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# China's Digital Silk Road

## Strategic Implications for the EU and India

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**&**
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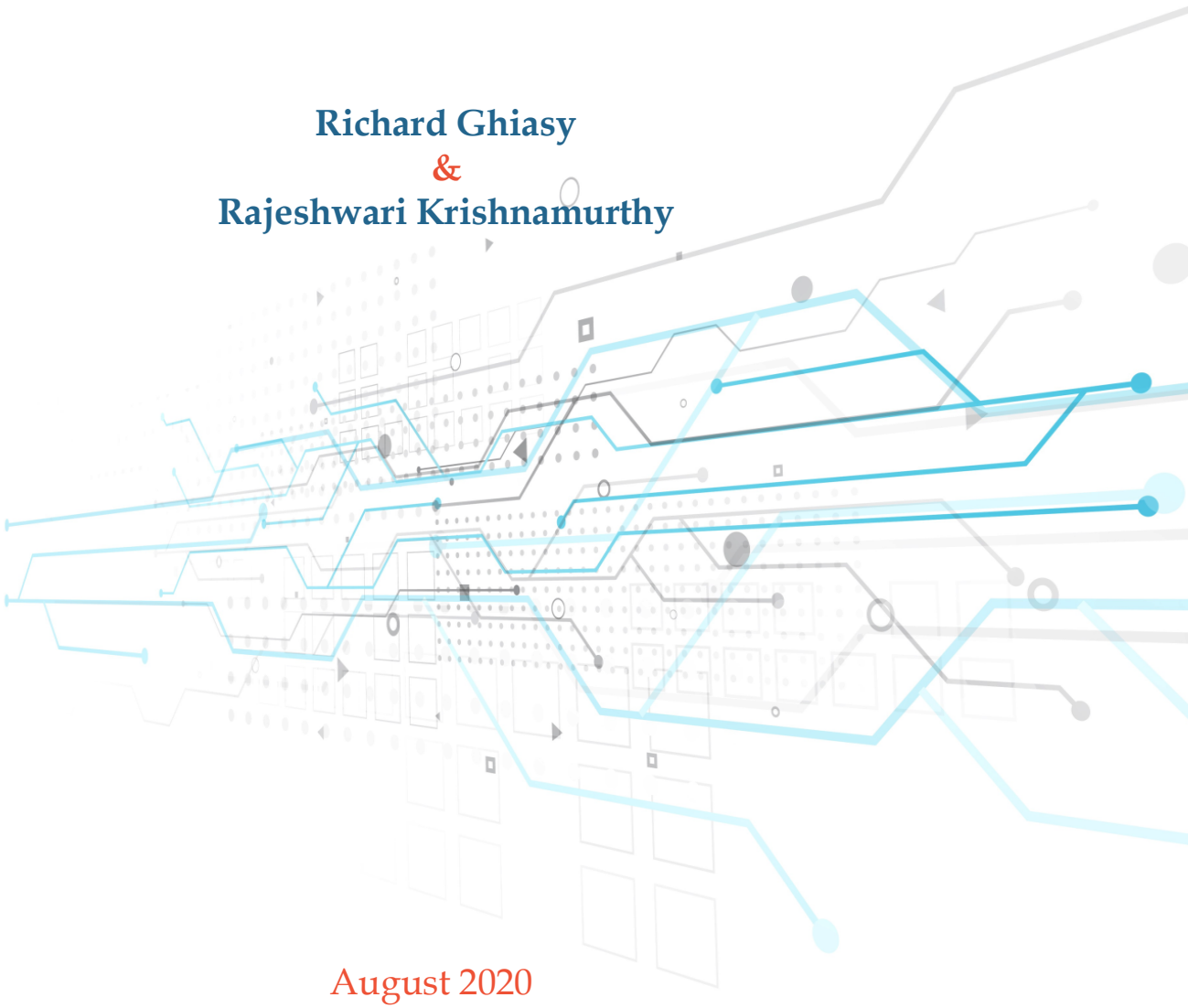

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This paper is part of a project on China's Digital Silk Road: Challenges and Opportunities for India and the EU, run collaboratively by Institute of Peace and Conflict Studies (IPCS) and the Leiden Asia Centre (LAC), The Netherlands. The project examines China's expanding role in the digital domain in South Asia, particularly India, and in the EU, to identify: a) The (economic) opportunities, and strategic and security challenges posed by China's Digital Silk Road and other 'digital investments'; b) Convergences and divergences in digital priorities, concerns, and capabilities between India and the EU; and c) Potential for India-EU digital cooperation.

