Chapter 8

Cooperation amongst Governments: Ensuring Sustainable and Inclusive Growth in Indo-Pacific

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Chapter 8

Cooperation amongst Governments: Ensuring Sustainable and Inclusive Growth in Indo-Pacific

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1. Introduction

The idea of the 'Indo-Pacific' has mobilised significant attention in the global community and is being viewed as the dominant geopolitical and economic construct of our time. As such, Indo-Pacific does not have a single (agreed) definition in terms of geographical coverage and sectors of focus. Different countries have come up with Indo-Pacific strategies which are neither homogenous nor very different in terms of approach and sectors, although the degree of emphasis on sectors differs. These permutations and combinations of Indo-Pacific strategies, especially their economic dimensions, have seen some sort of maturing in the past few years as public awareness about the Indo-Pacific has continued to grow. These permutations and combinations have been manifested in varying emphasis on different sectors such as maritime connectivity, infrastructure investments, and the blue economy. Essentially, it characterises a transition from the Quadrilateral Security Dialogue (the Quad), a security-driven configuration, to a viable economic cooperation proposition, with ownership beyond the Quad. While the Quad remains central to the foundation of the Indo-Pacific, the white papers (country positions) of the United States (US), the Association of Southeast Asian Nations (ASEAN), India, France, Germany, New Zealand, and Canada, amongst others, signify a broadening of the Indo-Pacific paradigm with very strong economic content. Factors such as infrastructure, digitalisation, strengthening of supply chains, maritime cooperation are considered the drivers of economic growth and prosperity in the Indo-Pacific region. All the existing schemes of bilateral and trilateral cooperation within the geography of the Indo-Pacific – such as the Indian Ocean Rim Association (IORA), ASEAN, Australia–Japan–India (AJI), Quad Plus, India–European Union (EU) Strategic Partnership, India–EU Connectivity Partnership, India–Japan Comprehensive Economic Partnership Agreement, India–Australia Economic Cooperation and Trade Agreement, EU–China Comprehensive Agreement on Investment, and ASEAN–EU Comprehensive Air Transport Agreement – find a way to express their unique strength. On the other hand, countries party to those agreements – particularly the US, India, Australia, France, Germany, and New Zealand – are keen to pursue the Indo-Pacific with each other, signifying a possible convergence in their Indo-Pacific vision.

The maritime space covering the Indian and Pacific oceans could unleash huge potential for sustained inclusive economic growth, which the world needs badly in the post-coronavirus disease (COVID-19) economic reset. India's Indo-Pacific Oceans Initiative (IPOI) envisages a strong maritime pillar of cooperation in the Indo-Pacific region. In addition, the low-hanging fruit of Indo-Pacific cooperation could leverage the digital economy both to enhance its spread (greater digitalisation) and address its unequal benefits (digital divide). Infrastructure would remain a key enabler of economic cooperation amongst the Indo-Pacific countries. Moreover, the agglomeration economy

effects of infrastructure on the local economies need to be factored in efficiently to development cooperation projects. The Indo-Pacific needs to recognise the strength and effectiveness of triangular cooperation as the post-COVID-19 world struggles to mobilise resources for funding development projects and falls short of financing the Sustainable Development Goals (SDGs). Official development assistance (or aid) still forms the core of development cooperation, although new innovative models of resource mobilisation such as blended finance, social impact bonds, and investment by institutional investors like sovereign wealth funds, need to deployed. Aid flows from the Organisation for Economic Cooperation and Development (OECD)-Development Assistance Committee countries to poor countries in the Indo-Pacific region could help countries overcome resource constraints.

This chapter is an attempt to highlight the roadmap for economic cooperation that the participating countries in the Indo-Pacific vision are embarking upon. Interestingly, all the major economies in the Indo-Pacific agenda, i.e. the US, the EU, India, Japan, and ASEAN, have stressed promoting cooperation on various aspects of the marine/blue economy, which seems to be the most substantive and viable economic proposition for cooperation amongst countries in the region. This chapter critically analyses the visions of the major players in the Indo-Pacific, examines the merits of leveraging those ideas given the economic challenges facing the region, and identifies a few important sectors as the tangible expressions of the Indo-Pacific economic vision. The Indo-Pacific, as a government-driven initiative, could possibly absorb the contribution of the private sector – not as a strategy partner, but as a source of capital, technology, and expertise.

The chapter looks at developing a scheme of economic cooperation amongst various stakeholders of the Indo-Pacific vision.

2. Indo-Pacific: A Reality or Hype

The Indo-Pacific Economic Framework for Prosperity (IPEF), launched by the US in May 2022, is one of the latest manifestations of the Indo-Pacific vision. It appears to be a feasible proposition, rather than rhetoric, as the IPEF has 13 countries (the US, Australia, Brunei Darussalam, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, and Viet Nam) as parties and four pillars – Trade (Pillar I), Supply Chain (Pillar II), Clean Economy (Pillar III), and Fair Economy (Pillar IV) – for substantive cooperation. Unlike the IPEF, other country papers on the Indo-Pacific open up the possibility for partners from the broader geographic areas of the Indian and Pacific oceans. Moreover, the priority areas – trade; supply chains; clean energy, fair economy, decarbonisation, and infrastructure; and tax an anti-corruption – are not binding for the members as a 'single undertaking', hence the flexibility to explore sector-specific cooperation amongst the parties. All 13 countries joining the IPEF represent a large political and economic influence in the Indo-Pacific region. The US strategy in the Indo-Pacific seems to be reactive to China, as it clearly refers to China's aggressive ventures in the Indian Ocean and South China Sea in the IPEF statement. On the other hand, the EU's vision of the Indo-Pacific is more balanced and neutral. The EU is not averse to working with China, India, and other emerging players, and does not position itself explicitly against China's growing dominance in global affairs, nor does the EU consider China the single largest threat to the world. Like the US, the sectors identified by the EU for Indo-Pacific cooperation broadly reflect contemporary opportunities and challenges. Similarly, the ASEAN Indo-Pacific vision is a neat and clean economic cooperation agenda. Promoting trade and investment,

