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Digital Public Goods and India's Diplomatic Outreach in the Indo-Pacific

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Abstract

The government of India's determined digital push in the domestic sphere through flagship schemes like 'Digital India' is also getting manifested in the diplomatic sphere. India is one of the few countries that has taken the lead in developing robust digital public infrastructures like Aadhar (Unique Identification Number.) for accessing social benefits, Covid Vaccine Intelligence Network (CO-WIN) portal for public health, and Unified Payment Interface (UPI) for instant money transfer and financial inclusion. These have shown potential for improving public service delivery and overall governance. This has prompted the current government to export/offer India's stack of digital public goods to its neighbouring countries. For instance, countries like Bhutan and Nepal have adopted the united payments interface. Most of the BIMSTEC countries have a substantial migrant population and therefore, the proliferation of platforms like the UPI would substantially reduce the cost of sending money. Similarly, identifying beneficiaries through unique numbers for welfare schemes could help check corruption and leakages, benefitting people and the respective government(s). These can substantially alter the governance infrastructure and play an instrumental role in regional integration through digital infrastructure.

Therefore, the paper argues that India's digital public good diplomacy could be a potent force in the digital integration of the Indo-Pacific region. Unlike large-scale infrastructure project that requires massive capital investment and could stress the balance sheet of recipient countries, these digital public digital goods pose no such risk. The subsequent section of the paper focuses on the following: (a) India's troika of digital public goods, (b) India's overall digitization experience, (c) ongoing efforts to leverage it for foreign policy objectives, and recommendations for fostering digital connectivity across the Indo-Pacific region. Methodologically, the research article is based on reviewing secondary literature sources such as journal articles, policy reports, speeches of leaders, and news reports.

Keywords: Digital Diplomacy, Digital Public Infrastructure, BIMSTEC, BRI, India, South Asia.

Introduction: Digitization and Troika of India's Digital Public Good

A flip side of the COVID-19-induced disruption and health crisis is the rapid digitization of realms/domains like governance, healthcare, business, and work. This has led to increased intensity of data flows within and across borders. As per McKinsey's global survey of executives, "the COVID-19 pandemic accelerated the digitization of their operations by three to four years, and in some sectors by almost seven years"[i]. Across businesses, the share of digitization has leapfrogged. The survey notes that the share of digitized products and services globally was around 29% in 2017, which increased to 55% in 2020[ii]. Apart from businesses, COVID-19 marked the acceleration of digitization of government services, i.e., a large range of government services shifted online, notwithstanding the digital divide. According to the United Nations E-Government Survey, 65 % of the 193 member states are at the high or very high level of the E-Government Development Index (EGDI)[iii]. This upward tick in the digitization of goods and services offered by both the public and private sectors has brought discussions about digital infrastructure (read public digital infrastructure) to the centre of global governance deliberations. Post Covid-19 digital infrastructure has become crucial to the booting of the economy and therefore digital public goods are increasingly becoming central to bridging the digital divide within the country as well as across the region.

United Nations defines digital public goods as ones "characterized by open source software, open data, open AI models, open standards, and open content"[iv]. India stack and Modular Open-Source Identity Platform (MOSIP) are examples of digital public infrastructure that could be leveraged to develop digital goods. Definition-wise, "India stack is the term used for open APIs (Application Programming Interface), and digital public goods that aim to unlock the economic primitives of identity, data, and payments at the population scale; it can be applied to any country for enabling it to develop digital platforms"[v]. Similarly, MOSIP could be understood as "an open-source identity platform that could help government and other user organisation implement a digital foundational identity system in a cost-effective manner; it provides flexibility to countries in implementing and configuring the systems in a manner specific to their context"[vi].

India's successful leapfrogging in building large-scale digital public goods which are open, affordable, real-time, and inclusive deserves serious attention. For brevity, the paper discusses three digital public goods in its introduction section: **Aadhar, UPI, and the COWIN app**. The reason for listing them out is that these digital goods have impacted and continue to impact billions of lives daily, thereby necessitating discussion.

