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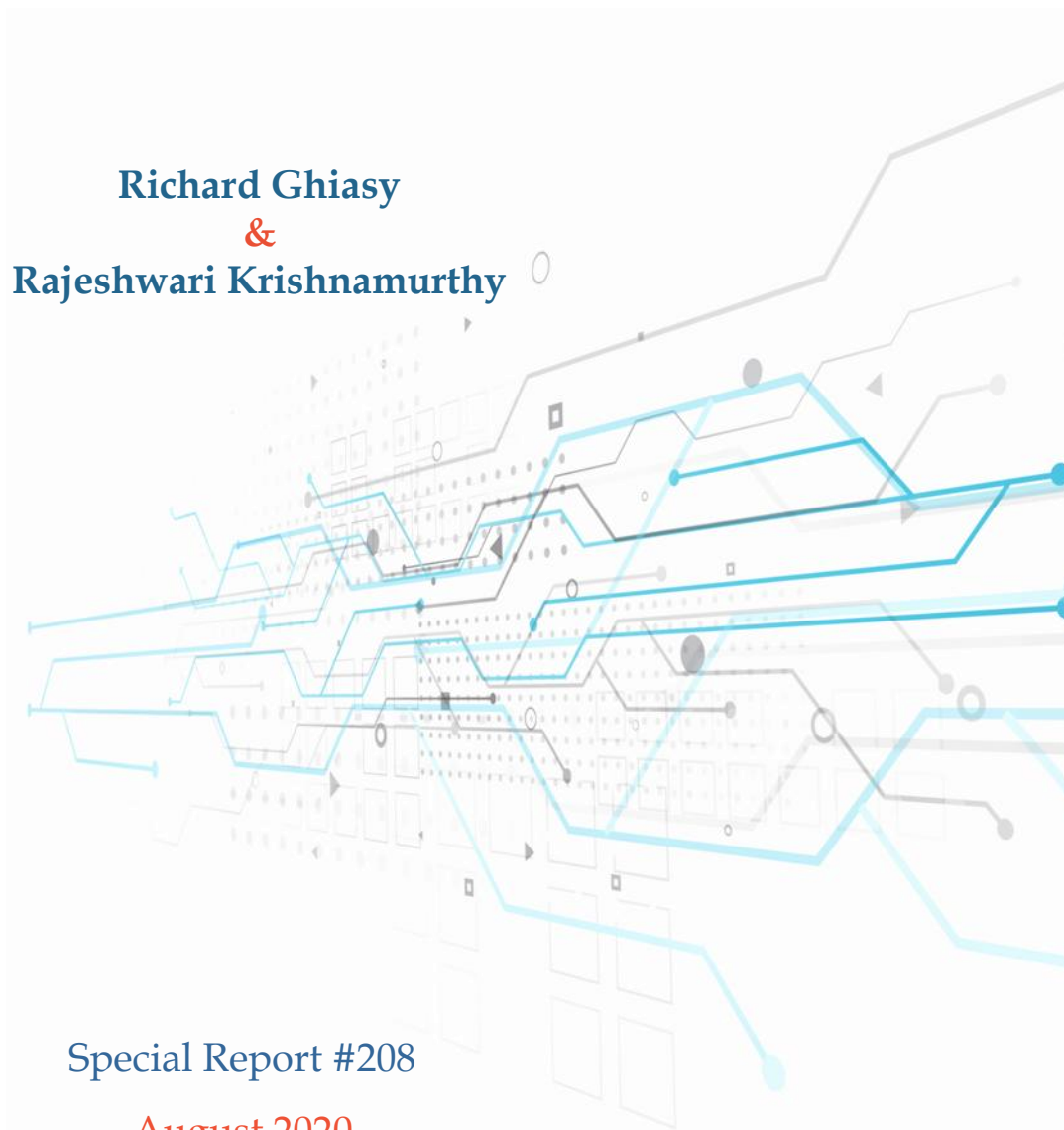
# China's Digital Silk Road

## Strategic Implications for the EU and India

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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.<sup>1</sup>

