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Financial Flows of the Blue Continent

A Case Study of Potential Pacific-India-Australia Collaboration

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Abstract

This paper proposes a collaborative effort between India, Australia, Papua New Guinea, and Fiji to pilot a payments system using the infrastructure underlying India's Unified Payments Interface framework. This aims to catalyse the creation of an open, interoperable, and efficient regional payments system in the Pacific that enfranchises all stakeholders. While cost is a central factor, existing funds within the Pacific Financial Inclusion Programme, Forum for India-Pacific Islands Cooperation, Pacific Islands Forum, India-UN Development Partnership Fund, or Quadrilateral Security Dialogue can be leveraged. Frank dialogue about the financial needs of Pasifika peoples and their countries is critical, and open-source protocols can allow for tailor-made, sovereign solutions without vendor lock-in. Current efforts to strengthen regulatory frameworks and address money laundering risks should also continue in concert with this endeavour. More broadly, this paper demonstrates India's potential to collaborate with Australia – and others – to create positive outcomes for low-income states. The policy recommendation in this paper exemplifies how such collaborations can drive positive change globally and accelerate progress for the developing world, such as in the Pacific Islands.

Keywords: India, Australia, Pacific, UPI, financial inclusion, Pacific Islands

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1. Introduction

During its G20 Presidency, the role that Digital Public Infrastructure ('*DPI*') played in India's public service delivery, pandemic response, economic development, and digital and financial inclusion was front and centre. Now, with over a decade worth of experience in building these digital systems at scale (a scale much larger than most), India hopes to develop open technological solutions to socio-economic issues, with a focus on improved governance, inclusion, and efficiency. Many countries could benefit from its leadership on building digital identity, fast payments, and data transfer systems in a way that empowers citizens with individual sovereignty over their own data (Matthan, 2022).

As India mounts the world stage as an economic and technological superpower, it is seeking to engage both more deeply with existing partners, and more broadly with areas previously outside its sphere of concern. Australia is an example of the former, and Pacific Island Countries ('*PICs*') are an example of the latter. In this pursuit, India's DPI is a potent soft power tool which it can use to help solve some of the major challenges for developing countries. Strategically positioned as a conduit between the Global North and South, India can help build technological solutions for low- to middle-income countries directly informed by its own experiences.

This paper will demonstrate the value India could bring to PICs by using its Unified Payment Interface ('*UPI*') as the basis for a regional instant payment system. It will act as a case study of how India can leverage its partnerships with developed countries to campaign for and create positive outcomes for countries in the Global South. The proposal contained herein is proof of concept of partnerships which could be developed to push positive change around the world, and accelerate progress towards the Sustainable Development Goals 2030.

2. Background

Preliminarily, there are definitional issues with the concept of 'digital public infrastructure' (DPI), a term coined by politicians and policymakers, and a subject on which the literature is nascent (Gupta and Nair, 2023). The DPI movement is inspired by the open standards and specifications that led to some of the most transformative technological advancements of our time, namely the Internet and mobile networks (Centre for Digital Public Infrastructure, 2024).

There are common buzzwords across the rhetoric of those championing DPI, such as 'inclusion', 'accountability', 'interoperability', 'accessibility', 'scalability', and 'open standards' (Centre for Digital Public Infrastructure, 2024; Dhamija et al., 2024; Massally, Matthan, and Chaudhuri, 2023). DPI is beyond simple software but encompasses technology, markets, and governance, and is underpinned by common design, robust governance, and private sector participation (Massally, Matthan, and Chaudhuri, 2023).

These definitions market DPI as leading us to a utopian future reminiscent of Arthur C. Clarke's third law: 'Any sufficiently advanced technology is indistinguishable from magic.' It provides little guidance to policymakers, especially those without the technical expertise at hand to understand complex ICT solutions. The international community has been slow to focus on and adopt a definition that aptly describes the purpose, requirements, and nature of DPI. The only working definition provided by a multilateral body was contained in the Outcome Document from the G20 Digital Ministers' Meeting last year:

> Under the Indian Presidency's initiative, we recognise that digital public infrastructure, hereinafter referred to as DPI, is described as a set of shared digital systems that should be secure and interoperable, and can be built on open standards and specifications to deliver and provide equitable access to public and/or private services at societal scale and are governed by applicable legal frameworks and enabling rules to drive development, inclusion, innovation, trust, and competition and respect human rights and fundamental freedoms (G20, 2023).

This definition, and many others, merely tout the benefits of DPI, or offer a set of aspirational standards which DPI must exhibit. These normative approaches are dressed-up opinions about what DPI *should* be, not what it *is*, and often have ideological undercurrents (Gupta and Nair, 2023). The definition put forward at the G20 is vague, with the exact nature and features of DPI still unclear. For example, many current solutions considered to be DPI are not 'built on open standards and specifications', especially if considered 'secure' (G20, 2023).

International institutions have provided no substantive guidance about 'applicable legal frameworks', and for many countries looking to develop DPI, simultaneously 'enabling…inclusion, innovation, trust, and competition' is near impossible. The definition of DPI is outside the scope of this paper, but scholars and policymakers should put more thought into developing objective and empirical frameworks which measure the applicability and suitability of DPI, and guide its implementation (Gupta and Nair, 2023).

A common analogy to explain DPI characterises it as the 'digital rails' or 'digital building blocks' upon which goods and services can be built to benefit entire populations (Chakravorti, 2023; Alonso et al., 2023; Manur, 2023). In India, the set of Application Programming Interfaces ('*APIs*') and shared standards used to support these solutions is called 'India Stack'. This name borrows the 'stack' phraseology from the ICT world, and refers to the physical, connective, and application layers of DPI (Chakravorti, 2023).

The 'connective' layer, considered the most crucial, generally consists of digital identity, payments, and data exchange systems (Alonso et al, 2023; Manur, 2023). For the everyday Indian, these are respectively Aadhaar, Unified Payments Interface ('*UPI*') and Account Aggregator. This connective layer is the foundation for the application layer, where private actors can create a range of end-user products automatically available to huge populations. This modular and extensible approach where new innovations can be built on preceding ones results in a deeply enmeshed ecosystem of solutions.