Initially conceived in 2009 under the Manmohan Singh government, India has so far managed to issue more than 1 billion digital identity cards, also known as **Aadhar cards,** in 2021, covering 99 per cent of the net Indian adult population aged 18 years and above[vii]. At the start of the Aadhar program, it was reported that only 17% of Indians had a bank account, and close to 400 million Indians lacked individual identity[viii]—this complicated spending of welfare subsidies as there was rampant leakage. Thus, began the journey to provide a unique digital identity to 1.2 billion Indians that could be leveraged for inclusive governance. More than a decade later, Aadhar has substantially altered the governance landscape and has emerged as the backbone of the Indian welfare state. According to the Economic Survey of India (2023, 156)[ix], Aadhar is used for 318 central schemes and over 720 state DBT (Direct Benefit Transfer Scheme). The Union Government is increasingly leveraging aadhar-based DBT to implement large-scale welfare schemes like the NREGA (National Rural Employment Guarantee Act) and PAHAL (Pratyaksh Hanstantrit Labh Scheme); as of 2022, close to USD 93 billion comprising 10.1 billion transactions has been executed under the aegis of such large-scale schemes[x]. Reportedly, Aadhar-based transaction has reduced the transaction cost and eliminated fake beneficiaries, reportedly saving the union government around USD 27 billion[xi]. The success of the Aadhaar digital identification program has generated several responses; notable among them is the Nobel laureate and former World Bank economist Paul Romer, who described Aadhaar as "the most sophisticated ID program in the world"[xii].

Next, **United Payments Interface (UPI**) is another significant digital public good that has revolutionised the banking and digitised financial transactions within India and boasts penetration to mufassil towns and villages. An estimate of penetration of real-time digital payments and banking could be gauged from the following statement by the Asia Group vice president Uzair Yunus, a Pakistani-origin policy analyst who was visiting India recently; in an interview titled "This is India's moment"[xiii] talks about the proliferation of digital goods like UPI and Aadhar. He notes, **"Bombay mei mochi ke pass bhi QR code hai"** (roughly translated as "In Bombay, even a cobbler uses QR code for accepting payments). In February 2023, approximately 150 billion [xiv]USD worth of UPI transactions were recorded within India. A joint report by the Boston Consulting Group (BCG) and Phonepe titled "Digital Payments in India: A US$10 trillion opportunity"[xv] notes that the share of UPI in India's overall non-cash transactions is rising steadily; UPI constituted only 16% of the overall non-cash transaction in 2019 and almost quadrupled to 63% of the overall non-cash transaction in India; and is expected to comprise 73% of the overall non-cash transaction in India by the financial year 2026. A snapshot

of the overall digital transaction shows an exponential rise in the overall digital transactions in India, both in terms of value and volume.

Year (FY)	Total no. of digital txn (billion)	Total approx. value of digital txn (USD trillion)
2017-18	20.71	23
2018-19	31.34	30.2
2019-20	45.72	36
2020-21	55.54	36.5
2021-22	88.40	36.8
2022-23*	91.92	25

Source: PIB, 2023[xvi]

The success of India's real-time digital payments infrastructure is gradually being appreciated, and a proposal to improvise FedNow on the lines of an open and real-time payment system akin to India's UPI was suggested to Federal Reserve Board, USA, by Mark Isakowitz, a senior official at the google in charge of GPay. In a letter dated 7th November 2019, he wrote[xvii]:

> "UPI was thoughtfully planned, and critical aspects of its design led to its success. Firstly, it is an interbank transfer system. Second, it is a real-time system. Third, it is open- meaning companies can build applications that help users directly manage transfers into and out of their accounts held at banks. It has attained amazing results for banks, consumers, and other players within the payment ecosystem. Adoption of the system was rapid, growing from 100,000 monthly transactions to 77 million, to 480 million, to 1.15 billion monthly transactions in the first four years. After three years, the annual run rate of transactions flowing through UPI is about 10% of India's GDP. Google has been a successful market participant in India's use of UPI, and Google Pay (Gpay) provides one of the three leading mobile applications that use UPI; every transaction made in Gpay is through our partnerships with Indian banks over UPI-this success is mutual as between tech, financial services, and the government".

The above note by the Google official suggests the success of digital payment infrastructure not only in terms of design and scale but also from the point of weaving together multiple stakeholders such as tech companies, financial service providers, common users, and government machinery in a complex setting like India. Thereby making it a case study for not only digital public goods but also the regulatory environment that enables the seamless proliferation and adoption of such goods.

