

Policy Brief No. 208 — September 2025

Digital Inclusion: Policy Pathways for Public-Private Partnerships

Deepak Maheshwari

Key Points

- The digital divide persists, especially along gender, geographic and generational lines.
- The public sector often lacks the requisite resources to ensure universal and meaningful connectivity. Meanwhile, the private sector may ignore financially unviable people and places.
- By combining the convening power of the public sector with private sector entrepreneurship, well-designed and executed public-private partnerships (PPPs) may bridge such gaps.
- While charting pathways for PPPs in pursuit of digital inclusion, policy makers must focus on:
 - identifying and monitoring digital exclusion;
 - ensuring transparency and accountability;
 - upholding technology neutrality and adopting digital public infrastructure (DPI);
 - engaging with the local communities for co-developing applications and capacity building;
 - creating intentional positive discrimination for demand-side support; and
 - overcoming the friction in inter-agency coordination.

Introduction

From education to entertainment, health care to hospitality, communication to commerce, and trade to tourism, everything is increasingly dependent on the digital ecosystem — an integrated domain where telecommunications, information technology and broadcasting increasingly converge— enabled and sustained by the foundational infrastructure of the internet. Unsurprisingly, then, digital exclusion could be a symptom or result of, or even a reason for, broader exclusion, seen in limited opportunities for education, health care, skilling, financing and earning livelihoods, as well as difficulty, delay or even denial in relation to benefits and public services (Institute of Electrical and Electronics Engineers [IEEE] 2023).

While public sector efforts in the form of policy proclamations at the international level, such as the Global Digital Compact, adopted by consensus at the UN Summit for the Future (United Nations 2024), and at the national and subnational levels are necessary, these proclamations alone have been insufficient in bridging the digital divide. Meanwhile, private actors, left to their own devices, may ignore or deprioritize customers, communities or regions deemed commercially unviable, leaving them digitally excluded.

This logjam must be broken to realize the public interest of digital inclusion envisioned in policy proclamations by leveraging the resources, innovation and expertise of the private sector through PPPs. However, these PPPs can

About the Author

With more than three decades of experience, **Deepak Maheshwari** has a keen interest in the interplay of public policy with technological innovation and socio-economic development.

Currently, he is a senior policy advisor at the Centre for Social and Economic Progress, advisor at the Indicus Centre for Financial Inclusion, and a member of the public affairs advisory board of Palo Alto Networks. He has also been affiliated with the Indian Council for Research on International Economic Relations, the Consumer Unity and Trust Society, the Center for the Digital Future and the Public Affairs Forum of India. An oft-invited speaker and columnist, Deepak has been published and cited widely.

In addition to serving on government committees on artificial intelligence and accessibility, he has volunteered as global chair of the IEEE Internet Initiative, secretary of Internet Service Provider Association of India and advisory board member of the Indian Institute of Management Ahmedabad-Idea Telecom Centre of Excellence. Earlier, he led the public policy function in Microsoft, Mastercard, Symantec and Sify, covering India, South Asia, and the Association of Southeast Asian Nations and China regions.

A strong believer in public-private partnerships, Deepak co-founded the National Internet Exchange of India and the ITU-APT Foundation of India. He holds an engineering degree from the Indian Institutes of Technology and a law degree as well.

succeed only if the incentives of all the stakeholders are aligned and they share a common vision.

The Socio-Economic Impact of Digital Exclusion, Amplified by COVID-19

Both access and ability to leverage the digital ecosystem are highly dependent on the socio-economic status of the individual, family, community or even nation. Though it was prevalent even earlier, the digital divide manifested sharply during the COVID-19 pandemic.

