ISAS Insights
No. 508 – 15 August 2018
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Building a Digital Bridge:
New Frontiers in India-Singapore Connectivity

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Digital connectivity is becoming an increasingly important tool of diplomacy, driven mainly by significant Chinese investments, especially in the Association of Southeast Asian Nations (ASEAN) region. In the 21st century, digital connectivity will have as significant a geo-political impact as physical connectivity. Increased Chinese presence in the digital markets of ASEAN, therefore, has led to unease amongst the countries of this region. Given India's rapidly expanding and maturing digital sector, coupled with the presence of indigenously developed digital products that could have relevance in the countries of ASEAN, India could act as a direct competitor to China in this region. Singapore, which is home to a number of India-facing digital companies, and is at the heart of the ASEAN economy, could act as a conduit for greater India-ASEAN digital cooperation. To ensure this, however, India must act on two fronts. Externally, India should be more ambitious and driven in exporting its technology and digital products to the rest of the world, and should improve its overseas project delivery capacities. Internally, India should ensure that its digital markets remain free and open, with clear, well-thought out policies, and should not fall into the temptation of having data localisation requirements.

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Introduction

Connectivity has become a central theme of international politics in the last half-decade, driven primarily by Chinese investments in trans-national connectivity projects such as the Belt and Road Initiative. Physical connectivity, however, is but one aspect of the idea of connectivity, the digital component becoming as important in geo-political considerations. The primary recent driver for this again is significant Chinese investment in cross-border digital connectivity, through what has been dubbed as the 'Digital Silk Road'.[2]

While Chinese investments in both physical and digital connectivity have been generally welcomed across a large swathe of countries in Asia and Africa, they have also raised fears of overdependence on Chinese money and unsustainable indebtedness to Chinese corporations, most recently seen in the case of the Hambantota airport in Sri Lanka.[3] In spite of these fears however, India's neighbours especially have largely welcomed Chinese investments in both physical and digital connectivity projects, primarily to balance decades of dependence on India.[4] Given, however, the increasing uneasiness over the centrality of Chinese commercial interests in new trans-national connectivity among China's neighbours, this paper argues that India could act as a counter to Chinese forays in digital connectivity, where India has the necessary manpower and technical resources to compete internationally. To do so, however, would require overhauling India's traditional approach to conceptualising and executing connectivity projects to play to India's strengths, and focus first on enabling greater connectivity with Singapore which can act as the gateway to the greater Association of Southeast Asian Nations (ASEAN) region.

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2 Wenyuan Wu, "China's Digital Silk Road: Pitfalls Among High Hopes", *The Diplomat*, 3 November 2017.

3 Ian Marlow and Anusha Ondaatjie, *Sri Lanka Seeks India and Japan Cash to Balance China*, Bloomberg, 27 March 2018.

4 Ashlyn Anderson and Alyssa Ayres, "Economics of Influence: China and India in South Asia", *Council on Foreign Relations*, 3 August 2015.

The Question of Digital Connectivity

At the outset, however, it becomes necessary to state what is meant by the term 'digital connectivity'. The more traditional notion of physical connectivity is readily understood as a massive buildup of interconnected ports, roads, railway lines and airports to enable greater and faster movement of goods and people.[5] The idea of 'digital connectivity', however, is harder to pin down. Fundamentally, it consists of two inter-related parts. The first is the physical aspect in the form of optic fiber cables such as the Pakistan East Africa Cable Express being bankrolled by China, and which would connect Pakistan to Kenya via Djibouti.[6] The second is greater digital interconnectedness, especially in value generating sectors such as financial technologies and e-commerce. This interconnectedness includes reciprocal acceptability of digital financial instruments, collaborations in cutting edge research and development, and exchange of technical know-how and trained manpower. Specific examples of such types of connectedness will be elaborated upon later in the paper.

