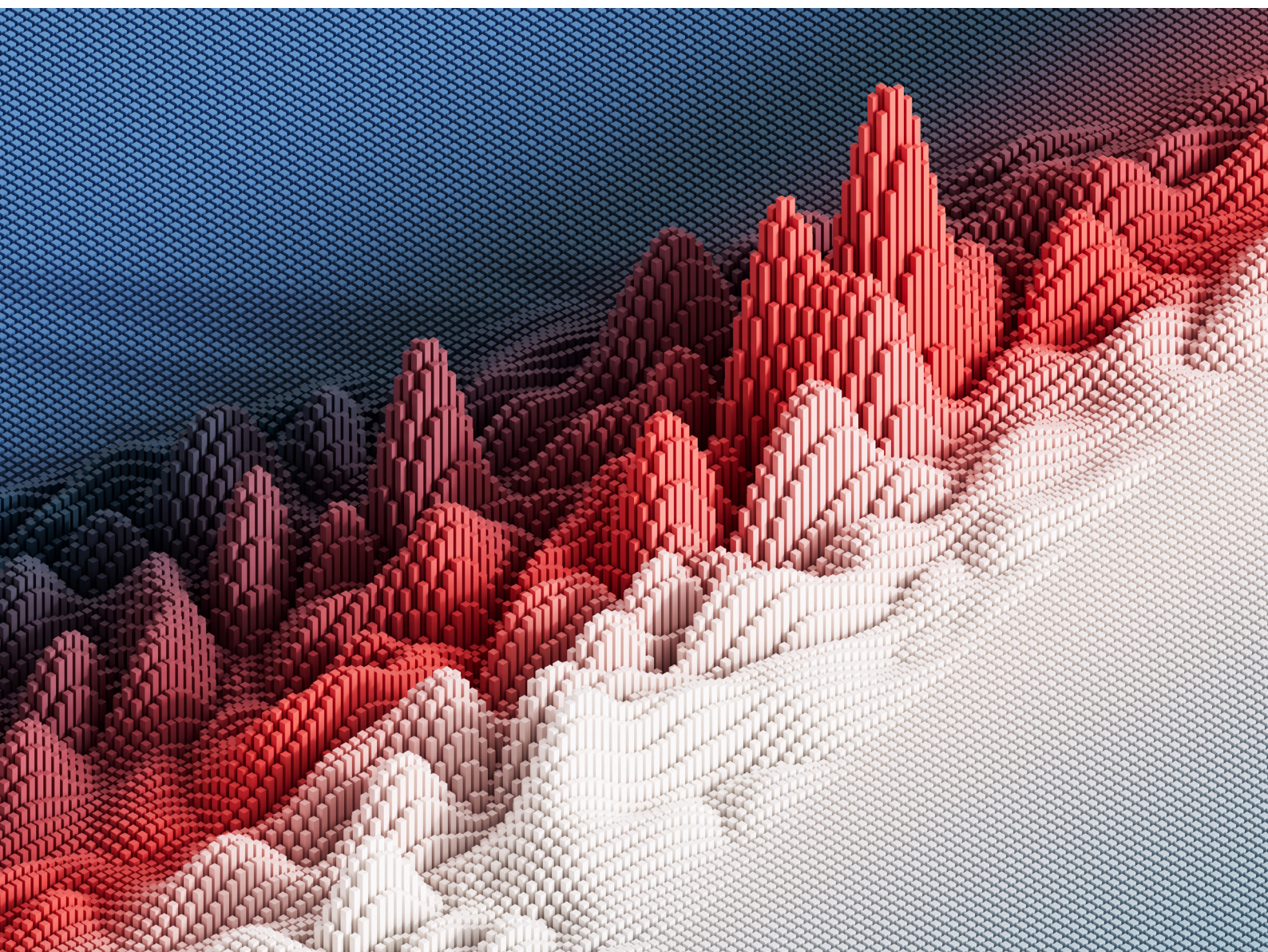# A Public-Private-People Partnership Model for Digital Economy Recovery in the Post-Pandemic World

Apoorva Lalwani and Jhanvi Tripathi

Abstract

The onset of the COVID-19 pandemic hastened the widespread adoption of digital technologies across the globe. The pace of digitalisation—from the micro levels of education and e-commerce to the macro levels of supply chains and production networks—has galvanised governments to advance digital regulations. The tightrope walk of creating policies that enable digital innovation and ensure regulations are in the larger public interest have led to intense debate. What is clear is that digital regulations are necessary to enable a complete economic recovery and secure humankind's common future. It is important to reconcile the competing visions of digital regulations to find the right balance and create policies and institutions that are responsive to the needs of citizens.