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)<sup>2</sup> 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.<sup>3</sup> 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 implication: 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.<sup>4</sup> 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.<sup>5</sup> Three developed European economies—Germany, Italy, and Spain—feature in the top 15 countries across the world with the highest estimated DSR spending.<sup>6</sup> The top five recipients are found across three continents: Mexico, Ethiopia, Malaysia, the Philippines, and—ranked first among the recipients—India.<sup>7</sup> No less than 18 out of 30 Indian ‘unicorns’<sup>8</sup> have significant Chinese investment.<sup>9</sup> 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.<sup>10</sup>

Importantly, the DSR is not merely a foreign policy initiative but has a strong domestic emphasis.<sup>11</sup> 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.<sup>12</sup> 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.<sup>13</sup> 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)<sup>14</sup>
- f) enables Beijing to influence global discourse on China
- g) potentially enables Chinese businesses and authorities to access large pools of foreign data.<sup>15</sup>

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.<sup>16</sup>

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.<sup>17</sup> 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.<sup>18</sup> 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.<sup>19</sup> 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.<sup>20</sup> Today, US-based tech giants such as Google, Facebook, Microsoft, and Amazon are major investors in new cables.<sup>21</sup>

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.<sup>22</sup> In Asia, China's share is close to 30 per cent of existing cables and over half of planned cables.<sup>23</sup> The cables mostly focus on upgrading east and west internet connections across the BRI regions<sup>24</sup> 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.<sup>25</sup> Since the next generation of digitalisation will depend heavily on 5G, it has



even become an object of great power competition.<sup>26</sup> 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,<sup>27</sup> which have an accuracy of 10 cm in China and the Asia-Pacific. Currently, GPS offers a 30 cm accuracy in the same region.<sup>28</sup> 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.<sup>29</sup> In Asia, Pakistan, Laos, Brunei, and Thailand are among the countries that have adopted BeiDou,<sup>30</sup> and there is growing use in the Middle East/West Asia and Africa.<sup>31</sup>

## 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.<sup>32</sup> In Myanmar, 4G penetration rate is less than 20 per cent, and the home broadband penetration rate is only about two per cent.<sup>33</sup> 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.<sup>34</sup>

In 2018, Nepal operationalised a joint fibre-optic link with China, providing the landlocked country alternative internet access routes to those via India.<sup>35</sup> The same year, a cross-border fibre-optic cable was laid between Pakistan and China as part of the China-Pakistan Economic Corridor (CPEC),<sup>36</sup> and the Pakistani military began replacing its use of GPS with BeiDou in 2020.<sup>37</sup> 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.<sup>38</sup> When completed in 2020, it will become the shortest route for high-speed internet traffic between Asia and Africa.<sup>39</sup> Sri Lanka prepared for BeiDou adaptation in 2017.

In 2017, India launched its South Asia Satellite, which supports communication, broadcasting, and internet services.<sup>40</sup> Its applications are free of charge in all South Asian countries except Pakistan, which opted out.<sup>41</sup> 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<sup>42</sup> or highly expensive.<sup>43</sup> 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<sup>44</sup> 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.<sup>45</sup> 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.<sup>46</sup> 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.<sup>47</sup> Three years later, Ant Financial, the Alibaba Group’s financial technology affiliate, bought UK-based currency exchange WorldFirst.<sup>48</sup>

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.<sup>49</sup> 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.<sup>50</sup>

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.<sup>51</sup> 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 disproportionately 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.<sup>52</sup> 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.<sup>53</sup>

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.<sup>54</sup>

## 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.<sup>55</sup>

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.<sup>56</sup>

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.<sup>57</sup>

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 interoperability within the European mobile payment sector, and between European and Chinese mobile payment sectors.<sup>58</sup> 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.<sup>59</sup> 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.<sup>60</sup> 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.<sup>61</sup> India's case is a useful example of Chinese forays beyond FinTech in South Asia. Chinese smartphone manufacturers are currently leading the Indian smartphone<sup>62</sup> and laptop<sup>63</sup> markets. Chinese companies account for over 70 per cent of the smartphone market share.<sup>64</sup> 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.<sup>65</sup>

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.<sup>66</sup> Related to this are the DSR's potential repercussions 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.<sup>67</sup> 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.<sup>68</sup>

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.<sup>69</sup> 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.<sup>70</sup>