UPI is an real-time payment network built, owned, and operated by the National Payments Corporation of India ('*NPCI*'), a not-for-profit company jointly owned by the Reserve Bank of India and major banks in India (National Payments Corporation of India, "About Us.", 2023; Alonso et al., 2023). Its interoperable protocol allows anyone to build an app providing payments as a service to all customers of participating banks (Alonso et al., 2023). The payments are settled instantly and for almost zero cost.

According to the NPCI, there were over twelve billion transactions on the UPI network in February 2024 (National Payments Corporation of India, "UPI Product Statistics", 2024). UPI has demonstrated that it is a robust payments interface, which within three years of launch was effortlessly processing 750 million transactions per month, which is now closer to ten billion (Matthan, 2019). The central protocols and infrastructure are under the control of the National Payments Corporation of India ('*NPCI*')[1], while the market strategy and end-user experience are spearheaded by the private sector. Market participation rules can be directly encoded into the infrastructure without stifling innovation and consumer-centric outcomes (Matthan, 2022).

Other economies have seen how this approach enables financial inclusion and provides users with access to services using their digital footprint (ibid).

- Last year, UPI was connected with Singapore's PayNow and the UAE's NEOPAY systems, and Nepal and Bhutan have been using it since 2022.
- In Sierra Leone, digital wallets used during the Ebola crisis allowed response workers to receive fast, accurate, and secure payments which augmented the country's ability to contain the disease (Matthan, 2023).
- The well-studied mPESA service in Kenya has been responsible for lifting an estimated million people out of abject poverty (ibid).

India is in discussions with more countries to install systems based on UPI, touting the micro- and macro-economic benefits which an instant payments system can provide. Of India's DPI offerings, UPI has the clearest use case in other jurisdictions, and could rectify significant issues with current payments systems, including in the Pacific.

There are caveats to the success of this model, factors unique to the Indian context or design decisions that would not be replicable in other markets. For example, the Government of India has mandated that banks not charge transaction fees on UPI payments, in order to attract users. It pays them a compensatory subsidy to achieve this, which amounted to almost $257 million in the most recent budget, a two-fold increase from the $125 million previously allocated (Choudhury, 2023). This strategy seems to have worked, as the two-year period from 2020 to 2022 saw UPI transaction gross value increase four-fold, from $0.4 to $1.5 billion (ibid).

Some might attribute this rapid uptake to the COVID-19 pandemic, due to the need for contactless payments and emergence of widespread government stimulus disbursements. Undoubtedly, the government played the anchor client role, opening basic bank accounts and using UPI to make social security payments (Alonso et al., 2023). However, in 2021 and 2022 alone, the volume of UPI transactions jumped by 40% and the gross value increased by 76%, demonstrating long-term uptake by individuals and the private sector (Ahuja, 2023).

The regulations which mandate zero-cost transactions, however, significantly disadvantage the companies creating products in that final applicational layer. This scheme is unlikely to be sustainable in the long-term in India, nor would it receive the same altruistic private investment in other markets. The end-user application market for UPI is dominated by three companies – PhonePe, Google Pay and Paytm – who collectively possess 94% market share (Menon, 2022). The largest is PhonePe, which reported a loss[2] of 16.12 billion rupees in the 2022 financial year, which widened to 17.55 billion in FY2023 (Reuters, 2023). These companies have failed to report profits due to the absence of transaction fees (Menon, 2022).

To achieve profitability, these companies would only require a miniscule levy on the 11.6 billion transactions worth $134 billion that are recorded monthly.[3] The NPCI and government leaders in India argue that zero-cost transactions have been instrumental to UPI's success, whereas private actors point out that the digital innovation, especially in end-user applications, has been a more decisive factor in attracting users (Sunilkumar, 2023).

In February, new Reserve Bank of India limitations saw Paytm's UPI transactions drop from 1.4 billion to 1.3 billion, further cementing a PhonePe/Google Pay duopoly, and increasing concerns about the long-term sustainability of UPI (ET Online, 2024). In India, private players might have a higher risk tolerance for direct losses on UPI transactions, because of the access UPI provides to the country's vast population. In other countries, however, private actors will need to be more certain of returns before they pour resources into developing new products.

Regardless, the net benefit that UPI has provided for India and its citizenry is undeniable, and the underlying infrastructure shows promise for international application. The modular, open and interoperable characteristics of the technology will allow for versatile, tailored solutions for different markets, and help to address unique national and regional challenges.

3. Geopolitical Context

3.1 India and the Pacific

India has had cursory interactions with the Pacific countries through the Commonwealth, the Non-Aligned Movement, and the UN system (Saint-Mézard, 2023). In 2006 it became a Pacific Islands Forum (PIF) dialogue partner, primarily due to its special relationship with Fiji, where 40% of the population originate from indentured servants the British Empire brought from India (ibid).

India's diplomatic presence in the region is sparse as its focus has been on island states in its own Indian Ocean Region (ibid).

In the early '90s, India introduced a 'Look East' policy which focused on building socio-economic and cultural ties with South-East Asian states through multilaterals such as ASEAN and the East Asia Summit (Wadhwa, 2019). When Prime Minister Narendra Modi and his government were elected in 2014, this was reshaped into the 'Act East' policy, which aimed to drive deeper engagement across South-East Asia, but also Japan, South Korea, Australia, and the Pacific Islands (ibid). This coincided with the US' Obama Administration changing its chief strategic concern from the Middle East to the Asia-Pacific, which was soon coined the 'Indo-Pacific' to enfranchise an emergent India as a strategic and economic power (ibid).

With India taking a more active role in ensuring the region is free, open, inclusive, and resilient, it has sought to engage more deeply with PICs. The main body for cooperation is the Forum for India-Pacific Islands Cooperation ('*FIPIC*'), launched by Prime Minister Modi during a visit to Fiji in 2014, as part of the Act East Policy (Ministry for External Affairs India, 2023).

More recently, India's strategic and economic interests have aligned to match those of its partners in the Quadrilateral Security Dialogue ('*Quad*')[4] and it has sought to engage more extensively with the Pacific on security, trade, development, disaster relief and more. In 2017, it convened the India-Pacific Islands Sustainable Development Conference in Fiji and in 2019, the India-Pacific Small Island Development States Meeting (on the sidelines of the UN General Assembly) (Saint-Mézard, 2023).