This report discusses the growth of the digital economy and the renewed importance of digital public goods (DPGs). It highlights the competing visions for digital regulations, and recommends a public-private-people partnership (4P) for digital governance. Using DPGs built through this 4P partnership model is good for the economy as it increases the number of stakeholders consulted in the creation of digital regulation.

Introduction

The 'digital economy' is an all-encompassing term that refers to any economic activity that uses digital information, knowledge, or tools as a factor of production and consumption.[1] This typically indicates specific parts of the economy, such as e-commerce or trade in cross-border digital services. The extent to which the digital element has become omnipresent across economic sectors and human lives was largely beyond the imagination of policymakers until recently. This is exemplified by the fact that even until the late 2000s, discussions on digital trade at the World Trade Organization (WTO) were limited to the Moratorium on Customs Duties on E-Commerce transactions.[2] The widening definition of the digital economy and its pervasiveness have also caused wariness at the level of multilateral policymaking related to the digital economy.

Digitalisation and digital innovation have been identified as the next frontiers in the industrial growth story, and governments have now started recognising the importance of regulating and perhaps even monetising this aspect of the economy. The 2019 Digital Economy Report by the United Nations Conference on Trade and Development (UNCTAD) notes the difference between traditional economic value creation and value creation in the digital economy—the main actors in the exercise of value creation are producers, consumers, and the government; in the digital economy, there are two additional forces in value creation: platformisation and the monetisation of data.[3]

In *The Great Tech Game*, Anirudh Suri argues that technology should be treated as a factor of production and not simply a sector of the economy.[4] Suri compares the accumulation of technology and data to the accumulation of capital as an asset for both the public and the private sector. Notably, the meaning of 'technology' has evolved to coincide with the digital sphere. At one point in history, the printing press was the frontier of technology, given that it democratised knowledge. Today, technological innovation is almost coterminous with digital technology. The deployment of (digital) technology, as Suri argues, boosts the productivity of the other factors of production as well. Eventually, he indicates, this implies a link between capital and technological innovation, as one attracts the other.[5] Countries wanting to progress technologically require capital, and capital is attracted to growth sectors of the economy (in this case, technological innovation).

A pre-pandemic report by Bloomberg shows that the digital economy is increasing the productivity of some economies, even as long-held advantages of the traditionally large economies wane.[6] The report identifies five sources of economic disruption—digitalisation, automation, populism, climate change, and protectionism—and four key drivers—demographics, investment, productivity, and catch-up potential. The index measures a country's ability to deal with these forces in percentage terms. An interesting picture emerges when exploring how the BRICS countries score in the areas of digitalisation as a disruptor vis-à-vis the overall drivers (see Table 1).

Table 1: Digitalisation as a disruptor in BRICS economies (value implies an ability to adapt; in percentages)

Country	Digitalisation as a disruptor	Drivers
Brazil	49.7	43.8
Russia	61.7	45.3
India	49.5	56.2
China	72.5	69.6
South Africa	48.4	56.7

Source: Bloomberg[7]

Besides China and Russia, the other BRICS members are in a unique middle position in their ability to adapt to a digitalised world. These are the levels of adaptation the countries would have likely been at if not for the COVID-19 pandemic. The pandemic has led to the increased adoption of digital technologies and leapfrogged growth in this sector of the economy. This can be seen from the growth levels in internet use and the digital economy during the pandemic.