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.<sup>71</sup> 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.<sup>72</sup> 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.<sup>73</sup>

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).<sup>74</sup> 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.<sup>75</sup> 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.<sup>76</sup> For example, in what seems to be the controversial ‘Document Number



9<sup>77</sup> and the ‘joint model’ of domestic journalism education (in place since 2013) playing out in practice,<sup>78</sup> 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.<sup>79</sup>

The impact of Beijing’s media strategy abroad is already discernible.<sup>80</sup> 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.<sup>81</sup> In Pakistan, a Chinese media outlet and a Pakistan-based think-tank are reportedly set to establish a ‘Rapid Response Initiative System’<sup>82</sup> 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<sup>83</sup> 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.”<sup>84</sup>

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.”<sup>85</sup> 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.<sup>86</sup>

Beijing has also demonstrated that considerable control over users of Chinese apps, even outside of China.<sup>87</sup> 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’.<sup>88</sup> 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.<sup>89</sup> 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.<sup>90</sup>

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<sup>91</sup> 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,”<sup>92</sup> and deepening “military-civilian integration” in the tech innovation sector.<sup>93</sup> 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,<sup>94</sup> Egypt,<sup>95</sup> and Pakistan<sup>96</sup> (the last two being BRI participants)—which are developing along the Chinese model, and often with China’s support.<sup>97</sup>

## 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 have 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.<sup>98</sup> 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.

<sup>1</sup>“We should build bilateral cross border optical cable networks at a quicker pace, plan transcontinental submarine optical cable projects, and improve spatial (satellite) information passageways to expand information exchanges and cooperation.” See: Vision and Actions on Jointly Building Silk Road Economic Belt and 21st Century Maritime Silk Road. 28 Mar. 2015, p. 6, reconasia-production.s3.amazonaws.com/media/filer\_public/e0/22/e0228017-7463-46fc-9094-0465a6f1ca23/vision\_and\_actions\_on\_jointly\_building\_silk\_road\_economic\_belt\_and\_21st-century\_maritime\_silk\_road.pdf. Accessed 15 May 2020.

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<sup>2</sup> Kratz, Agatha, et al. “Chinese FDI in Europe: 2019 Update.” *Mercator Institute for China Studies*, 8 Apr. 2020, www.merics.org/sites/default/files/2020-05/MERICS-Rhodium%20Group\_COFDI-Update-2020\_3.pdf. Accessed 21 June 2020.

<sup>3</sup> This study draws on DSR-related data, and is based on policy documents, official statements, academic studies, think-tank analyses and news reports.

<sup>4</sup>At the opening ceremony of the Belt and Road International Cooperation Summit Forum in May 2017, China’s President, Xi Jinping, stressed the importance of connecting the BRI to domains such as digital economy, artificial intelligence, nanotechnology, quantum computing, big data, and cloud computing. See: “Full Text of President Xi’s Speech at Opening of Belt and Road Forum.” *Xinhua*, 14 May 2017, www.xinhuanet.com/english/2017-05/14/c\_136282982.htm. Accessed 1 July 2020.

<sup>5</sup>It should be noted that there is no comprehensive public record of DSR projects, and some of these figures may not have officially been labelled as part of the DSR by China. For the first figure, see: Prasso, Sheridan. “China’s Digital Silk Road Is Looking More Like an Iron Curtain.” *Bloomberg*, 10 Jan. 2019, www.bloomberg.com/news/features/2019-01-10/china-s-digital-silk-road-is-looking-more-like-an-iron-curtain. Accessed 22 May 2020. For the second figure, see: Adee, Sally. “The Global Internet Is Disintegrating. What Comes Next?” *BBC*, 15 May 2018, www.bbc.com/future/article/20190514-the-global-internet-is-disintegrating-what-comes-next. Accessed 22 May 2018.

<sup>6</sup> Includes projects completed or initiated outside China since 2012 that enhance the digital infrastructure of the target country. Does not include mergers and acquisitions. See: “China’s Belt and Road Initiative: Recalibration and New Opportunities.” *Deloitte*, 15 Aug. 2019, www2.deloitte.com/us/en/insights/economy/asia-pacific/china-belt-and-road-initiative-update.html#endnote-sup-39. Accessed 22 May 2020.