maritime connectivity, and the digital economy, amongst others, within ASEAN centrality remain the top priorities for ASEAN. Australia, on the other hand, has adopted a balanced stand rather than a confronting position on China's rise in the region. Australia is more concerned about regional security than cultivating the China–US differences.

Infrastructure investment is central to almost all the country visions on the Indo-Pacific. ASEAN and the US focus on energy, infrastructure and connectivity, the digital economy, reciprocal trade, promoting business partnerships, and other areas of sectoral cooperation (ASEAN, 2021; Government of the US, 2022). India's Act East Policy and IPOI integrate the vision of a free, open, transparent, and inclusive Indo-Pacific as core principles (Government of India, 2019; 2020). In a certain sense, there is greater convergence amongst the different models of Indo-Pacific cooperation from the perspective of the scope of bilateral and transnational engagements.

The Free and Open Indo-Pacific (FOIP) enunciated by Japan in 2018 and reiterated by the US and India, sets out a vision for the common future of the people in the Indo-Pacific region. Recently, the QUAD leaders Conference help on 4 March 2022 and the Japan-India Summit Meeting of 19 March 2022 reiterated promoting efforts toward cooperation in the Indo-Pacific region. At the 19 March meeting, the Prime Ministers of India and Japan underscored the space for increased cooperation between IPOI and FOIP. Since the region is endowed with precious natural, mineral, and human resources, it is subject to strategic competition and geopolitics. To harness the potential of the region, a virtuous model of international development cooperation amongst the countries in the Indo-Pacific region is needed. By following the principles of development partnership, countries in the region could envision a common roadmap for attaining inclusive growth and development in the Indo-Pacific region.

3. Core Sectors for Indo-Pacific Investments

Investment is at the heart of the Indo-Pacific vision of all the major economies in the world. Besides trade, it has been a tangible component of regional cooperation across various regions. In fact, the coverage of investment issues in a new vintage of regional trade agreement (RTA) and free trade agreement (FTA) negotiations in which Indo-Pacific countries have participated is comprehensive and deeper. Investment in critical sectors across the Indo-Pacific region could form a strong basis for governments to explore cooperation and partnership in the Indo-Pacific, especially amongst the 13 countries joining the IPEF. Major fields of investment to originate and be directed within the Indo-Pacific may include the following.

Infrastructure

Despite being a traditional area of development cooperation, infrastructure in all its manifestations – e.g. physical, digital, and social – remains a top policy priority for all countries, including the advanced economies. Physical infrastructure gaps in roads, railways, ports, and airports can often impede trade, investment, and economic integration in the Indo-Pacific region. According to estimates, $0.7 trillion in new investments per year are required to close the infrastructure gap (Wilson, 2020). For the Indo-Pacific region, Asian Development Bank (ADB) estimates suggest an infrastructure investment requirement of €1.4 billion per year until 2030. During 2013–2017, the European Investment Bank invested €7.5 billion in infrastructure in the region (Government of Germany, 2020). The Government of France is of the view that

infrastructure is a highly competitive sector in the Indo-Pacific region. This prompted France to invest in the region by setting norms and standards; deploying multilateral tools for financing quality infrastructure; and promoting environmental protection, social inclusion, competition rules, transparency, and fiscal sustainability (Government of France, 2022). To meet the SDGs, building, operating, and maintaining sustainable and quality infrastructure need to be viewed as a comprehensive strategy. This would help ensure a transition to a more sustainable economy and efficient energy consumption. Besides maintenance, investment in ageing infrastructure and both preventive and predictive maintenance could help reduce maintenance costs, enhance energy efficiency, and promote ecology-friendly technologies (D20, 2021). Standardised design and construction processes also create the opportunity to save on long-term maintenance due to the use of similar replacement parts and equipment (World Economic Forum, 2016). Digital infrastructure is the new enabler of growth, diversification, and economic integration. Chaturvedi et al. (2021) showed how digital layers in governance could yield significant gains in developing countries.

Table 8.1 indicates the increasing portfolio of energy, information and communication technology, and human capital investments. These sectors not only attract greenfield investments but are also preferred sectors for international project finance. Given the magnitude of the infrastructure gap, public investment should crowd in private capital to harness the large pool of private savings seeking long-term investment. To this end, the development of infrastructure as an asset class is a helpful step. Lack of critical mass of bankable projects and insufficient data to track asset performance can hinder this process (OECD, 2018). A critical enabler is the need to leverage technology in a better way for infrastructure delivery. Operation and maintenance of critical infrastructure projects can be enhanced by using the internet of things (IoT) devices for a speedy response, leveraging data analytics capabilities for monitoring and supervision of projects, and using blockchain for online authentication and disintermediation. Technological transformation would also be the driver for crisis-proof infrastructure projects (KPMG, 2020).