Data aggregated from multiple sources suggests that, globally, the number of internet users increased from approximately 4.2 billion in January 2020 to 5 billion in April 2022. The global total increased by 200 million in 2020-21 alone.[8] According to the UNCTAD's 2021 Digital Economy Report, global internet bandwidth use increased from 26 percent in 2019 to 35 percent in 2020 due to the pandemic.[9] The report shows that the net increase in the profits of digital platforms in the US (from search engines to social media companies) reached US$192.4 billion in 2020, a remarkable 21.1 percent increase compared to 2019, while Chinese platforms saw a 78 percent increase in profits.[10] Overall, digital trade saw an increase, with digitally deliverable services accounting for 64 percent of all service exports in 2020, even as overall services trade saw a 20-percent drop.[11]

Internet adoption in the private sector grew dramatically during the pandemic. A McKinsey Report published eight months into the pandemic (October 2020) shows that the average share of digital customer interactions (which rose from 20 percent to 36 percent between June 2017 and December 2019), rose to 58 percent between December 2019 and July 2020.[12] While a 16 percent increase had taken over two years, a 22 percent increase occurred in six months. These numbers are important because they indicate that there are more consumers in the current digital economy, and many more financial transactions are taking place digitally than ever before.

Along with internet consumption and the digitalisation of services and trade, an important area of increased digitalisation was the delivery of public services or digital public infrastructure (DPI).

The Digital Public Sector

An important but positive fallout of the pandemic was the need to rapidly digitise public services such as healthcare and education to minimise the negative impact of the pandemic. An OECD report on digital transformation identifies DPGs as digital open-source software that makes DPIs functional.[13] DPIs are platforms used to deliver vital services like identification and payments to enable the use of public services. They cut across sectors and services.

The importance of DPGs and open-source data was repeatedly proven during the pandemic. In the health sector, governments and experts shared data to track and trace the spread of the virus in their populations, share effective treatment protocols in real-time, and record the ever-evolving variants of the virus. DPGs were also used for the issuance and roll out of vaccine programmes and vaccine certificates, which eventually allowed border rules to slowly be relaxed, thereby allowing trade in services (especially Mode 2 and 4, which depend on the movement of people[14]) to resume. The OECD reports notes the example of the Digital Infrastructure for Vaccination Open Credentialing (or DIVOC) developed by India, and which was cited by the WHO, leading to its adaption in other countries like the Philippines.[15] It has become widely apparent that DPGs are an important part of the global commons, which also impact international cooperation for public welfare. DPI in India has been used for a wide range of services, from direct benefit transfers, which is a flagship programme for financial inclusion, to enabling data sharing for access to vaccines using the Aadhaar unique ID.

A study by the Rockefeller Foundation spells out the importance of DPGs for DPIs. The report gives the example of the Digital Public Goods Alliance, which is built on the idea that DPGs are tools that countries can use to fuel their digital transformations, access pioneer information, and

develop local ecosystems.[16] This is part of a larger understanding, both in the public and private sectors, of digital technology being transformational and allowing economic growth. Technology is not just a factor of production but also a factor of distribution, according to Microsoft CEO Satya Nadella.[17] The public and private sectors need to coordinate best practices and responses to deliver public services.

DPGs are also the tipping point for consumers when it comes to data sharing and information exchanges. Data from the Observer Research Foundation's youth survey on technology policy suggests that young Indians are more comfortable sharing information with the government for what they deem as societal good than sharing information with for-profit technology companies.[18] While about 66 percent of respondents said they would be uncomfortable sharing sensitive data with companies even if they were offered remuneration, about 77.4 percent said they would be comfortable sharing medical records and 82 percent said they would be comfortable sharing financial records to boost public healthcare or financial systems.

The BRICS grouping has also recognised the importance of DPGs. At an address during the BRICS Academic Forum in 2021, Indian BRICS Sherpa Sanjay Bhattacharyya highlighted the importance of digital technologies to achieve the Sustainable Development Goals and articulated the hope to set up a BRICS portal on DPGs[19] to share open-source technologies created by BRICS members.[20]

What, then, is the appropriate middle ground in terms of policy? How can countries ensure economic growth without trampling on the needs and rights of citizens?

