

China's Digital Silk Road: Implications for India

This report presents the outcome of the symposium titled "China's Digital Silk Road: Implications for India" held in New Delhi on September 25, 2019. The symposium was co-organized by the Institute of Chinese Studies, Institute of South Asian Studies, National University of Singapore, Konrad-Adenauer-Stiftung (KAS) and India International Centre.

The Symposium was motivated by the fact that despite a vigorous debate in India on China's Belt and Road Initiative there has been little focus on its digital complement. The chief objectives of the symposium were:

- 1) to assess the emergence of China as a digital powerhouse;
- 2) examine the growing global impact of its digital strategy; and
- 3) distill potential implications for India.

The Symposium was divided into two sessions. The first session titled "China's Digital Rise" examined domestic drivers for China's digital transformation and its geopolitical consequences. It also brought focus upon China's strategy for leadership in the development and use of Artificial Intelligence technologies. The second session titled "Impact on India" mapped out China's participation in India's digital technology sector through investments and India's dependency on China in the hardware sector. It also reflected on the need for India to adopt a selective approach in formulating policies that shape its digital economy.

The six papers that were presented at the symposium are as below:

1. Dr. Marieke Ohlberg - Domestic drivers of China's digital rise
2. Dev Lewis - China's techno-utilitarian experiments with Artificial Intelligence
3. Prof. Raja Mohan - China's digital expansion and India
4. Santosh Pai and Rajesh Ghosh - Mapping China's participation in India's digital economy
5. Vivan Sharan and Yamini Jindal – Identifying and offsetting import dependence in ICT Markets
6. Ananth Padmanabhan - China's Digital Silk Road: Implications for India

Copies of the papers are annexed to this report.

China's Digital Rise

While the idea of a digital silk road has been part of Chinese discourse for some time it formally appeared in public only during China-EU forums in 2015 and has been refined since. In a 2019 speech, Xi Jinping emphasised on the “need to keep up with the trend of the Fourth Industrial Revolution, jointly seize opportunities created by digital, networked and smart development, explore new technologies and new forms and models of business”. China has already signed cooperation agreements with 16 countries for the construction of the Digital Silk Road. Chinese companies’ low-cost digital products in sectors including telecommunication infrastructure, space and satellite services, e-commerce and smart cities, have been welcomed in most parts of the world. China’s aims of leveraging its advanced domestic digital economy to expand internationally is not, contrary to what many analysts claim, an unprecedented effort. The rise of modern capitalism in Europe saw states expanding beyond European borders to undertake infrastructure projects that nurtured modern port cities like Singapore, Hong Kong, Mumbai and major infrastructural feats like the Suez Canal and the Panama Canal. And just as European expansion was paralleled by the display of political power, China’s international foray is not devoid of strategic ambitions. Even though “Chinese propaganda presents [its] initiatives as being part of promoting a more inclusive globalisation...”, the tension between opportunities and risks has animated politics around the world, including in India.

The Communist Party views digital technology as the next frontier for accelerated economic growth and an opportunity for China to take a decisive lead over Western counterparts. An assessment of the domestic drivers behind China’s digital rise reveals that the Chinese Communist Party (CCP) has tied the success of its policies in the digital realm to its own legitimacy. The CCP hopes to restore China to its perceived “rightful place” as a global leader in scientific and technological innovation. This raises the stakes involved in success of China’s digital silk road on the international stage considerably. China’s growing geopolitical rivalry with United States on which it is heavily dependent for integrated circuit technology also explains the urgency with which it is taking giant strides in bridging the gap in other areas like 5G and Artificial Intelligence.

The policy blueprint for China’s digital ambitions comprise of a ‘top-level policy design’ and a unique system of control that links public and private players in the ICT sector. The freedom

afforded by the “First develop, then regulate” approach and government capital channelled through Government Guided Funds (GGFs) spurs commercial actors to innovate and swiftly produce market-ready products for a digital ecosystem protected from foreign competition at massive scale. President Xi’s policy style which involves appointing task specific Leading Small Groups has launched major policy initiatives such as the National Informatization Strategy (2016-2020) that urge China’s internet companies to “go out” into the world and support the creation of a “Digital Silk Road” supplemented by the “Made in China 2025” road map and “Internet Plus” strategy.

