to step into environments where not everyone is known, where group norms vary, and where activity is more public. Extended groups offer visibility that trusted circles cannot, and women use them to promote products more actively, join specialized groups, observe peers, and connect with buyers they would never meet offline. For many, this gradual expansion beyond familiar audiences reflects a desire to grow once known networks feel saturated or limiting.

Within extended networks, conversion becomes the practical work that turns visibility into relationships. Women encourage interested group members to save their number, shift promising interactions into private chats, and build personalized communication that supports orders, payments, and follow-up. These one-to-one exchanges help strengthen trust and loyalty with new customers, transforming group visibility into durable business contacts.

“ One way around this is to try to build relationships with the people on the group by responding to conversations on the group actively. That way, you can save their numbers, perhaps encourage them to save yours, and in that way, grow the audience for your WhatsApp status.”

Osun, Nigeria (25–34)

However, women’s concentration within known networks can also be a source of constraint. Existing relationships provide an immediate customer base with established trust. Women can begin selling without first building reputation among strangers. But this same pattern limits scale. Women who restrict their business to family, friends, and community contacts constrain their potential market size. Those who wish to expand beyond local networks face the challenge of building trust with unknown customers, managing fraud risks, and protecting themselves from harassment — barriers that some choose to avoid by keeping their businesses small and network-embedded.

Trusted circles and extended networks form a layered ecosystem in which women build confidence, seek growth, and cultivate customer relationships. Trust sets the boundaries of where women feel comfortable; extended networks expand what is possible; and conversion practices help women turn that expanded reach into meaningful livelihood outcomes.



Family dynamics

Family dynamics shape women's ability to use WhatsApp for livelihoods. In many households, husbands or male relatives serve as gatekeepers who can either enable or constrain women's platform access. Supportive family members provide phones, purchase data, offer technical assistance, and encourage business use. However, this dependency also creates vulnerability — women whose family members do not support their business activities face significant barriers.

Household norms around device ownership, privacy, and access also shape participation patterns. Shared phone use is far more common among lower-income Indian women, reflecting affordability constraints and longstanding household norms, whereas women in Kenya and Nigeria are more likely to own their own phones or act as primary users of household devices. Where shared devices are common, women adapt by limiting the kinds of information they store on their phones, managing visibility carefully, or participating during moments when the device is available.

Beatrice uses WhatsApp in her work as a *boda boda* rider. Photo by Beatrice via Story x Design.

In households where women do have their own phones, privacy is maintained through common tools rather than secrecy. Kenyan respondents described using security features including Face ID, fingerprints, chat locks, or two-factor authentication, or maintaining second devices to create boundaries, primarily with children. Across contexts, most women reported that their families understood the nature of their business and did not interfere with phone use, though support was typically conditional on meeting domestic responsibilities.

“ Well, juggling between business and family is simple. Everyone in my family understands the nature of my business, that it requires a lot of communication with customers, and they are comfortable with it. They are my number-one supporters. But still, the slogan remains: my phone is fully mine, and it’s fully secured with a password, so no one can access it without my approval.”

Nairobi, Kenya (25–34)

Household context shapes how reliably women can maintain customer communication, and who controls when and how devices are used. Where women own their devices, livelihood activity fits more seamlessly into daily routines. Where phones are shared, participation becomes more fragmented, tied to availability and shaped by the presence and expectations of others in the household.

Summary

Women’s WhatsApp use for livelihoods differs across income levels.

- Women in the Base and Lower segments typically anchor their activity in known networks, using direct messages, groups of familiar people, and status updates to reach customers within existing relationships.
- Some women in the Mid segment extend their reach through broadcasts, paid status boosts, and participation in larger community groups, converting group visibility into private customer relationships.
- Women in the Top segment are currently the most likely to add AI tools to support content creation, communication polish, and business planning.

These layers reflect both capability and constraint. Women in lower income segments demonstrate effective use despite limited resources, enabled by peer learning, family support, and trusted networks. However, data costs, shared devices, and safety concerns continue to shape how confidently and publicly women engage. The progression from known networks to extended networks to AI-supported professionalization suggests multiple points where targeted support could help more women derive value from the platform.

04-5

What are emerging signals related to the WhatsApp Business app and AI?

The patterns documented in previous sections on reach, sectoral use, and gradations of effective use provide context. This section examines early signals around two emerging developments: the WhatsApp Business app and AI tools.

Our data on these emerging tools is relatively limited. Survey questions about the WhatsApp Business app in Waves 1 and 2 faced challenges: the logos and names are visually similar, leading to potential confusion among respondents. For AI, usage rates in the Wave 2 survey were low and concentrated among higher-income women, making quantitative analysis difficult. The qualitative interviews, particularly those conducted in Kenya and Nigeria with higher-income respondents, provided richer insights into both WhatsApp Business and AI adoption. This section draws primarily on these qualitative findings alongside available survey data to identify early patterns and forward signals.

Features and use of the WhatsApp Business app

WhatsApp offers a separate Business app designed initially for larger enterprises but increasingly used by small-scale entrepreneurs. The app provides features that address several challenges documented in [section 4.4](#): a separate business phone number, catalog functions for product display, automated greeting and away messages, quick replies for common questions, and labels for organizing customers and orders.

These features align with documented barriers. The separate business number prevents “context collapse” — the challenge of managing personal and professional communication on the same account, where women struggle to maintain professional boundaries while remaining accessible to family and friends.⁶⁸ One Lagos respondent described this challenge directly:

“ It just wasn’t working. I’d miss client messages buried under family and friends’ chats. ... Now, I use WhatsApp Business strictly for clients—orders, updates, and all work stuff. The regular WhatsApp is for personal chats—family, friends, and my gist circle.”