Digital Governance and Competing Visions

Although it is making lives easier and bolstering economies, digitalisation is also increasingly posing challenges for all. While there is a shared understanding of the importance of open and free digital services, there are also challenges, such as cyberattacks and hacking,[21] which have given rise to diverging views for digital governance, due to which various countries have adopted differing strategies on the issue based on their requirements. The world is currently roughly divided into two competing visions—the market-led model, as characterised by the US; and the government-led model, exemplified by China.[22]

The market-led model for digital governance is based on the free hand concept, which relies on the market's ability to organise, structure, and protect itself in the face of threats. This strategy involves limited state intervention, while the free hand of the market nudges companies to devise and adopt the best strategies and technologies, leading to higher innovation levels.[23] However, with the wide expansion of the digital economy, and more users being added every day, there is a rising threat of cyberattacks due to the limited enforcement of digital regulations and norms for best practices. There is also the matter of for-profit companies using consumer data without their consent for further innovation.

The US is a befitting example of the market-led system. The open market—with limited digital governance in terms of competition policy, data localisation (physical storage and process of data), privacy, and copyright—has given rise to global mammoths in the digital space, such

as Meta, Netflix, Amazon, Google, and Apple. The limited regulation model has bolstered the US's digital economy, making the country a leader in the digital space, while Europe, China, and South Asia are the largest consumers of digitally-enabled services provided by American companies.[24,25]

According to a European Center for International Political Economy (ECIPE) study, restrictive data policies (in particular, data localisation) negatively impact trade in digitally-enabled services. Also, the impact is stronger or more pronounced for countries with better-developed digital networks. The limited regulations pose lesser adherence costs on companies, which encourages more innovation and competition.[26]

However, there are growing concerns over these companies' global monopoly and access to citizens' data. Europe, one of the biggest partners/consumers of the US's digitally-enabled services, has raised arguments on various digital governance issues, one of which is privacy. Within the European Union (EU), privacy protection is a fundamental right, while it is still a consumer protection issue in the US. After having clashed on many occasions over privacy, the US and EU have now negotiated the privacy shield, which is still under legal challenge in the EU.[27]

Another point of contention is competition law. The EU fears that the absence of a just competition policy in the digital space is detrimental for its vibrant start-up market. The EU has noted that US tech companies abuse their dominant position in the market to push their products. For example, Microsoft bundled its media player with Windows, for which the European Commission fined Microsoft €497 million (approximately US$549 million).[28] In 2017, the European Commission imposed a €242 billion (about US$264 billion) fine on Google for abusing its search engine dominance in favour of its own shopping network.[29]

Furthermore, on the issue of data localisation, both parties realise the importance of the free flow of data owing to its increasing centrality to business and profits. However, according to the ECIPE's Digital Trade Restrictive Index, the EU ranks 21 on data policy restrictions, while the US ranks 53 (lower the rank, lower the restrictions), indicating their respective differences in

this regard.[30] The EU's General Data Protection Regulation (GDPR) requires protection and only the responsible transmission of data, which is a point of potential disagreement in US-EU digital engagement. The US and EU are trying to circumvent their differences by proposing bilateral regulations and through mutual recognition of the adequacy of domestic rules.[31]

Fears related to the monopoly of big tech firms and the increasing threats of cyberattacks on a country's critical infrastructure pose a challenge for national security and resilience. This has given rise to a counter approach—the state-led approach. The government-led approach is pre-emptive towards potential risks and imposes regulations to avoid irreversible consequences. The strategy can effectively reduce cyber threats, but may also limit free enterprise and innovation, and decrease competitiveness in the global market.[32]

The EU's GDPR is a democratic, region-led approach towards digital governance. The GDPR's primary focus is on the protection of the privacy of internet users, giving them unprecedented control over their data. The regulation, with respect to data processing, transfer, and storage under the GDPR, has instilled consumer trust.[33] However, researchers have been apprehensive of the negative impact of the regulations on cost competitiveness and trade.[34]

Positioning the BRICS

Where do the BRICS states stand? China and Russia have adopted the strict state-led approach to seek complete cyber sovereignty. Both China and Russia have implemented one of the most restrictive policies for digital governance with respect to competition policy, intellectual property rights, content access, privacy, and the cross-border movement of data.[35]

