POLICY BRIEF

Recentring Communities: A Participatory Approach for Connectivity

2025

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Digital Transformation

Abstract

Universal meaningful connectivity (UMC) risks are being exploited for profit-driven motives that prioritise economic growth over sustainability and human wellbeing. To ensure digital connectivity efforts truly address the needs of underserved communities, policies must focus on their most pressing challenges rather than merely expanding the digital economy. While adoption of digital-by-default service models have persisted from the COVID-19 pandemic, default integration into digital platforms does not equate to meaningful participation in economic and civic life. Beyond mere access, meaningful connectivity requires active and informed engagement. Although gender and geographical gaps in mobile internet adoption across low- and middle-income countries (LMICs) have narrowed since 2020, progress is uneven. The growth in digital access and usage has not been matched by an increase in digital capabilities, and increasing burdens on individuals due to digital-by-default service delivery have contributed to new kinds of exclusions and marginalisation, even as connectivity increases.

The G20 Guidelines on Indicators and Metrics for Universal and Meaningful Connectivity identify ownership of one's own devices as a proxy for meaningful connectivity. This overlooks the critical role of intermediated digital access, which often serves as an invisible yet necessary enabler of digital participation, particularly for marginalised communities. Intermediation does not negate the meaningfulness of one's meaningful participation. Through case studies from South Africa and observations from an agri-cooperative in a digitally sparse region in India, we show how community intermediaries leverage grassroots trust and effectively foster human-centricity by understanding and encouraging active participation to address community members' specific needs.

Recognising the immense potential that intermediaries can have to nurture meaningful digital experiences for intermittently connected and underserved communities, this brief proposes that G20 nations pay renewed attention to community intermediaries as valuable instruments to attaining meaningful and human-centric digital infrastructures. It provides specific recommendations that guarantee community intermediaries a seat at the table of multi-stakeholder ICT governance. By centring community-driven approaches, G20 nations can ensure the vicious circle of digital exclusion is broken once and for all.

Keywords: Meaningful Participation, Community-driven Approaches, Intermediaries

Diagnosis

Universal meaningful connectivity (UMC) is increasingly framed as a cornerstone of inclusive development. However, implementation without critical appraisal of what vision these indicators map out, risks digital inclusion being driven by projects that are focused on the expansion of smartphone ecosystems and network penetration, leaving capacity building as an oversight. As the world accelerates toward compulsory digitisation – where social protection, livelihoods, and essential services demand mandatory online participation – the consequences of getting UMC wrong have escalated from mere digital exclusion to systemic marginalisation. While mobile internet adoption gaps in low- and middle-income countries (LMICs) have narrowed since 2020,[1] the growth in access has not matched growth in digital capabilities, leaving millions nominally connected but functionally disempowered in digital-by-default systems.[2]

The G20's current metrics for UMC, which emphasise individual device ownership, overlook both the reality of shared access in low-resource settings and the critical role of intermediated access – where trusted community actors facilitate meaningful participation. This brief diagnoses how prevailing frameworks for digital inclusion: (1) over-rely on individual connectivity metrics, and (2) dismiss intermediation as a stopgap rather than valuing it as the most effective pathway to active, informed participation for marginalised groups. Research on intermediaries within Information and Communication Technologies for Development (ICT4D) has historically been concentrated on physical access with a focus in on commercial intermediaries like cybercafés.[3] Intermediation by

[1] Jeffrie et al., The Mobile Gender Gap Report 2024 (London: GSMA, 2024), https://www.gsma.com/r/wp-content/uploads/2024/05/The-Mobile-Gender-Gap-Report-2024.pdf
[2] Faith et al., Digital Poverty in the UK (Brighton: Institute of Development Studies, 2022), https://opendocs.ids.ac.uk/articles/report/Digital_Poverty_in_the_UK/26428945?file=48182248
[3] Maung K. Sein and Bjørn Furuholt, Intermediaries in ICT4D: The other "I" (paper presented at the Second Annual SIG GlobDev Workshop, Phoenix, USA, December 14, 2009), https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=775171b13134c7b46dee6d9f09b59ac697673e14.

community-governed organisations like cooperatives, whose motive is not profit-oriented but of community upliftment, has received less consideration in the literature. This brief focuses on intermediation through community-led organisations specifically as objectives of cooperativism explicitly align with the creation of equitable economies. It highlights how the work of cooperatives in the Global South can be understood within the frame of meaningful connectivity, and how G20 nations can support this specific form of intermediation.

Through the case studies of two cooperatives, based in South Africa and India, we demonstrate how community intermediaries bridge the gaps of skills building and address the specific challenges within their geographies, essential for meaningful digital participation. We conclude with recommendations for G20 nations to include, make visible, and promote community intermediation as a viable path towards digital inclusion.