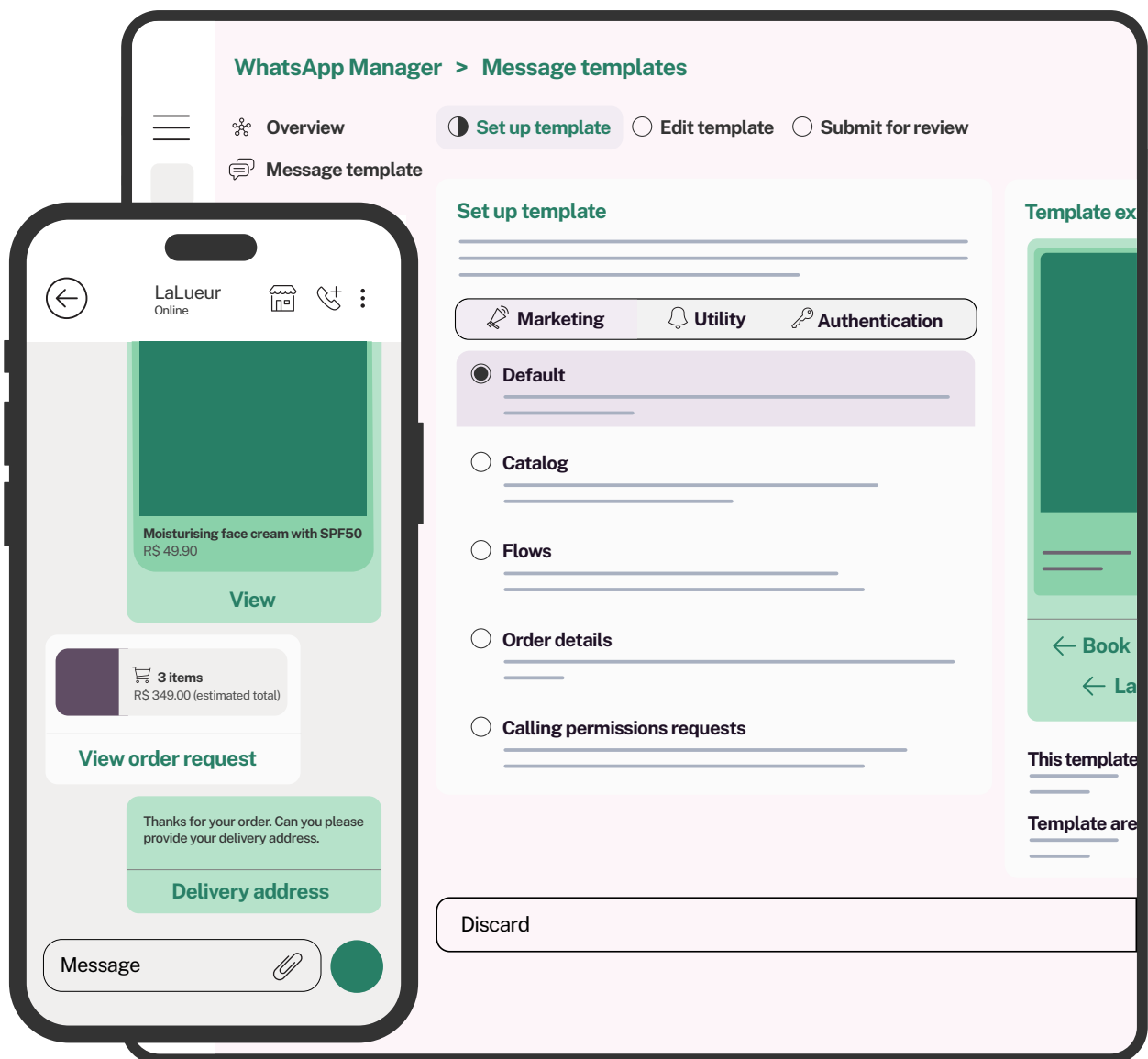
Lagos, Nigeria (25–34)

68 Marwick and Boyd, “I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience.”

Automated messages help women manage intermittent access constraints, particularly important for those with limited data or shared devices. Catalog functions support product visibility needs, allowing systematic presentation of offerings without requiring women to repeatedly describe products through individual messages.

Despite these alignments, adoption remains limited. Qualitative interviews conducted by [Turn.io](#) in Kenya and Nigeria found that only a few early adopters were using the WhatsApp Business app, though many expressed eagerness to learn. Respondents showed interest in features like boosted status updates, automated replies, and ad tools. Those using the app appreciated auto-replies, labels, and product showcases, often pairing it with Instagram or Facebook promotions. Use of WhatsApp Business was associated with more sophisticated digital habits overall, including AI use.

The WhatsApp Business app offers features like product catalogs and automated messaging.



However, managing two WhatsApp numbers, one for personal use and one for livelihoods, represents a common workaround that comes with practical trade-offs. Women cite several reasons for not adopting the Business app: reluctance to maintain two profiles or phone numbers, concerns about confusing customers who might not understand why they have different numbers for personal and business contact, limited awareness that the Business app exists, and uncertainty about whether features requiring additional setup justify the effort.

The qualitative evidence suggests that awareness and understanding of WhatsApp Business features varied significantly by income level and country. In India, where the sample skewed toward mid–low-income women, knowledge and use of WhatsApp Business remained limited. In Kenya and Nigeria, where interviews included mid–high-income women, awareness and understanding of features was higher, though even among this group, broadcast lists remained underutilized.

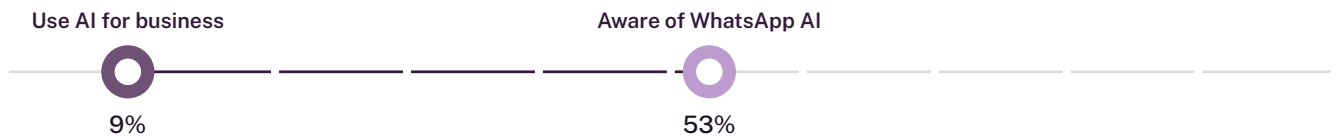
AI: Awareness is emerging but use remains nascent

Early signals from India and Kenya suggest that AI is beginning to enter some women’s digital routines, but adoption remains limited. Among women already using WhatsApp for livelihoods (the June 2025 Wave 2 survey population, a group that skews toward higher income segments and greater digital confidence than the general population), 53% in India and 23% in Kenya reported awareness of WhatsApp’s AI features. Actual use of AI for business purposes was far lower: 9% in India and 3% in Kenya.

FIGURE 18

Among women active on WhatsApp, AI is beginning to enter their digital routines, but adoption remains very limited

India



Kenya



Source: Data by Ipsos (women in Base, Lower, and Mid income segments in India (unweighted n=272) and Kenya (unweighted n=141) (Wave 2, June 2025)). Analysis by Caribou.

The gap between awareness and use is significant. Even among this more digitally engaged subset, most women have not incorporated AI into their livelihood activities. The pattern is consistent with the income gradient documented throughout this report: awareness concentrates among women with greater digital confidence, resources, and literacy, while women in the Base and Lower segments show far lower exposure.

Qualitative interviews offer a glimpse of what early adoption looks like where it does occur. Some women described practical applications that fit within existing workflows: drafting customer messages, generating product captions and marketing ideas, polishing professional communication, and learning new skills. Several used ChatGPT, Canva AI, or voice-to-text tools alongside WhatsApp rather than Meta AI within it. Most AI use was behind the scenes rather than in direct customer interactions. Perhaps the common thread is practicality: the early AI adopters in the qualitative interviews had applied it to tasks that are simple, immediate, and supportive of the communication skills at the center of social commerce.

“ I ask it for business ideas! I ask things like what captions I should write for my products and how to do product photography.”

Bihar, India (18–24)

These qualitative findings should be read with caution: the interview sample, recruited and conducted over WhatsApp by [Turn.io](#), likely skewed toward more educated and higher-income women than either survey wave. The enthusiasm they expressed, and their strong appetite for structured learning support, represent a leading edge rather than the current mainstream. For most women using WhatsApp for livelihoods, AI remains unfamiliar territory. But this may change, depending in part on what actions the development and technology communities take (see [section 5](#)).