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Table 8.1: Investment in Infrastructure Sectors

(US$ Million)

Sector	Greenfield Projects				International Project Finance Deals			
	2011	2019	2020	2021	2011	2019	2020	2021
Energy	4398 (3)	3483 (17)	7047 (24)	3260 (7)	93370 (14)	59267 (67)	18208 (49)	55855 (47)
Human Capital	177 (10)	201 (10)	43 (5)	244 (7)	387 (2)	130 (1)	351 (2)	216 (3)
ICT	1120 (27)	337 (19)	2248 (31)	1898 (31)	-	320 (2)	-	410 (2)
Natural Capital	12159 (44)	11214 (19)	3059 (10)	1568 (7)	-	181 (1)	-	-

Sector	Greenfield Projects				International Project Finance Deals			
	2011	2019	2020	2021	2011	2019	2020	2021
Private Sector Development	2322 (147)	1377 (108)	838 (45)	524 (31)	-	-	-	-
Structural Change	8488 (256)	14754 (232)	4078 (92)	3364 (72)	1844 (5)	314 (3)	992 (5)	858 (5)
Transportation	77 (5)	2413 (16)	-	509 (5)	1164 (3)	7164 (9)	12849 (4)	3135 (6)

ICT = information and communication technology.
Notes: Figures in parentheses indicate number of projects.
Source: UNCTAD (2021a).

There is also a growing need to incorporate environmental, social, and governance (ESG) criteria in infrastructure projects, especially in emerging markets and developing economies. In addition, it is imperative to bring in reforms to ensure cost-effective tariffs, transparent regulations, certainty, and predictability for infrastructure projects. The level of interest in emerging markets presents a great opportunity for governments to tap into this pot of funding. This would entail producing a clear pipeline of greenfield and brownfield projects via asset recycling, to offer them as an investable asset class for long-term investors such as pension funds, insurance companies, and infrastructure funds (KPMG, 2020). The COVID-19 pandemic required increased spending to address priorities such as digital connectivity, healthcare, welfare, pandemic-proofing of public services, and infrastructure such as transport. However, these infrastructure systems must be connected in a way that creates a seamless flow of services to society. Hence, achieving convergence between physical, social, and digital infrastructure is a novel way of harnessing existing infrastructure to achieve sustainability and resilience.

With the rising importance of the digital economy, the digital infrastructure financing gap in Asia is growing significantly and is projected to reach $512 billion by 2040. Financing gaps are still prevalent in middle- and low-income countries. More than 50% of the global digital infrastructure investment gap will be in Asia by 2040, with impacts predicted on economic growth. Digital infrastructure development (both soft and hard) is the foundation of the digital economy. This must be aligned with different maturity levels, where digital availability, access, appetite, and abilities should be considered holistically.

Institutional investors have substantial liquidity, so they are a significant source of capital. Amongst them, pension funds are important for infrastructure investment. Pension funds have long-term, annuity-type liabilities, and these funds have mandates to invest in long-term, low-risk securities with predictable income streams. The long-term nature of infrastructure projects and relatively stable returns from underlying assets (during the operating stage) is complementary to the requirements of pension funds, as revenue streams from infrastructure projects are comparatively stable and underpinned by long-term service contracts. However, pension fund investors usually have a low appetite for risk. Bonds could be another instrument for funding infrastructure projects. The advantage of project bonds as a means of debt financing is the flexibility they offer in structuring

the issue. They could have flexible or fixed interest rates and come in tranches that could be issued in different currencies for different tenors (AIIB, 2020).

Digitalisation

Governments across the world are establishing digital financial infrastructure to support publicly scalable financial inclusion platforms. At a basic level, such infrastructure promotes affordable and instantaneous payment services – enabling access of retail and small-scale individuals/firms to formal financial systems. At a deeper level, this infrastructure is disrupting the way in which governments have managed the delivery of public services in the economy. The notion of treating digital financial infrastructure as a digital public good has increasingly gained momentum. It presents both opportunities and responsibilities for the governments in the Indo-Pacific region. On the one hand, when viewed as a digital public good, governments find themselves at the forefront of financial technology (fintech) innovation. On the other hand, governments carry the additional responsibility of implementing fintech innovations in a safe, secure, scalable, and responsible manner. The challenge is the lack of global standards to enable governments to harness these opportunities and navigate through such issues efficiently.

From a policy perspective, global standards refer to the extent to which such designs should (i) leverage the national digital identity framework, (ii) promote the performance reliability of the digital financial infrastructure, and (iii) encourage scalable delivery of multiple public services. From a regulatory perspective, while implementing/operating this digital financial infrastructure, governments should focus on key considerations such as (i) new regulatory themes, (ii) new regulatory architecture, and (iii) new regulatory tools. Taken together, the policy issues and regulatory considerations must be translated into a comprehensive global standard that countries could eventually prescribe for guiding the design of digital financial infrastructure by governments as a public good. Such a standard would help governments realise their financial inclusion and public service delivery objectives in a safe, secure, scalable, and responsible manner.

Designing digital financial infrastructure as a public good presents governments with opportunities and responsibilities. Governments can nurture fintech innovation for public service delivery while leading from the front; at the same time, there is a need to implement such innovation in a safe, secure, scalable, and responsible manner. The twin objectives often work at cross purposes. Governments need a risk-seeking mindset to nurture innovation and a risk-averse mindset for its responsible implementation. The challenge is to strike a balance between these twin objectives while designing digital financial infrastructure.