Lastly, the **COWIN app** is another digital public infrastructure that impacted the lives of billions of Indians during the pandemic. Apart from large-scale vaccination programme and domestically manufactured vaccines, India's fight against the COVID-19 pandemic was marked by the development and deployment of digital public health infrastructures like the COWIN app. COWIN or Covid Vaccine Intelligence Network is a "cloud-based system that facilitates registration, immunisation, appointments, and issues digital vaccine certificates"[xviii]. This enabled the government to register beneficiaries, track their vaccination status, and issue QR code-

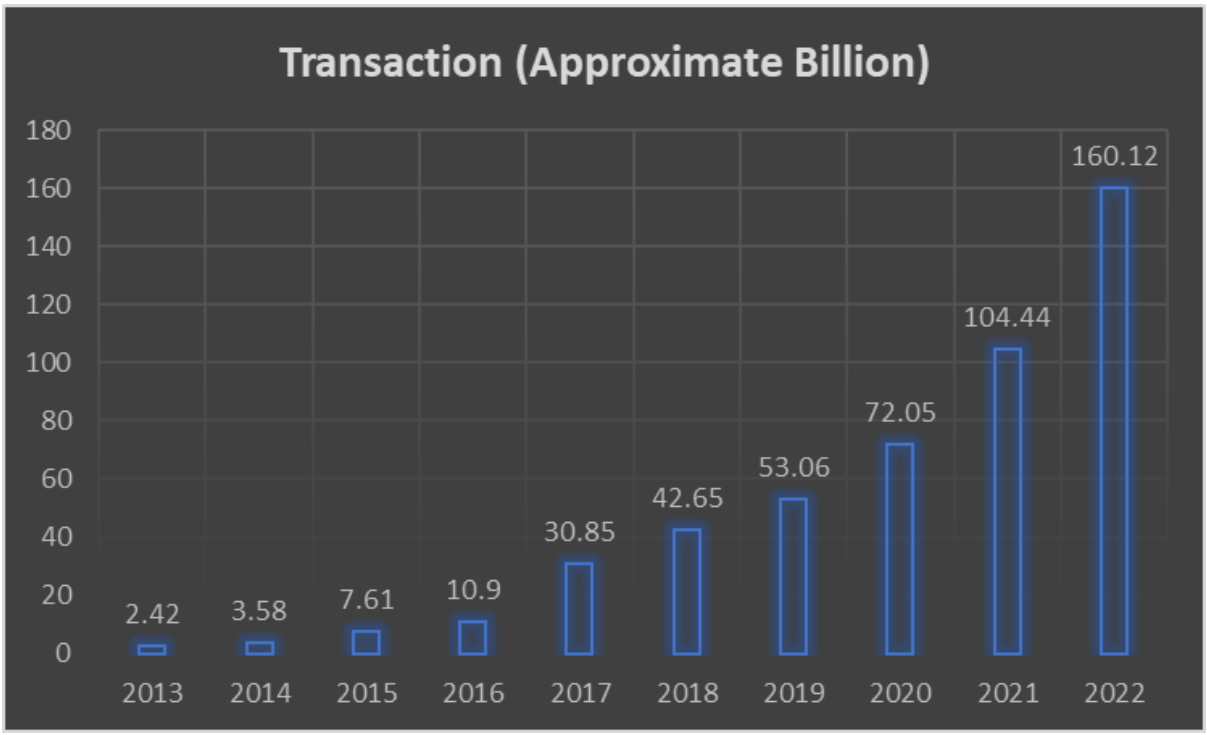
enabled vaccine certificates. Today, India has successfully administered 2.2 billion[xix] COVID-19 doses, a significant milestone enabled by digital products like COWIN in a context marked by geographical vastness, catching up digital literacy, patchy ICT infrastructure in rural areas, and the multiplicity of language, norms, and beliefs. Thereby necessitating the need to emphasise the inclusive manner in which these are being deployed or attempted.