The limits of current UMC frameworks

1. The limits of device-centric connectivity

The ITU's UMC framework stakes out individual ownership of devices and household-level broadband access as proposed indicators of meaningful connectivity. While this approach was meant to provide more granular indices for measurement of connectivity to disaggregate national level disparities,[4] it fails to account for how community access models also ensure safe, productive, and enriching digital experiences. The ITU's proposed framework for measuring successful UMC pushes for a vision of connectivity that is predicated on individuals having their own device that provides connection to fast and reliable internet. In

[4] G20 Digital Economy Working Group, Universal and Meaningful Connectivity: Policy Recommendations (Brasília: CETIC.br, 2024), https://cetic.br/media/docs/publicacoes/1/20241209152714/G20_DEWG_Brasil_2024_Universal_and_meaningful_connectivity.pdf

many LMICs, however, state, civil society, and grassroots intermediaries such as cooperatives are experimenting with alternative modes of digital inclusion in particularly underserved geographic regions, enabling digital participation without requiring personal device ownership.[5]

- **Broken promises of affordability:** Market-led expansion initially lowers costs but often leads to monopolistic pricing, illustrated by price hikes for data plans in 2024 that occurred after market consolidation by Indian telecom company Jio, which initially grew its market share on the promises of low-cost data plans.[6] In the absence of vigorous antitrust legislation to prevent ISP mono/duopolies, individual connection to affordable and reliable internet connections becomes an empty promise, with little room for progress.
- **Digital readiness:** Device access, particularly mobile access, alone does not translate into digital skills and capability to access opportunity. A 2015 study by the Groupe Spécial Mobile Association (GSMA) found that female mobile users in three LMICs were unlikely to have received any formal training on how to use the internet. As a result, they were confined to the applications they used, unable to transfer skills to take full advantage of their devices.[7]

2. The hidden role of community intermediation

Intermediated access – where trusted community actors facilitate engagement on digital platforms – is often dismissed as a "stopgap" rather than an essential part of solution delivery However, evidence shows it:

[5] Maung K. Sein and Bjørn Furuholt, "Intermediaries in ICT4D: The Other 'I'," (paper presented at the Second Annual SIG GlobDev Workshop, Phoenix, USA, December 14, 2009), https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=775171b13134c7b46dee6d9f09b59ac697673e14.
[6] "Reliance Jio Announces Mobile Tariff Hike: Full List of New Plans and Prices," Times of India, last modified Jul 4, 2024, https://timesofindia.indiatimes.com/technology/tech-news/reliance-jio-announces-mobile-tariff-hike-full-list-of-new-plans-and-prices/articleshow/111318743.cms.
[7] GSMA, Accelerating Digital Literacy: Empowering Women to Use the Mobile Internet (London: GSMA, 2015), https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2015/06/DigitalLiteracy_v6_WEB_Singles.pdfs/2015/06/DigitalLiteracy_v6_WEB_Singles.pdf.

- Builds trust: People in marginalised groups, such as women in rural areas, often rely on community intermediaries to navigate digital services. Intermediaries, in these environments, support people by providing them with skills training to navigate digital platforms and by troubleshooting technical issues.[8]
- Promotes inclusion: Community intermediaries ensure digital-by-default services reach everyone by providing human-centred support, bridging gaps for those with limited literacy or access. As highlighted in the statement by the digital transformation taskforce during Brazil's G20 presidency, intermediaries aid in the complementary role that digital technologies should play.[9]
- Enables context-specific solutions: Community intermediaries often tailor digital tools to local needs.
- Fills institutional gaps; As shown below, community intermediaries often stand in to create alternative pathways towards markets and the state where either have failed to provide access to it and shareholders have been excluded.

Case Study 1. Zenzeleni (South Africa)

Zenzeleni is a cooperative providing affordable internet services in communities across the Eastern Cape of South Africa, an area whose historical underdevelopment due to apartheid has resulted in high rates of unemployment[10] and few opportunities. Zenzeleni's success comes from the successful recognition of challenges faced in its target communities: the

[8]Maung K. Sein and Bjørn Furuholt, "Intermediaries in ICT4D: The Other 'I'," (paper presented at the Second Annual SIG GlobDev Workshop, Phoenix, USA, December 14, 2009), https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=775171b13134c7b46dee6d9f09b59ac697673e14.
[9] "T20 Brasil Task Force 05, Statement" (Rio de Janeiro: T20 Brasil, 2024), https://www.t20brasil.org/media/documentos/arquivos/TF05_Statement_A5.pdf
[10]Sol Luca de Tena and Carlos Rey-Moreno, "South Africa: Challenging Inequality in Post-Apartheid South Africa: A Bottom-Up, Community-Led Business Model for Connectivity," in Global Information Society Watch 2018: Community Networks (Johannesburg: Association for Progressive Communications, 2018), [222-226], https://giswatch.org/sites/default/files/gw2018_south_africa.pdf.