Discussion

05-1

WhatsApp at scale

This study estimates that approximately 89 million women across India, Kenya, Nigeria, and Pakistan use WhatsApp to support their livelihoods, roughly one in six working-age women with self-employment income in these countries. Among them, approximately 34 million are effective users. Given that the primary barriers for many non-users are perceptual rather than structural, and that women across all income segments have demonstrated effective use, there is considerable room for growth as access expands and as more women with access recognize the platform's relevance to their work. The question is: What kinds of interventions follow from these findings?

There are two ways to approach this question.

The first treats **WhatsApp as a tool**, a technology that some women have adopted and others have not, where the goal is to reduce friction and increase uptake. From this perspective, the findings point toward familiar interventions: training programs to build digital skills, peer support to demonstrate relevance, subsidies to lower device and data costs. Each of these approaches would help. They address real barriers documented in [section 4.4](#), and they align with how development practitioners typically think about technology adoption.

The second approach recognizes that at this scale, **WhatsApp functions as infrastructure**, a system embedded in the daily practices of tens of millions of women, shaped by both technological design and social norms, shaping what economic opportunities are visible, accessible, and attainable.

WhatsApp as tool: Reducing barriers to adoption and use

The findings in [section 4.4](#) identify two distinct transitions in women's WhatsApp use for livelihoods. The first is from non-use to use, driven primarily by access barriers (device ownership, data costs) and perceptions of relevance. The second is from occasional use to effective use, shaped by digital skills, social networks, and confidence navigating the platform's features for economic purposes. These transitions suggest different intervention points.

Access costs matter, but they are not WhatsApp-specific challenges.

Device affordability and data costs constrain smartphone adoption broadly, affecting women's access to mobile money, health information, education resources, and family communication. Addressing these barriers through device subsidies, data price regulation, or public Wi-Fi infrastructure would support WhatsApp adoption, but the case for these investments rests on much broader development returns.

Training and social support, by contrast, are directly actionable and WhatsApp-relevant. Many women, particularly those in lower income segments, may underestimate the platform's utility for their economic activities until they see concrete examples from peers. Digital literacy programs that demonstrate specific use cases (coordinating with suppliers, sharing product images, maintaining customer relationships) can address this perception barrier. Peer learning networks and mentorship programs that connect women already using WhatsApp effectively with those just starting can provide both practical skills and confidence.

Relevant content and groups further reduce friction. When women join WhatsApp groups focused on their specific livelihood sectors (agriculture, tailoring, food vending), they encounter immediate value that justifies continued engagement. Development organizations, private sector actors, and local institutions can support the creation and facilitation of such groups, ensuring they provide actionable information, peer exchange, and market connections.

Applied systematically, these interventions would help address real barriers documented in [section 4.4](#) and align with how development practitioners typically approach technology adoption.

WhatsApp as infrastructure: Strengthening the ecosystem

Because of its unique scale, WhatsApp has become an infrastructure for daily life for billions of people worldwide. For the estimated 89 million women across these four countries who use it to support their livelihoods, infrastructure differs from a tool in important ways. It is not something women adopt and then use occasionally; it is something they inhabit. Because their customers, suppliers, mentors and peers are on the same platform, it shapes what economic opportunities are visible, which customer relationships are maintainable, and which markets are accessible. This study illustrates how many women (and men) build their livelihoods within and around the platform's capabilities and its other users, adapting practices to fit what WhatsApp allows and constrains.

In many of the communities we surveyed, WhatsApp has likely become “taken for granted,” so deeply embedded in daily routines that its absence, rather than its presence, would be remarkable.⁶⁹ The pattern we observed is not new, but the income gradient complicates the picture: the platform itself may be taken for granted, yet the capacity to use it productively for livelihoods is not.

[Section 4.4](#) shows that effective use concentrates heavily among higher-income women: 29% in the Top segment, 6% in the Base. This reflects how infrastructure reproduces existing inequalities at scale. Women with stronger social networks, more confidence navigating digital spaces, greater exposure to diverse business practices, and more time for experimentation are better positioned to extract value from the same platform that lower-income women struggle to use effectively.

What makes WhatsApp particularly powerful as infrastructure is also what makes effectiveness so uneven: **the platform is simple, encrypted, and agnostic about use.** Women appropriate it for their specific contexts: coordinating rotating savings groups in rural Kenya, negotiating wholesale prices in Lagos markets, managing catering orders in Karachi, sharing agricultural advice in Jharkhand villages. This flexibility is a strength. But it also means that effectiveness depends almost entirely on what women bring to the platform: their existing networks, their digital confidence, their ability to navigate evolving social norms about what is appropriate to share, where, and with whom.

Those norms matter as much as the technology. Women described leaving groups when men behaved inappropriately, creating women-only trading groups to avoid harassment, negotiating unwritten rules about when business promotion is acceptable in community or religious groups. These are social practices that emerged as women adapted the platform to their needs and constraints. The interaction between what the platform allows and what communities decide is appropriate shapes who can use WhatsApp effectively for economic purposes.

As WhatsApp’s capabilities expand through features like the WhatsApp Business app and embedded AI tools, this dynamic continues. [Section 4.5](#) documented early signals of women encountering new features and adapting their practices accordingly. Some women use AI to draft more professional messages or generate product images; others avoid it due to cost or unfamiliarity. Some navigate the tension of making their businesses more visible while managing privacy and safety concerns. These adaptations reflect the same patterns of uneven capability, network strength, and resource access that shape effective use more broadly.

90m

For nearly 90 million women, in India, Pakistan, Nigeria, and Kenya, WhatsApp is an infrastructure and ecosystem within which their livelihoods take place.

⁶⁹ Ling, *Taken for Grantedness: The Embedding of Mobile Communication into Society*.

When we see WhatsApp as infrastructure, it becomes clearer that strengthening its utility requires more than helping individual women use it better. It means shaping the conditions under which all women encounter the platform: the norms that govern group behavior, the safety features that determine who participates, the affordability conditions that determine who can sustain engagement, the design choices that determine which practices are easy and which are difficult. It means recognizing that the ecosystem around WhatsApp, including peers, intermediaries, community organizations, platform designers, and policymakers, shapes outcomes as much as individual capability does. The calls to action that follow reflect this broader framing.

05-2

Digital infrastructure isn't always “public”

The patterns documented in this report create a tension that should be named directly. Tens of millions of women have built parts of their economic lives within WhatsApp. Their customer relationships, market visibility, peer learning, and business coordination depend on it. Yet the platform they depend on is owned and controlled by Meta, a corporation accountable to shareholders. Terms of service, privacy policies, and feature roadmaps are determined by commercial interests rather than public deliberation or user governance. A policy change, a pricing decision, or a shift in corporate strategy could reshape the conditions under which these women conduct their economic lives, with few mechanisms for consultation or accountability.

This dependence is compounded by a further reality: WhatsApp itself depends on public goods and other infrastructures to function. Spectrum allocation, network connectivity, electrification, consumer protection frameworks, and rule of law all underpin the platform's ability to operate. Private infrastructure is built on top of public investment.