Digital India: Making Clicks Count

GSMA report titled 'mobile economy Asia Pacific 2022' notes that mobile broadband remains the crucial link for internet connectivity in the Indo-Pacific region. At the end of 2021, there were 1.2 billion mobile internet users with an overall penetration rate of 45 % which is set to increase to 52 % by 2025[xx]. With more than 700 million subscribers, India is presumably one of the fastest and largest growing economies for digital goods and services. Internet users in India are estimated to soar up to 900 million users in 2025; thus, 87 per cent of the households in India will have at least one internet user in the coming year[xxi]. Reserve Bank of India's (RBI)[xxii] own estimates suggest that the size of the digital economy in India in absolute terms has more than doubled from USD 107.7 billion in 2014 to USD 222.5 billion in 2019 and has subsequently led to the generation of around 62.4 million Jobs. Similarly, India's Chief Economic Advisor, V.A. Anantha Nageshwaran, notes that "Digital Public Infrastructures (DPIs) could add around 60-100 basis points i.e., 0.6%-1% to India's potential GDP growth rate"[xxiii]. It is estimated that India's internet economy is expected to touch around USD 1 trillion in 2030[xxiv]; similarly, the size of the SaaS (Software as a service) company is set to grow from USD 3.5 billion in FY 21 to approximately USD 8 billion in FY 26[xxv]. In fact, digitization, a function of internet penetration could offer cross-sectoral benefits. For instance, it is estimated that the digitization of small and medium businesses (SMBs) in India could add around USD 158 billion to USD 216 billion to India's GDP[xxvi].

Apart from economic contributions, digitization has significantly impacted governance in terms of quantity and quality. Digitization of government services has proven effective in reducing corruption. For instance, the launch of platforms like 'I Paid Bribe' in the Indian province of Karnataka helped the transport department figure out critical areas of improvement based on anonymous complaints lodged by the citizens through the online portal (Adam and Fazekas 2021,7)[xxvii]. This led to a change in the driving license mechanism, and a revamp was implemented to eliminate the scope of rent-seeking in the entire process (Ibid, 8).

Similarly, welfare schemes and subsidies are an integral part of public policy and governance in India. However, rampant corruption was (and perhaps is) one of the acute challenges confronting India's state capacity. In this regard, JAM trinity- Jan Dhan, Aadhar, Mobile has proven to be a significant mechanism in checking corruption. As Gupta (2016)[xxviii] notes that digitization of Direct Benefit Transfers (DBT) helped the government of India to save USD 3 billion from just one welfare program-LPG (cooking gas cylinders) subsidy. The unique identity through Aadhar card and direct transfer of subsidy to bank accounts opened under Jan Dhan Yojna helped eliminate over 30 million fake beneficiaries[xxix]. This indicates the impact that digitization could have in improving public finances and ensuring transparency and good governance. Given the impact and outcome, the Government of India's thrust on digitization is hard to miss. A cursory look at the Government of India's Etaal portal (Electronic Transaction Aggregation and Analysis Layer) highlights the transaction record of 4,043 digitized services[xxx]. A snapshot of the digital transaction of these services from 2013-2022 is given below:

