G20's Digital Public Infrastructure: Analysing Progress & Potential

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Introduction

With the end of the of the 18th G20 summit in New Delhi, held at the Bharat Mandapam Centre in Pragati Maidan, New Delhi, the G20 member states adopted the New Delhi declaration which in Prime Minister Narendra Modi's words was a "historic and pathbreaking achievement" considering the declaration was adopted with 100 percent consensus. Following the failure of the November 2022 G20 leaders' summit in Bali, where member states had acknowledged the importance of advancing inclusive cooperation on digital trade, expanding affordable and high-quality digital infrastructure, facilitating cross-border data flows, and fostering digital literacy and skills, but still world leaders had left without an agreement, the 100 percent consensus on the New Delhi declaration shows India's ability to bring everybody on the same table.

Digital Public Infrastructure and India

Digital Public Infrastructure (DPI) refers to building blocks or platforms like digital identity, financial infrastructure, and data exchange solutions that assist nations in providing citizens with basic services, empowering individuals, and enhancing lives by facilitating digital inclusion. The movement of people, money, and information is mediated through DPIs. The movement of people through a digital ID system comes first. Second, the movement of funds via a real-time, quick payment method. Thirdly, the flow of personal data through a consent-based data sharing system to fully realise the advantages of DPIs and give the citizen a practical means of data control.

The DPI is a game changer. With the digital public infrastructure becoming the centre piece of India's G20 presidency amid the global tensions and India's aim to increase technological global financial inclusion, the New Delhi declaration is a big success for the Indian diplomacy since the last attempt made, for such an initiative, failed during the Bali summit. With the New Delhi declaration being passed India's model of governance coupled with its aim to provide employment while enhancing people connectivity and the country's aim to facilitate services to its citizens will now be shared by all the member G20 countries.

However, the path to this rocky road was not an easy one. For this declaration to become a success, work started in the background of this summit. Starting with the first meeting taking place in January this year, with the Union Government setting up India's G20 Task Force on Digital Public Infrastructure for Economic Transformation, Financial Inclusion and Development which was co-chaired by India's G20 sherpa, Mr Amitabh Kant, and Infosys Chairman Nandan Nilekani, where a resolution was made to oversee and facilitate India's G20 Presidency agenda. This was further followed by the first meeting of the G20 Digital Economy Working Group (DEWG) which was held in Lucknow, Uttar Pradesh from February 13-15 this year where digital skill development, digital public infrastructure, and cyber security were the key areas of focus and delegates from the member states met for the 4th time and discussions were made for the drafting of the final documentation.

The New Delhi Declaration covers 3 key aspects of DPI : A G20 Framework for Systems of Digital Public Infrastructure; Creation of a Global Digital Public Infrastructure Repository and One Future Alliance.

- **G20 Framework for System of Digital Public Infrastructure:** All G20 members have agreed to a voluntary and proposed structure for the creation, implementation, and governance of digital public infrastructure (DPI), a Sustainable Development Goals (SDG) accelerator. In the Digital Economy Working Group, the World Bank and the United Nations Development Program (UNDP) worked together with the Government of India as a knowledge partner on DPI. DPI is a bundle of digital technologies, such as digital payment networks, digital identification systems, etc., where India's DPI was showcased to world.[1]

- **Creation of a Global Digital Public Infrastructure Repository**: The declaration also includes the endorsement of India's proposal to create and maintain a virtual stack where non-G20 and G20 nations can voluntarily contribute their open-source technologies in order to foster an ecosystem that benefits all parties. The repository will house DPI solutions from member nations and will facilitate their simple deployment. The website is still-under-construction and will serve as the virtual repository's host. The main idea behind the repository is to solve the knowledge gap about the best methods for population-scale DPI design, development, and deployment. Each participant has the option to display any information at their discretion, which can assist others in developing their DPI, depending on whether their DPI is built on open platforms, APIs, standards, and protocols is not only confined to G20 member countries but is open for all.[2]

- **One Future Alliance**: The resolution also takes note of India's plan to establish One Future Alliance, a voluntary initiative aiming at capacity building, and to offer financial support and technical help for the implementation of digital public infrastructure in low- and middle-income nations.[3]

Why the Push for Digital Public Infrastructure in the G20

The push for the digital infrastructure by PM Modi has been long seen. He feels that DPI can stimulate economic expansion and development where countries can boost efficiency, production, and creativity while also upgrading their digital infrastructure, which will ultimately result in greater economic success. Not only will this lead to a greater financial inclusivity for all, but would greatly empower those who are in the rural and remote areas, while also helping the Micro, Small, and Medium Enterprises and leading to bolstering of the economy which will lead to a reduction in poverty.

With the declaration being adopted, not only did India's vision for a democratisation for technology succeeded, but a framework for safe and responsible use of Artificial Intelligence which can further help humans in their future challenges has been adopted where the members would work together for harnessing AI's capabilities for the good for all.

Another reason of push for this declaration is to do with the digital economy. As the world moves towards a cashless economy and a crypto based currency, the member countries led by India realised the shift towards the same and have vowed that maintaining security is essential for fully utilising the benefits offered by the global digital economy. This would also help curb terror funding and narcotics trade, which often is financed through crypto currency, by making the network more visible for all.