Imperatives for Digital Connectivity

Much as with physical connectivity, there are specific geo-political imperatives that drive the need for India to invest greater resources in the idea of digital connectivity. As mentioned previously, Chinese investments are being welcomed by countries in India's neighbourhood primarily to offset decades-long dependence on Indian aid and support.[7] A similar but reverse feeling is in play among China's neighbours, including in the ASEAN region, wherein countries are increasingly uneasy with the increasingly important role played by Chinese corporations in their respective digital economies, and are looking for an actor to balance Chinese interests in the

5 Yong Wang, "Offensive for Defensive: The Belt and Road Initiative and China's New Grand Strategy", *The Pacific Review*, 2016.

6 "Huawei Marine Commences Survey for PEACE Submarine Cable", *Pakistan Today*, 4 May 2018.

7 Amit Bhandari and Chandni Jindal, *Chinese Investments in India's Neighbourhood*, Gateway House, March 12, 2018.

region.[8] This is a role that India can take up given its existing capabilities in the digital arena, allowing it to effectively act upon its vision to be a democratic counterweight to China.

A second imperative is the transfer of technical know-how as a tool of diplomacy. Over the last decade and a half, India has built up considerable expertise in adapting digital technologies to cater to the needs of the proverbial bottom of the population pyramid and for governance purposes. Prominent examples of this include the Aadhaar identity card, the Unified Payments Interface system, the RuPay card system, and various e-governance initiatives such as Mee Seva. Each of these can have specific use-cases in the ASEAN region, given the similar socio-economic makeup of most ASEAN-member countries and India, and the export of these products could be a significant weapon in India's diplomatic arsenal.

A third and final imperative is commercial. Alongside the buildup of technical know-how, over the last decade, India has also seen a veritable boom in startups and companies that have built significant expertise in commercialising the digital arena to meet the needs of India's specific socio-economic demographic profile. Greater digital connectivity with ASEAN through Singapore will allow these companies to expand their commercial heft by entering new markets that are similar to India in profile. Conversely, greater digital connectivity between India, Singapore, and the ASEAN region will also allow cutting edge startups from the ASEAN region to enter the vast and growing Indian digital market.

India-Singapore Digital Connectivity: An Overview

Given these imperatives, in the recent past, digital connectivity has become a central theme of expanding India-ASEAN relations in general and India-Singapore relations in particular. Singapore's Minister for Foreign Affairs, Vivian Balakrishnan, in his remarks at New Delhi in October 2017,[9] highlighted the necessity of better digital connectivity between India and

[8] "How China's Asian Neighbours Survive Great Power Rivalry", *The Economist*, 22 April 2017.

[9] Remarks of Dr. Vivian Balakrishnan at the Singapore Symposium, New Delhi, 31 October 2017. https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2017/10/Transcript-of-Minister-for-Foreign-Affairs-Dr-Vivian-Balakrishnans-Remarks-at-the-Singapore-Symposium.

countries of ASEAN, especially Singapore. He also noted that this was one area where considerable opportunities for greater cross-border collaboration exist. Similar sentiments were again expressed by Balakrishnan at the ASEAN-India Pravasi Bharatiya Divas in January 2018.[10] Alongside, Singapore's Deputy Prime Minister, Teo Chee Hean, also stated that "digital technologies...can form a new frontier in our [India-ASEAN] relationship".[11] The deputy prime minister also specifically identified Singapore specifically as central to India's connectivity and business engagement with the ASEAN region.[12]

Such digital connectivity can encompass a variety of projects and undertakings, including the building of a regional high-capacity fiber optic network, the creation of 'digital villages', and conducting training programmes on telecommunication networking technologies. Each of these were specifically highlighted by Indian Prime Minister Narendra Modi at the Plenary Session of the India-ASEAN Commemorative Summit.[13] However, cooperation in these specific fields will depend on India's capabilities in executing such projects in the ASEAN region, where it will need to compete directly with better resourced and already well-established Chinese companies. In spite of this, there is one area of digital connectivity highlighted by Modi where India could engage effectively in greater collaboration with Singapore and the ASEAN region, the sphere of 'digital financial inclusion' and financial technologies (FinTech).