<sup>7</sup>Research conducted by Washington D.C.-based RWR Group. Figures and projects are based on 2012-2018; some of these predate the DSR. Based on projects that have been initiated or completed, and which enhance the digital infrastructure of the country in question. Does not include mergers or acquisitions. *Ibid.* Accessed 22 May 2020.

<sup>8</sup> Unicorns are tech start-ups whose market capitalisation has reached US\$1 billion or more.

<sup>9</sup> Bhandari, Amit, et al. “Table 1: Indian Unicorns with Chinese Investors.” *Chinese Investments in India*, Gateway House, Feb. 2020, p. 9, www.gatewayhouse.in/wp-content/uploads/2020/03/Chinese-Investments-in-India-Report\_2020\_Final.pdf. Accessed 1 June 2020.

<sup>10</sup>Substantial loans are also offered to vendors in recipient countries, which often run through the China Development Bank, the Export-Import Bank of China, and other state-owned commercial banks. For example, India’s telecom operator Bharti Airtel received US\$2.5 billion in part to purchase Huawei and ZTE equipment in 2015. See: Belt & Road News. (2019, August 30). ‘Networking the “Belt & Road” the Future is Digital.’ Retrieved on 5 June 2020 from <https://www.beltandroad.news/2019/08/30/networking-the-belt-road-the-future-is-digital/>. See also: Abe, Tetsuya. “Backed by Their Government, Chinese Companies Splash out Abroad.” *Nikkei Asian Review*, 7 Jan. 2016, <https://asia.nikkei.com/Business/Backed-by-their-government-Chinese-companies-splash-out-abroad>. Accessed 15 June 2020.

<sup>11</sup>Cheney, Clayton. “China’s Digital Silk Road: Strategic Technological Competition and Exporting Political Illiberalism.” *Pacific Forum*, Issues & Insights Working Paper, vol. 19, no. WP8, July 2019.

<sup>12</sup> Li, Wang. “Directions 2017: BeiDou’s Road to Global Service.” *GPS World*, 6 Dec. 2016, www.gpsworld.com/directions-2017-beidou-road-to-global-service/. Accessed 1 June 2020.

<sup>13</sup>*Notice of the State Council on Printing and Distributing “Made in China 2025.”* 19 May 2015, www.gov.cn/zhengce/content/2015-05/19/content\_9784.htm. Accessed 16 June 2020.

<sup>14</sup> An emerging industry that uses technology to improve financial activities.

<sup>15</sup> Chan, Jia Hao. “China’s Digital Silk Road: A Game Changer for Asian Economies.” *The Diplomat*, 30 Apr. 2019, thediplomat.com/2019/04/chinas-digital-silk-road-a-game-changer-for-asian-economies/. Accessed 22 May 2020.

<sup>16</sup> Cheney (2019).