# Abstract

This paper offers a big-picture analysis of the Chinese Digital Silk Road's (DSR) three most strategically pressing implications for the EU and India. It does so by analysing the DSR's global progress and specific impacts in Europe and South Asia.

The three implications are: a) the creation of a full-fledged Chinese digital backbone; b) the setting of technological standards in the unfolding Fourth Industrial Revolution; and c) the shaping of cyber governance, norms, and a 'digital experience' with 'Chinese characteristics'. While immediate DSR impact is currently more ubiquitous outside the EU and India, it will substantially influence the global digital order as well. The DSR offers countries involved in the initiative with economic opportunities, and can, if harnessed smartly, assist in enabling a more level playing field with advanced economies. Equally, it also poses challenges. From the EU and Indian economic and security points of view, neither can afford to ignore the DSR, or be reactionary in policy responses. For both, addressing emerging digital realities will require a long-term multi-pronged vision, and greater collaboration among like-minded states.

# Introduction

China's Digital Silk Road (DSR) falls under the second objective of its Belt and Road Initiative (BRI): 'facilities connectivity'. Fundamentally, the DSR is driven by the Chinese government's desire to become a superpower by capitalising on the potential of existing and emerging technologies. To achieve this, it has chosen a two-pronged approach: enhancing technological capacity while reducing dependence on foreign actors; and linking the world to China and Chinese technologies. To that end, DSR projects have focused on improving international communications connectivity, hereafter referred to as 'digital connectivity', in and with BRI participant countries as a starting point.[1]

By some estimates, the DSR's geopolitical, economic and security consequences are substantially more pressing than typical BRI rail, road, and port projects. South Asia, for instance, is integrating deeply with China's digital economy. In Europe, Chinese 5G technology, electronic payment systems, and collaborations between Chinese and European entities on research and development (R&D)[2] have made headway despite concerns by some European stakeholders over their security implications.

This paper offers a big-picture analysis of the DSR by examining three major strategic implications of the initiative for the EU and India.[3] While there are substantial differences in technological and economic advancements between Europe, India, and within South Asia, they are all witnessing the same digital revolution, and thus provide instructive and contrasting case studies. The EU and Indian policy communities are increasingly concerned about how China has come to play a more prominent role in their (digital) economy, infrastructure, and security—and are gradually exploring cooperative avenues to address it. With that in mind, this paper examines the DSR's global progress, and specific impact in Europe and South Asia.

The three global implications discussed are:

I. The creation of a Chinese digital backbone,
II. The setting of technological standards,
III. The shaping of cyber governance, norms, and the 'digital experience'.

This paper is divided into sections per implications: beginning with a broader overview, and followed by a sub-section that highlights DSR impact in South Asia and Europe.

## The Digital Silk Road: Data as the New Silk

Typical BRI infrastructure—rails, dams, ports, and power plants—all have technology embedded within them. The DSR, however, is a more future-oriented component of the BRI. Publicly, the Chinese government first introduced it in a March 2015 white paper as the 'Information Silk Road', but it only entered the limelight during the first Belt and Road Forum in Beijing in May 2017.[4] Like the BRI, it is exceptionally ambitious. By 2018, BRI and DSR-related investments already stood at an estimated US$79 billion in digital infrastructure projects overseas, and were engaged in 80 telecom projects around the world.[5] Three developed European economies—Germany, Italy, and Spain—feature in the top 15 countries across the world with the highest estimated DSR spending.[6] The top five recipients are found across three continents: Mexico, Ethiopia, Malaysia, the Philippines, and—ranked first among the recipients—India.[7] No less than 18 out of 30 Indian 'unicorns'[8] have significant Chinese investment.[9] This seems remarkable considering India-China political and military tensions and India's official opposition to the BRI. It is also, however, unsurprising given China is one of India's largest trading partners.

State-facilitated Chinese public-private partnership (PPP) abroad is among the core features of the DSR. China's private sector tech giants have a prominent role in furthering the project by doubling as proxies for Beijing. For example, by using the DSR as a policy-facilitated platform as outlined in the 2016 National Informatisation Plan, these corporations are able to substantially under-price their products and services in overseas markets; benefitting from credits, subsidies, and other incentives offered by the Chinese government.[10]

Importantly, the DSR is not merely a foreign policy initiative but has a strong domestic emphasis.[11] Domestically, its objective includes an actualisation of Beijing's 'Made in China 2025' goal by developing capabilities in existing and emerging technologies such as quantum computing, driverless cars, cloud computing, and artificial intelligence (AI), among others. China's BeiDou global navigation satellite system has just become fully operational and offers millimetre-level precision with post-processing.[12] As the foreign policy extension, many of these advanced technologies and services are offered to BRI and non-BRI countries. The question is, why?