expenditure for spotty internet access was not flowing back into the community but out to large internet service providers (ISPs). Through a co-consultation with affected communities, Zenzeleni was able to address their needs. In addition to building out a wireless network, it responded to the need for readily available power by creating solar-powered charging hotspots to charge phones that charge a smaller fee than local shops, as well as a training programme that guided local youth on how to apply for national education grants online.[11]

Case Study 2. SEWA Federation (India)

SEWA Federation supported an Indigenous women-run agricultural cooperative in India to build a digital ecosystem that would connect shareholder farmers with agricultural advisory and agricultural input sale services through a farmer-facing app.[12] However, after initial surveying, the cooperative found that mobile use was sparse in households owing to the lack of network coverage on farms and the high cost of data plans. Therefore, it pivoted to tailoring a digital ecosystem that was instead centred on frontline workers who would provide advisory services and sale of agricultural inputs within their villages to shareholder farmers through face-to-face contact, with data collection on seed demand and transactions collected through a "digital-lite" application.[13] This allowed frontline workers to provide personal support to farmers while increasing farmers' access to better quality seeds and context sensitive agricultural advisories.

Recommendations

To recentre UMC around human wellbeing, G20 nations must:

[11] ibid.
[12] Ranjitha Kumar and Salonie Muralidhara Hiriyur, "Re-imagining the Platform Firm: Lessons and Design Blueprints from SEWA's Data Cooperative Experiment" (paper presented at the 8th Conference of the Regulating for Decent Work Network, International Labour Office, Geneva, Switzerland, July 10-12, 2023), https://www.sewafederation.org/wp-content/uploads/2024/10/5.-2023_ITFC-ILO-conference.pdf.
[13] Ranjitha Kumar, Viraj Samir Desai, and Natasha Susan Koshy, "Creating Sustainable Data Cooperatives in the Global South: Frameworks for Institutional Support" (Bangalore: IT for Change, 2023), https://itforchange.net/creating-sustainable-data-cooperatives-global-south-frameworks-for-institutional-support

1. Build an enabling environment for community-governed institutions to provide intermediated digital access

The G20 must mandate member states to develop national intermediation frameworks that formally recognise and fund community-governed models as core to UMC, while avoiding one-size-fits-all metrics. This requires (1) legal recognition of intermediaries as essential service providers eligible for universal service funds; (2) participatory governance through local digital councils with an agreed representation from community intermediary organisations; and (3) flexible funding for context-specific solutions – like Zenzeleni's shared-network models. By institutionalising these principles, the G20 can ensure intermediation is scaled without stifling grassroots innovation.

2. Redefine UMC metrics to Include community intermediation

Upon the maturation of an enabling environment, the G20 must add "community-governed intermediated access" as a core indicator in G20 UMC guidelines, measuring:

- the density of community intermediaries per capita; and
- usage rates of intermediated vs direct digital services.

It should also recognise intermediated device use as valid for UMC, provided they enable secure, sustained participation.

3. Fund and legitimise community intermediaries

- Create G20 grants for intermediary-led digital inclusion (eg, training community health workers in telehealth); and
- Integrate intermediaries into policymaking for digital inclusion: Establish local 'digital councils' with seats for community intermediaries.

4. Regulate against exploitative connectivity models

- Anti-monopoly safeguards: Enable and promote community intermediaries by establishing possible pathways such as national procurement mandates to **formalise community intermediaries as market counterweights.**
- Subsidise intermediation: Tax digital firms with large market concentration to fund community access hubs.

5. Prioritise capability over connectivity

- Expand the goal of digital literacy beyond access: Pair infrastructure rollout with localised digital literacy programmes, taking examples from SEWA's front-line worker training model.
- Co-design with communities using participatory methods, taking cues from community-based programmes like Zenzeleni to ensure UMC policies reflect marginalised voices.

Conclusion

For UMC to be achieved, we must acknowledge that individual device-based internet connectivity is not the only way for people to have meaningful and productive digital experiences. The specific historical context of underdevelopment in unconnected regions translates into new exclusions in the digital economy. By legitimising intermediation, G20 nations can break the cycle of digital exclusion and build human-centric connectivity – where access translates to empowerment. The cases of Zenzeleni and SEWA prove that community-driven approaches are not compromises but necessary for equitable participation.

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