India has provided training for nearly 1000 Pacific officials between 2015-2023, and sent experts on long-term secondments to national and regional agencies (ibid). It has also funded many projects in the Pacific through the India-UN Development Partnership Fund, including solar-powered refrigeration in the Republic of the Marshall Islands, upgraded facilities and equipment in Palau's community health centres, and the repair and reconstruction of an export and fumigation facility in Tonga (ibid). The Fund was established in June 2017 to help encourage Global South countries to meet their Sustainable Development Goal targets, and the Government of India committed $100 million to the fund for this decade, as well as an additional $50 million for Commonwealth countries (Permanent Mission of India to the United Nations, 2023). From 2017 to 2019, the Fund developed 36 projects in 37 partnering countries with 21 already under implementation (ibid).

At FIPIC 2023, PM Modi unveiled a 12-point plan to further drive India's engagement with the Pacific Islands (Press Trust of India, 2023). It was announced that the India-funded Centre for Excellence for IT in Papua New Guinea would be upgraded and transformed into a Regional Information Technology and Cybersecurity Hub (ibid). A further 1000 scholarships for training PIC officials were also announced (Saint-Mézard, 2023).

India cleverly engages with the Pacific not in its role as a regional power or Quad member, but as a fellow Global South country facing similar development challenges. It holds itself as a voice for the Global South, indicated by the Voice of the Global South Summit it held this year (ibid). It also leads landmark multilaterals aimed at challenges disproportionately affecting developing countries, such as the International Solar Alliance and the Coalition for Disaster Resilient Infrastructure (ibid).

There has been a gradual positive shift in India's foreign policy in the Pacific due to a more transparent and inclusive relationship built on historical ties with countries like Fiji, a focus on driving development and cooperation in the Global South, and a shift in its strategic aims to creating a stable and peaceful external environment for its own growth (Pandey, 2023). This has paralleled the pivot of other actors -- such as the US, UK, France, the EU, Australia, and New Zealand -- to the Indo-Pacific, to help ensure it continues to create economic opportunities for all, and to sustain the peace which is a necessary precondition for that prosperity.

3.2 Australia and the Pacific

Australia has been the key security, development, and engagement partner for many Pacific Island countries. It is the region's largest development partner, with budget estimates showing Australian Overseas Development Assistance ('*ODA*') to the Pacific region in 2021-22 totalled USD 1.03 billion (Department of Foreign Affairs and Trade Australia, 2023). Papua New Guinea is the largest recipient of this aid, followed by the Solomon Islands, Vanuatu, and Fiji (ibid).

Australia has a small Pasifika[5] diaspora of 337,000 people, whilst over 38,000 additional Pasifika peoples work temporarily in Australia under the Pacific-Australia Labour Mobility ('*PALM*') Scheme (Collins, 2023). Between July 2018 and December 2021, short-term workers in Australia remitted approximately $681 per month, while for long-term workers it was closer to $841 per month (ibid). These numbers are expected to expand in the coming years as the diaspora grows at a faster rate than the general population, plans to expand the PALM Scheme are advanced, and the new Pacific Engagement Visa becomes available (ibid).

There is a storied history between the Australia and Pacific countries, marred by practices such as blackbirding[6], but since most Pacific countries obtained independence from their colonial powers, Australia has provided help, support, and safety. The exceptions would be those which are dependent territories or freely associated states with the US[7], France[8] and New Zealand.[9]

Australia's close relationship with the Pacific, including as a founding member of the Pacific Islands Forum ('*PIF*'), has also been affected in recent years by accusations of paternalism and an 'insulting and condescending' attitude, and frustration amongst Pacific states concerning Australia's reluctance to act on climate change (Turnbull, 2022). A change of government in Australia in 2022, however, led to PM Anthony Albanese declaring a 'new era' for Australian engagement in the Pacific. This has been followed up with high-level visits to every Pacific country, new commitments to combatting climate change at home and abroad, and an emphasis on speaking to the Pacific Islands with respect (ibid).

Australia has committed to providing an additional $318 million in aid over the next four years. Its most recent aid policy also promises to 'strengthen trade and business ties within the region, including through Australia's banks', which seeks to address the desertion of the region by major Australia banks, as discussed below (Herr, 2023). In November 2018, Australia also committed to delivering $1.38b for its Australian Infrastructure Financing Facility for the Pacific, which aims to provide funding for energy, water, transport, telecommunications, and other projects that are predicted to improve outcomes for Pacific Islanders (Wadhwa, 2019; Australian Infrastructure Financing Facility for the Pacific, 2023).

As the most developed country in the neighbourhood and a close US ally, Australia continues to endeavour to support, strengthen, and invest in PICs in a genuine manner to improve its desirability as the partner of choice. The Pacific Islands, however, are responding with increasing suspicion, all too aware of their small size and strategic importance, which makes them vulnerable to manipulation and great power security concerns (Herr, 2023). This partly reflects the increasing securitisation of the region, such as the emergence of the Quad as a new 'minilateral' quite clearly intended to help counter China's regional influence.

3.3 The Role of the Quad

The Quadrilateral Security Dialogue consists of the United States, Japan, India, and Australia, and has dramatically deepened its engagement with the Pacific in recent years. The Quad contributes across many domains, including infrastructure. It works on disaster risk reduction, largely in the Pacific, through its Infrastructure for Resilient Island States ('*IRIS*') initiative (Sharma and Manoj, 2023). This has aided in capacity-building efforts towards digital and economic connectivity, clean energy, and power sector infrastructure (ibid).

The work of the Quad Infrastructure Working Group is relevant, as it assesses regional infrastructure needs and coordinates on technical assistance, as well as ensuring that infrastructure investments do not place unsustainable debt burdens on recipient countries, a criticism often levelled at China when funding projects in developing countries ('*debt-trap diplomacy*') (ibid).

In their 2023 Joint Statement, the Quad leaders reaffirmed their commitment to working with the Pacific Islands to 'achieve shared aspirations and address shared challenges', a sentiment somewhat undermined by the fact that only India would broadly share the same challenges as Pacific states (The White House, 2023). They announced plans to continue to improve infrastructure development in the region through their own IRIS initiative, and also the India-led CDRI mentioned above. This was complemented by the announcement of a Quad Infrastructure Fellowships Program which aims to train over 1800 regional practitioners to design, build and manage quality infrastructure in their home countries (ibid).