India saw the reverse migration of millions — mostly blue-collar and casual workers — to their native villages, even as white-collar workers shifted to remote work with relative ease (Tiwari and Majumdar 2025). Education loss due to the pandemic has been called “nearly unsurmountable” (United Nations Children’s Fund [UNICEF] 2022), as 168 million children globally missed almost one full year of schooling while another 214 million missed more than three-quarters of their in-person learning (UNICEF 2021). In India, almost 20 percent of children, mostly belonging to the lower income groups, lacked access to online classes (Vegas, Lee and Shrestha 2021). Female students suffered even more, as they are often dependent on shared devices — a manifestation of the gendered digital divide due to the double whammy of entrenched patriarchy in society and limited financial resources.

Globally, 2.6 billion people remain offline (International Telecommunication Union [ITU] 2025) even as almost 90 percent of them live within mobile broadband coverage (Global System for Mobile Communications Association [GSMA] 2025a). Clearly, service availability is necessary but insufficient. The reasons for this usage gap include inequalities within the family structure, unaffordable devices and lack of digital literacy. Add to this the state’s proclivity for a de facto mandate to digital as the only means to exercise certain rights or access public services. This resulting usage gap limits opportunities for the digitally excluded, thereby perpetuating the vicious cycle of inequality.

Coverage gaps could be due to high capital or operating costs or right-of-way bottlenecks, but they could also be due to lack of power supply or lack of local skills for upkeep and operations.

The positive impact of access to and participation in the digital ecosystem is indeed profound. For example, the Bank for International Settlements estimated that financial inclusion among India's adult population grew from a mere 17 percent in 2009 to an impressive 80 percent in 2017, a feat achieved through the JAM trinity — Jan-Dhan, a no-frills bank account; Aadhaar, the digital identification number; and mobile phones — in eight years, growth that would have taken 47 years otherwise (D'Silva et al. 2019). Since 56 percent of the incremental accounts belonged to women, the gender gap with respect to financial inclusion also narrowed from 17 percent in 2011 to six percent in 2017.

A Lot of Ground Covered, yet Miles to Go

Numerous indices and reports benchmark countries' digital inclusion (Jia, Du and Yan 2024). These include the ITU's ICT [Internet and Communication Technologies] Development Index, the Portulans Institute's Network Readiness Index, the UN Trade and Development (UNCTAD) Digital Economy Report, *The State of Broadband* by the ITU/United Nations Educational, Scientific and Cultural Organization Broadband Commission for Sustainable Development, and the GSMA's *Mobile Economy* reports. Unsurprisingly, countries in the Global North, as well as Japan, Korea and Singapore, continue to lead in digital inclusion, notwithstanding tremendous advances in China and India (the former being the primary source of equipment and the latter thriving on low-cost data tariffs and digital public infrastructure) (Maheshwari 2025a).

Thanks to government policies and a slew of entrepreneurial endeavours and innovations across technology, as well as business models, the internet currently extends far and wide across the Global South,¹ whereas in 2000, it was concentrated within the Global North.² However, in spite of this, the digital divide persists and is particularly accentuated

across gender, geographic and generational lines (Maheshwari 2025b), as well as disproportionately affecting people with disabilities (Maheshwari 2023).

Admittedly, the policy focus has also expanded from mere access to telephony in the 1990s to universal telephony in the 2000s and now to “universal and meaningful connectivity” (UMC) — in other words, the possibility for everyone to enjoy a safe, satisfying, enriching, productive and affordable online experience.³ UMC includes affordable access to services and devices; digital and cyber literacy; accessibility for people with physiological, learning or neurological disabilities; and cybersecurity and online safety. Being dynamically adaptive and contextually relevant, UMC now also includes meaningful access to artificial intelligence (AI).