China’s multi-pronged digital strategy has five distinct goals. First is its long-term goal of self-reliance. Notwithstanding China’s external dependence for core technologies like integrated circuits and semiconductors it is already in the forefront of many technologies like AI and 5G network. 5G technology is a good illustration where China is the only country that is running ahead of the “2020 5G Development Schedule” proposed by the UN’s International Telecommunication Union (ITU). The second objective is to help Chinese industry players move up the manufacturing industry’s value-chain. China intends to establish at least 50 academic and research institutes in Artificial Intelligence (AI) and through digitalisation hopes to add 1.8 trillion USD in cumulative GDP growth by 2030 from Internet of Things (IoT) alone. Thirdly, digital technologies are viewed as effective tools of social control. In places like Xinjiang the Chinese State has effectively used Big Data and AI techniques and established an IT-based surveillance state in the name of security measures against terrorists. Fourthly, China seeks to use private sphere innovations to modernize its military capabilities through its strategy of Civil Military Integration. Civil military integration has been a top-level national strategy since 2014 and is now complemented by initiatives such as the Beidou Satellite Navigation System which is being rolled out across 60 countries as part of the Belt and Road Initiative. Fifthly, the CCP seeks to attain international leadership by setting global standards and regulatory norms. It established a “Special Leading Small Group on the Major Project of Standardisation alongside the ‘Belt and Road Initiative’” in 2015. In June 2018, China’s IoT Reference Architecture was approved by International Organisation for Standardisation (ISO). China’s efforts in Artificial Intelligence (AI) are an apt illustration of efforts at building a technology ecosystem with Chinese characteristics. China’s AI industry has attracted around 60% of global AI investments and reports value its over 1000 AI companies anywhere between

US\$23 billion to over US\$30 billion. At the end of 2016 there were estimated to be over 1000 government backed funds aimed at raising an aggregate of RMB 5.3 trillion. In the last four years Chinese companies have employed machine-learning techniques and scaled operations by using unmatched datasets to make breakthrough applications. However, China is yet to make serious breakthroughs in fundamental research of the kind that could help it leap-frog ahead of its Western peers. China's playbook also faces difficult questions related to ethics, governance and privacy. Xi Jinping called on China to "develop laws, safety, employment, ethics, and governance of AI from all aspects" and also observed that this would "require deep cooperation with all countries". China has already released two sets of governance principles namely "Beijing AI principles" and Ministry of Science and Technology's "Responsible AI" principles. The unique characteristic of China's conceptualization of AI principles compared to those in the West is its emphasis on the collective over the individual. Thus, the issue of protecting individual privacy is not as unilateral as is in the West.

Impact on India

Presence of Chinese telecom equipment suppliers Huawei and ZTE in the Indian digital technology sector has grown in parallel with the rise of private telecom operators during the period 2000-2015 with their market share touching 46% in 2016. This was followed by the entry of Chinese mobile phone brands which found India attractive due to a combination of factors including a slowdown in China, lack of significant competition in India and government policies that discouraged pure imports in favour of 'phased manufacturing'. As Xiaomi, Vivo, Oppo, OnePlus and Realme increased their market share in India, contract manufacturers such as Foxconn and Winstroon followed them to India along with a slew of their component suppliers. An important reason for this import of the entire value chain is that in the ICT hardware sector India has failed to vertically integrate local manufacturers for a range of supporting hardware equipment. This is in stark contrast to India's IT services companies' performance domestically and internationally, where they have successfully built a niche. As a result, the market for these hardware systems has been ceded to Chinese companies "despite a fair chance at managing technological transitions through a mix of government interventions and private sector agency".

The more recent spurt in the activity of Chinese players in the Indian digital economy has been through venture capital investments and launch of internet applications. Chinese internet

giants such as Alibaba, Tencent and Xiaomi, Corporate Venture Capital (CVC) funds such as Fosun Capital, and Venture Capital (VC) funds such as Shunwei, Qiming, Morningside and CDH have made investments of close to USD 10 billion through 125 transactions within a short span of four years. In 2018 among the top 100 most downloaded internet applications in India, 44 were launched by Chinese developers. Chinese participation in the Indian internet industry is largely motivated by market potential. With a relatively low per capita income of USD 1700 and internet penetration of 34% (2017) there is more headroom available for growth in India than China. Another distinct motivating factor for Chinese investors is the fact that most of the existing investors in India's digital ecosystem are focussed excessively on the market catering to the English-speaking minority segment among Indian internet users. The much larger Indic language market often denoted by terms such as "Next Billion" or "Bharat" comprising of users preferring to employ more than a dozen languages is largely untapped. The vast pool of IT personnel available in India is yet another motivating factor but is yet to be meaningfully exploited by Chinese companies.