Another infrastructure initiative announced this year was the Quad Partnership for Cable Connectivity and Resilience which aims to draw on its members' expertise in manufacturing, delivering and maintaining cable infrastructure (ibid). Notably, the Quad also announced a joint effort to deploy an Open Radio Access Network ('*Open RAN*') in Palau, the first in the Pacific, an effort to strengthen and diversify the telecommunications infrastructure supply chain in the region. The idea that the Quad could play a role in DPI deployment adoption in different jurisdictions has been suggested in the past, and it certainly presents as one of multiple options for building core DPI capabilities in the Pacific region (Chaudhuri and Gupta, 2024).

The important caveat to these initiatives, however, is that the Quad assumes responsibility for and covers a large area. These programs are potentially always on the proverbial chopping block, as the attention of one or all four members shifts rapidly from the South China Sea, to the Pacific, to the Indian Ocean Region, to *outer space* or *the cybersphere* and around again.

Further, the individual members view the Quad markedly differently, with Japan emphasising it as a group of regional democracies, India viewing it as a mechanism for functional cooperation, and Australia hesitating to call it a formal alliance (Smith, 2021). It is, however, undoubtedly beneficial in the long-term for developing countries in the region, as these states flood the Pacific with expertise, resources, and support to counter China's influence. It also provides an opportunity for India to bring that important Global South voice to a meeting of key regional players, which could help avoid future accusations of paternalism. Although the Quad does not necessarily have digital payments within its purview, its members often collaborate on joint initiatives in bilateral or trilateral arrangements not under the Quad banner. The solution proposed in this paper is one such example.

4. Problem Description

4.1 The Pacific's Need for Instant Payments Systems

4.1.1 Financial Inclusion

Currently, approximately 37% of the global population – 3 billion people – are not digitally connected, yet 70% of global economic value will be generated by the digital economy in the next decade (Mita, 2023). The terms 'digital inclusion' and 'financial inclusion' are almost synonymous in this digital age.

Globally, COVID-19 resulted in the emergence of some fintech and other non-bank financial services, and increased adoption of cashless transactions in remote areas and villages where dispensers, ATMs and financial institution branches were hard to access (Sheth, 2021). These were collaborations between financial institutions and other payment service providers, government agencies, intergovernmental organisations, multinational corporations, fintech providers and agent networks (ibid).

The expansion of formal financial services has created new economic opportunities, increased account ownership and built household resilience against financial shocks (World Bank Group, 2022). As of 2021, 76% of adults globally have an account with a bank, other financial institution, or mobile money provider, up from 51% a decade prior (ibid). During the pandemic, low- and middle-income countries saw over 40% of adults use a card, phone, or the Internet to make a merchant, in-store or online payment for the first time (ibid).

Two-thirds of adults worldwide now make or receive digital payments. The Global Findex Database found that receiving payments into an account instead of in cash catalyses use of the formal financial system, as 83% then use that account to make payments (ibid). The establishment of an interoperable and accessible digital payment infrastructure can provide the foundation for the second-order lending and investing services which contribute to business growth, innovation and entrepreneurship, and development.

The Pacific truly is the wild frontier when it comes to digital transformation, especially in payments. PICs have small and geographically sparse populations, with an average of 34 people per square kilometre (Statham et al., 2021). This is exacerbated by high emigration rates to Australia and New Zealand. Regional GDP sits at USD 23 billion (USD 3600 per capita), which pales in comparison to nearby Australia's USD 1.3 trillion (USD 51812 per capita) (ibid). The small regional economy and production base has created diseconomies of scale for many businesses, which hinders the growth of services, and discourages international players from entering these thin markets (Statham et al., 2021; Collins, 2023). In the Pacific, only 40% of adults have a bank account due to remote living, challenges acquiring identity documents and accessing bank branches, and a regional preference for cash (Collins, 2023).

There have been collaborative efforts to improve Pacific Islanders' access and enfranchisement in the formal financial system. The Pacific Financial Inclusion Programme ('*PFIP*'), a collaboration between the UNDP and UNCDF, worked with the PNG Women's Micro Bank to set up access points for customers to access basic transaction services (de Groot, Payne and Reddaway, 2022; Statham et al., 2021). Mobile Network Operators ('*MNOs*') are also important stakeholders in the Pacific payments space, and the PFIP worked with the two major regional providers, Vodafone and Digicel, to launch mobile money solutions in Fiji in 2010, which have now expanded to other countries too (de Groot, Payne and Reddaway, 2022). These efforts are a step in the right direction, and demonstrate that a digital solution which helps to maintain security whilst working around the accessibility challenges of the Pacific is ideal.

4.1.2 Remittances

Limited natural resources and economic opportunities leads to large Pasifika diasporas in these richer neighbouring countries, and dependency on inbound remittances. During the COVID-19 pandemic, remittances outperformed foreign direct investment ('*FDI*') and overseas development assistance ('*ODA*') as a source of income for low to middle-income countries (Collins, 2023). For many smaller Pacific countries, remittances comprise upwards of 40% of total GDP, and even in Fiji, which has the most inbound remittances by dollar value, it still represents a significant 9.2% segment (World Bank Group, 2023; Collins, 2023).

The average cost of a remittance transaction to Fiji was 10.2%, which is exorbitantly high compared to the G20 global target of 5%, or the UN Sustainable Development Goal ('*SDG*') target of 3% (Collins, 2023). There have been efforts, such as through the Pacific Working Group on Remittances

('*PWGR*') to integrate regional payments systems to align them with the SDGs, which also includes removing corridors with costs above 5% per transaction completely (Statham et al., 2021).

Multilateral and bilateral partnerships which provide PICs with this foreign aid have also driven efforts to improve digital payments. The Tonga Development Bank in cooperation with The World Bank, Australia, and New Zealand, launched the *'Ave Pa'anga Pau* voucher system, which allowed diaspora and seasonal workers to remit funds fixed at interbank rates. Mobile money wallets developed by MNOs, as mentioned above, resulted in a 28% increase in remittances during the 2020-21 financial year too (Collins, 2023).

However, these pilot programs are built as siloed one-off development solutions, rather than open and interoperable frameworks upon which any private entity can expand. Due to the small populations involved, the network effect is not sufficient to provide transaction volumes that justify continued investment. Therefore, these solutions are either heavily subsidised by national or international development partners, which is not a sustainable solution, or are slowly wound up as the private entities involved seek to invest elsewhere.