India began with a more restrictive regime. In 2019, the government proposed the Data Protection Bill, which will ensure mechanisms for the protection, processing, and local storage of personal and critical data. A parliamentary review report on the Bill was released in December 2021, with recommendations on how different types of data should be handled and the frameworks required.[36] India is also developing Data Empowerment and Protection Architecture framework, a public-private endeavour that enables users to have control in sharing their data with a third party, and also ensures its free flow and secure transfer. The second version of the Data Protection Bill was released in November 2022, focusing more on the rights of citizens and obligations of organisations when using the data rather than the overall transfer of data.

Brazil legislated a new Data Protection Law in September 2020 to regulate the processing of the personal data of its citizens and proposed the regulation of social media content in the form of the 'Fake News Bill'. Brazil has also adopted a cybersecurity strategy, establishing three strategic pillars to achieve cybersecurity in the country—digital security and prosperity, resilience to threats, and the country's role in international cybersecurity.[37]

South Africa is establishing similar data security norms. In 2020, it enacted the Protection of Personal Information Act to make responsible parties (companies or government entities collecting personal information) and the operator (entity processing personal information on behalf of the responsible party) more accountable for the protection of the personal data of the citizens.[38]

Although these regulations protect the countries from potential threats, they are extremely burdensome on companies. Compliance becomes even more difficult for multinational firms due to inconsistencies and non-uniformity in digital governance rules from one country to another. Still, free digital services provided by foreign corporations are not entirely free; they are paid for with data and, ultimately, national security.[39] Such 'free' digital services are aimed at capturing potential data wells. In light of growing cybercrimes and threats posed to national security and, consequently, with the advent of increasing regulations in the digital space imposed by the BRICS countries, there is growing momentum to re-establish digital sovereignty.[40] The BRICS countries are increasingly favouring data localisation as local storage ensures data being governed by local regulations, and timely access to data during cybercriminal investigations.[41]

Cybersecurity, with special regard to data privacy and data localisation, has become more relevant in recent years, with ample examples of technology-related violations trying to manipulate citizens and democracies. With increasing knowledge of the economic costs of cyberattacks on a country, the strategic value of personal data, and the inability to appropriately tax raw data, countries in the BRICS grouping may have a natural consensus on the different issues around data regulations.[42]

An assessment of the BRICS countries' domestic policies and the group's endeavours—such as the establishment of BRICS Working Group on Security in the Use of ICTs in 2015, Russia's proposal on a BRICS intergovernmental agreement on cooperation on ensuring security in the use of ICTs, and Brazil's suggestion of bilateral agreements among the grouping's countries to ensure security in the use of ICTs[43]—shows an increased synergy with respect to digital governance.

However, at the international level, BRICS countries are unable/reluctant to take a unanimous stand on the issue, particularly amid the ongoing 'digital Cold War' between Russia and China's multilateral approach and the US's multistakeholder approach. Russia and China are pushing the multilateral approach by advocating for the internet and norms regarding the digital space to be included in the International Telecommunication Union, which gives developing countries more influence in decision-making and reduces the sole authority of the Internet Corporation for Assigned Names and Numbers (ICANN) over the internet. On the other hand, the US and other western countries support the multistakeholder approach for fear of losing the US's limited but real control on the ICANN.[44]

Other countries in the BRICS are unable to showcase full support to the Russia-China stance, prioritising their national interest instead and thus reducing the grouping's influence on this front. The BRICS countries must push for a unanimous consensus to develop a more secure, yet open, framework for the sustainable development of the digital economy. An overarching framework towards cybersecurity at the BRICS level will enable all member countries to jointly propose norms for responsible behaviour at the UN and other multilateral institutions.