The DSR supports a key objective, which is establishing China as a technological superpower.[13] It is also driven by the intention of boosting China's international prestige, and reinforcing its economic strength and political and military capabilities. To that end, China will need to achieve greater technological autonomy from its geopolitical rivals, most notably the US.

The DSR helps it achieve these objectives in several ways. For example, it

a) supports China in becoming a world leader in providing digital connectivity infrastructure
b) creates a more China-centric Asian and global digital connectivity infrastructure

c) facilitates the global expansion of Chinese technology corporations
d) enables Beijing to exercise greater influence in setting global technology standards and cyber norms
e) expands China-oriented e-commerce and financial technology (FinTech)[14]
f) enables Beijing to influence global discourse on China
g) potentially enables Chinese businesses and authorities to access large pools of foreign data.[15]

With technology playing an increasingly prominent role across virtually all dimensions of society, the more that countries sync with and depend on Chinese technologies, software, and services, the more influence this will grant Beijing. Further, while the Chinese government promotes cyber sovereignty, it caveats it 'with Chinese characteristics' as the organising principle for internet governance, i.e., more restricted and state-paternalistic. This is opposed to the approaches adopted by the EU and the US, and many of their allies, who prefer a more open and transparent cyber space.[16]

From a rhetorical standpoint, the concept of sovereignty resonates well with developing countries, especially post-colonial ones. And rhetorically, China has yoked this concept to the governance of cyber space, albeit with 'Chinese characteristics'.

The following section examines how the Chinese PPP model is effectively driving the construction of a global Chinese digital backbone, i.e. the first of three major DSR implications for the EU and India.

## Implication I: The Creation of a Chinese Digital Backbone

Globally, there are an estimated 4 billion potential new or novice digital users.[17] China has already positioned itself to tap into that market through the DSR. But, tapping overseas markets is just one component of a bigger whole. Designing, owning, operating, and being able to repair digital connectivity infrastructure is indispensable to the Chinese government's objective of attaining greater technological autonomy and influence. So far, the backbone of this infrastructure is comprised of a) submarine and terrestrial fibre-optic cables; b) next generation cellular networks; and c) satellite systems. Driven by government support, human ingenuity, and an immense domestic market, Chinese corporations have advanced rapidly with the technology, production, and operationalisation elements of all three of these domains.

Submarine cables, and terrestrial cables to a lesser degree, are the lifelines of information and communications technology (ICT) and the digital economy. Submarine cables carry close to 98 per cent of international internet data and telephone traffic.[18] As of early 2020, there were approximately 406 submarine cables in service around the world, most of which are laid between the transatlantic community, and through the North Pacific Ocean connecting East and South East Asia with North America.[19] These cables, predominantly based on fibre-optic technology, are what enable lightning-paced digital communication—private, commercial, intelligence, and even, military. The World War I experience provides a good example of these cables' military relevance. A day after declaring war on Germany on 4 August 1914, Britain cut all but one (which was under British control) of the German undersea telegraph cables.[20] Today, US-based tech giants such as Google, Facebook, Microsoft, and Amazon are major investors in new cables.[21]

China, in its active pursuit of greater autonomy, has become a landing point, owner, or supplier for 11.4 per cent of these cables globally, and more than twice that (24 per cent) of planned cables.[22] In Asia, China's share is close to 30 per cent of existing cables and over half of planned cables.[23] The cables mostly focus on upgrading east and west internet connections across the BRI regions [24] and are complemented by Chinese servers and data centres. Evidently, the DSR is creating a more China-centric Asia-Pacific digital connectivity infrastructure.

Chinese tech giants Huawei and ZTE's lead in 5G cellular network technology and associated security concerns have occupied recent headlines. It is estimated that by 2024, about half the globe will be covered by 5G, and well over a billion people will be using 5G technology.[25] Since the next generation of digitalisation will depend heavily on 5G, it has even become an object of great power competition.[26] For example, the US government views Chinese-led 5G infrastructure as a threat to domestic and international security, as well as to the US' economic and technology position globally. Consequently, it is actively endeavouring to decelerate its expansion outside China.