A holistic approach that balances the opportunities and risks of digital transformation in pursuit of overall well-being, the Organisation for Economic Co-operation and Development's Going Digital Toolkit has seven interrelated policy areas: access, use, innovation, jobs, society, trust and market openness.⁴

Though not explicitly enunciated as a fundamental right (Mildebrath 2021), with the exception of Greece, access to and ability to use digital devices and services is becoming a fundamental necessity. Costa Rica, France, Finland and Spain have either declarations or laws supporting affordable universal access (Borg Psaila 2011), while in India there is both policy (Department of Telecommunications 2018) and judicial support.⁵

Countries use statutory regulators, universal service obligation (USO) mechanisms, e-governance plans, “national broadband plans,”⁶ and so on in pursuit of their policy objectives. For example, the Digital India program, launched in 2015, has a three-pronged vision: “digital infrastructure as a core utility to every citizen, governance and services on demand, and digital empowerment of citizens” (Ministry of Electronics and Information Technology 2022).

While such actions have led to the expansion of networks in remote and rural areas,

1 See www.submarinecablemap.com/ready-for-service/2025.

2 See www.submarinecablemap.com/ready-for-service/2000.

3 See www.itu.int/itu-d/sites/projectumc/home/aboutumc/.

4 See <https://goingdigital.oecd.org/dimensions>.

5 *Pragya Prasun & Others v Union of India & Others with Amar Jain v Union of India & Others* (2025), [2024] (SC), online: <https://api.sci.gov.in/supremecourt/2024/17879/17879_2024_13_1501_61229_Judgement_30-Apr-2025.pdf>.

6 See <https://datahub.itu.int/data/?i=100113&e=SOM&d=Name+of+policy%2C+strategy>.

provision of e-services, investment in digital literacy and protections against arbitrary restrictions or roadblocks, one-third of the global population is still offline (ITU 2025), and this segment is disproportionately made up of women (GSMA 2025b), older people and residents of rural, remote or hilly areas.

The Role of the Private Sector

Considering that the development and deployment of technology — telegraphy, telex and telephone; submarine cables, smartphones and satellite communication; chips, computers and cloud computing — often happens in the private sector, this sector has a critical role in realizing the vision of public policy. However, if left to their own devices, private players may ignore or deprioritize the customers, communities and regions that they consider commercially unviable. For example, a remote hilly village may not generate sufficient revenue to defray even the operating costs.

Sometimes, actions by the private sector can also deepen the digital divide, even if unintentionally. For example, if private sector actors choose not to offer tariff packs with low-data volumes, their services could become unaffordable for many.

The private sector is nimbler footed in terms of experimenting with new technologies, procurement cycles, business models and decision making. However, it may also resort to cartelization, gold-plating project costs, misusing data and socializing the resulting losses.

The Role of the Public Sector

Besides policy making and regulatory functions, the public sector may provide financing from, for example, the USO mechanism. However, overcoming the friction on account of inter-agency coordination is one particular area that the public sector must take upon itself to resolve.

While a public sector monopoly operator could cross-subsidize local calls for residential customers by imposing higher tariffs on business customers for long-distance calls, this could still lead to inefficiencies, corruption and stasis. Moreover, the limited public sector resources must compete with other priorities such as national security, education and health care. Hence, it is important that the public sector focuses first and foremost on well-designed policy and that milestones against the set timelines are rigorously tracked. Regulatory humility can also help in course correction.

Public-Private Partnerships

The policy objective of bridging such gaps can be realized by combining the public sector's convening and even financial power — say, using the USO mechanism — with the resources, innovation and expertise of the private sector through PPPs. The prime objectives of these partnerships are infrastructure expansion, research and development, affordable access to devices and services, business model innovation, skilling and sustainability.

PPP variants include viability gap funding for infrastructure, financial support for devices and services, public challenges to address specific problems such as the development of foundation models, special purpose vehicles for internet exchange points or a country code domain name registry, upfront or ongoing incentives for specific industry, capacity building and skilling initiatives.

Though not a formal PPP per se, the global system for mobile communications standards were developed for the digital cellular mobile telephony under the aegis of the European Telecommunications Standards Institute by bringing together governments, telecom operators and equipment manufacturers across Europe. It is indeed one of the best success stories as it continues to evolve through successive generations such as 3G, 4G, 5G and 6G.