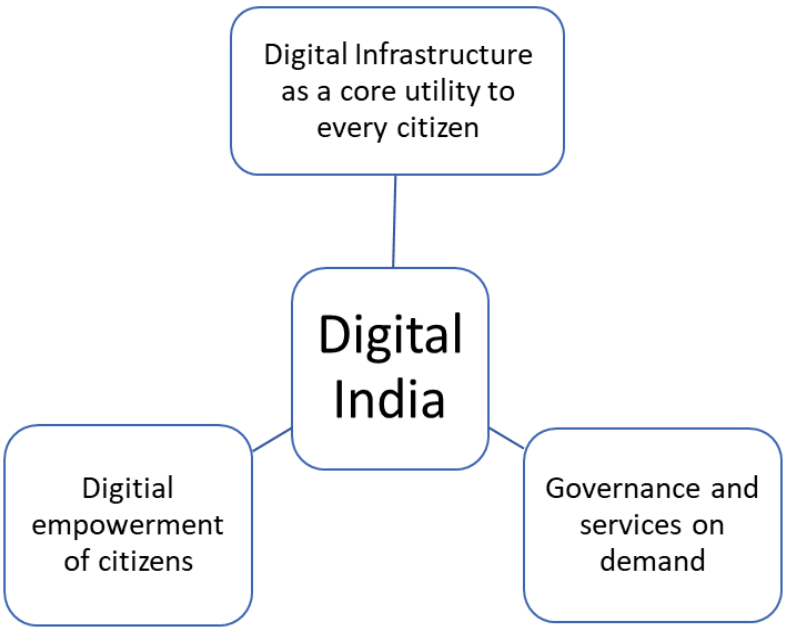


Source: etaal.gov.in

The Digital India initiative's impact on speeding up digitization and transforming India into a digital powerhouse was hailed by Indian Prime Minister Narendra Modi on the eve of its sixth anniversary. He noted[xxxi]:

"Digital India is the resolve of India. Digital India is the instrument for AatmaNirbhar Bharat (Self-reliant India) and is also a manifestation of a strong India emerging in the 21st century. Minimum Government – Maximum Governance, bridging the gap between the government and people, system and facilities, problems and solutions, eliminating difficulties and increasing the convenience of the general public, was the need of the hour. And, therefore, Digital India is a great means of ensuring facilities for the common citizens and their empowerment."

According to the Ministry of Electronics and Information Technology (MEITY), Digital India is to provide thrust to the nine core areas of growth, namely: "Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti – Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes[xxxii]". It was launched with the objective to boost online infrastructure and make internet services available to the common masses. The following infographic depicts the core vision of the Digital India initiative.



Source: (MeitY 2016)[xxxiii]

As per the United Nations E-Governance Survey 2022[xxxiv], despite being low-income or lower-middle-income countries, India, Indonesia, Rwanda, and Ukraine have a very high Online Service Index (OSI). OSI is an indicator that measures the use of ICT by the government. The survey goes on to note that India and Rwanda boast of high OSI of respectively 0.7934 and 0.7935 despite not having a so-developed telecommunication infrastructure as their respective Telecommunication Infrastructure Index stands at 0.39 (India), and 0.32(Rwanda)[xxxv]. Here, India's high OSI in a challenging context deserves merit because of the sheer scale of digital governance-related transactions that the bar graph above suggests. At its current level of per capita, India boasts of reasonable human capital as well and overall is categorized as a 'High EGDI' (E-government index) by the UN survey with an overall score of 0.588[xxxvi]; the report suggests that poor telecommunication infrastructure is one of the major bottlenecks. Therefore the government's emphasis on boosting digital infrastructure and accessibility under the aegis of 'Digital India' makes for a reasonable policy intervention.

Research across the board demonstrates a positive causal link between the proliferation of ICT and GDP. Matalaqh and Ward (2011, 426)[xxxvii] in their study examining the linkages between telecom penetration and GDP in non-oil-producing Arab countries note that a 10% increase in telecom connections could boost GDP growth by almost 3%. Torreo, Choudhary, and Bedi (2006)[xxxviii] studied telecommunication penetration data from 113 countries and found a positive causal link between telecommunications penetration and GDP. In the Indian context, Kutharia et.al (2007,6) note that for every 10% mobile penetration in the Indian states, the GDP growth shot by 1.2%[xxxix]. They go on to highlight the network effect associated with telecommunication i.e., a larger growth effect is evident in regions across India where the telecommunication penetration reached a critical mass. Sahoo, Nayak, and Behra (2021, 16)[xl] use mobile density and internet density as a proxy for digitization to argue that there exists a high positive correlation between mobile and internet density with the per capita GDP of India and China. The mobile density and per capita GDP correlation for India and China were 0.95 and 0.99 respectively; while the internet density per capita GDP correlation for India and China was 0.94 and 0.98[xli]. These indicate a significant causal correlation between these variables. Kidane (2019)[xlii], in his analysis of the impact of e-commerce on the Asian-Pacific economies, notes that countries with

a higher penetration of e-commerce are more likely to experience higher GDP growth. In fact, e-commerce is found to have a positive correlation with a firm's productivity, felt more acutely in Asia, where the productivity level went up by 30% compared to a global uptick of 14 %[xliii].