Compared to 5G, China's advances in global satellite navigation systems have received relatively less coverage. Satellite navigation has been dominated by the US' Global Positioning System (GPS); to a lesser degree, Russia's Global Navigation Satellite System (Glonass); and more recently, the EU's Galileo. China's BeiDou global network has a constellation of 55 satellites,[27] which have an accuracy of 10 cm in China and the Asia-Pacific. Currently, GPS offers a 30 cm accuracy in the same region.[28] The BeiDou constellation is expected to advance next-generation technologies, such as driverless vehicles, 5G, robotics, and China's surveillance and military command-and-control capabilities.[29] In Asia, Pakistan, Laos, Brunei, and Thailand are among the countries that have adopted BeiDou,[30] and there is growing use in the Middle East/West Asia and Africa.[31]

## DSR Impact in Europe and South Asia

Much of the developing world still lacks adequate digital connectivity infrastructure. Without it, many countries will be at a disadvantage while competing in the global economy, and may fall even further behind. China is making value propositions for digital connectivity all over the developing world. These propositions could have potential positives for the EU and India, but there are also challenges involved.

DSR projects are active in most of India's neighbours, including Indonesia, Myanmar, and Thailand.[32] In Myanmar, 4G penetration rate is less than 20 per cent, and the home broadband penetration rate is only about two per cent.[33] It thus offers a considerable market for Chinese companies engaged in these sectors. Huawei is already operational in the country, with an aim to increase these numbers and leapfrog to 5G by 2021-22. The DSR also intends to connect landlocked Afghanistan with Central and South Asia and, ultimately, Europe, through terrestrial fibre optic cables.[34]

In 2018, Nepal operationalised a joint fibre-optic link with China, providing the landlocked country alternative internet access routes to those via India.[35] The same year, a cross-border fibre-optic cable was laid between Pakistan and China as part of the China-Pakistan Economic Corridor (CPEC),[36] and the Pakistani military began replacing its use of GPS with BeiDou in 2020.[37] Pakistan's digital connectivity with East Africa will improve through a submarine fibre-optic cable laid by Huawei Marine between Pakistan's China-built Gwadar Port and a landing point near Mombasa in Kenya, and Djibouti.[38] When completed in 2020, it will become the shortest route for high-speed internet traffic between Asia and Africa.[39] Sri Lanka prepared for BeiDou adaptation in 2017.

In 2017, India launched its South Asia Satellite, which supports communication, broadcasting, and internet services.[40] Its applications are free of charge in all South Asian countries except Pakistan, which opted out.[41] The Indian Regional Navigation Satellite System/Navigation

with Indian Constellation is also an alternative to BeiDou. However, China has a considerable advantage over India in South Asia by being able to offer an entire digital backbone.

The BeiDou system in particular risks creating considerable dependence for developing economies on China. This is because in addition to its military components, the nature of BeiDou-dependent services are in "critical subsistence areas" such as agriculture, and other infrastructure (such as 5G) where alternatives are either unavailable[42] or highly expensive.[43] For developing countries, relying on infrastructure tied to the BeiDou system makes extrication, if so desired, difficult, owing to lack of cost-efficient alternatives and bargaining power, as well as potential risk of Chinese backlash.

Combined with Beijing's massive investments in AI[44] and other emerging technologies, the Chinese digital backbone will provide indigenous corporations and the government with considerable advantages to shape markets and possibly even policies, in developing economies in South Asia and in and around Europe.[45] An indication of this is that despite US pressure to the contrary, 47 of Huawei's 91 5G global contracts as of early 2020 come from Europe.[46] Chinese corporations have also bought important European tech companies in the last five years. In 2016, Midea bought German advanced robotics firm Kuka, and Chinese tech giant Tencent bought a majority stake in Finnish mobile games maker Supercell.[47] Three years later, Ant Financial, the Alibaba Group's financial technology affiliate, bought UK-based currency exchange WorldFirst.[48]

While the prospective Chinese digital backbone is making (more) waves outside of Europe, in regions where such a backbone is non-existent, incomplete, or outdated, its impact will soon be felt substantially, and globally. The next implication—setting new technological standards—however, is more immediate a concern for both India and Europe.

# Implication II: Setting Technological Standards

A battle is on for who will set standards for the Fourth Industrial Revolution, i.e., the digitalisation of the world. Nevertheless, it is important to remember that the DSR diffuses not only Chinese standards and technologies but also US and European technologies to the world.[49] Indeed, technology products are rarely exclusively single-state. They are instead a synthesis of components sourced internationally and thus generally abide by common standards.

However, it is different for emerging technologies. As Chinese corporations begin to lead this domain with considerable state support, they will increasingly be able to influence the technological priorities of DSR participant countries. Today, Chinese corporate giants such as Huawei, Alibaba, Tencent, ZTE, Baidu, and state-backed telecom providers such as China Mobile, China Telecom, and China Unicom are challenging the *status quo*, in part through the DSR. So far, the Chinese government has signed DSR-specific MoUs with 18 countries, including four eastern and central European countries, and the UK.[50]

Many of these 18 countries are emerging and developing economies. Beijing will be able to gain involvement in their technological development, provided they become heavily integrated with Chinese technology and investment. This is not to say however that China has an automatic *carte blanche*. Ultimately, countries will decide what to buy and whom to buy from based on an assessment of their interests, even if Chinese bids tend to be more price-competitive than those of their Western competitors.[51] If Chinese companies were to offer integrated and comprehensive hardware and software packages, which should be anticipated, it could create more opportunities for dependence on Chinese systems.