Unfortunately, global standards are currently disaggregated across various domains such as sustainable development, financial inclusion, fintech policy, financial regulation, data privacy, and cybersecurity. A comprehensive global standard (covering all these aspects as well-connected building blocks for designing digital financial infrastructure) and taking into account learnings from the experience of countries that have initiated such an exercise, is currently not in existence. Such a standard would provide alternative approaches, comparative nuances, and possible pitfalls from which governments can draw guidance/inputs for designing and implementing digital financial infrastructure as a public good.

From the policy and regulatory perspective, the Indo-Pacific economic agenda could consider the following areas:

- ***Leverage the national digital identity framework*** (covering design choices for form, authentication, and operational aspects of digital identity).
- ***Promote the performance reliability of digital financial infrastructure*** (covering key parameters such as the extent of availability (24*7), ease of access, openness of the underlying architecture, and interoperability amongst service modules offered through the infrastructure).
- ***Encourage scalable delivery of multiple public services*** (range of public services for delivery through the infrastructure at the national, provincial, and municipal level).
- ***New regulatory themes:*** Apart from financial inclusion, digital financial infrastructure enables gradual proliferation of digital currencies in the economy. Concepts such as money, contracts, enforcement, and fairness are therefore undergoing several debates and discussions globally. While looking at digital financial infrastructure, governments should consider new regulatory themes such as non-fungible tokens, smart contracts, code as law/law as code, algorithm bias, and decentralised autonomous organisations. These themes are in addition to traditional themes such as promoting competition, conduct, and integrity in the online marketplaces created through digital financial infrastructure.
- ***New regulatory architecture:*** Regulation of the financial economy globally adopts a twin-peak model wherein the regulatory authorities attempt to regulate the prudential and market conduct aspects across different financial firms. In the context of digital financial infrastructure (especially with the recent fintech innovations), a triple-peak model of regulatory architecture can be envisaged. The regulatory focus under the third peak should cover the societal impact of digital financial infrastructure (covering a wide range of issues such as privacy, personal data protection, and interoperability at the *micro level*; and fairness, accountability, and transparency issues at the *society level*). Governments should therefore envisage the role of new regulatory authorities (for regulating privacy and personal data protection, digital lending, digital currencies, data exchanges, and decentralised finance service providers) in operating the digital financial infrastructure.
- ***New regulatory tools:*** Technology tools (e.g. RegTech and SupTech) have the power to harness regulation in an efficient and effect manner. Technology tools such as machine learning and distributed ledger technology enhance the quality of regulation and supervision for preventing financial crime. They further facilitate open source investigations, real-time monitoring, and the traceability of transactions. Governments should leverage these tools to ensure smart regulatory oversight without compromising the societal values of individual freedom and protection of privacy.

Digitalisation is not just a technological disruption – rather, a force of transformation and change. The positive effects of digitalisation are manifest in all sectors, most prominently in the spheres of financial inclusion, retail payment settlements, delivery of public services, e-commerce, and the Fourth Industrial Revolution (4IR). Moreover, with the rapid pace of digitalisation through mobile telephony, apps, and real-time access to information, the 'empowerment impact' of digitalisation is quite strong in developing countries and least developed countries (LDCs). During the long and frequent lockdowns due to the COVID-19 pandemic, the power of digitalisation in ordinary lives was

felt by households, businesses, and governments. It also provided direction for promoting the digital economy through digital public goods. The 2020 United Nations Secretary-General's Roadmap for Digital Cooperation has been a popular reference document on issues such as global connectivity, digital public goods, digital inclusion, digital capacity building, digital human rights, artificial intelligence, digital trust and security, and global digital cooperation (United Nations, 2020).

The United Nations views digital cooperation as a multi-stakeholder effort and, while governments remain at the centre, the involvement of the private sector, technology companies, civil society, and other stakeholders is essential. It is vital to engage with the private sector, the technical community, and civil society from the beginning if realistic and effective decisions and policies are to be made. The focus of such multilateral norms and standards on data governance should be to achieve greater transparency in the data-related functions of public and private entities and, in turn, ensure better quality of data. The Group of Twenty (G20) has recognised the importance of digitalisation for economic growth, industrialisation, and societal progress, and accordingly introduced several initiatives in the past presidencies to promote the digital economy, standardised rules and regulations governing digitalisation, leveraged digitalisation for development, and addressed associated policy and governance issues. The recent G20 presidencies have stressed the promotion of open, secure, and affordable digital access and bridging the digital divide. Besides the commercial use of digital technologies, the G20 presidencies of Germany (2017), Argentina (2018), Japan (2019), and India (2023) have underlined the importance of data for development.

Other key areas of focus of the G20 include (i) protection of intellectual property rights, respect for privacy, consumer protection, and applicable legal frameworks (Argentina, 2018); (ii) unlawful and arbitrary interference with privacy (Turkey, 2015) and cybercrime (Italy, 2021); (iii) measurement of the digital economy (China, 2016); (iv) digitalisation of micro, small, and medium-sized enterprises; small and medium-sized enterprises; and start-ups (Germany, 2017); (v) leveraging digitalisation for the achievement of the SDGs; (vi) digital trade and e-commerce (Germany, 2017) and digitalisation of business models (Saudi Arabia, 2021); (vii) development and use of market- and industry-led standards (Germany, 2017); (viii) free flow of data (Japan, 2019) and digital government (Germany, 2017; Argentina, 2018); and (ix) smart mobility (Saudi Arabia, 2020) and the G20 Innovation League (Italy, 2021).