WhatsApp is not the first privately held platform to become essential infrastructure for low-income populations. The Bell telephone system in the United States⁷⁰ and M-PESA in Kenya⁷¹ followed similar trajectories. They can be seen as private services that became so embedded in daily economic and social life that their absence became almost unthinkable.

⁷⁰ Fischer, *America Calling: A Social History of the Telephone to 1940*.

⁷¹ Mas and Radcliffe, “Mobile Payments Go Viral: M-PESA in Kenya.”

Each prompted its own governance debates about regulation, access, and public accountability. Those histories exceed the scope of this paper, but they suggest that the questions raised by WhatsApp's infrastructural role are neither new nor unique to digital messaging platforms.

The governance tensions prompted by these examples resonate with the current aspirations behind digital public infrastructure. DPI advocates argue that foundational digital systems (identity, payments, data exchange) should be publicly governed, interoperable, and designed to serve users rather than shareholders. There is force to this argument: it is often easier to build technology in the public interest when the technology itself is public. The challenge raised by this study is that nearly 90 million women across four countries are not waiting for DPI to mature. They have built livelihoods with, and within, the infrastructure currently available to them.

WhatsApp clearly works well as a communication layer, but many women in this study repeatedly encountered its limits: difficulties in verifying the identity of unknown buyers and sellers, vulnerability to fraud and scams, and inability to process payments within the platform. These are gaps that publicly governed infrastructure is well suited to fill. Interoperable payment systems, portable digital identity, open commerce protocols, and transparent data frameworks can address weaknesses in this private platform without requiring women to leave it.

In practice, this will mean hybrid ecosystems where public and private infrastructure interoperate. India's [Beckn protocol](#), an open-source framework built as an extension of the India Stack (the country's suite of open digital infrastructure for identity, payments, and data), aims to address many of the same discoverability and interoperability challenges that small enterprises currently navigate through WhatsApp, but through publicly governed, platform-agnostic infrastructure. Brazil's [Pix](#) instant payment system represents a similar public investment. Whether WhatsApp and public approaches like these will run in parallel, in competition, or in complementarity will likely vary by country.

This study cannot resolve whether WhatsApp, as an infrastructure within which livelihoods currently take place, serves some of the same needs as digital public infrastructure. But discussions of DPI and its potential to support small enterprise should proceed with awareness of and engagement with what WhatsApp is already doing, and of how tens of millions of women are already using it.

05-3

Calls to action

These calls to action are grounded in what women told us about their work, their constraints, and what would help. They also reflect the duality discussed above: that WhatsApp is both a powerful tool, and a complex ecosystem that can be shaped to be more inclusive and supportive of women's livelihoods.

Platforms: Design for resource-constrained realities

Across contexts, women emphasized that WhatsApp works because it is familiar, lightweight on data, and fits smoothly into daily communication routines. Platform-level decisions can reinforce these strengths and reduce the frictions that constrain women's participation.

Prioritize low-data, low-bandwidth functionality. Lower-income women frequently ration data and avoid high-volume activities. Optimizing image compression, reducing update sizes, and supporting core features on older or shared devices aligns with how women manage digital access.

Strengthen safety, abuse detection, and group governance. Harassment, spam, scams, and unwanted contact directly shape how widely women participate. Features that help admins moderate groups, protect phone numbers, flag suspicious behavior, and create clearer norms can support safer participation in the larger groups women use for visibility and learning.

Support embedded, lightweight assistance. Early AI use shows that women value simple tools that help draft messages, improve tone, generate captions, and prepare promotional content. Embedded assistance that runs on limited budgets, without requiring separate apps or high-end devices, can reduce cognitive load without adding complexity.

Support safer engagement beyond known networks. Women's livelihood activity on WhatsApp is anchored in trusted relationships, but growth often requires reaching new customers and markets. Reputation features, stronger group moderation tools, and clearer signals of member identity can help women extend their commercial reach without the safety risks that currently discourage participation in larger, less familiar groups.

Policymakers: Strengthening the enabling environment

Women's digital participation depends on foundational conditions: connectivity, affordability, and protection. The constraints described in previous sections highlight several areas where policy action can continue to make a meaningful difference.

Expand access to affordable, capable devices. Device quality strongly influences what women can do online. Programs that improve access to smartphones, through subsidies, installment plans, or financing, help ensure women can participate independently and consistently.

Address data affordability and reliability. Women's need to purchase small data bundles limits when and how they use WhatsApp for work. Policies that reduce data costs or expand low-cost, stable connectivity may directly support more continuous livelihood activity.

Strengthen digital safety frameworks. Women's decisions about joining groups, posting publicly, or responding to unknown contacts hinge on perceived safety. Clear reporting mechanisms, enforcement of consumer protection rules, and awareness efforts can reduce risks that currently narrow participation.

Invest in rural connectivity and electrification. Unreliable networks and inconsistent power make daily communication unpredictable. Improvements here support basic conditions for digital engagement across all income segments.

Invest in complementary digital public infrastructure. As discussed in [section 5.2](#), digital identity, interoperable payments, and open commerce protocols can address gaps that private platforms may not be well positioned to fill.⁷² These systems lower barriers to onboarding, reduce fraud risks, and help women translate informal digital commerce into more stable livelihood opportunities.

Donors and implementers: Supporting incremental capacity building

Many women in the sample learned digital practices over time, from trusted sources, through observation, peer support, and low-risk experimentation. Programmatic support can build on these patterns.

Focus on practical, communication-centered skills. Women's commercial activity is rooted in messaging, visibility, coordination, and safety. Training that teaches how to manage customer conversations, use statuses effectively, and participate in groups safely aligns with the digital tasks effective users already perform.

Build AI literacy for everyday business tasks. Training initiatives can support simple AI-enabled assistance, such as message drafting, caption creation, and organization. AI-enabled tutoring or modular step-by-step learning tools can help lower barriers to experimentation.

⁷² Caribou, *Advancing Financial Inclusion Through Platform-Enabled Financial Services*.

Build on peer learning structures. Women consistently rely on peers to learn features, assess risks, and trial new behaviors. Programs that formalize or support these networks, including sector groups, community learning circles, self-help groups, and vocational networks, anchor digital learning in trusted spaces.

Tailor support for lower-income and lower-literacy women. Lower-income and lower-literacy women face compounded barriers: device sharing, limited confidence, and uncertainty about relevance. Targeted support that introduces simple use cases, including safe group participation, basic promotion, and managing customer chats, can help bridge the gap to regular use.

Communities and local intermediaries: Anchoring trust and connection

Community organizations and local intermediaries already play a central role in how women learn, build confidence, and manage risk while supporting their livelihoods on WhatsApp. Deliberate investment in these structures can extend their reach.

Strengthen trusted group environments. Many women respond positively to groups with strong moderation and respectful norms. Intermediaries can help set expectations, provide oversight, and ensure these spaces remain safe and constructive.

Integrate digital practices into existing community structures. Many women already discuss suppliers, pricing, and customer expectations within faith networks, self-help groups, and sector groups. Adding digital navigation, like privacy settings, safe participation, and AI basics, into these existing routines aligns capacity-building with real behavior.