Interestingly, the larger technology companies appear to be in favour of digital regulations. In an intervention at the World Economic Forum in 2022 Microsoft president and vice-chair Brad Smith noted that there was a need for 'multi-stakeholderism' and a 'Digital Geneva Convention', to establish principles of trust and security in the cyber sphere.[45] It is a unique situation where one of the biggest multinationals worldwide supports regulation as long as these continue in the vein of multistakeholder multilateralism. The idea is explained in greater detail in *Tools and Weapons*, Smith's co-authored book (with Carol Ann Browne).[46] The authors share their experience collaborating with SAP and Adobe in creating the Open Data Initiative, which aims to provide a platform to allow companies to share their data even as they retain ownership over it. On governance, Smith and Browne note that perhaps the problem is not that technological innovation is so fast, it is that governments function slowly and, therefore, regulation cannot keep up with innovation.

Additionally, societal choices and cultural values also impact the evolution of technology. Take, for example, the debate around racial bias in Artificial Intelligence. Digital platforms separated by geographical borders cannot help but have such a bias. However, their impact is not limited by geography due to the openness and adaptability of the digital world. Digital supply chains may be similarly impacted if regulations are not harmonised for the private sector from a cost of compliance and market efficiency lens.

The question to resolve then is—can digital governance be ideated in a manner that does not hamper economic activity and, therefore, recovery and growth?

The importance of BRICS is not just because of its member countries' size and increasing economic and geopolitical relevance, but also because of the pace of internet growth in the five countries. Considering the growing user base post-pandemic, increased internet penetration in India, Brazil and South Africa, and the BRICS's huge appetite for digital transformation, the group forges must enhance cooperation and mutual trust to develop a regulatory framework for digital governance. The technological, political, and governmental imperatives around cyber regulation defined here will impact the grouping and the world.

However, it is important to note that all countries are at different stages of digital development, and their capabilities vary. As a global leader in the digital space, China has developed high-level information infrastructure and IT industries and has a substantial domestic market. Through its efforts in creating a digital Silk Road, China is implementing strategic measures to accelerate the deployment of new infrastructure and is developing new formats and models centred around its own digital economy. While India and Brazil are the emerging stars of the global digital market,[47] their digital economies are primarily based on high internet consumption attributed to emerging global unicorns, such as Ola Cabs and Byjus in India,[48] and QuintoAndar and Creditas in Brazil.[49] Lastly, African countries are starters in the digital economy space and are trying to narrow the digital divide that persists with the developed countries, primarily through mobile internet.[50]

The Way Forward: A Public-Private-People Partnership

To enable post-pandemic recovery in an equitable manner for all, it is important to think of an innovative model at the BRICS that differs from the current duality. A 4P model—a multistakeholder approach centred on the needs of the people, who are the actual data wells behind the prolific performance of digitalisation—might be the answer. Several recent studies indicate that the 4P model for infrastructure development will be more prosperous, identifying people as significant stakeholders and embracing the bottom-up participative strategy for implementing projects and policies.[51,52] This model is replicable in the digital economy. A more people-participative model, characterised by four key features—transparency, inclusivity, interactiveness, and continuity towards the development of the digital economy—will shift the decision-making power and the ultimate authority to people, eventually reducing the risk of potential opposition or conflict from the people.

An important example of the success of the 4P model is the creation of India Stack. This volunteer-driven software platform has been a key enabler of the government's Digital India initiative. India Stack's roots are in the government's efforts to solve a fundamental problem in enabling financial inclusion, the lack of a comprehensive identifier[53]. The Unique Identification Authority of India, a somewhat precursor to India Stack, was built in 2009 to resolve this problem. The programme is a stellar example of a public-private partnership, with people at the centre of the cooperation. Stalwarts from India's tech industry lead the initiative, which grants Indian citizens a unique digital ID that is at the centre of India's financial inclusion efforts. For instance, the Pradhan Mantri Jan Dhan Yojana was possible through a combination

of *jan dhan* (public funds), Aadhaar (digital public infrastructure), and mobile penetration (private sector).[54] This direct transfer of funds to citizens creates many more consumers in the market, generates more significant economic activity, and reduces corruption as there are fewer leakages or chances of embezzlement.

Given enough time and effort, the model is replicable at the regional and global level. It is important to prioritise the public good of equity and inclusion, and balance it with state interests of sovereignty and security. It is also necessary to ensure that this does not come at the cost of economic growth but is implemented in a way that drives economic growth. **ORF**

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