The West, in particular, the UK and the US, has had a disproportionally large hand in dominating global markets and setting technological standards. The UK's largest telegraph company manufactured two-thirds of the cables used in the 19th century.[52] US-based corporate technology and software giants such as Google, Microsoft, Cisco, Apple, Intel, and Facebook have long been in the driver's seat in their domains. Indeed, global technology standards are largely dominated by US-based private companies, and to a lesser degree, by those in Europe.[53]

Evidently, if China is not able to set new standards, they will be directed as before by other technology leaders such as the US, Japan, South Korea, Israel, and some EU member states. Technological overdependence on one set of countries is as theoretically unsound as a skewed reliance on China. A geographic diffusion of technological leadership is a more balanced ideal, and could positively promote competition and lower prices. One such example is cross-border payments infrastructure led by Chinese FinTech brands like Tencent's WeChat Pay and the Alibaba Group's Alipay. Both compete with SWIFT, the US-led system, which is currently dominant.

The risk for India and the EU lies in strategic dependence on China and the dilution of global standards, including of cyber governance and norms. The Asia-Pacific and Africa, both largely comprised of developing countries, might move further into China's technological sphere of influence. The Asia-Pacific is the world's fastest-growing region for internet adoption and digital connectivity between people and businesses, as well as a key strategic region for Chinese, Indian, and EU security interests.[54]

## DSR Impact in Europe and South Asia

The DSR's scope is much wider and more complex than what the global fixation on Huawei and 5G suggest. A closer examination reveals the emergence of a parallel ecosystem of digital activities with substantial Chinese influence. ePayment systems, also known as digital wallets, are one such example.

Tencent's WeChat Pay and Ant Financial's Alipay—both privately-owned Chinese entities—have become dominant players in this sphere. Ant Financial's forays abroad are illustrative of how Chinese FinTech companies are leading the charge in setting standards. Of the over 50 countries that currently accept Alipay and affiliated services, 29 are European, and a handful are South Asian.

In Europe, Alipay has partnered with digital wallets such as Vipps (Norway), Bluecode (Austria), ePassi and Pivo (Finland), Momo Pocket (Spain), Pagaqui (Portugal), and has picked up a minority stake in Klarna (Sweden). In South Asia, Alipay is steadily becoming a leading actor. It is a major investor in Paytm (India), bKash (Bangladesh), and Telenor Microfinance Bank (Pakistan), which owns Easypaisa. In Sri Lanka, Alipay has partnered with Dialog Axiata, and the Commercial Bank of Ceylon PLC. In 2020, Nepal granted Alipay and WeChat Pay permission to operate in the country, a year after banning the two for bypassing Nepal's financial system.[55]

The effects of Chinese FinTech products play out differently in South Asia and the EU due to structural differences between the two regions but do nonetheless contribute to standards setting. Commercial prospects and the conveniences of inter-operability are key to enabling Alipay's greater penetration into European markets. An enabling factor in developing countries in regions like South Asia is the use of digital wallets and digitisation of financial activities as cost-efficient ways to ensure the financial inclusion of unbanked populations.[56]

Individually, these investments seem innocuous. Together, they suggest a systematic integration that enables China to strategically position itself for future dominance of overseas markets. This is in line with specific internationally-oriented goals outlined in Beijing's 2016 National Informatisation Plan. Ultimately, these developments could assist China's

preparedness to influence innovation, internationalisation, and standardisation in FinTech services.[57]

In Europe, Alipay's partnerships with the six digital wallet companies made a cross-platform deal to adopt a unified Alipay-supplied QR code possible, thereby enabling inter-operability within the European mobile payment sector, and between European and Chinese mobile payment sectors.[58] In January 2019, TMB launched Pakistan's first cross-border remittance (Malaysia to Pakistan) service using Alipay-developed blockchain technology through its Easypaisa mobile wallet, by linking it to Telenor's Malaysia-based Valyou service.[59] In the same year, UnionPay, China Mobile, Red Date Technologies, and the State Information Centre launched China's blockchain service network (BSN) as a trans-regional public infrastructure network. In 2020, China formed a national blockchain committee, which includes representation from Ant Financial, Tencent, Baidu, Huawei, etc, and is aimed at developing standards for blockchain technology use across industries.