Surface safety issues and emerging needs. Local intermediaries observe how digital practices unfold on the ground. They are positioned to identify new risks (e.g., scams), evolving needs (e.g., photo skills, customer management), and areas where additional support is required.

AI as a cross-cutting opportunity

Across each of these calls to action, AI represents a potential shift in what is possible at scale. Consider the cost constraint alone. Personalized business training for micro-enterprises has proven difficult to sustain: the cost of delivering in-person support typically exceeds the incremental revenue these businesses generate as a result.⁷³ AI embedded within platforms women already use could change this equation dramatically.

73 McKenzie, "Small Business Training to Improve Management Practices in Developing Countries."

Productivity assistance, buyer-seller matching, fraud detection, translation, accessibility, and safety tools are all candidates for AI-enabled support delivered through familiar interfaces at marginal cost, primarily through user-initiated features rather than platform-level content analysis. The development community is only beginning to understand what small business support will look like when contextual, responsive assistance can be woven into the infrastructure women already inhabit. The technology industry has long anticipated “conversational commerce” – transactions conducted through chat interfaces rather than storefronts or catalogs.⁷⁴ Until recently, the chatbots underpinning this vision struggled to deliver on the promise. That is changing. AI embedded within platforms women already use could enable discovery, transaction support, and personalized assistance through the same conversational flows women already rely on for their livelihoods.

Today, many women in the Base income segment anchor their livelihood activity in known networks. Women in the Mid segment extend their reach through broadcasts and larger groups. Women in the Top segment are beginning to add AI tools for content creation, communication polish, and business planning. WhatsApp five years from now will likely look quite different from the WhatsApp of today, and AI is poised to be central to that transformation. The income gradient in AI awareness and use already mirrors the gradient in effective WhatsApp use more broadly, with higher-income women adopting new features faster and more extensively. Without deliberate attention to access, design, and literacy, AI risks becoming another layer where effectiveness concentrates among those with pre-existing advantages.

This makes the ecosystem coordination outlined in these calls to action more urgent. Platforms must design AI features that work on low-end devices and address the tasks women actually face. Donors and implementers must build AI literacy into existing peer learning structures. Policymakers must ensure that safety frameworks evolve alongside platform capabilities. Community intermediaries must help women navigate new questions about trust, cost, and appropriateness.

Getting this right matters beyond WhatsApp. The case for AI as a net positive for digital inclusion will be strengthened or weakened by how well it serves the women documented in this study: women who are already using digital infrastructure for their livelihoods, and who stand to gain the most from support that was previously unavailable at any price.

74 Messina, “Conversational Commerce.”

Conclusion

This study provides the first large-scale estimate of women using WhatsApp for livelihoods across different income segments. Nearly 90 million women in India, Kenya, Nigeria, and Pakistan use the platform to support their economic activities — roughly one in six working-age women with self-employment income.

Among them, approximately 34 million are “effective users” who have developed the skills, networks, and practices to use WhatsApp strategically for economic gain. The income gradient is substantial: 29% of higher-income women who use WhatsApp for work are effective users, compared to just 6% of lower-income women.

The findings reveal that WhatsApp functions as infrastructure, not simply as a tool. At this scale, the platform shapes what economic opportunities are visible, which markets are accessible, and how women maintain customer relationships and coordinate supply chains. Women appropriate WhatsApp’s simplicity, scale, and features to build livelihoods within their specific contexts — but their effectiveness depends heavily on their pre-existing capabilities, social networks, and resources. The result is infrastructure that does not serve all users equally, reproducing and potentially amplifying existing inequalities unless ecosystems are deliberately shaped toward more equitable outcomes.

Two developments suggest both momentum and urgency. First, AI tools are becoming embedded in messaging platforms, helping users draft professional messages, generate product images, and organize business information. Early signals show that women are already experimenting with these capabilities, but adoption follows the same income gradient visible in effective WhatsApp use more broadly. Without ecosystem interventions that ensure lower-income women can access, understand, and benefit from AI features, infrastructure evolution risks widening existing gaps rather than closing them.

Second, this moment calls for the kind of pragmatic, inclusive policy thinking that has always been required when powerful technologies emerge. Technologies are never evenly distributed at first. Adoption concentrates among the prosperous and the skilled. But through deliberate investment, thoughtful regulation, peer learning structures, and ecosystem coordination, technologies that initially serve narrow populations can become foundations for broader participation. WhatsApp clearly holds promise for women's livelihoods, particularly for higher-income women who use it effectively. The extent to which development actors, governments, platforms, and communities will invest in making that promise accessible to the millions of lower-income women who currently struggle to extract value from the same infrastructure has not yet been determined.

If current barriers to access, relevance, and capability were addressed systematically, substantially more women could use WhatsApp productively for their livelihoods, and the greatest gains would likely come from women in the Lower and Base income segments, who currently face the steepest barriers to effective use. But expansion without equity means concentrating gains among those already advantaged. The infrastructure lens matters because it reveals that interventions must go beyond individual skill-building to shape the norms, affordances, constraints, and support structures of an entire ecosystem, as outlined in [section 5.2](#).

Two research frontiers deserve attention. As AI becomes embedded in WhatsApp's conversational interface, users encounter machine-generated responses in a channel they associate with human connection; how women (and men) navigate this shift, and whether it builds or erodes trust, warrants close study. Additionally, this study documents patterns of use but cannot establish causal effects on income or well-being; longitudinal and experimental designs that trace financial and livelihood outcomes for women using WhatsApp across income segments would strengthen the evidence base considerably.