Drivers of Digital Financial Connectivity

As mentioned above, the digital financial inclusion sector was highlighted by Prime Minister Modi in early 2018[14] as an area of possible collaboration between India and Singapore, and India and the ASEAN region. The financial inclusion space, and consequently the FinTech space,

[10] Keynote Address by Dr Vivian Balakrishnan at the ASEAN-India Pravasi Bharatiya Divas Opening Plenary, 7 January 2018. https://www1.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2018/01/Transcript-of-Keynote-Address-By-Dr-Vivian-Balakrishnan-at-ASEAN-India-Opening-Plenary.

[11] Remarks of DPM Teo Chee Hean at the Gala Dinner of the Pravasi Bharatiya Divas, 7 January 2018. https://www.pmo.gov.sg/newsroom/dpm-teo-chee-hean-gala-dinner-pravasi-bharatiya-divas.

[12] Ibid.

[13] Opening remarks of Prime Minister Narendra Modi at the ASEAN India Commemorative Summit, January 25, 2018. http://www.pmindia.gov.in/en/news_updates/opening-remarks-by-the-pm-at-the-plenary-session-of-the-india-asean-commemorative-summit/?comment=disable.

[14] Ibid.

could become the primary drivers for enhanced digital connectivity between India and Singapore for three fundamental reasons.

First, the fact that both India and Singapore have mutual advantages in specific sub-areas of this sector could prove to be beneficial to each other. India has the market, a number of new enterprising FinTech startups and is backed by policies such as 'Digital India' and 'Startup India' – it is poised to create a new generation of financial services, products, and users. Singapore, as a global financial hub, is home to enterprises with the expertise and the know-how of exploiting new opportunities in financial services. Further, Singapore is also at the forefront of new regulatory practices, with the Monetary Authority of Singapore (MAS) having unique experience in the development of regulatory sandboxes to encourage innovation in the FinTech. These are experiences that the Indian policymakers and financial sector can learn and benefit from.

Second, financial inclusion products designed in India can be exported, via Singapore, to the countries of the ASEAN region. A number of countries in the ASEAN region are roughly equivalent to India in socio-economic development indicators and face a number of the same social and economic issues that India does. Financial inclusion products and practices developed in India could prove to be immensely valuable for similarly placed ASEAN nations. Singapore, as a global and regional economic hub, can become the conduit for such transfer of technology and know-how.

Third, Singapore is already home to a number of companies with businesses in India, including the parent companies of Indian unicorns like Flipkart. Along with India-focused companies, Singapore is also home to companies with a heavy exposure to the ASEAN markets. This makes Singapore the ideal location for cross-border collaborations and connectivity, especially for those Indian companies looking to move into the ASEAN markets and ASEAN focused companies looking to venture into India.

Taking these three reasons together, therefore, it becomes necessary to enhance India's digital financial connectivity with Singapore. In both India and Singapore, there is a greater understanding of this situation, resulting in some tentative recent steps, including the agreement

between the government of the state of Maharashtra and MAS to promote FinTech activities in both regions, enable opportunities for Singapore-based FinTech startups to establish business links with FinTech enterprises in Maharashtra, and establish a FinTech marketplace in Maharashtra. While such general agreements are in and of themselves a necessary step, greater connectivity can be driven by a singular showpiece product which offer many advantages to both countries – a product like RuPay or Bharat Interface for Money (BHIM) Unified Payments Interface (UPI).