Realising the problems which most countries are facing and have faced during the pandemic, DPI would also ensure that essential services and money can be made available to the public

without the need for them to leave their homes. Countries like UAE, France, Russia, Bahrain, Nepal and 5 other countries have already adopted India's UPI system as they see it as an alternative to the SWIFT payment system and would not only help boost India's technological exports but would also help drive the economy forward along with giving a boost to the technology startups.

While the Digital Public Infrastructure has been received positively by everyone and is seen as a new tool of India's soft power there is still a long way to go for this initiative and for its successful operation. India has also partnered with multilateral organizations like UNDP and countries like the US for the development and advancement of the digital public infrastructure. Looking at the Estonia model, the government plans to further expand its digital public infrastructure and hopes to become a leader in this sphere.

A further push has been given to the digital public infrastructure as countries like Armenia, Sierra Leone, Suriname, Antigua, Barbados, Trinidad and Tobago, Papua New Guinea and Mauritius along with member states of Shanghai Cooperation Organization (SCO) have adopted India's digital public infrastructure along with India Stack to develop their indigenous DPI systems. This is done to drive the Prime Minister's commitment to sustainable development and inclusive growth for all.

The push for DPI is also for India and the world to achieve its Sustainable Developmental Goals. As per the UNDP'S report on "Accelerating the SDG'S Through Digital Public Infrastructure", the use of DPI can accelerate the global economic growth by 20-33%, can reduce the carbon emission by 0.8 to 1% GtCO2e and can increase in access to justice by 28-42%.[4] Not only this but the use of DPI can also reduce government expenditure. As per the Indian government report, up to March 2021, about 1.1 percent of GDP in expenditure was saved due to the digital infrastructure.[5]

Relevance of DPI & Way Forward

With the introduction of the digital public infrastructure in the G20 and SCO, India has found a new element of its soft power. Up to 43 nations have indicated a desire to use some elements of the Indian DPI and this has become a low-cost, software-based counterpart of China's Belt and Road Initiative, which focuses on infrastructure while the world considers data to be the new currency of the world. India has a tool which keeps it ahead of the curve. This also gives India an edge towards China and other countries in framing digital infrastructure laws and regulations, an edge which will allow India an opportunity to have the first say in important matter pertaining to data.

Not only is this an excellent opportunity for India as a country but this also gives a boost to the Indian startups especially those which are dealing with healthcare and banking. Driving the economy forward and boosting India's rank in the ease of doing business. But we all need to understand that this is a double-edged sword. While on one hand this allows governments to better cater to their citizens by providing them essential services at their doorsteps or on their devices but there also looms a persistent risk of data theft and illegal data mining. India has already faced its fair share of criticism for the Aadhar data leak of over 1.1 billion of its citizens from 2017-2018.[6] There needs to be a better framework and security for protection of data especially if this vision is now to be shared by G20 members and other states which wish to join this venture. While India has tied up with Infosys for overlooking this aspect a further tie up with

industry leaders is essential for this enterprise to be successful and safe for all and here India needs to take the driving seat.

While the One Future Alliance is a great initiative introduced by our Prime Minister there needs to be a conscious effort by all to share their best practices for capacity building only then can such a venture be successful. Till now only India has provided its digital stacks and resources for member states to work and build upon.

Conclusion

The DPI Framework's acceptance by the G20 during India's Presidency signals a global shift towards digital transformation that combines technology and ethics. It prioritises community interaction, openness, and data privacy rules, going beyond conventional infrastructure. This is a framework for modernising global government, not just a set of rules. India's success serve as a motivation for the developing world and guiding countries towards a digital, inclusive society.

Endnotes

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[1] "G20 New Delhi Leaders Declaration", *Ministry of External Affairs of India*, September 10,2023, pp. 22-23, https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/G20-New-Delhi-Leaders-Declaration.pdf

[2] Ibid.

[3] Ibid.

[4] "Accelerating the SDGs through digital public infrastructure: A compendium of the potential of DPI,"*United Nations Development Program*, August 19, 2023, accessed on September 16, 2023, https://www.undp.org/india/publications/accelerating-sdgs-through-digital-public-infrastructure-compendium-potential-dpi

[5] Cristian Alonso et al, " Stacking up the Benefits Lessons from India's Digital Journey," *International Monetary Fund,* March 31,2023, accessed on September 18, 2023, https://www.imf.org/en/Publications/WP/Issues/2023/03/31/Stacking-up-the-Benefits-Lessons-from-Indias-Digital-Journey-531692

[6] Yogesh Sapkale, "Aadhaar Data Breach Largest in the World, Says WEF's Global Risk Report and Avast," *Moneylife*, February 19, 2019, accessed on September 16, 2023, https://www.moneylife.in/article/aadhaar-data-breach-largest-in-the-world-says-wefs-global-risk-report-and-avast/56384.html

Naman J Anand is a Research Intern at Centre for Strategic Studies and Simulation (CS3), United Service Institution (USI) of India. He holds a Masters of Arts in Diplomacy, Law & Business from O.P. Jindal Global University.

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