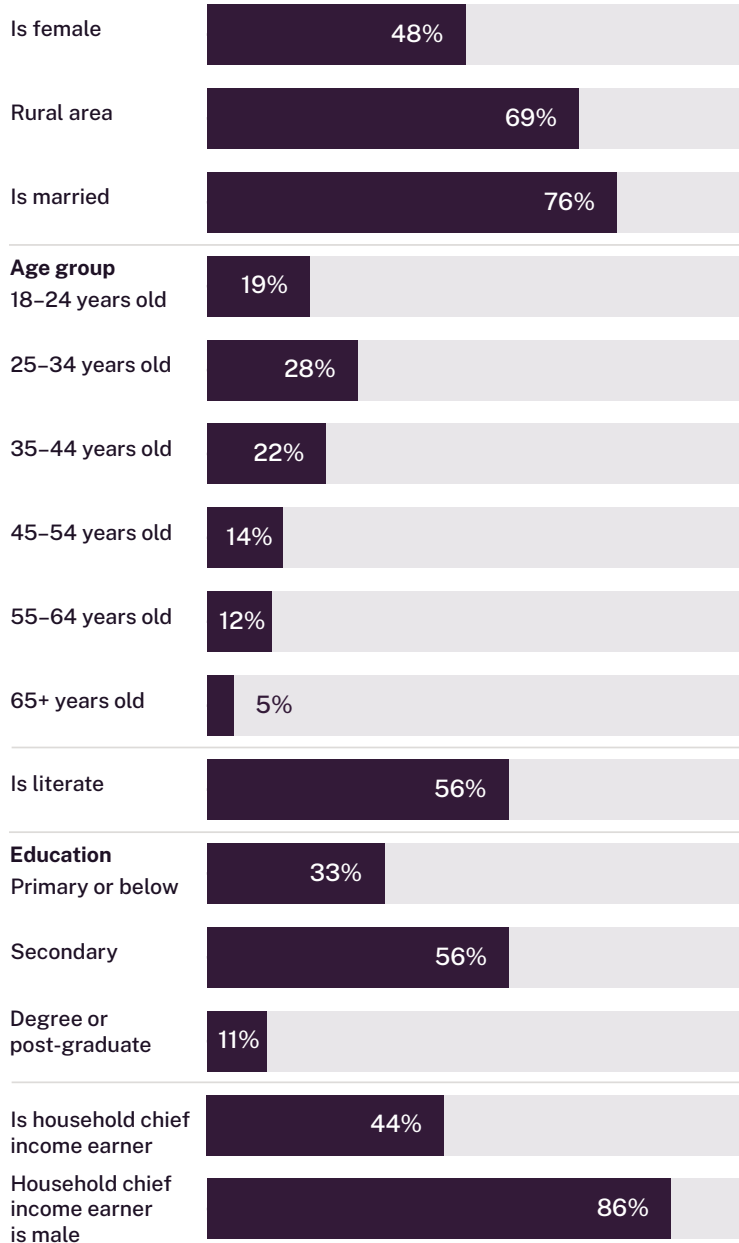
The gains documented here represent a starting point, not a ceiling, particularly as the WhatsApp platform itself continues to evolve. The study demonstrates how WhatsApp already is providing significant support to the livelihoods of millions of women. The task now is to ensure that the technology and the ecosystem around it remain as inclusive as possible, supporting effective use for millions more.