- <sup>17</sup> Clement, J. "Internet Usage Worldwide - Statistics & Facts." *Statista*, 25 July 2019, [www.statista.com/topics/1145/internet-usage-worldwide/](http://www.statista.com/topics/1145/internet-usage-worldwide/). Accessed 21 July 2020.
- <sup>18</sup> Rapp, R.J. "Cable Laying and Repair - Cable Ship Operations." *The Sargasso Sea Commission*, 23 Oct. 2014, [www.sargassoseacommission.org/storage/documents/Cable\\_Installation\\_and\\_Maintenance\\_-\\_TE\\_SubCom\\_Sargasso\\_Sea\\_Final1.pdf](http://www.sargassoseacommission.org/storage/documents/Cable_Installation_and_Maintenance_-_TE_SubCom_Sargasso_Sea_Final1.pdf). Accessed 5 June 2020. TE Connectivity. PPT Presentation made at the George Washington Law School, Washington, D.C.
- <sup>19</sup> "Submarine Cable Map." *TeleGeography*, [www.submarinemap.com/](http://www.submarinemap.com/). Accessed 5 May 2020.
- <sup>20</sup> Britain pioneered cable-cutting and had conducted one of the first strategic acts of information warfare in the modern world. See: Bruton, Elizabeth. "From Australia to Zimmermann: A Brief History of Cable Telegraphy during World War One." *The Museum of the History of Science, University of Oxford*, 2013, [blogs.mhs.ox.ac.uk/innovatingincombat/files/2013/03/Innovating-in-Combat-educational-resources-telegraph-cable-draft-1.pdf](https://blogs.mhs.ox.ac.uk/innovatingincombat/files/2013/03/Innovating-in-Combat-educational-resources-telegraph-cable-draft-1.pdf). Accessed 3 July 2020.
- <sup>21</sup> Poole, Jim. "Submarine Cable Boom Fueled by New Tech, Soaring Demand." *Network World*, 6 Mar. 2018, [www.networkworld.com/article/3260784/submarine-cable-boom-fueled-by-new-tech-soaring-demand.html](http://www.networkworld.com/article/3260784/submarine-cable-boom-fueled-by-new-tech-soaring-demand.html). Accessed 26 June 2020.
- <sup>22</sup> Hillman, Jonathan E. "Event Transcript of 'China's Digital Silk Road.'" *Center for Strategic and International Studies*, 11 Feb. 2019, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211\\_Chinas\\_Digital\\_Silk\\_Road.pdf](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211_Chinas_Digital_Silk_Road.pdf). Accessed 22 May 2020.
- <sup>23</sup> Ibid.
- <sup>24</sup> "China's Belt and Road Initiative: Recalibration and New Opportunities." *Deloitte*, 15 Aug. 2019, [www2.deloitte.com/us/en/insights/economy/asia-pacific/china-belt-and-road-initiative-update.html#endnote-sup-39](http://www2.deloitte.com/us/en/insights/economy/asia-pacific/china-belt-and-road-initiative-update.html#endnote-sup-39). Accessed 22 May 2020.
- <sup>25</sup> Goodman, Matthew P. "Event Transcript of 'China's Digital Silk Road.'" *Center for Strategic and International Studies*, 11 Feb. 2019, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211\\_Chinas\\_Digital\\_Silk\\_Road.pdf](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211_Chinas_Digital_Silk_Road.pdf). Accessed 22 May 2020.
- <sup>26</sup> The US government considers Huawei and ZTE-led 5G infrastructure as a threat to international security and is actively working to decelerate its expansion outside China.
- <sup>27</sup> Goodman, Matthew P. "Event Transcript of 'China's Digital Silk Road.'" *Center for Strategic and International Studies*, 11 Feb. 2019, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211\\_Chinas\\_Digital\\_Silk\\_Road.pdf](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211_Chinas_Digital_Silk_Road.pdf). Accessed 22 May 2020.
- <sup>28</sup> Liu, Zhen. "China's BeiDou System One Satellite Closer to Full Operation." *South China Morning Post*, 10 Mar. 2020, [www.scmp.com/news/china/science/article/3074499/chinas-beidou-system-one-satellite-closer-full-operation](http://www.scmp.com/news/china/science/article/3074499/chinas-beidou-system-one-satellite-closer-full-operation). Accessed 5 June 2020.
- <sup>29</sup> Zhao, Lei. "Beidou System to Aid Belt and Road." *China Daily*, 2 June 2015, [www.chinadaily.com.cn/china/2015-06/02/content\\_20884173.htm](http://www.chinadaily.com.cn/china/2015-06/02/content_20884173.htm). Accessed 5 June 2020.
- <sup>30</sup> Chan, Jia Hao. "China's Digital Silk Road: A Game Changer for Asian Economies." *The Diplomat*, 30 Apr. 2019, [thediplomat.com/2019/04/chinas-digital-silk-road-a-game-changer-for-asian-economies/](http://thediplomat.com/2019/04/chinas-digital-silk-road-a-game-changer-for-asian-economies/). Accessed 22 May 2020.
- <sup>31</sup> Beidou can offer BRI and non-BRI countries navigation and positioning services for general logistics, cross-border transportation, fishing management, customs clearance, and modern agriculture, among others.
- <sup>32</sup> Ibid.
- <sup>33</sup> Please note that very few people own computers in Myanmar. Nanda, Saw Yi. "Huawei Myanmar to Keep Eye on 5G Prize." *Myanmar Times*, 14 Mar. 2019, [www.mmtimes.com/news/huawei-myanmar-keep-eye-5g-prize.html](http://www.mmtimes.com/news/huawei-myanmar-keep-eye-5g-prize.html). Accessed 2 June 2020.
- <sup>34</sup> "Afghanistan and China Sign Optic Fiber Agreement." *Regional Economic Cooperation Conference for Afghanistan*, 26 Apr. 2017, [recca.af/?p=2387](http://recca.af/?p=2387). Accessed 3 June 2020.
- <sup>35</sup> "Nepal-China Optical Fibre Link Operationalised." *The Himalayan Times*, 12 Jan. 2018, [thehimalayantimes.com/nepal/sino-nepal-cross-border-optical-fibre-link-starts-operations-today/](http://thehimalayantimes.com/nepal/sino-nepal-cross-border-optical-fibre-link-starts-operations-today/). Accessed 16 June 2020.
- <sup>36</sup> "China Pakistan Economic Corridor." *China Pakistan Economic Corridor*, [www.cpec.gov.pk/project-details/40](http://www.cpec.gov.pk/project-details/40). Accessed 5 June 2020.
- <sup>37</sup> Chan, Jia Hao, and Deepakshi Rawat. "India Struggles to Compete With China's Digital Silk Road." *The Diplomat*, 29 Nov. 2018, [thediplomat.com/2018/11/india-struggles-to-compete-with-chinas-digital-silk-road/](http://thediplomat.com/2018/11/india-struggles-to-compete-with-chinas-digital-silk-road/). Accessed 1 June 2020.
- <sup>38</sup> Balakrishnan, Paran. "China's Digital Route to Dominance." *The Hindu BusinessLine*, 15 Oct. 2019, [www.thehindubusinessline.com/opinion/chinas-digital-route-to-dominance/article29692762.ece#](http://www.thehindubusinessline.com/opinion/chinas-digital-route-to-dominance/article29692762.ece#). Accessed 21 June 2020.