In 2019, China, Egypt, Laos, Saudi Arabia, Serbia, Thailand, Turkey, and the United Arab Emirates (UAE) jointly launched the 'Belt and Road International Cooperation Initiative on Digital Economy'. Beijing also signed cooperation documents with 16 countries to strengthen the construction of the DSR, issued the 'Standard Unicom Joint Construction "Belt and Road" Action Plan (2018-2020)', and had, by 2019, signed 85 standardisation cooperation agreements with 49 countries.[60] These figures exemplify the DSR's strategic consequences, and how they facilitate a stronger position for China to influence cyber governance and norms.

Irrespective of whether a country is part of the BRI/DSR network, Chinese tech companies' extensive inroads into domestic markets end up linking these portfolios to the DSR wagon, and by extension, BRI.[61] India's case is a useful example of Chinese forays beyond FinTech in South Asia. Chinese smartphone manufacturers are currently leading the Indian smartphone[62] and laptop[63] markets. Chinese companies account for over 70 per cent of the smartphone market share.[64] A host of mobile apps with links to Chinese companies have been also widely used in India, with PUBG Mobile (published partly by Tencent Games), TikTok (developed by Beijing-based ByteDance) being two prime examples. Further, Chinese companies have made substantial investments in various Indian companies offering online services such as shopping, cab aggregation, music, social media, news aggregation, and educational technologies.[65]

The upside is that the local private sector benefits not just from the capital inflow but also from Chinese tech expertise. The downsides include the immense dependence on China this engenders in strategic sectors, and the volume of metadata it helps Chinese companies gain access to. Collectively, these will undoubtedly give Chinese corporations and the government a considerable edge in tailoring their consumer-targeting strategies more effectively. It will possibly also enable them to shape markets and policies, thus creating strategic vulnerabilities for the target countries.[66] Related to this are the DSR's potential implications concerning cyber-governance, norms and the 'digital experience'—i.e. the third implication discussed in this paper.

## Implication III: Cyber Governance, Norms and 'Digital Experience'

The DSR has the potential to enhance digital connectivity in developing economies—and even some developed ones—by filling a significant global digital infrastructure gap. For developing countries, DSR projects can a) support the levelling of the digital playing field with more developed economies; b) trigger the establishment and growth of small, medium, and large digitally-driven businesses; and c) boost the efficiency and speed of production, logistics, medical processes, disaster management, and agricultural activities among others. Developing economies are eager for connectivity technology—whether Western or Asian—to achieve these goals.[67] The governments of many developing countries strongly advocate digital economy as a key pillar for growth, and the public is likewise optimistic that new technologies offer more opportunities than risks.[68]

However, there is a concern, especially in the developed economies of the West, that the DSR could negatively affect cyber governance and norms by spreading digital authoritarianism and curbing fundamental human rights.[69] The concern is based on a) China promoting cyber sovereignty with 'Chinese characteristics' as the organising principle for internet governance, as evidenced by their promotion of this at UN fora such as the Group of Governmental Experts; and b) Beijing's strict control of the internet and domestic information flow, and its use of technology to monitor citizens. China's engagement with the World Trade Organisation (WTO) and the United Nations Convention on the Law of the Sea (UNCLOS) is suggestive of its broader functionalist approach to law.[70]

Beijing does not promote digital authoritarianism in official rhetoric on the DSR. However, it is willing to, and capable of, equipping states with technologies that have the potential to be misused for greater population control. In Belgrade, Serbia, Huawei installed a network of facial recognition software as part of its Safe Cities technology. The system intends to help reduce crime in the city. However, there is potential for misuse if, for example, political opposition is tracked for penalisation. To be sure, US and EU-based companies too export safe city technologies for smart policing.

As of 2019, 230 cities worldwide use Huawei's system. In Europe, this includes cities in Ukraine, Azerbaijan, Malta, Germany, France, and Italy.[71] In South Asia, Pakistan's 'safe city' project in Lahore was built by Huawei, and entails the use of CCTV, facial recognition, and a wide range of specialised applications used by local authorities.[72] According to a 2018 report by the watchdog Freedom House, Chinese firms have provided high-tech tools of surveillance, including facial recognition, to 18 countries (of the 65 assessed) whose governments lack respect for basic human rights. Chinese officials have held trainings and seminars on 'new media' or 'information management' with representatives from 36 of these 65 countries.[73]