APPENDIX

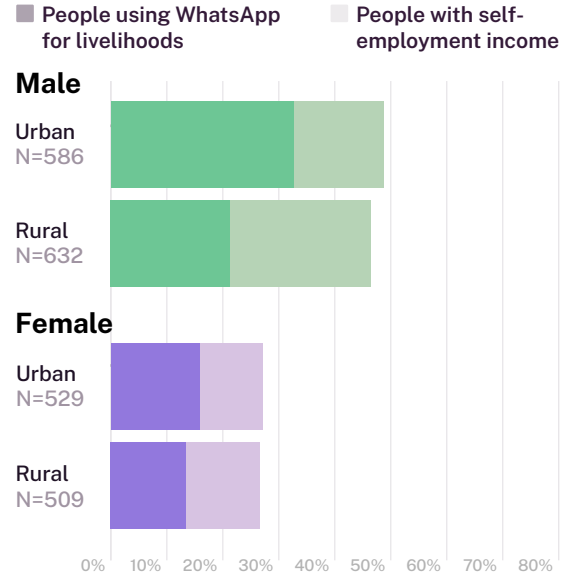
Country summaries

India

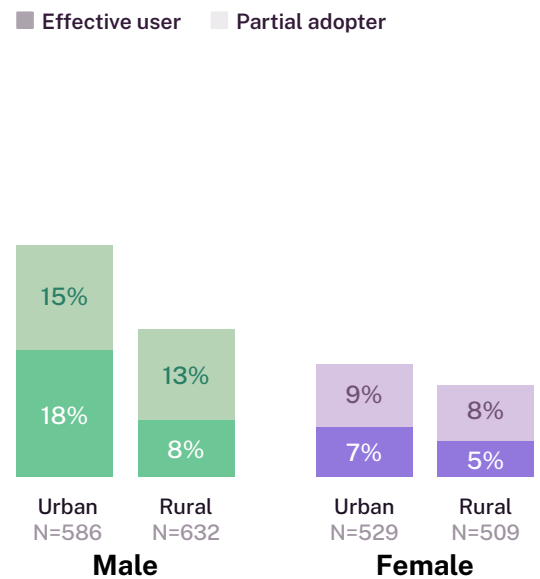
Sample demographics



WhatsApp for livelihoods



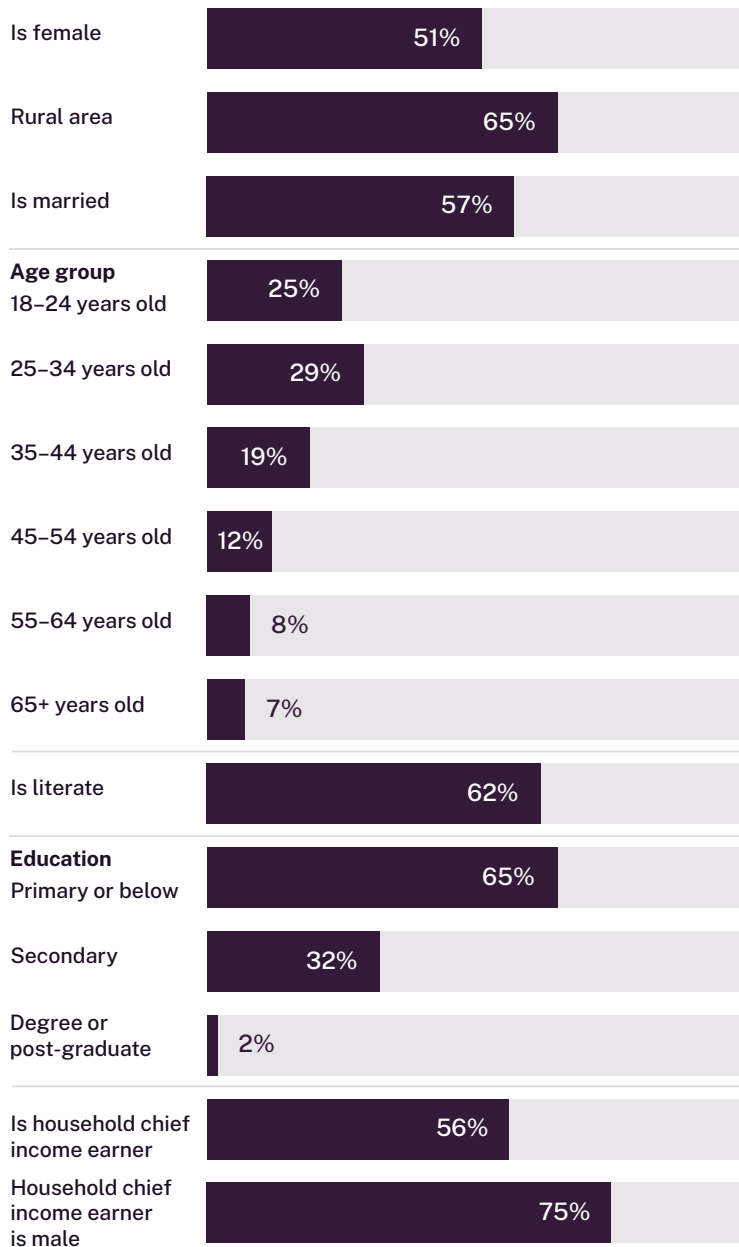
WhatsApp use type



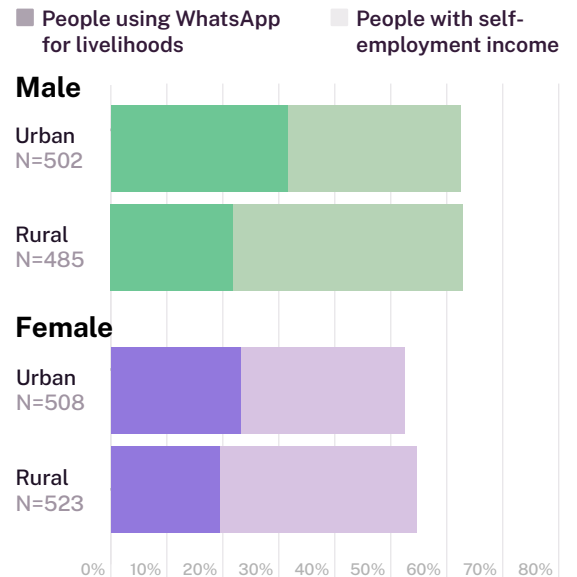
Source: Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); total weighted sample N=7,000 (unweighted n=7,572), Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distribution, age, education, and other socio-demographics from national census. For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA World Population Prospects 2024. Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

Kenya

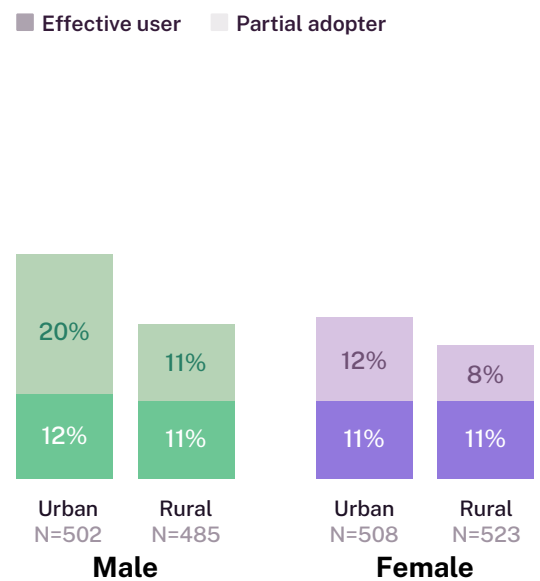
Sample demographics



WhatsApp for livelihoods



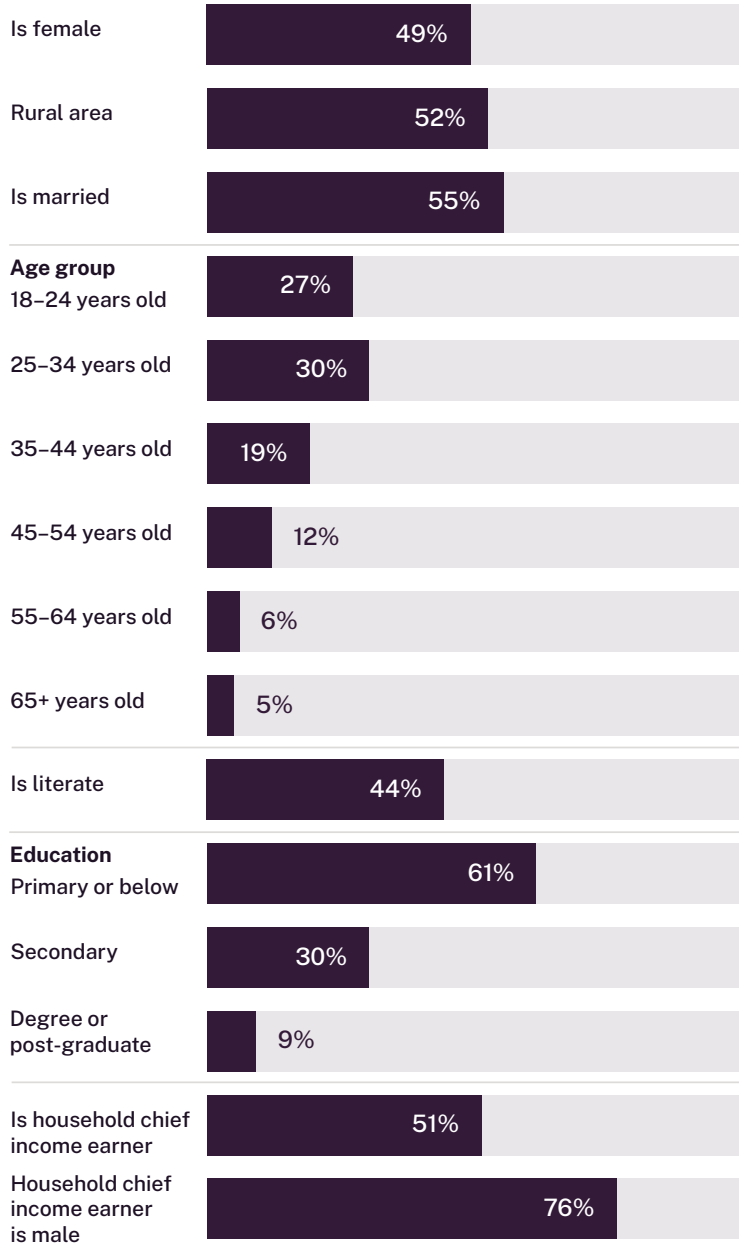
WhatsApp use type



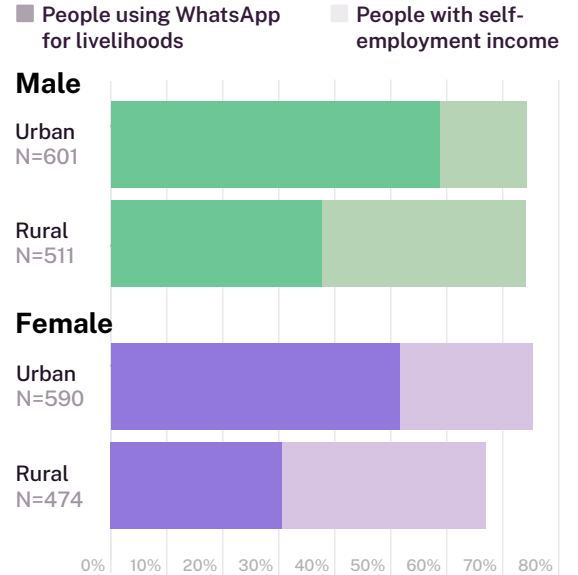
Source: Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); total weighted sample N=7,000 (unweighted n=7,572), Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distribution, age, education, and other socio-demographics from national census. For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA World Population Prospects 2024. Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