India is yet to formulate its final position on Huawei's participation in the upcoming 5G rollout. A complete ban, as has been the policy direction of the US and Australia, is not in India's overall economic interest. Therefore, India needs to maintain a balance between its national security interests and maintain cost-efficiencies towards discoms and telecoms. Monitoring foreign investments to determine its national security implications is in any case a difficult task in the absence of the national security mechanism in place. And this is not just true for Chinese investments but all foreign investments in general.

The sudden influx of Chinese participants has thrown up a number of other challenges which are relatively under-debated. Such challenges can be broadly categorised under the headings of over-dependence and regulatory arbitrage. The advent of Chinese mobile phone companies which have decimated their Indian peers is sometimes touted as a success of the 'Make in India' program. However, if the same playbook is adopted in other industries it could lead to excessive dependence on China to meet India's growing consumer demand. A more nuanced approach that builds manufacturing capacity with larger Indian participation needs to be developed. Hardware dependencies in areas of previous technological transitions like ATM and set-top boxes could also be perpetuated in the Internet of Things (IoT) landscape if urgent steps are not taken to mitigate the underlying causes of hardware dependency. India's

past experience with technology transitions should be a good starting point for it to plan for all future technology transitions. India should focus on sequencing digital technology transitions with the development of local manufacturing capacities. The emergence of new technologies and the need to set new standards are also opportunities for India to adopt niche domestic ones so as to give domestic manufacturers a competitive edge. In the digital technology product space non-tariff barriers like local language requirements should be explored so as to allow domestic manufacturing of equipment. Tax incentives and non-financial export incentives also need to be explored to move in the direction of import substitution by making Indian hardware production globally competitive.

India's nascent data governance framework is not sufficiently equipped to monitor internet activity in a plethora of languages. Hence the chances of inappropriate content proliferating the internet through Chinese-controlled applications due to lack of regulatory oversight is real. The recent controversy involving Bytedance's TikTok is a case in point. Another topic of concern is the lack of commitment towards legal compliance on the part of some Chinese companies. In early 2019 cross-border e-commerce companies from China were caught in flagrant violation of Indian customs laws when they built and scaled an entire business model around a loophole that allowed 'gifts' to be imported without payment of customs duty. It took many months for Indian regulators to catch on and clamp down on such activity. Similar instances of regulatory arbitrage might be attempted in other sectors of the Indian economy that witness a sudden influx of Chinese participation.

There is also a geopolitical dimension to China digital ambitions for India to consider. First, as US-China decoupling intensifies, India will be increasingly pushed to make clear choices between the two. So far India has been able to balance its relations between the two to secure its economic interest, however, as the distance between the US and China grow wider India's choices will deeply impact the future growth of its IT and telecom sectors. Second, India is also pulled from two different ideological poles on the issue of digital governance. On the one hand, India has often sided with Russia and China in multilateral forums to oppose Western ideals on digital governance, on the other it has not been welcoming of China's proposed 'cyber sovereignty'. A third challenge rises from China's growing digital presence in India's neighbourhood. Since the mid-20th century maintaining an upper hand in its neighbourhood has been a major objective of India's foreign policy. However, India seems to have failed to

anticipate China's growing footprint in India's neighbourhood digital landscape. For India to continue to maintain its strategic influence, it needs to take a fresh look at its neighbourhood digital diplomacy.

Conclusion

The need of the hour is for India to build regulatory resilience that can balance its national interests and ward off risks arising from participation of Chinese stakeholders. In doing so, India should be mindful of creating a regulatory framework that enables the growth of a vibrant and innovative technology ecosystem rather than impede it. Any policy should be guided by three principles: one, India must clearly identify specific problems that need to be addressed rather than coming up with all-encompassing laws such as the current draft of the e-commerce policy. Two, India must take up a risk-based, responsive regulatory approach that reacts to emerging problems rather than taking a safe position by stretching its reach so far that it also hinders innovation. Third, India needs to abide by democratic principles when regulating technology rather than embracing concepts such as "cyber sovereignty" which is championed by China.