4.1.3Innovation and Entrepreneurship

End-consumers and merchants play an important role in digital payments systems. Their inclusion requires suitable point-of-sale ('*POS*') terminals and gateways, low latency settlements, and basic infrastructure such as electricity and connectivity. In the Pacific, many products and services provided by small or medium enterprises ('*SMEs*') are marketed online but transactions are completed in cash. There have been grassroots efforts, such as through local online marketplaces such as Vitikart, Pacifickart, CyberFood, to provide seamless e-payment options; however, the absence of underlying infrastructure hinders these efforts (Statham et al., 2021).

The acceleration of digital transformation in the region could not only reduce leakages and losses in these direct sources of income, but create new opportunities for innovation and entrepreneurship. As Datuk Paul Khoo, CEO of Malaysian technology firm ReGov Technologies said: 'In a region where small economies are cut off from each other and the rest of the world by vast distances, a digitally-connected Pacific can become a significant economic bloc' (Mita, 2023).

4.2 Common Development Challenges

There are a number of characteristics about India's development of DPI unique to its situation. Due to the need for support payments during COVID-19, the government acted as an important anchor client which encouraged society-wide adoption (Alonso et al., 2023). India has a high IT capacity in its domestic labour market, which allowed it to develop these solutions in-house and avoid siloed solutions (ibid).

India has subsequently endeavoured to increase the accessibility and availability of this infrastructure and help other developing countries avoid vendor lock-in as well. As part of the G20 Digital Economy Ministers' Meeting, India offered to develop a Global Digital Public Infrastructure

Repository ('*GDPIR*') to encourage knowledge sharing between countries implementing these technologies (G20, 2023). In collaboration with Pacific Islands governments, India could provide expertise, experience, and insight into lessons learned from its own DPI journey, so that the Pacific can quickly build a scalable and reliable fast payments system.

There are a number of challenges to building effective, inclusive, resilient, and instant payments systems in the Pacific. The demographic challenges caused by small, disparate populations with low economic resources and low financial and digital literacy are the most obvious. Other challenges include building critical infrastructure, such as undersea cables, in fragile ecological environments; lack of trans- and even intra-national interoperability; and a lack of uniform or harmonised regional regulation across financial systems, digital payments, cybersecurity and data privacy (Statham et al., 2021).

In certain ways, India has faced and overcome (or continues to tackle) similar challenges, and it is these commonalities which make it the ideal partner for the Pacific to develop their own capabilities. A clear example is the inherent weakness that Internet connectivity penetration poses for fast payments. Connectivity is still a major issue in the Pacific region, with only an average of 64% 4G and 81.4% 3G coverage (ibid). India partly circumvented this by providing an offline payment option through phone banking, however one party still has to be online, and is therefore not a substitute for connectivity.

Another chief challenge is data safety and sovereignty, but India Stack – and DPI more broadly – aims to be secure-by-design, and takes an *ex ante* rather than *ex post* approach to data sovereignty by ensuring that the protocols and architecture are federated, or at least controlled by an independent authority, while consumer data remains as decentralised as possible. India's Data Empowerment and Protection Architecture (DEPA) is not purely regulation (which does little to protect the consumer), and instead focuses on reprimand and restitution for poor data practices. Instead, it utilises a techno-legal model which gives individuals greater agency over their personal privacy and use their data in ways that empowers them (iSPIRT Foundation, 2023).

Another area where India has unique insight is the need for simple and effective systems that facilitate inbound remittances, given it is the highest global recipient of such remittances. The World Bank predicts that the total value of international remittances to India will be $100 billion in 2022, compared to $89 billion in 2021 (Ahuja, 2023). The gap between India and the next highest recipient is high, with Mexico receiving $54.1 billion in remittances that year (Kumar, 2023).

The integration of India's UPI framework with Singapore's PayNow system, as well as the financial systems of the UAE, Mauritius, Nepal, and Bhutan is expected to dramatically improve cost and latency of international remittances (ibid). As these developments are recent, however, data is yet to be collated on the existence and extent of any improvements in these corridors. However, research demonstrates that mobile money solutions like UPI, even accounting for transaction costs and cash-out fees, are significantly cheaper than other formal remittance channels (ibid).

India has struggled with many of the challenges that the Pacific Islands also face. In engaging with the Pacific Islands and Australia, India will be able to help bridge gaps in understanding created by these actors' markedly different levels of development, which may have contributed to disagreements and strained relations in the past. Meanwhile, Australia has the financial resources and familiarity with the region that India could use to better orient its investments and efforts at building this platform. Therefore, the complementary strengths of both states and their individual relationships with the Pacific Islands make this collaboration an ideal nexus for diplomatic, developmental, and digital leadership from all involved.

5. Policy Recommendation

The Union Government of India and the Commonwealth Government of Australia start a dialogue with Papua New Guinea and Fiji to establish a pilot program that helps to streamline, integrate, and modernise their payments system, based on India's UPI framework.

Papua New Guinea and Fiji

The introduction of a UPI system will need to have a solid value proposition for private sector actors, given the opportunity to develop end-user applications. Papua New Guinea and Fiji are amongst the largest sovereign states in the region (excluding Australia and New Zealand) by population and area (Central Intelligence Agency, 2023). There are already efforts underway in both countries to introduce digital identity, which is an important foundation for digital payments, like Aadhaar was for UPI.

The prominent players in financial systems in the region are also mostly present in these two countries, and their active participation in this scheme will be necessary. These are not only large regional banks such as the Bank of the South Pacific, but also MNOs like Digicel Pacific (now owned by Telstra Australia) and Vodafone.

Many will point to already established successful mobile money programs as justification that this renewed investment is duplication of effort. However, the lack of underlying payments infrastructure and investment cohesion means these solutions are stop-gap measures which address very specific issues, such as the Australia-Tonga remittance vouchers, or are constrained to a single market. In many cases, these initiatives are not sustainable because of thin markets in the Pacific and lack of private sector buy-in.

Conversely, this policy recommendation is that India and Australia work with the two Pacific Island countries with which they have the strongest ties respectively – Fiji and Papua New Guinea – to create an open, interoperable, and efficient payments network that can be used by government, banks and other financial institutions, mobile money operators, money transfer operators (e.g., Western Union), large and small vendors, and individuals.