RuPay and BHIM UPI

RuPay is an Indian domestic card scheme and payment gateway launched by the National Payments Corporation of India (NPCI). The RuPay scheme was conceived to enable greater domestic uptake of card payments through lower transaction costs vis-à-vis international card companies like Visa and Mastercard. Since its launch in 2012, RuPay has become the largest card network in India in terms of the number of cards issued and is slated to become the second biggest network by volume and value.[15] The RuPay card system has played an instrumental part in ensuring greater financial digital inclusion, especially through targetted schemes such as the *Kisan Credit Card* (Farmer Credit Card) that allows previously unbanked farmers to undertake formal financial transactions.

While RuPay has managed to gain domestic credibility, it also offers several advantages that could allow it to compete internationally. The primary advantage is the lower transaction costs on RuPay portals, due to its entire operations being based in India. Further, given NPCI's experience in modelling the RuPay scheme specifically for lower-income users and individuals previously outside the formal financial sector, these are knowledge advantages that could easily be transferred to similarly-placed developing nations. Singapore, as the financial and economic hub of the ASEAN region, is best placed to act both as a conduit and as an ambassador the RuPay scheme.

[15] Aman Sharma, "RuPay Set to Emerge No 2Card in Volume and Value of Deals", *The Economic Times*, 30 April 2018.

International acceptance of the RuPay card scheme will also allow for greater inter-operability of financial instruments, between India and Singapore. This, in turn, can have a potential spill-over effect of allowing new FinTech services and applications in India and Singapore to be interoperable.

This is a fact that has already been recognised to an extent. In November 2017, Singapore's Network for Electronic Transfers (NETS) signed a memorandum of understanding (MoU) with the NPCI to enable cross-border usage of their respective payment systems, and specifically the RuPay system.[16] The MoU came into effect earlier this year, with Modi undertaking the first international purchase using a RuPay case in Singapore.[17] RuPay cards will now be widely accepted on all NETS payment portals and point of sale machines in Singapore. This could act as a catalyst for promoting RuPay transactions in all of ASEAN by pitching RuPay as a direct competitor to both Visa and Mastercard. Wider international acceptance of RuPay, especially in the ASEAN region will also provide a launch-pad for deeper collaborations, especially in the transfer of knowledge regarding the creation of formal financial structures for the previously unbanked, as described previously. Increasing acceptance of RuPay will also allow the Reserve Bank of India (RBI), which would be the primary regulatory authority over the RuPay ecosystem, to collaborate more closely with its counter-parts in the ASEAN-member countries, and specifically MAS to share regulatory experiences and learnings, and help shape a multilateral regulatory environment that allows for greater cross-border collaborations and transactions.

Similarly, the UPI system developed in India could act as a model that could be emulated globally, and specifically in the ASEAN region. UPI is a real-time payments system that facilitates inter-bank transactions but does so without the need to know the parties' bank account details or the Indian Financial System Code. All that is needed is a single unique identity. This process simplifies banking transactions significantly and incentivises digital payments.

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[16] Subhomoy Bhattacharjee, "PM Modi's Singapore Visit To Put India's RuPay Card on Global Stage", *Business Standard*, 28 May 2018.

[17] Press Trust of India, "PM Modi launches BHIM, RuPay, SBI apps in Singapore", *Hindustan Times*, 1 June 2018.

Hurdles to Connectivity

While greater digital financial connectivity with Singapore, and through Singapore with the ASEAN region as a whole, is and should be a necessary aim for India, there are a number of issues that need to be resolved before such connectivity can be made effective.

The first and foremost issue that would need to be resolved is the increasing tendency of Indian regulators to pitch for data-localisation policies, often without adequate explanations or details. A case in the point is the recent one-page notification issued by the RBI which requires all payment systems operating in India to keep their data within India. The notification itself does not provide any details or reasons regarding the decision, and has thrown the operations of market leaders such as Google Tez and WhatsApp Payments into a state of confusion. If Indian companies and systems like RuPay are to expand into other markets, questions arise regarding the data generated by these systems in other jurisdictions. As Indian companies and systems, would they need to store even trans-jurisdictional data within India or only data generated within India? The answer to this question would have a significant impact on the welcome Indian financial systems like RuPay receive in Singapore and other ASEAN-member countries. A similar emphasis on data localisation can be seen in a recent government appointed committee's report on data protection,[18] and the draft Personal Data Protection Bill, 2018.[19]