While there are PPP models worldwide, such as E-Rate in the United States, the Digital Ambassadors Program in Rwanda and the Wireless Networking Project in Nepal, this policy brief will specifically examine India's experience with PPPs for digital inclusion over the past three decades.

Digital Public Infrastructure

With “public interest” at its core and the participation of both the public and the private sector, DPI refers to the foundational digital systems and platforms enabling services such as identity, payment and data exchange. Built using interoperable building blocks based on open protocols, standards and application programming interfaces, and collectively called the “India Stack,” it is gaining currency globally.

Aadhaar is the biometric-based digital identity number that can be obtained voluntarily by all Indian residents. Unified payment interface (UPI) enables interoperable payment across multiple entities, and accounts for half of global real-time digital payment transactions. Account aggregators facilitate consent-based data exchange on behalf of an individual with a specific entity, purpose and duration.

Other examples of DPIs include Ayushman Bharat Digital Mission for health care, the Open Network for Digital Commerce and the Open Credit Enablement Network.

Digital Bharat Nidhi

Digital Bharat Nidhi (DBN) originated in 2003 as the Universal Service Obligation Fund and was renamed in 2024 as Digital Bharat Nidhi. Its corpus stands at almost US\$10 billion, with collections exceeding the disbursements with the exception of one year. However, targeted support for demand enablement could improve its efficacy and impact (Maheshwari and Sridhar 2020).

Bharat Net

Launched in 2011, the National Optical Fibre Network aimed to bridge India’s digital divide by providing broadband to all the gram panchayats (GPs), or village councils, by 2014. Renamed in 2015 as the BharatNet, about 45,000 out of the 264,000 GPs remain unconnected (Ministry of Communications 2025). Financed from the DBN, it engages private operators and village-level entrepreneurs for last-mile connectivity.

Prime Minister’s Wi-Fi Access Network Interface

Against the National Digital Communication Policy 2018 target of 10 million public Wi-Fi hotspots by 2022, less than 280,000 were operational in April

2025, likely due to unviable business models and infrastructure challenges including power supply.

Google Stations

Launched in partnership with the public sector Railtel, Google Stations was rolled out in 2015 to offer free public Wi-Fi access at 400 railway stations. Railtel took over the entire project after Google pulled out in 2020, due to a wider availability of affordable data plans on 4G networks.

National Internet Exchange of India

With an objective to save on international bandwidth cost and reduce latency, the National Internet Exchange of India was incorporated as a not-for-profit PPP company in 2003 with financial grant-in-aid from the government of India following a regulatory nudge. It also runs the “.in” country code top-level domain registry as well as the national internet registry.

National Patent Pooling

Access to standard essential patents is a pre-requisite for India to become a major manufacturing hub of mobile phones and the Internet of Things. A national entity has been proposed to help start-ups, small and medium enterprises, and educational institutions to file, obtain and commercialise patents for their innovations (Malik, Sinha and Jagadeesh 2024).

Sankhya Vahini

Sankhya Vahini was a collaborative initiative in the 1990s between the Indian government and IUNet, a subsidiary of Carnegie Mellon University, aiming to provide high-bandwidth internet across India, especially for education, research and development. However, it was shelved in 2001 due to disagreements among stakeholders, criticism and scrutiny for bypassing the tendering process, and aspersions cast on valuations and financial payouts.

Media Lab Asia

A collaboration between the Indian government and the Media Lab at Massachusetts Institute of Technology, Media Lab Asia focused on fostering cutting-edge technology in areas such as health care, education and agriculture. Its successful pilots included developing low-cost devices and extending internet to villages. A collateral benefit accrued by way of licence-free spectrum for Wi-Fi (Maheshwari 2020). However, due to criticism around lack of

transparency, accountability and deliverables, as well as failure in attracting commensurate private funding, the collaboration was terminated in 2003.