G20 nations have also proposed the development of digital infrastructure to support digital economies, built on the principles of sustainability, resilience, and inclusivity. The G20 Guidelines for Financing and Fostering High-Quality Broadband Connectivity for a Digital World were developed based on the long-standing expertise of G20 members and the OECD (G20 Italy, 2021). As against the use of data for profit, India has been pushing the concept of data for development at the G20 to ensure that the benefits of technology outweigh its potential risks. The idea is also to ensure digital inclusion in various government initiatives that leverage technology, including those measures aimed at advancing social security benefits.

India has emerged as one of the largest digital economies – a powerhouse of digital solutions and a global leader in digital public goods that have a transformative impact as tools for responding to the pandemic and accelerating the SDGs. India has a preeminent claim to engage in rule-making and norm-setting on data for development, covering major domains such as digital public goods, digital inclusion and access to data, and the promotion of artificial intelligence as a welfare tool and mainstream open source data. Aadhar, CoWIN, Aarogya Setu, BHIM, RuPay, and UMANG are some

recent experimentations by India in the digital space, which can be replicated with locally customised solutions in other developing countries.

Fintech

Banks and financial institutions worldwide are increasingly adopting fintech solutions to create efficiency in financial intermediation and offer value-added financial services to a diverse range of customers, especially in developing countries. Despite significant development in the access to and usage of financial services (e.g. deposits, lending, and remittances), the unbanked population and gaps in financial inclusion are still large. According to the Global Findex Database 2021, 76% of adults globally had bank accounts with a bank or financial institution in 2021. Although bank account ownership increased by 50% over the 10-year period from 2011 to 2021, the remaining 24% of the global population were still outside the formal financial system during this period (World Bank, 2021). Since fintech solutions enable digital transactions and services linked to bank accounts, the unbanked population would remain excluded from the benefits of digitally empowered banking and financial services.

As illustrated in Table 8.2, people do have several financial worries which demand faster and efficient solutions preferably customised to the specific requirements of various sections of the population. For instance, adults from different regions participated in the survey by the World Bank for Findex Database indicates medical expenses as a major financial issue. More than 40% of the participants in low-income and upper middle-income countries cited medical reasons a major financial worry along with need for monthly expenses and money for old age. It is observed that demand for financial solutions is high in all countries and regions, perhaps with varying emphasis.

Table 8.2: Financial Issues Worrying People, 2021

(%)

Country category/region	Monthly expenses	School fees	Medical expenses	Money for old age	Not worried
High-income economies	13	6	23	31	27
Upper middle-income economies	12	9	40	16	21
Lower middle-income economies	18	19	32	20	9
Low-income economies	14	27	38	15	3
East Asia and the Pacific	8	11	41	16	22
Europe and Central Asia	16	9	40	19	14
Latin America and the Caribbean	25	9	34	21	10
Middle East and North Africa	15	11	42	19	11

Note: Views of the adults participating in the survey.

Source: Compiled World Bank (YEAR), Global Findex Database. https://www.worldbank.org/en/publication/globalfindex/Data (Accessed 20 February 2023).

The global fintech industry has grown dramatically over the years, with a good number of start-ups producing futuristic and customised financial solutions. Fintech is pervasive in certain market segments such as payments, credit, insurance, and wealth management. Equity investments in fintech have registered phenomenal growth in the last decade, reaching $1 trillion in more than 35,000 deals since 2010. Moreover, the capital raised by fintech was 5% of the global equity deals – marking a significant jump from 1% in 2010 (Cornelli et al., 2021). Large technology firms (BigTechs) are major players in the fintech industry, with more than $2 billion of investment in fintech companies in 2020 (Bains, Sugimoto, and Wilson, 2022). Fintech applications are not just used in the financial sector; rather, they have become a connecting thread for many solutions in other sectors. The ease of settling payments, faster customer identification, and creditworthiness assessments, amongst others, pave the way for a whole range of retail products by banks and financial intermediaries. India's experiment with digital payments is often viewed with interest. For instance, the United Payments Interface (UPI)-based retail payment revolution in India has demonstrated the scale and pace at which digitalisation can bring efficiency in the payment and settlement domain. The Aadhar platform enabled the Government of India to make fast and transparent execution of Direct Benefit Transfer (DBT) schemes during the COVID-19 pandemic. India has emerged as one of the fastest growing fintech markets in the world. It was ranked first in the Global FinTech Adoption Index in 2021 with an adoption rate of 87%, outperforming major fintech markets such as the United Kingdom (UK), Singapore, Switzerland, and the US.

The Jan Dhan–Aadhaar–Mobile (JAM) trinity was a major initiative driving the financial inclusion and fintech revolution in India. It has enabled large-scale implementation of DBT by the government to the poor and needy, solely through digital identity numbers. DBT schemes have eliminated intermediaries, brought transparency and accountability, and supported effective targeting of beneficiaries. This has allowed the government to target genuine and deserving beneficiaries, leading to estimated savings/benefits of ₹2.2 trillion (or $26.5 billion at a US dollar–Indian rupee exchange rate of $1.0 = ₹82.9 as on 22 February 2022). India's experience of Jan Dhan Yojana, MUDRA, and DBT through the Aadhaar-based digital medium is an example of new global practices for cost-effective access to credit by ordinary people. The evolution of India as a fintech nation is the result of various government initiatives aimed at building the digital infrastructure, to achieve greater financial inclusion and a cashless economy. This effort gave rise to India Stack, a set of open application programming interfaces (APIs) and digital public goods that aim to unlock the economic primitives of identity, data, and payments at the population scale. Although the name of this project bears the word India, the vision of India Stack is not limited to one country; it can be applied to any nation – developed, emerging, or LDC.