Therefore, it isn't a surprise that digital infrastructure is one of the priority areas for the government of India. India is striving to bring villages under the ambit of internet connectivity and has launched one of the world's largest rural broadband connectivity initiatives 'Bharat Net' aimed at rural digital connectivity and has so far laid out 6,13,868 km of fibre optical cable in rural areas[xliv],and currently, 1,91,751-gram panchayats have been connected with optical fibre cables. In order to boost wireless internet connectivity in India, the Government of India has launched PM-WANI [xlv](Prime Minister's Wi-Fi Access Network Interface), which aims to provide public wifi spots throughout India by enabling small and micro-entrepreneurs to register as wifi providers and to make the process convenient has waived off license requirement and registration fee. The scheme was launched on December 2020, and as per the Government of India's own admission in the parliament, as of 9th March 2023, one lakh 48 thousand[xlvi] public wifi hotspots have been set up in the country. Here, it is to be noted that this is way less than 10 million spots that were envisaged nevertheless a steady beginning albeit slow. Apart from digital connectivity, it is estimated that schemes like PM-WANI would help generate 1-2 small-scale jobs per wifi hotspot, and the overall aim is to generate 20 million jobs[xlvii] by installing 10 million public wifi hotspots. The Union budget of 2023 too aims for bolstering digitization[xlviii] in domains like agriculture, finance, judiciary, and education.

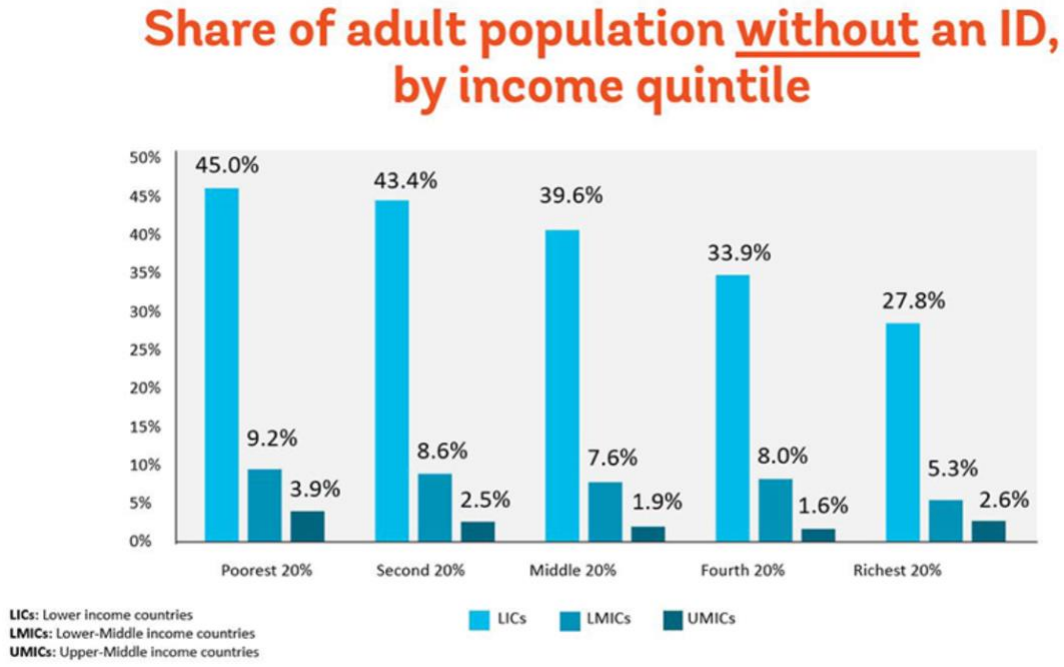
India's experience in a challenging context and the stack of digital public goods could be leveraged for powering digital connectivity and integration across the Indo-Pacific – a region at the crossroads of geopolitics and economics. As a region, it is home to the world's fastest-growing economies and has a bulging youth population that forms the core consumer of digital products and services. Moreover, the proliferation of mobile-based broadband has given an unprecedented boost to growth as far as e-commerce is concerned and has placed the region at the centre of global e-commerce as the Asia-Pacific region accounts for almost 60% of global e-commerce transaction[xlix]. This ongoing digital transformation necessitates regional technical cooperation in the form of digital public infrastructure on which digital public goods catering to the needs of governments, citizens, and markets are built. In the process, fostering digital integration of the region- sustainably and transparently.