Antrix Corporation and Devas Multimedia Deal

In 2005, the public sector's Antrix Corporation agreed to offer satellite transponders to the US-based Devas Communications for providing multimedia services to mobile users. Following allegations of underpricing in 2009, it was cancelled by the Indian government in 2011. In 2022, the Supreme Court of India termed the deal *ab initio* fraudulent, prompting foreign investors' attempt to attach Indian assets abroad.

Simputer

Launched in the early 2000s, Simputer was a low-cost Linux-based handheld computer with a smart card reader and touchscreen and text-to-speech capabilities. Due to limited marketing and lack of an ecosystem, Simputer was a commercial failure. Though not a formal PPP, the device was fostered by Simputer Trust, which was founded by researchers from the Indian Institute of Science, Bengaluru — a public institution.

Aakash Tablet

Launched by the Indian government in 2011 and developed by the British-Canadian company DataWind, this low-cost tablet for students featured Android OS, a seven-inch touchscreen and basic connectivity. However, poor performance vis-à-vis overhyped expectations and delayed supplies led to its downfall.

Lessons and Recommendations

It is clear that while PPPs help in resource mobilization, infrastructure development, enhancing access and capacity building, they remain susceptible to lack of transparency and accountability; the need to coordinate across multiple government agencies; and chances of derailment after their champions within the government move on. Additional concerns include antitrust behaviour, data misuse and the tendency to socialize losses by the private players.

Multiple stakeholders with misaligned incentives lead to conflict at best and derailment at worst. Clearly, PPPs are not panaceas and need deft balancing across the public sector's policy objectives and the private sector's profit motives.

There are six critical factors for PPPs to be able to foster and sustain digital inclusion:

→ **Identifying and monitoring digital exclusion:**

Digitally excluded persons, communities and regions must be identified based on objective criteria, both systematically and periodically. A policy road map must focus on specific support needed rather than using a cookie-cutter approach.

→ **Ensuring transparency and accountability:**

It is clear from the foregoing examples that lack of transparency and accountability are the biggest challenges faced by PPPs and thus must not be compromised. The choice of an appropriate PPP model and its design are as important as the choice of the partners involved. This collaboration must be predicated on the philosophy of “gain share, pain share.”

→ **Upholding technology neutrality and adopting DPI:**

Technology neutrality fosters choice and competition, while also mitigating vendor lock-in. For some areas, satellite links may work better, while in other areas, mobile and optical fibre may be a better choice. Hence, it is better to focus on outcomes rather than being prescriptive. A DPI framework can also help with efficiency and effectiveness.

→ **Engaging with the local community for co-developing solutions and capacity building:**

Local communities can help in better comprehension and analysis of the underlying challenges, as well as in co-developing and implementing appropriate solutions. In addition to such endeavours, the private sector can play a critical role in capacity building, especially for user awareness and adoption. For example, there are multiple competing UPI apps in India that enable even illiterate street vendors to get audio notifications in their local languages when they accept digital payments using QR codes. Without such engagement, even well-intentioned policies and programs can fail at the last mile.

→ **Creating intentional positive discrimination for demand-side support:**

The budgeting must be intentional with respect to factors such as

gender, geography and generations that are on the wrong side of the digital divide to ensure greater equity. Targeted support on demand-side enablement from the universal service funds, for example, should be provided both for device and service to those meeting certain thresholds. Likewise, access to AI is becoming a necessity and should no longer be considered a luxury.

→ **Overcoming the friction in inter-agency coordination:** The primary agency driving digital inclusion policy must take it upon itself to reduce and smooth the inter-agency coordination challenges faced by private entities. These challenges include right-of-way approvals, siting clearance for towers and orbital coordination for satellites, as well as rather mundane things such as an uninterrupted power supply and the roll-out of relevant application services parallel to network expansion.

It would be useful to explicitly enunciate and rigorously implement these recommendations within the PPP framework for digital inclusion through a transparent, public and real-time dashboard tracking progress vis-à-vis the policy timelines.