The benefits of fintech have been manifested vigorously in Africa. M-PESA in Kenya has transformed the financial sector in Kenya and other countries in the region, including Tanzania, Lesotho, Mozambique, and Ghana. As a result, sub-Saharan Africa has become the world leader in mobile money transfers, and fintech has proven to be a leapfrogging technology for inclusive development as traditional banking and financial infrastructure lacks scale, competition, and linkages (Sy et al., 2019). By conducting an empirical analysis for 52 countries, Sahay et al. (2020) demonstrated that digital financial services were faster and more efficient than traditional financial services during COVID-19, and have greater potential to reach out to lower-income households and small and medium-sized enterprises.

Fourth Industrial Revolution

Today, all the countries in the world are silently embracing the 4IR in an accelerated fashion. The growing spread of digital products and services will make this process irreversible, regardless of the development status of the countries. The Consolidated Strategy on the Fourth Industrial Revolution for ASEAN identified six enablers of 4IR for its Member States, which are applicable to emerging markets and developing economies: (i) digital infrastructure, (ii) capability development, (iii) cooperation and collaboration, (iv) institutions and governance, (v) resource mobilisation, and (vi) effective monitoring (ASEAN, 2021b). These enablers correspond to an integrated and mutually reinforcing ecosystem approach that addresses multiple facets of the 4IR transition in developing countries, such as digital readiness, enabling digital infrastructure, and skilled human resources. Likewise, Germany considers the demand for Industry 4.0 products in the Indo-Pacific to be high, and the region is an attractive market for Industry 4.0 products (Government of Germany, 2020).

Our assessment of digital readiness in various countries by their income status reveals interesting developments. For the mobile and internet indicators, the numbers look impressive for most of the country categories covered in Table 8.3. According to the International Telecommunication Union, mobile broadband subscriptions and the coverage of the 3G and LTE mobile network have increased rapidly across all groups. Additionally, the international bandwidth has increased incredibly for developed and developing countries.

Table 8.3: Digital Readiness in Countries by Level of Development

(per 100 inhabitants)

Indicators	World		Developed		Developing		LDCs		LLDCs		SIDS	
	2015	2020	2015	2020	2015	2020	2015	2020	2015	2020	2015	2020
Fixed telephone subscriptions	14.0	11.6	39.0	33.4	8.9	7.4	0.9	0.8	3.8	3.3	12.1	11.6
Fixed broadband subscriptions	11.4	15.8	29.5	34.6	7.6	12.1	0.8	1.4	1.9	2.9	6.7	8.0
Mobile cellular telephone subscriptions	97.3	107.0	124.5	133.0	91.6	101.9	67.5	74.7	70.4	76.7	80.4	84.8
Active mobile broadband subscriptions	44.6	77.3	89.2	127.1	35.4	67.5	14.9	36.3	19.7	40.0	31.8	54.4
Population covered by at least a 3G mobile network	78.3	93.6	94.0	97.8	75.0	92.8	53.3	79.0	49.8	78.6	61.5	87.8
Population covered by at least an LTE/WiMAX mobile network	43.4	85.0	85.4	98.0	34.7	82.4	15.4	44.1	12.3	41.9	34.9	65.4
International bandwidth (Tbit/s)	154.5	719.1	79.2	263.4	73.8	405.1	0.7	7.6	2.1	9.4	4.5	32.3
Households with internet access at home (%)	47.9	65.7	80.1	87.8	36.5	57.8	10.7	22.0	20.8	31	..	48.4
Individuals using the internet (%)	40.5	59.1	76.7	88.3	32.9	53.3	10.8	24.6	19.2	32.3	39.4	60.6

LDC = least developed country, LLDC = landlocked least developed country, SIDS = small island developing states, Tbit/s = terabits per second.

Source: ITU Statistics.(https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2020.pdf). Accessed in July 2022.

Trends in digital readiness in G20 countries suggest that all countries are catching up faster in digital infrastructure and the usage of digital services. This forms the backbone of the adoption of the 4IR. Considering the systemic changes happening across the world, the G20 could consider implementing certain measures for smooth and faster adoption of the 4IR.

Developing countries have mostly remained dependent on advanced economies for technology transfer even though significant efforts are under way for indigenous technology development. Hence, the pace of technological catch-up in developing countries is slower and often comes with a lag. Developing countries need to make significant progress in upgrading their economies by adopting past technological innovations as well as by embracing the 4IR. Given the rapid and disruptive nature of digital technology, no country – particularly developing countries – can afford to follow the traditional technology catch-up model that has occurred in previous industrial revolutions. The way to remain relevant today is to 'leapfrog' in the technology space rather than following the technology leader–laggard framework. As a result, countries such as India, South Africa, and Brazil can use leapfrogging to catch up with technologically advanced nations and reap the benefits of Industry 4.0. For example, instead of going through the stages of network development that developed countries did, such as analogue to copper and then to fibre optics, developing countries can choose to install fibre optics directly.