The second is the question of data protection and privacy. This issue is intertwined with the question of data localisation mentioned above. Any cross-border financial connectivity would require the free flow of data across jurisdictions, and would necessarily involve the flow of some amount of foreign data into India. This raises the issue of whether India is equipped to guarantee the protection and privacy of this data. While the draft bill mentioned the above attempts to answer this question, what is required, is not knee-jerk data localisation policies but adequate policy and legal safeguards, including redressal mechanisms that build the required trust among foreign entities vis-à-vis India's data protection regime.

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[18] Committee of Experts Under the Chairmanship of Justice B.N Srikrishna, "A Free and Fair Digital Economy, 2018". http://meity.gov.in/writereaddata/files/Data_Protection_Committee_Report.pdf.

[19] Personal Data Protection Bill, 2018. http://meity.gov.in/writereaddata/files/Personal_Data_Protection_Bill%2C2018_0.pdf.

A third issue that needs to be resolved is the heavy regulatory burden imposed by the RBI on non-traditional financial and payment enterprises, primarily in the form of ensuring onerous Know Your Customer (KYC) requirements. The imposition of these requirements has already had a significant negative impact on the mobile wallets segment. This segment, consisting of a variety of players, including unicorns like PayTM, was instrumental in ensuring a greater uptick in digitisation and digital payments in the aftermath of the demonetisation of November 2016. The central attraction of these products was the ease of on-loading and transferring of money amongst users. However, with the requirement to ensure complete KYC of each individual user (similar to the requirements for banks while opening accounts) kicking in from March 2018, the number of users of these wallets fell dramatically, ranging from 80 per cent to 90 per cent and sometimes more.[20] Amazon Pay, for instance, saw of a reduction of 95 per cent in its user base.[21] Correspondingly, the cash on delivery payments increased from 40 per cent to 60 per cent of the total payments on e-commerce websites.[22] The root cause of such a policy decision was the inability to recognise the fact that mobile wallets are fundamentally different from traditional financial instruments and systems.

Unless the above mentioned issues are rectified soon, any cross-border collaboration could be hampered by a combination of onerous regulatory requirements and inadequate legal safeguards, which could act as disincentives to innovation and foreign collaborations.

Conclusion

Digital financial connectivity is one area where significant opportunity exists to drive greater connectivity between India and Singapore, and through Singapore, to the rest of the ASEAN region. The prime instrument of this connectivity can be the RuPay system, which can be offered as a direct and cheaper alternative to Visa and Mastercard, and as a payment system that can be altered to fit the individual needs of developing countries, specifically to ensure financial

[20] Pratik Bhakta, "Customers Threaten to Dump E-Wallets As KYC Norms Kick In", *The Economic Times*, 2 March 2018.
[21] Pratik Bhakta, "Mobile Wallets Sag As KYC Norms Chase Users Away", *The Economic Times*, 19 April 2018.
[22] Shrutika Verma and Mihir Dalal, "COD Payments at E-Commerce Firms Back to Pre-demonetisation Levels", *Mint*, 16 November 2017.

inclusion. The export of the RuPay payments system will also allow Indian regulators to learn from the regulatory experiences in other markets, including the advanced financial market of Singapore, and equip them to better handle the changing nature of financial products, instruments and innovations. However, the effectiveness of such connectivity will depend on policy and regulatory approaches within India, specifically the need to move away from data localisation, ensuring an adequately powerful and responsive legal data protection regime, and reducing the onerous regulatory requirements to operate new financial technology systems and platforms. Addressing each of these issues will throw open the doors to greater connectivity between India and Singapore, allowing India to better enhance its growth story and build a resilient and innovative new-age FinTech sector.

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