Annexe

Paper Presenters

Dr. Mareike Ohlberg

Mareike Ohlberg is an analyst at the Mercator Institute for China Studies (MERICS) in Berlin. Her research is focused on China's digital policies as well as its influence operations in Europe. Ohlberg holds a PhD in Chinese Studies from the University of Heidelberg and an MA from Columbia University. In her doctoral thesis, she analyzed changes in China's global propaganda apparatus since 1978. She has spent several years in China and speaks and reads Chinese fluently. Prior to joining MERICS, she spent a year as an An Wang Postdoctoral Fellow at the Fairbank Center for Chinese Studies at Harvard University and another year as a postdoctoral researcher at the Cheng Shewo Institute for Chinese Journalism at Shih Hsin University in Taipei, Taiwan. She is a frequent speaker at china-focused conferences and events around the world and has briefed various European policymakers on China's growing footprint in Europe.

Dev Lewis

Dev is a Fellow and Program Lead at Digital Asia Hub, as well as a Yenching Scholar at Peking University. His interests lie at the intersection of technology, politics, and policy, especially in Asia, and he is currently working on a project mapping the build out of social credit scores in China. Dev has an International Relations degree from Roger Williams University and studied Mandarin in Shanghai and Zhengzhou. He frequently writes for several regional publications and think tanks, and previously spent time at Gateway House, a foreign policy think tank in Mumbai, and Infosys China, an IT services Multinational.

Professor C Raja Mohan

Professor C Raja Mohan is Director, Institute of South Asian Studies. Earlier, Professor Mohan was Professor of South Asian Studies at Jawaharlal Nehru University, New Delhi, and at the S Rajaratnam School of International Studies, Nanyang Technological University, Singapore. Professor Mohan has been associated with a number of think tanks in New Delhi, including the Institute of Defence Studies and Analyses, the Centre for Policy Research and the Observer Research Foundation. He was also the founding director of Carnegie India, New Delhi – the sixth international centre of the Carnegie Endowment for International Peace, Washington DC. Professor Mohan was the Henry Alfred Kissinger Chair in International Affairs at the United States Library of Congress, Washington DC, from 2009 to 2010. He served on India's National Security Advisory Board. He led the Indian Chapter of the Pugwash Conferences on Science and World Affairs from 1999 to 2006. Professor Mohan is one of India's leading commentators on India's foreign policy. He writes a regular column for the Indian Express and was earlier the Strategic Affairs Editor for The Hindu newspaper, Chennai. He is on the editorial boards of a number of Indian and international journals on world politics. Professor Mohan has a Master's degree in nuclear physics and a PhD in international relations. Among his recent books are *Samudra Manthan: Sino-Indian Rivalry in the Indo-Pacific* (2013) and *Modi's World: Expanding India's Sphere of Influence* (2015).

Santosh Pai

Santosh Pai has been offering legal services to clients in the India-China corridor since 2010. His areas of interest include Chinese investments in India, India-China comparative law and policy, cross-cultural negotiations and board governance. He holds a B.A., LL.B. (Hons.) degree

from NLSIU, Bangalore, LL.M. (Chinese law) from Tsinghua University, Beijing and an MBA from Vlerick University, Belgium (Peking University campus). His manuscript "Practical Guide on Investing in India for Chinese investors" has been translated into Chinese and published by China Law Press. Santosh is currently a partner at Link Legal, an Indian law firm. He is a member of CII's Core Group on China, teaches two courses on India-China business at IIM Shillong and volunteers at NGOs in his free time.

Vivan Sharan

Vivan Sharan is Secretary of the Esya Centre, a New Delhi-based technology policy think-tank, where he directs programmes on intellectual property and the new economy. He is also a Partner at the Koan Advisory Group, a research and advocacy firm based which works with several Fortune 500 clients, international organisations and governments. He is an economist with diverse experience in the policy circuit. Previously, he has served as the Chief Executive of the Global Governance programme at the Observer Research Foundation (ORF) and as the Business Head of a sustainability company that ran India's first energy efficiency index. He is also a Visiting Fellow at ORF where he is involved with research on the digital economy and a member of several industry committees. Vivan is on the Board of several technology-enabled companies.