Fostering Digital Integration in the Indo-Pacific

Digital infrastructure could provide the much-needed thrust towards the regional integration of the Indo-Pacific region. The Government of India has set up a G20 task force on digital public infrastructure for 'Economic Transformation, Financial Inclusion and Development'[l] to realise it. Further, India's Ministry of Electronics and IT (MeitY) has partnered with the UNDP 'to drive collective action on digital public infrastructure' to fulfil the sustainable development goals (SDGs)[li]. Reportedly, New Delhi is keen on showcasing and sharing its experience and expertise about digital public goods like the Aadhar and the United Payments Interface (UPI). Through its 'India Stack' initiative, also referred to as a global repository of key projects, India has already offered[lii] an open version of digital goods like Aadhar biometric ID, Digi locker, DIKSHA (Digitial Infrastructure for Knowledge Sharing), and UPI to the countries worldwide using application programming interface (APIs).

The effective proliferation of these platforms could provide a much-needed boost to welfare governance and financial inclusion. In fact, target 16.9 of the United Nations Sustainable Development Goals (SDGs) argues for "providing legal identity for all by 2030"[liii]. As per World Bank's estimates, 1 billion people don't have access to basic ID credentials, which includes 1 in 4

children[liv]. The lack of verifiable identity substantially impedes their ability to access basic services such as health, education, welfare schemes, job, financial inclusion, representation, and mere existence, thereby substantially impacting their life chances. Identification, therefore, is a key enabler as far as the individual is concerned.



Source: World Bank. 2018. Global ID Coverage by the Numbers: Insights from the ID4D-Findex Survey (English). Washington, D.C.: World Bank Group.

The poor are disproportionately affected by the lack of identification, as the bar graph suggests that almost 45% of those in the low-income quintile lack a national identity card. Of the 1 billion people without any identity, 81% of them live in Sub-Saharan Africa and South Asia[lv]. Given the current scenario, India could prioritise Aadhar diplomacy for partner countries in these regions for its Aadhar diplomacy. West African countries like Sierra Leone[lvi] have approached India to help them develop Aadhar-like digital id project. Other countries that have approached India with similar requests are Russia, Morocco, Algeria, Tunisia, Nigeria, the Philippines, Republic of Guinea, Sri Lanka, and Malaysia[lvii]. It is argued that an Aadhar-like biometric identification system could be transformative[lviii] in regions such as Africa; people could use digital id cards to access welfare services, produce valid IDs, bank services, registration of births and deaths, and property registration etc., a pan-regional id card on the lines of Aadhar could help regularise large scale regional migration and cut down informal channels that expose migrants to substantial risk and exploitation. It is to be noted that these aren't specific to Africa, parallels could be found in South Asia- India's immediate neighbourhood. Therefore, Aadhar diplomacy could be an effective instrument of digital integration across the BBIN ((Bangladesh, Bhutan, India, and Nepal) and BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) countries.

Next, India should strive for cross connectivity of real-time payment system (RTPS) starting from the immediate neighbourhood. Here, it is worth noting that Bhutan and Nepal have already opted for the adoption of UPI[lix]. These two countries share a porous border with India which observes a substantial cross-border exchange of people and goods. Integration of the payment

system could lead to reduced transaction costs and increased formalization of cross-border exchanges. A similar exchange with BIMSTEC countries could have the same effect as the region is home to a large migrant population. A real-time payment system could eliminate rent-seeking in economic transactions. The recent PayNow-UPI[lx] collaboration between Singapore and India could be extended to countries like the USA (FedNow), Australia (NPP), Thailand (PromptPay), Canada, and the UK. A similar arrangement is underway with the West Asian countries such as the UAE, Saudi, Bahrain, and Oman that house substantial Indian diaspora[lxi]. India's National Payment Corporation has enabled international mobile numbers for UPI-based transactions from select countries. However, it is worth noting that these countries comprise[lxii] 16.6 million overseas Indians. A tabular snapshot of the same is given below:

Country	ISD code
Singapore	+65
Australia	+61
Canada	+1
Hong Kong	+852
Oman	+968
Qatar	+974
Saudi Arabia	+966
UAE	+971
UK	+44

Source: NPCI, 2023[lxiii]

NPCI is entering in partnership with payment merchandise from countries across continents. The following table showcases countries and their respective merchandise partnering with NPCI to adopt the UPI system.