China is passing on norms for how technology can be utilised to govern society, and with this, is in a position to alter existing norms of state-citizen relations. It has the potential to align views on cyber governance and norms across DSR participant countries, and contribute to the global decline of democratic values. The argument also applies to EU norms and India's constitutional provisions governing speech, expression, and other civil liberties. Of course, virtually any technology and software can be exploited to the detriment of democracy. Infringements on privacy and human rights are not exclusive to Chinese technology. Some non-Chinese high-profile cases include the 2016 Facebook-Cambridge Analytica data scandal, Google tracking 'private' internet use in its Chrome browser in 2019, and the decades-long tapping of German and other top officials' phone calls by the US National Security Agency (NSA).[74] These cases show that over-dependence on US technology also brings serious risks to democracy and transparency. Ultimately, the difference lies in the difference in political structures of these tech platforms' countries of origin, and the availability of legal recourse.

## DSR Impact in Europe and South Asia

China potentially shaping cyber governance and norms would involve exporting its own system of values. This could impact digital governance and the overall 'digital experience' in BRI and non-BRI countries along the same lines. Chinese inroads into news and social media in other countries is one such example. Through a combination of investments, tie-ups, and acquisition of media outlets and social media platforms, 'training programmes', and general lobbying, Beijing has been steadily influencing content that reaches audiences across Europe, Asia, Africa, and the Americas.[75] In the long-run, the collective effect of these measures will significantly bolster China's discursive power, and allow Beijing to globally shape an 'information order'—on China, at the very least. At this time, such developments are more discernible in developing economies in Asia, Africa, etc, than the EU.

DSR impact on the 'digital experience' is rooted in how information is transmitted and engaged with today. A substantial portion of information exchange occurs via the internet, through print and broadcast news apps, social media, and TV and radio broadcasts, most of which depend on digital connectivity. Internet streaming of news, views, entertainment/'info-tainment' shows, etc. is similarly widespread and set to increase. Influencing content at the creation stage will enable Chinese media outlets to direct public opinion and debate on digital platforms, Chinese or non-Chinese.

Beijing has been taking systematic measures to entrench itself in media abroad, and shape journalistic norms.[76] For example, in what seems to be the controversial 'Document Number 9'[77] and the 'joint model' of domestic journalism education (in place since 2013) playing out in practice, [78] Chinese state institutions have been pursuing influence operations on international reportage on China. This is done by co-opting and 'educating' journalists from across the world via graduate education, and through all-expenses paid 'trainings', 'seminars', 'workshops', 'media fellowships', etc. These modules include training in 'journalism with

Chinese characteristics'. South Asian journalists from major news outlets in India, Nepal, Pakistan, Bangladesh, etc. have been part of such programmes, including the highly regulated 10-month-long all-expenses paid 'media fellowship' organised by the Chinese Ministry of Foreign Affairs, which entails strict restrictions on reporting and travel.[79]

The impact of Beijing's media strategy abroad is already discernible.[80] In May 2019, coinciding with Nepal President Bidya Devi Bhandari's visit to Beijing, three journalists with Nepal's state-run Rashtriya Samachar Samiti—which has a content-sharing arrangement with China's state-run *Xinhua* news agency—were investigated for translating a news report about the Dalai Lama.[81] In Pakistan, a Chinese media outlet and a Pakistan-based think-tank are reportedly set to establish a 'Rapid Response Initiative System'[82] to counter "negative perceptions" and stop "fake news" about CPEC projects. Criticism of CPEC in the Pakistani media has considerably diminished over the past few of years.

Similarly, a series of news and social media-related developments[83] in Pakistan point to a trend wherein, the government, aided by China's reach and technological capability, could further restrict press freedoms as well as the public's internet and media freedom and access to information. A 2016 study on Chinese engagement in media sectors in Africa found that Beijing's inroads through content supply and content delivery technology have resulted in the growth of "more favourable public opinion toward China across multiple dimensions."[84]

A June 2020 survey of journalism unions by the International Federation of Journalists provides insight into how Beijing is "cultivating a cadre of third-party supporters, outsourcing its influence operations to individual journalists," and how there has been a greater focus on "journalists from developing countries with repressive and ineffective governments."[85] Budgetary constraints have also resulted in several media outlets using news from Chinese state-run media such as *Xinhua*, which often provides free content. In some cases, domestic media outlets have shown dependence on China-linked entities' support for funds and physical infrastructure, scholarships, etc.[86]

Beijing has also demonstrated that considerable control over users of Chinese apps, even outside of China.[87] In June 2020, against the backdrop of Sino-Indian border tensions, TikTok (which boasted around 200 million users in India) deleted a video by an Indian artist critical of China. While this video was reinstated after public outrage, the app has also been criticised for implementing 'shadow bans'.[88] In July 2020, India banned 59 Chinese apps, including TikTok, over security concerns.