Acronyms and Abbreviations

AI	artificial intelligence
DBN	Digital Bharat Nidhi
DPI	digital public infrastructure
GSMA	Global System for Mobile Communications Association
IEEE	Institute of Electrical and Electronics Engineers
ITU	International Telecommunication Union
PPP	public-private partnerships
UMC	universal and meaningful connectivity
UNCTAD	United Nations Conference on Trade and Development
UNICEF	United Nations Children's Fund
UPI	unified payment interface
USO	universal service obligation

Works Cited

- Borg Psaila, Stephanie. 2011. "Right to access the Internet: the countries and the laws that proclaim it." *Diplo* (blog), May 2. www.diplomacy.edu/blog/right-to-access-the-internet-countries-and-laws-proclaim-it/.
- D'Silva Derryl, Zuzana Filková, Frank Packer and Siddharth Tiwari. 2019. "The design of digital financial infrastructure: lessons from India." Bank for International Settlements Paper No. 106. December. www.bis.org/publ/bppdf/bispap106.pdf.
- Department of Telecommunications. 2018. *National Digital Communications Policy — 2018*. https://dot.gov.in/sites/default/files/Final%20NDCP-2018_0.pdf?ref=static.internetfreedom.in
- GSMA. 2025a. *The Mobile Economy 2025*. www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/wp-content/uploads/2025/04/030325-The-Mobile-Economy-2025.pdf.
- . 2025b. *The Mobile Gender Gap Report 2025*. www.gsma.com/r/wp-content/uploads/2025/06/The-Mobile-Gender-Gap-Report-2025.pdf.
- IEEE. 2023. "Impact of the Digital Divide: Economic, Social, and Educational Consequences." *IEEE Connecting the Unconnected* (blog), February 27. <https://ctu.ieee.org/blog/2023/02/27/impact-of-the-digital-divide-economic-social-and-educational-consequences/>.
- ITU. 2025. "160 years of technologies empowering humanity." May 17. www.itu.int/hub/2025/05/160-years-of-technologies-empowering-humanity/.
- Jia, Shiwei, Jia, Tina Du and Hui Yan. 2024. "Towards a comprehensive framework for digital inclusion: a comparison of international measurements." *Aslib Journal of Information Management*. December 23. <https://doi.org/10.1108/AJIM-06-2024-0494>.
- Maheshwari, Deepak. 2020. "Wi-Fi Policy in India: Role of Serendipity" LinkedIn article, June 20. www.linkedin.com/pulse/indias-twisted-tryst-wi-fi-deepak-maheshwari/.
- . 2023. "Digital accessibility: A must for digital inclusion." DQIndia Online, October 3. www.dqindia.com/digital-accessibility-a-must-for-inclusion/.
- . 2025a. "A Novel Institutional Architecture for Digital Public Infrastructure." Opinion, Centre for International Governance Innovation, February 14. www.cigionline.org/articles/a-novel-institutional-architecture-for-digital-public-infrastructure/.
- . 2025b. "WTD 2025: Gender equality — A prerequisite for digital transformation." *ET Telecom*, May 17. <https://telecom.economictimes.indiatimes.com/blog/wtd-2025-gender-equality-a-prerequisite-for-digital-transformation/121230053>.
- Maheshwari, Deepak and V. Sridhar. 2020. "Broadband, broad-based." *The Financial Express*, June 9. www.financialexpress.com/opinion/broadband-broad-based/1985323/.
- Malik, Payal, Aman Sinha and Harishankar Jagadeesh. 2024. "Navigating SEP Licensing: Insights from Indian Jurisprudence." Indian Council for Research on International Economic Relations Policy Brief 30. December. https://icrier.org/pdf/Cellular-Standard-Essential-Patents_Policy-Brief-1.pdf.
- Mildebrath, Hendrik. 2021. "Internet access as a fundamental right: Exploring aspects of connectivity." European Parliamentary Research Service study. July. www.europarl.europa.eu/RegData/etudes/STUD/2021/696170/EPRS_STU%282021%29696170_EN.pdf.
- Ministry of Communications. 2025. "BharatNet: Extending Internet Access, Expanding Rural Progress." Press release, April 21. www.pib.gov.in/PressReleasePage.aspx?PRID=2123137.
- Ministry of Electronics and Information Technology. 2022. "Achievements Made under Digital India Programme." Press release, December 23. www.pib.gov.in/PressReleasePage.aspx?PRID=1885962.
- Tiwari, Piyush and Saumen Majumdar. 2025. "Coping with the Shocks of COVID-19 through Reverse Migration in India." *Economic & Political Weekly* 60 (23). www.epw.in/journal/2025/23/commentary/coping-shocks-covid-19-through-reverse-migration.html.