Open source technologies can provide a means of effective technology transfer and can help countries to leapfrog, thereby helping them to catch up with their developed counterparts. Various forums have been discussing and promoting the use of open source innovation. The United Nations Conference on Trade and Development (UNCTAD) has been promoting the use of open source technologies for many years. The United Nations Economic and Social Council has adopted a resolution on open source technologies for sustainable development (UNCTAD, 2021b). The United Nations Technology Innovation Labs (UNTIL) has launched an open source initiative to make technology, software, and intellectual property available to everyone, including developing countries (Karlitschek, 2019). The United Nations Children's Fund (UNICEF) has also developed various tools and platforms to operationalise its commitment to open source, including tools to foster open source collaboration, agreements to develop new solutions with vendors, and collaboration with UNICEF's partners. UNICEF has worked to progressively operationalise open source, for instance, an example of which is the UNICEF GitHub organisation (Bédi et al., 2020).

'Data free flow with trust' – which seeks to enable cross-border free flow of data while addressing concerns over privacy, data protection, intellectual property rights, and security – has been a priority of global digital policy coordination since the G20 first raised it during Japan's presidency of the G20 in 2019. The Italian presidency in 2021 underscored the importance of enhancing regulatory frameworks for workers on digital platforms, which have seen a monumental rise in this phase of 4IR. Data, which are widely regarded as the oil of the 21st century, have seen an exponential rise with global digitalisation. The production and storage of data in such large quantities is fraught with security challenges, especially in an increasingly connected world.

As data flows are fundamental to the growth of the digital economy and facilitate businesses across the global supply chain, the World Trade Organization should incorporate a horizontal obligation enabling cross-border data flows for conducting business transactions and prohibiting data localisation measures (Mitchell and Mishra, 2019). Privacy is a prerequisite for instilling greater digital trust. The current General Agreement on Trade in Services framework allows an exception for privacy

measures, but this exception is insufficient as data source countries are unlikely to accept one-sided limits on their right to protect privacy. In other words, to enable cross-border data flows, both data source and destination countries should have effective privacy frameworks. Therefore, World Trade Organization law should require all members to adopt a basic regulatory framework for the protection of personal information or privacy protection for ensuring free flow of data. Members should adopt a mandatory cooperation mechanism for addressing the transnational aspects of online consumer protection, including information-sharing and providing assistance for cross-border enforcement of consumer protection laws. Countries should adopt measures that they consider appropriate and necessary to protect the personal information of users.

Developing countries should try to develop resilient and adaptable labour markets that allow workers and countries to manage the transition to this new technological age with the least disruption. Investment in education and training should be made to skill and re-skill young people for the jobs of the future and for equipping them with appropriate skills to successfully navigate an ever-changing, technology-rich work environment. As part of upgrading educational and pedagogical methods to usher in the 4IR, digital learning platforms assume great importance. The onset of the pandemic reinforced this trend. Taking advantage of digital learning platforms, online open courseware or massive open online courses (MOOCs) have become a practical method to address the inefficiencies associated with conventional learning platforms. Many private sector companies have the unique value proposition of housing online training courses, aimed at supporting the workforce development needs of current employees. With the understanding that these trainings are proprietary, and often tailored to the specific customer and employee needs of the company, open source online courses also exist and can be leveraged for the business needs of the future. These could be particularly effective if accompanied by mentorship, coaching, and hands-on learning. Working with established mobile-enabled platforms, such courseware could be leveraged to promote cross-cultural education and global connectivity, supporting companies' development of fractured work cultures (Deloitte, 2018).

Blue Economy

The large maritime space of the Indo-Pacific – covering the IORA, the Pacific Ocean, the Pacific Island economies, etc. – offers huge scope for promoting the blue economy. With the current state of knowledge and technologies, the blue economy in the region has not been fully harnessed. It has gained more popularity than its sister concepts (e.g. the green economy) perhaps because of its unique proposition of intertwining the goal of economic maximisation with environmental and ecological sustainability. The conceptual foundation of the blue economy and the ideas surrounding its practical application sound feasible. It propagates a clear message that ocean resources that have been in use in different forms for food, biological and mineral resources, shipping, and other industrial applications for centuries, can be used more efficiently and sustainably than the current approach of extraction for maximising the utility of those resources for the present generation.

In that sense, the blue economy appears to be a more convincing paradigm which does not treat the economic interests of society differently from the parameters of sustainable development. This may be the biggest realisation amongst practitioners – that achieving environmental sustainability goals as a separate policy objective may not work, as the classical trade-off between higher economic growth and sustainability remains unresolved in that single-dimension framework. In other words,

integrating the optimisation of economic interests with the goal of the sustainability of the marine ecosystem promotes ownership amongst stakeholders, with promising outcomes. Since the Rio+20 Conference in 2012, the blue economy has attracted tremendous policy attention from coastal nations as well as multilateral institutions such as the United Nations, the Food and Agriculture Organization of the United Nations, the World Bank, the United Nations Environment Programme, UNCTAD, and several other institutions. Countries in the region can work collectively to use the ocean resources sustainably for growth, diversification, and employment generation.