Nigeria

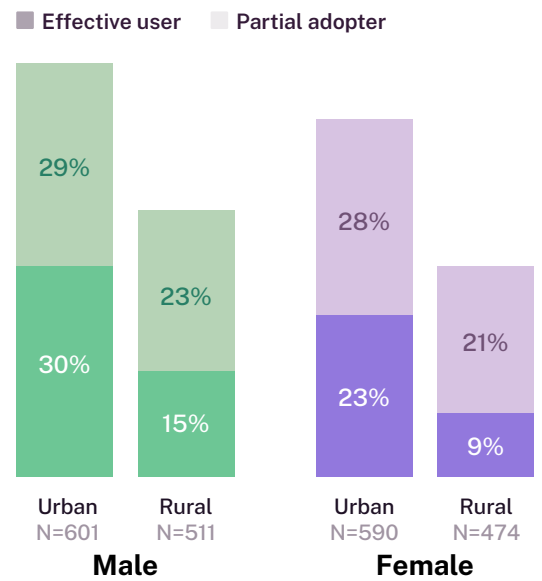
Sample demographics



WhatsApp for livelihoods



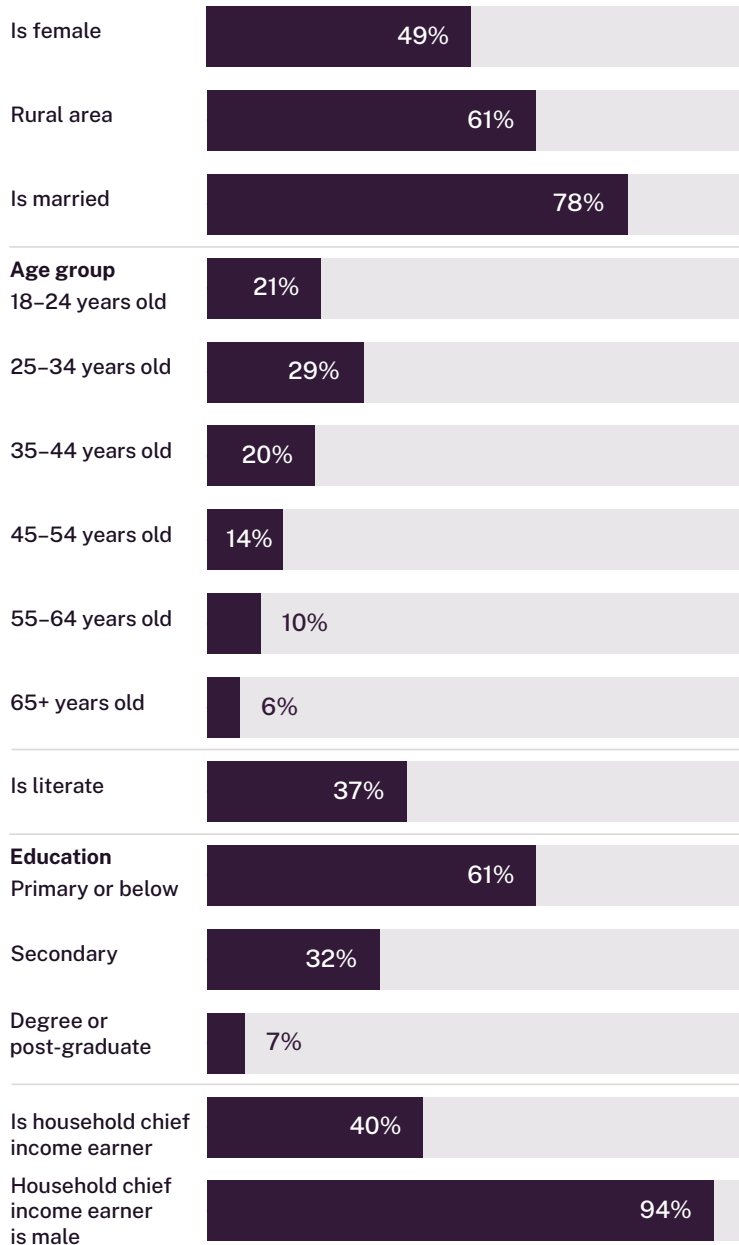
WhatsApp use type



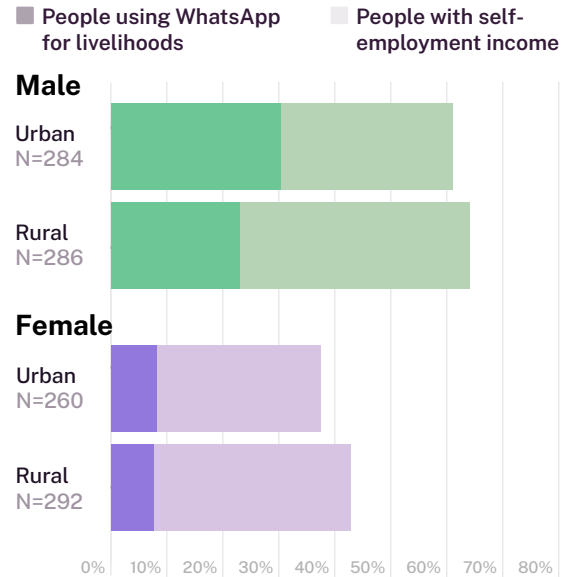
Source: Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); total weighted sample N=7,000 (unweighted n=7,572), Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distribution, age, education, and other socio-demographics from national census. For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA World Population Prospects 2024. Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

📍 Pakistan

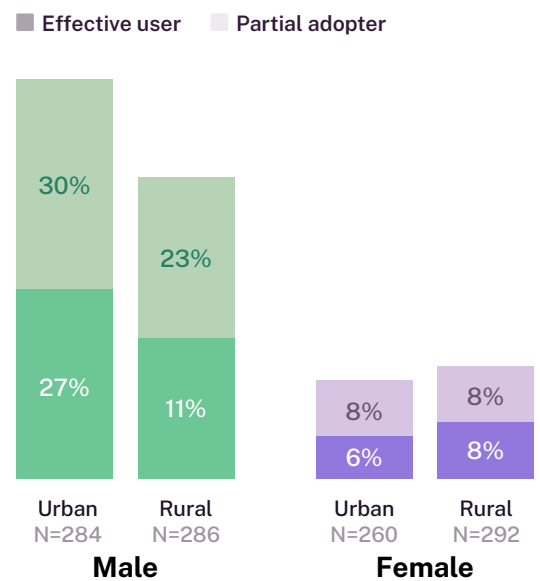
Sample demographics



WhatsApp for livelihoods



WhatsApp use type



Source: Data by Ipsos (full sample, Kenya, Nigeria, India (N=2,000; unweighted n=2,256, 2,018, and 2,176, respectively), Pakistan (N=1,000; unweighted n=1,122); total weighted sample N=7,000 (unweighted n=7,572), Wave 1, June 2025). Analysis by Caribou. Results weighted to adjust for rural/urban distribution, age, education, and other socio-demographics from national census. For overall, survey weights were further rescaled so that each country's sample reflects its adult (18+) population, based on UN DESA World Population Prospects 2024. Pooled results represent adults across Kenya, Nigeria, Pakistan, and India.

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