India brings technical expertise and developmental experience with the transformative impact of constructing an effective digital payments system. Australia can use its strong and profound ties through the Pacific, and its membership in regional fora to help advocate for this unique solution, and to be the primary listening post for Pacific Island countries' specific financial needs or concerns.

Costs and Sensitivities

In considering a practical policy solution, cost is nearly always the principal concern of policymakers, legislators and political leaders. In India, the creation of UPI required NPCI to spend $50 million in 2016, although this would be partly affected by its efforts to subsidise banks as a participation incentive (National Payments Corporation of India, 2016). While this provides a yard stick, the cost for the Pacific Islands would likely be higher given the need to integrate cross-jurisdictional infrastructure and provide not only direct financial support for the costs of constructing a UPI-esque system, but also the technical expertise and logistical support that these countries will need while they build their own capacity to maintain it.

These costs could be mitigated through the adoption of the 'DPI as a packaged Solution' (DaaS) model which is different from the 'traditional custom build' (TCB) approach [notwithstanding the oxymoron of a cutting edge field like DPI already using the term 'traditional'] (Varma et al., 2024). This would see fully packaged, easy to adopt, cloud-based, well-productised, modular solutions sold to countries with smaller populations, that can be rapidly deployed and easily maintained (ibid). This would reduce the long design, procurement and IT implementation of typical DPI rollout for smaller countries, which often do not have the economies of scale or adequate technological talent to build, operate, and maintain custom digital infrastructure (ibid).

The original proponents of this approach argue that all DPI pilot efforts could start with the DaaS model and be adapted into a more tailored solution as demands grew and evolved (ibid). Brief efforts to scope the costs of implementing this DaaS model have suggested that for states with population less than 10 million – such as in the Pacific – a pilot should not cost more than $2 million (Chaudhuri and Gupta, 2024). This would include the buildout of a particular technology asset, aligning local governance structures with a broader DPI framework, socialisation, and training in local jurisdictions.

The implementation costs might be higher than this predicted figure for the Pacific, but the DaaS approach could allow for solutions to be developed outside of the Pacific, in India for example, and deployed once efforts to upgrade physical infrastructure to the requisite levels were complete. The funds are already available and even earmarked for projects which would potentially fall under the umbrella of DPI. This could be achieved through a third iteration of the PFIP, FIPIC, the PIF, or with the support of the India-UN Development Partnership Fund or the Quad. Regardless, there are some important principles which should be considered for the governments of India and Australia when working with Papua New Guinea and Fiji on this pilot program.

The first is the importance of frank dialogue between all four states in implementing this solution. Australia has been accused of paternalism in past interactions, and so should be careful to understand the needs of Pacific states, especially given their markedly different economies and financial environments compared with Australia. Honest and open communication will be important for identifying the preconditions for the establishment of a regional payments system, and for understanding stakeholders' specific strengths and weaknesses.

The second is narrative control, especially emphasising that – as opposed to other potential solutions or systems – a payments framework based on open protocols like UPI can help combat financial oligarchies or dependencies. It will need to effectively enfranchise private sector actors such as regional banks, other financial institutions, and MNOs and persuade them that this model will be more effective, holistically beneficial, and profitable in the long-term.

Finally, there should be a concomitant effort to strengthen regulation and governance around banking, financial systems, and digital privacy in the Pacific. Both India and Australia have built recent initiatives to build data sharing networks based on informed – the Data Empowerment and Protection Architecture, and Consumer Data Right respectively – although both are in their infancy (India Stack, 2024; Australian Government, 2024).

There is no shortage of literature or resources for regulatory development in the Pacific, and there has already been significant strides by major donor partners to help countries develop their legal regimes, including in these areas. These must also help to ensure that the Pacific countries hedge against money laundering ('*AML*') and terrorism financing ('*CTF*') risks, and comply with international standards in this manner. The reluctance of major financial actors to enter the region or scale-up their service provision is partly due to AML/CTF risk, which is a concern that will need to be addressed in order to remove barriers to their participation on this new platform (Davies, 2023).

6. Conclusion

The Pacific Islands are in desperate need of a tailor-made, interoperable, and efficient financial payments system which improves financial inclusion, reduces regional remittance costs, and enables more innovation and entrepreneurship in their communities. Although strides have been made in this direction, through bilateral and multilateral efforts alike, these are small solutions for specific problems and have reached issues when attempted at scale, or have suffered from a loss of economic or political support.

Australia has made a concerted effort to engage more openly and genuinely with the Pacific, while simultaneously also seeing its relationship with India strengthen and broaden as their respective goals for their shared region align. As the state with the premier development and diplomatic presence in the region, Australia is positioned to contribute through its own efforts for stronger cooperation with the Pacific Islands. It has access to funding designed to help drive development and infrastructure projects in the region, governance and technical expertise which can complement that provided by India, and experience in coordinating and facilitating implementation and monitoring in the Pacific.

India's domestic success with DPI, of which UPI is a prime example, has established it as a world leader for creative tech-driven solutions to development challenges. It is now looking to use this as a tool to help its fellow members of the Global South realise the same gains and benefits it has experienced in recent years. The core principles of UPI and the issues it has solved for Indians align with the needs of the Pacific, and there is political will in India to increase its investment in the region, especially through DPI projects. Through this program, India will be able to lift millions of Pasifika people out of isolation and include them in the world economy, and serve as the seminal example of India's global leadership.

References

Ahuja, Ashish. "UPI for NRIs: A Game-Changing Proposition for International Remittances." *Mint*, January 19, 2023. https://www.livemint.com/money/personal-finance/upi-for-nris-a-game-changing-proposition-for-international-remittances-11674147712356.html.

Alonso, Cristian, Tanuj Bhojwani, Emine Hanedar, Dinar Prihardini, Gerardo Uña, and Kateryna Zhabska. "Stacking up the Benefits: Lessons from India's Digital Journey." *International Monetary Fund*, March 31, 2023. https://www.imf.org/en/Publications/WP/Issues/2023/03/31/Stacking-up-the-Benefits-Lessons-from-Indias-Digital-Journey-531692.

Australian Government. "What Is CDR?" Consumer Data Right, 2024. https://www.cdr.gov.au/what-is-cdr.