Triangular Cooperation in the Indo-Pacific

As we argue above, investment in development projects could perhaps build attraction towards the Indo-Pacific as various countries are implementing competitive development cooperation schemes. These schemes cover a spectrum of projects in infrastructure sectors: Build Back Better (US), the IPEF (US), the Global Gateway (EU), the BRI (China), and other infrastructure initiatives and institutions such as the Partnership for Quality Infrastructure the US International Development Finance Corporation, ADB, the Asian Infrastructure Investment Bank, the Master Plan on ASEAN Connectivity 2025, the Greater Mekong Subregion, the APEC Framework on Connectivity, and numerous regional initiatives in South Asia, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, and Africa. In addition, most of the countries implemented stimulus programmes in response to the COVID-19 pandemic in 2020 and 2021, a sizeable chunk of which was meant for infrastructure projects. Although the fiscal stimulus measures were primarily intended to stimulate domestic demand, they indicate the direction the countries are heading in the post-COVID-19 years. A study by Deb et al. (2021) observed that demand support policies should continue and are effective, especially in digital and green infrastructure.

From that perspective, the contribution of Indo-Pacific initiatives towards attracting foreign direct investment to the Indo-Pacific region and elsewhere in the areas of energy, the digital economy, and green infrastructure should be unique and attractive. The most pertinent question in this respect is whether the Indo-Pacific ambitions would prioritise the economic agenda over the geopolitical and strategic issues. Enhancing engagements amongst countries in the region on the economic pillars of Indo-Pacific cooperation – e.g. infrastructure, maritime cooperation, the blue economy, trade and investment, and digitalisation – could be a starting point for yielding strategic advantages later. The Indo-Pacific strategy of all major countries, such as the US, Germany, Canada, France, India, Australia, and New Zealand, as well as ASEAN indicates convergence in terms of sectoral priorities and instruments, e.g. capacity building, technical assistance, and financing. Most importantly, infrastructure, Industry 4.0, and digitalisation are viewed as sectors with great potential for investment, value addition, and job creation.

Unlike BRI projects, which are large and centred on physical connectivity projects, the Indo-Pacific development partnership could be people-centric and innovative. Indo-Pacific development projects should follow the principle of pooling finances, expertise, technology, and human resources by the participating countries. The Trilateral Partnership for Infrastructure Investment in Indo-Pacific, being jointly implemented by Australia, Japan, and the US, aims to follow this orientation. The Trilateral Partnership jointly finances projects, promotes global standards, encourages open procurement, ensures environmental sustainability, and addresses debt sustainability, amongst others. Likewise, AJI is a platform for joint action on common problems facing people in the Indo-Pacific region. In

addition, bilateral cooperation between major Indo-Pacific partners such as France, Germany, the UK, the US, Australia, New Zealand, and India could help identify projects within the spirit of triangular cooperation. Unilateral initiatives such as Export Finance Australia, an A$2 billion Infrastructure Finance Facility by Australia, support from the US International Development Finance Corporation, the Blue Dot Network, the Expanded Partnership for Quality Infrastructure of $200 billion by Japan, etc. are notable development cooperation efforts.

Mega regional Indo-Pacific initiatives – such as the IPEF; the IPOI of India; and the strategies of France, Germany, the UK, and the EU – strongly advocate peace, prosperity, and stability in the Indian and Pacific oceans, the geographical space of the Indo-Pacific. The FOIP and its subsequent expansion into the Free, Open and Inclusive Indo-Pacific by India marks a watershed moment in the development cooperation practice. These initiatives are not typical aid or South–South cooperation projects – rather, they represent a new and popular model of cooperation called triangular cooperation. The success of the Indo-Pacific economic vision, hence, would depend on innovative triangular cooperation projects. Chaturvedi, Prakash, and Dash (2020) demonstrated the strength of triangular cooperation in the context of the Asia-Africa Growth Corridor in terms of the growth triangle and growth quadrangle approaches.

4. Conclusion

The Indo-Pacific has been in vogue as a dominant foreign policy prism in recent years. Without a clearly identified geography, it has been viewed as a viable foreign policy strategy. Many believe that the Indo-Pacific is a competing initiative to the BRI by India and Japan, which remains an unsettled debate. In general, the Indo-Pacific strategies of the US, ASEAN, India, France, Germany, New Zealand, and Canada, amongst others, signify a broadening of the Indo-Pacific paradigm with very strong economic content. Infrastructure, digitalisation, strengthening of supply chains, maritime cooperation, etc. are considered the drivers of economic growth and prosperity in the Indo-Pacific region. All the existing schemes of bilateral and trilateral cooperation within the geography of the Indo-Pacific – such as the IORA, ASEAN, AJI, Quad Plus, India–European Union Strategic Partnership, India–EU Connectivity Partnership, India–Japan Comprehensive Economic Partnership Agreement, India–Australia Economic Cooperation and Trade Agreement, EU–China Comprehensive Agreement on Investment, and ASEAN–EU Comprehensive Air Transport Agreement, amongst others – manifest the larger economic vision of the Indo-Pacific.

The success of the Indo-Pacific economic vision, hence, would depend on innovative triangular cooperation projects. Triangular cooperation in the context of the Asia-Africa Growth Corridor in terms of the growth triangle and growth quadrangle approaches could yield substantive economic gains. Investment in infrastructure, including digital connectivity, could be a game changer for the Indo-Pacific region. Unlike the BRI, the focus should be on the sectors identified in the initiatives of the IPEF, the IPOI, etc. Governments and the private sector could work together for a peaceful, prosperous, free, open, and stable Indo-Pacific.

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