Ananth Padmanabhan

Ananth Padmanabhan is a visiting fellow at the Centre for Policy Research. His research interests are in the fields of technology policy, intellectual property rights, and innovation scholarship. He has authored a leading treatise, *Intellectual Property Rights: Infringement and Remedies* (LexisNexis, 2012), and co-edited an important volume, *India as a Pioneer of Innovation* (OUP, 2017). Over the past few years, Ananth has critically examined the policy implications of a wide range of technologies and solutions including digital identities, blockchain, civilian drones, gene editing, and electric mobility, with special focus on ease of innovating in India. His chapter on Big Data in a recent volume on *Regulation in India: Design, Capacity, Performance* (Hart Publishing, 2019), is part of a continuing initiative to examine the public law and regulatory dimensions of new technologies. It builds on his understanding of the Indian State and the Supreme Court within the constitutional context, explored through chapters in *Rethinking Public Institutions in India* (OUP, 2017), and the *Oxford Handbook of*

the Indian Constitution (OUP, 2016). He engages in broader public conversations on the impact of technology through his opinion pieces in ThePrint, Livemint, Indian Express, and other print / new media. Ananth has practiced law in the Madras High Court and taught at several institutions including the National Law University, Jodhpur, and the National Law School of India University, Bengaluru. He holds a master's degree in law from the University of Pennsylvania Law School and is presently completing his doctoral thesis on digital copyright at the same institution.

Session Chairs

Dr. Rajeswari Pillai Rajagopalan

Dr. Rajeswari Pillai Rajagopalan is a Distinguished Fellow & Head of the Nuclear and Space Policy Initiative, at Observer Research Foundation. She is also the senior Asia defence writer for The Diplomat. Dr. Rajagopalan joined ORF after a five-year stint at the National Security Council Secretariat (2003-2007), where she was an Assistant Director. Prior to joining the NSCS, she was Research Officer at the Institute of Defence Studies and Analyses, New Delhi. She was also a Visiting Professor at the Graduate Institute of International Politics, National Chung Hsing University, Taichung, Taiwan in 2012. She is the author of four books: *Nuclear Security in India* (2015), *Clashing Titans: Military Strategy and Insecurity among Asian Great Powers* (2012), *The Dragon's Fire: Chinese Military Strategy and Its Implications for Asia* (2009), and *Uncertain Eagle: US Military Strategy in Asia* (2009). She has also co-authored and edited five other books, including *Space Policy 2.0: Commerce, Policy, Security and Governance Perspectives* (2017); *Nuclear Security in India (Second Edition)* (2016); *Iran Nuclear Deal: Implications of the Framework Agreement* (2015). She has lectured at Indian military and policy institutions such as the Defence Service and Staff College (Wellington), National Defence College (New Delhi), Army War College (Mhow), and the Foreign Service Institute (New Delhi). She has also been invited to speak at international fora including the UN COPUOS (Vienna), Conference on Disarmament (Geneva), UNIDIR (Geneva), ASEAN Regional Forum (ARF) and the European Union.

Nalin Mehta

Nalin Mehta is Executive Editor, Times of India-Online. He is an award-winning social scientist, journalist and author. He has previously been consulting editor with The Times of India,

managing editor, India Today (English news channel), and held senior communications positions with the Global Fund in Geneva, Switzerland and UNAIDS. Mehta is also a founding editor of the international journal South Asian History and Culture (Routledge) as well as the Routledge 'South Asian History and Culture' book series. Alongside executive leadership positions in the media industry and in international development agencies, Mehta has held several research and teaching appointments at universities and institutions in Australia, Switzerland, Singapore and India. These include senior research fellowships at ISAS, [National University of Singapore](#); [Australian National University](#), Canberra; [La Trobe University](#), Melbourne; and [International Olympics Museum](#), Lausanne, Switzerland. Mehta has also been associate professor of Sociology at [Shiv Nadar University, adjunct professor at Indian Institute of Management, Bangalore](#); and Senior Research Fellow at [India Development Foundation](#). Mehta's latest book, 'Behind a Billion Screens: What Television Tells Us About Modern India' was long-listed for business book of the year by Tata Literary Live. Mehta's other books include 'India on Television: How Satellite Channels Have Changed the Way We Think and Act' (winner of the 2009 Asian Publishing Award for Best Book), the best-selling 'Sellotape Legacy: Delhi and the Commonwealth Games' (co-authored), and a critically acclaimed social history of Indian sport, 'Olympics: The India Story' (co-authored).