Australian Infrastructure Financing Facility for the Pacific. "About." The Australian Infrastructure Financing Facility for the Pacific (AIFFP), 2023. https://www.aiffp.gov.au/about.

Central Intelligence Agency. "Country Comparisons – Area." The World Factbook. Central Intelligence Agency, 2023. https://www.cia.gov/the-world-factbook/field/area/country-comparison/.

———. "Country Comparisons – Population." The World Factbook. Central Intelligence Agency, 2023. https://www.cia.gov/the-world-factbook/field/population/country-comparison/.

Centre for Digital Public Infrastructure. "DPI Overview." Centre for Digital Public Infrastructure, 2024. https://docs.cdpi.dev/the-dpi-wikipedia/dpi-overview.

Chakravorti, Bhaskar. "The Case for Investing in Digital Public Infrastructure." Harvard Business Review, May 22, 2023. https://hbr.org/2023/05/the-case-for-investing-in-digital-public-infrastructure.

Chaudhuri, Rudra, and Aadya Gupta. "A Quad Initiative on Digital Public Infrastructure." Carnegie India, February 19, 2024. https://carnegieindia.org/2024/02/19/quad-initiative-on-digital-public-infrastructure-pub-91668.

Choudhury, Deepsekhar. "Budget 2023: Subsidy for Digital Payments Jumps Two-Folds to Rs 2,137 Crore." *Moneycontrol*, February 1, 2023. https://www.moneycontrol.com/news/business/budget/budget-2023-subsidy-for-digital-payments-jumps-two-folds-to-rs-2137-crore-9980021.html.

Collins, Jessica. "Reducing Remittance Costs in the Pacific Islands." *Lowy Institute*, October 8, 2023. https://www.lowyinstitute.org/publications/reducing-remittance-costs-pacific-islands.

Davies, Michael. "Correspondent Banking in the South Pacific." Reserve Bank of Australia, June 15, 2023. https://www.rba.gov.au/publications/bulletin/2023/jun/correspondent-banking-in-the-south-pacific.html.

Department of Foreign Affairs and Trade Australia. "Overview of Australia's Development Program to the Pacific." Australian Government Department of Foreign Affairs and Trade, 2023. https://www.dfat.gov.au/geo/pacific/development-assistance/overview-of-australias-development-program-to-the-pacific.

Dhamija, Anjum, David Eaves, Krisstina Rao, and Jordan Sandman. "Launching the 'State of DPI' Project — Co-Develop." *Co-Develop Fund* (blog), December 22, 2023. https://www.codevelop.fund/insights-1/launching-the-state-of-dpi-project.

ET Online. "UPI Transaction Fee Debate Resurfaces as PhonePe & Google Pay Cash in on Paytm's Fall." *Economic Times*, March 11, 2024. https://economictimes.indiatimes.com/industry/banking/finance/upi-transaction-fee-debate-resurfaces-as-phonepe-google-pay-cash-in-on-paytms-fall/articleshow/108386883.cms?from=mdr.

G20. "Digital Economy Ministers Meeting Outcome Document & Chair's Summary." G20, August 19, 2023. https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/G20_Digital_Economy_Outcome_Document%20_and_Chair%27s_Summary_19082023.pdf.

George, A. Shaji, T. Baskar, A.S. Hovan George, and A.S. Gabrio Martin. "An Overview of India's Unified Payments Interface (UPI): Benefits, Challenges, and Opportunities." *Partners Universal International Research Journal* 2, no. 1 (April 2, 2023): 16–19.

Groot, Naomi de, Rose Payne, and Alex Reddaway. "Building the Rails: Expanding Access to Financial Services in the Pacific." Pacific Financial Inclusion Programme, February 2022.

Gupta, Aarushi, and Aman Nair. "Unpacking Digital Public Infrastructure: Navigating Conceptual Ambiguities." In *T20 Policy Brief*. New Delhi: Observer Research Foundation, 2023. https://www.orfonline.org/wp-content/uploads/2023/07/T20_PB_TF2_256_UnpackingDPI.pdf.

Herr, Richard. "What Australia's 'Indo-Pacific' Aid Policy Tells the Pacific about Its Priorities." The Strategist, August 27, 2023. https://www.aspistrategist.org.au/what-australias-indo-pacific-aid-policy-tells-the-pacific-about-its-priorities/.

India Stack. "India Stack." Data, 2024. https://indiastack.org/data.html.

iSPIRT Foundation. "Data Empowerment: A Techno-Legal Approach." iSPIRT Foundation, August 10, 2023.

Kumar, Sushil. “Cost of Remittance: A Priority Area for G20 Member Countries.” New Delhi: Research and Information System for Developing Countries, May 2023.

Manur, Anupam. “Government Overreach in Digital Economy Could End up with No Commensurate Benefit and Serious Distortions.” *Moneycontrol*, June 9, 2023. https://www.moneycontrol.com/news/opinion/government-overreach-in-digital-economy-could-end-up-with-no-commensurate-benefit-and-serious-distortions-10769971.html.

Massally, Keyzom Ngodup, Rahul Matthan, and Rudra Chaudhuri. “What Is the DPI Approach?” Carnegie India, May 15, 2023. https://carnegieindia.org/2023/05/15/what-is-dpi-approach-pub-89721.

Matthan, Rahul. “An Explosion of DPI.” *Ex Machina* (blog), March 15, 2023. https://exmachina.substack.com/p/an-explosion-of-dpi.

———. “Data Governance - the DPI Way.” *Ex Machina* (blog), November 9, 2022. https://exmachina.substack.com/p/data-governance-the-dpi-way.

———. “UPI Is World Class and It’s Time to Take It International.” *Mint*, July 23, 2019. https://www.livemint.com/opinion/columns/opinion-upi-is-world-class-and-it-s-time-to-take-it-international-1563904169325.html.

Menon, Navya. “How UPI Business Makes Money, What Profit Margin Do They Have?” *ETBFSI*, December 5, 2022. https://bfsi.economictimes.indiatimes.com/news/fintech/how-upi-business-makes-money-what-profit-margin-do-they-have/95985239.

Ministry of External Affairs India. “About Forum for India-Pacific Islands Cooperation.” Business Accelerator for Forum for India-Pacific Islands Cooperation (FIPIC), 2023. https://www.ficci-fipic.com/about.html.

National Payments Corporation of India. “About Us.” National Payments Corporation of India, 2023. https://www.npci.org.in/who-we-are/about-us.