UNICEF. 2021. "COVID-19: Schools for more than 168 million children globally have been completely closed for almost a full year, says UNICEF." Press release, March 10. www.unicef.org/india/press-releases/covid-19-schools-more-168-million-children-globally-have-been-completely-closed

———. 2022. "COVID-19: Scale of education loss 'nearly insurmountable,' warns UNICEF." Press release, January 23. www.unicef.org/press-releases/covid19-scale-education-loss-nearly-insurmountable-warns-unicef.

United Nations. 2024. *Summit of the Future Outcome Documents: Pact for the Future, Global Digital Compact and Declaration on Future Generations*. September. www.un.org/sites/un2.un.org/files/sof-pact_for_the_future_adopted.pdf.

Vegas, Emiliana, Sunhwa Lee and Unika Shrestha. 2021. "How has education technology impacted student learning in India during COVID-19?" Brookings Institute, August 23. www.brookings.edu/articles/how-has-education-technology-impacted-student-learning-in-india-during-covid-19/.

About CIGI

The Centre for International Governance Innovation (CIGI) is an independent, non-partisan think tank whose peer-reviewed research and trusted analysis influence policy makers to innovate. Our global network of multidisciplinary researchers and strategic partnerships provide policy solutions for the digital era with one goal: to improve people's lives everywhere. Headquartered in Waterloo, Canada, CIGI has received support from the Government of Canada, the Government of Ontario and founder Jim Balsillie.

Credits

Senior Fellow **S. Yash Kalash**
Director, Program Management **Dianna English**
Program Manager **Ifeoluwa Olorunnipa**
Publications Editor **Christine Robertson**
Graphic Designer **Sami Choudhary**

À propos du CIGI

Le Centre pour l'innovation dans la gouvernance internationale (CIGI) est un groupe de réflexion indépendant et non partisan dont les recherches évaluées par des pairs et les analyses fiables incitent les décideurs à innover. Grâce à son réseau mondial de chercheurs pluridisciplinaires et de partenariats stratégiques, le CIGI offre des solutions politiques adaptées à l'ère numérique dans le seul but d'améliorer la vie des gens du monde entier. Le CIGI, dont le siège se trouve à Waterloo, au Canada, bénéficie du soutien du gouvernement du Canada, du gouvernement de l'Ontario et de son fondateur, Jim Balsillie.

Copyright © 2025 by the Centre for International Governance Innovation

The opinions expressed in this publication are those of the author and do not necessarily reflect the views of the Centre for International Governance Innovation or its Board of Directors.

For publications enquiries, please contact publications@cigionline.org.



The text of this work is licensed under CC BY 4.0. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

For reuse or distribution, please include this copyright notice. This work may contain content (including but not limited to graphics, charts and photographs) used or reproduced under licence or with permission from third parties. Permission to reproduce this content must be obtained from third parties directly.

Centre for International Governance Innovation and CIGI are registered trademarks.

67 Erb Street West
Waterloo, ON, Canada N2L 6C2
www.cigionline.org

CIGI