Announcement	Partner Entity	Countries
July 2021	Royal Monetary Authority of Bhutan	Bhutan
Sept 2021[lxiv]	Monetary Authority of Singapore, PayNow	Singapore
August 2021	Merchantrade Asia	Malaysia
September 2021	Liquid Group	Singapore, Malaysia, Thailand, Philippines, Vietnam, Cambodia, Hong Kong, Taiwan, South Korea, Japan

November 2021	Network International (NI)	UAE
Feb 2022	Gateway Payment Services, Manam Infotech	Nepal
April- Aug 2022	LuLu Financial, NEOPAY (Mashreq Bank)	UAE
June 2022	Lyra	France
Aug-September 2022	Terrapay, PayXpert	UK
October 2022	Worldline	Netherlands, Belgium, Luxemburg, Switzerland
October 2022	Central Bank of Oman	Oman

Source: Bhardwaj, 2023[lxv]

The realization of these partnerships could be significant for the internationalization of India's digital payment infrastructure as well as RuPay debit cards on the lines of Visa and Mastercard. India could also contemplate capacity building on regulatory mechanisms needed to effectively proliferate these digital public goods through its ITEC (Indian Technical and Economic Cooperation).

Thirdly, India could take the lead in strengthening telecommunication infrastructures across the South Asian region. For instance, sharing mobile towers[lxvi] with countries such as Bangladesh, Bhutan, and Nepal could be contemplated. It would make infrastructure deployment affordable for countries with stressed balance sheets.

Next, Data governance is another aspect India could consider sharing its expertise. Inda has instituted- Data Empowerment and Protection Architecture (DEPA)[lxvii] that vouches for individual data ownership. It is argued to be premised on the principle that individuals/enterprises should have ownership over their own information and could allow/disallow it to be accessed for political/commercial purposes. This prioritisation of individuals/enterprises in the data governance paradigm dovetails with the free, secure, and open Indo-Pacific that the Quad countries envisage. To add cherry on the cake, India has decided to amend its strict data localisation policy and agreed to cross-border data flow into "certain notified" countries[lxviii]. This flexibility and the current G20 presidency could be utilised for reviving "data free flow with trust" (DFFT) originally proposed by Japan during G20 Osaka track declaration[lxix].

Since data is increasingly referred to as the new oil, India should aim to be the world's cloud storage and actively take steps to position itself as a global data storage industry hub. The union budget 2023 strives to work in this regard and moots setting up a data embassy in the GIFT city, Gujarat[lxx]. The envisaged data embassy will offer diplomatic immunity to countries and companies from their respective national and commercial data[lxxi]. The proposed flexibility for companies storing data in the data embassy could eliminate friction over cross-border data storage regulations[lxxii]. A start could be made by proposing the same to BBIN and BIMSTEC countries. The NEST (New and Emerging Technology) division within the Ministry of External Affairs could be leveraged for effective lobbying and promotion of India as a data hub across the world capitals.

Lastly, compared to large scale physical infrastructure, development and deployment of digital infrastructure doesn't generate the anxieties of debt in the receiving countries. Further, it is replicable too. Thus, India as well as Quad countries could jointly consider it to balance China's BRI under the aegis of Indo-Pacific Economic Forum for Prosperity.

To conclude, digital infrastructure would be crucial in determining the future of Indo-Pacific and with a focus on an open, transparent, reliable, and scalable digital public goods and infrastructure, India could play a proactive role in the global governance paradigm- a crucial benchmark for showcasing its credentials as a global power. Drenzer (2019, 287)[lxxiii] elaborating upon the role of technology and global affairs notes that the era of technological change tends to have a transformative impact on international politics by effecting distribution of powers in the global system, in the process leading to winner and losers and proliferation of new norms. Thus, as a rising power leveraging its capacity in digital public infrastructure could allow India an opportunity to participate as an 'equal' in shaping cum framing the paradigms of global governance in the post-American unipolar moment world order.

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