———. “Board’s Report.” National Payments Corporation of India, 2016. https://www.npci.org.in/who-we-are/corporate-governance/financials.

———. “UPI Product Statistics.” National Payments Corporation of India, 2024. https://www.npci.org.in/what-we-do/upi/product-statistics.

Pandey, Pragya. “FIPIC III: Enhancing India’s Engagement with Pacific Islands.” Indian Council of World Affairs (Government of India), June 6, 2023. https://www.icwa.in/show_content.php?lang=1&level=3&ls_id=9468&lid=6142.

Permanent Mission of India to the United Nations. “India-UN Development Partnership Fund.” Permanent Mission of India to the UN, 2023. https://pminewyork.gov.in/pages?id=eyJpdiI6IkFXaXV0TXZ4NTU2MTZ3elN3cUJiN1E9PSIsInZhbHVlIjoidEtjMEF1OXhZTklqNVBNa29CUDE2dz09IiwibWFjIjoiNjQwNjlhZTczNjdhNWYyNDlkMzY4OWQ0ZTBkOThiZDY2YTMwNDBlY2JlNGY1ZWU4ODMxNWEw

ZWMzZmY3Y2ExYSJ9&subid=eyJpdiI6InRuRVkyTEl2SjQ5TXZCUVprUkVNOUE9PSIsInZhbHVlIjoiU0hLd1FmRmN2Y2daakhEOGE0VHUyZz09IiwibWFjIjoiOGQyYTBkZDljY2Q2ODBiYWY2ZDhmNzFiZWQyYzI1ZjQ4NzgxNmU3NjAwM2RiMjU2Yjg0MzAxZTFjNTVhZmU4MiJ9.

Press Trust of India. "PM Announces 12-Point Development Initiatives for Pacific Island Nations." *Business Standard*, May 22, 2023. https://www.business-standard.com/india-news/pm-announces-12-point-development-initiatives-for-pacific-island-nations-123052201144_1.html.

———. "PM Announces 12-Point Development Initiatives for Pacific Island Nations." *Business Standard*, May 22, 2023. https://www.business-standard.com/india-news/pm-announces-12-point-development-initiatives-for-pacific-island-nations-123052201144_1.html.

Reuters. "PhonePe Revenue Soars 77% in FY23 on Booming Digital Payments Market." *Business Standard*, October 18, 2023. https://www.business-standard.com/companies/start-ups/phonepe-revenue-soars-77-in-fy23-on-booming-digital-payments-market-123101800712_1.html.

Saint-Mézard, Isabelle. "India's Development Strategy with the Pacific Island Countries. Killing Two (or More) Birds with One Stone ." Paris: Institut Français des Relations Internationales, June 1, 2023. https://www.ifri.org/en/publications/briefings-de-lifri/indias-development-strategy-pacific-island-countries-killing-two-or.

Sharma, Bharat, and Kewalramani Manoj. "Takshashila Issue Brief - What Is the Quad Doing in the Indo-Pacific? — The Takshashila Institution." *The Takshashila Institution*, September 21, 2023. https://takshashila.org.in/research/what-is-the-quad-doing-in-the-indo-pacific.

Sheth, Reena. "Deepening Financial Services Adoption." *FSS PayTech*, August 2021. https://www.fsstech.com/resources/2021-08/Deepening-Financial-Services-Adoption.pdf.

Smith, Sheila A. "The Quad in the Indo-Pacific: What to Know." Council on Foreign Relations, May 27, 2021. https://www.cfr.org/in-brief/quad-indo-pacific-what-know.

Statham, Chris, Konstantin Schroeter, Marius Siebert, and Samuel Chari. "The Opportunity for Digital and E-Commerce Payments in the Pacific Region." Pacific Digital Economy Programme, July 2021.

Sunilkumar, Singh Rahul. "NPCI Says No Charge on 'normal' UPI Payments; but Is Free Service Sustainable?" *Hindustan Times*, March 30, 2023. https://www.hindustantimes.com/technology/npci-says-no-charge-on-normal-upi-payments-but-is-free-service-sustainable-101680176734294.html.

The White House. "Quad Leaders' Joint Statement." The White House, May 20, 2023. https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/20/quad-leaders-joint-statement/.

Turnbull, Tiffanie. "Why Australia Is Declaring a 'new Era' in the Pacific." BBC News, June 5, 2022. https://www.bbc.com/news/world-australia-61669954.

United Nations Development Programme. "Pacific Financial Inclusion Programme." UNDP, 2023. https://www.undp.org/pacific/projects/pacific-financial-inclusion-programme.

Wadhwa, Anil. "India's Act East Policy." Lecture. Presented at the Ministry of External Affairs Distinguished Lecture, August 9, 2019. https://www.mea.gov.in/distinguished-lectures-detail.htm?840.

World Bank Group. "COVID-19 Drives Global Surge in Use of Digital Payments." *World Bank Group*, June 29, 2022. https://www.worldbank.org/en/news/press-release/2022/06/29/covid-19-drives-global-surge-in-use-of-digital-payments.

———. "Personal Remittances, Received (Current US$)." World Bank Open Data, 2023. https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT?locations=

Notes

[1]The National Payments Corporation of India is a not-for-profit company jointly owned and administered by the Reserve Bank of India and a consortium of India's leading banking institutions.

[2] Earnings Before Interest, Tax, Depreciation and Amortisation ('*EBITDA*')

[3] Figures refer to volume and value of UPI transactions in September 2023.

[4] The Quadrilateral Security Dialogue comprises India, Australia, Japan and the United States.

[5] Pasifika is the term used to broadly refer to the indigenous peoples of territories in the Pacific Islands.

[6] Blackbirding was a historical practice of forced kidnapping of Pasifika peoples and removal to Australia as indentured servants, predominantly on sugar cane plantations.

[7] The permanently inhabited US Pacific Territories are Guam, the Northern Mariana Islands, and American Samoa. The Compacts of Free Association govern the US relationship with the Federated States of Micronesia, the Republic of Palau, and the Republic of the Marshall Islands.

[8] The French external territories in the Pacific are New Caledonia, Wallis and Futuna, and French Polynesia.

[9] New Zealand has one Pacific external territory, Tokelau, and also has a free association relationship with the Cook Islands and Niue.