Finally, building a digital backbone and shaping global cyber governance cannot be complete without a complementary 'legal backbone'. The history of Chinese attempts to shape international legal instruments, and norms on a code of conduct for outer space, are useful examples.[89] In 2008, China and Russia proposed the Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects (PPWT), for a UN-based, legally binding treaty. However, the PPWT's definition of "weapon in outer space" excludes ground-to-space capabilities, such as jamming—especially a country's own

outer space infrastructure. This could be used to disrupt the peaceful use of outer space, or to manipulate it.[90]

Exercising such capabilities in a world heavily anchored in the digital domain would prove detrimental to end-users, most of whom are civilian. In this regard, the dual-use capabilities of China's BeiDou system and the Yaogan[91] series of optical reconnaissance satellites systems are particularly relevant. They are in line with the 'Outline of National Innovation-driven Development Strategy' published by the Communist Party of China's (CPC's) Central Committee in 2016. Among other things, this strategy calls for developing "disruptive technologies that will lead to industrial transformation,"[92] and deepening "military-civilian integration" in the tech innovation sector.[93] Another manifestation of the evolution of a China-influenced international 'legal backbone' can be seen in emerging cyber security laws and digital governance practices in different countries—including Vietnam,[94] Egypt,[95] and Pakistan[96] (the last two being BRI participants)—which are developing along the Chinese model, and often with China's support.[97]

# Conclusion

The Digital Silk Road (DSR) has pressing strategic implications for the EU and India. Of these, the three most significant at the global level are: a) the creation of a Chinese digital backbone; b) the setting of Chinese technological standards; and c) the shaping of cyber governance, norms, and 'digital experience' with 'Chinese characteristics'.

DSR impact within EU and India has raised concerns regarding the scope of access that Chinese corporations and, potentially, the Chinese government, could derive, and the corresponding geopolitical, security, and economic implications. FDI-related policy changes in India, individual EU countries, and the EU, in 2020, to monitor and limit Chinese investments, are a result of these concerns. Discussions on further policy changes to limit Chinese impact has accelerated during the COVID-19 pandemic.

At this time, the DSR's immediate impact is more discernible outside the EU and India. DSR initiatives are in active pursuit of some four billion new digital users, mostly, but not exclusively, in developing economies. The DSR is swiftly creating a global Chinese digital backbone through its activities. This ranges from digital infrastructure led by fibre-optic cables, to next generation cellular networks, to a constellation of satellites with global coverage. China could come to dominate a substantial share of the global digital market. This power will increasingly enable Beijing to set standards for emerging technologies, and will better position it to influence global cyber governance and norms with 'Chinese characteristics.'

China is positioning itself for a first-mover advantage in the writing the rules of the Fourth Industrial Revolution. It is seeking to do so by piggybacking the export of its political ideology on the economic opportunities presented by the technological revolution. Chinese state institutions' record of interpreting existing rules to suit the centre—i.e., by taking a differential approach to comply with the letter and spirit of specific international laws, for instance those of the WTO and UNCLOS—provides a useful indicator.[98] Such an approach to rules, if applied to future cyber norms and governance, will have a bearing on compliance and trust in systems of international governance.

The challenge is that there is no competing alternative to the DSR's compelling long-term narrative of a global interconnected digital future that facilitates joint cooperation and development. The EU (and the US), notwithstanding longstanding hardware and software primacy, offer no comparable narrative. The DSR thus erodes the West's tech primacy through a Chinese whole-of-government and private sector approach. As a constituent element, the DSR also advances the BRI narrative of mutually beneficial economic integration with China. India's neighbourhood, for example, is integrating closely with China's digital ecology.

Strikingly, India itself has become a receptacle of DSR outreach—without even signing for the BRI.

The DSR offers interested countries a gamut of economic opportunities. These opportunities, if harnessed smartly, could enable participant countries to try levelling the playing field with more advanced economies. It could help boost economies, and improve local human capital competitiveness. Equally though, the DSR would enable global integration with China. Further, the DSR also risks creating parallel worlds with de-coupled technological standards, economic spheres of influence, and security standards.

The DSR poses serious competition to Europe's technological prowess, and challenges India's ambition of becoming a technological powerhouse. Viewed from the EU and Indian vantage points, the engineering of a new digital world order with 'Chinese characteristics' is not a desirable option. Equally, neither India nor the EU can afford to ignore the DSR or be reactionary in policy responses. For both, addressing emerging digital realities will require a long-term multi-pronged vision, and greater collaboration among like-minded states.

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