- <sup>39</sup> Hillman, Jonathan E. "Event Transcript of 'China's Digital Silk Road.'" *Center for Strategic and International Studies*, 11 Feb. 2019, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211\\_Chinas\\_Digital\\_Silk\\_Road.pdf](https://www.csis.org/website-prod.s3.amazonaws.com/s3fs-public/publication/190211_Chinas_Digital_Silk_Road.pdf). Accessed 22 May 2020.
- <sup>40</sup> "GSLV-F09 / GSAT-9." *Indian Space Research Organisation*, 5 May 2017, [www.isro.gov.in/launcher/gslv-f09-gsat-9](http://www.isro.gov.in/launcher/gslv-f09-gsat-9). Accessed 14 June 2020.
- <sup>41</sup> Roche, Elizabeth. "India Launches First South Asia Satellite GSAT-9." *LiveMint*, 5 May 2017, [www.livemint.com/Science/22j5cj3JH3H3wa5RpqFqHJ/India-launches-first-South-Asia-satellite-GSAT9.html](http://www.livemint.com/Science/22j5cj3JH3H3wa5RpqFqHJ/India-launches-first-South-Asia-satellite-GSAT9.html). Accessed 14 June 2020.
- <sup>42</sup> "Chinese BeiDou BDS to Transfer Satellite Tech. to Iran." *Mehr News Agency*, 18 Oct. 2015, <https://en.mehrnews.com/news/111132/Chinese-BeiDou-BDS-to-transfer-satellite-tech-to-Iran>. Accessed 13 June 2020.
- <sup>43</sup> Kidwai, Saman Ayesha. "BeiDou and BRI: Dependence Masked as Independence?" *Institute of Peace and Conflict Studies*, 15 May 2020, [www.ipcs.org/comm\\_select.php?articleNo=5689](http://www.ipcs.org/comm_select.php?articleNo=5689). Accessed 14 June 2020.
- <sup>44</sup> "Next Generation Artificial Intelligence Development Plan Issued by State Council." *China Science & Technology Newsletter*, 15 Sept. 2017, [fi.china-embassy.org/eng/kxjs/P020171025789108009001.pdf](http://fi.china-embassy.org/eng/kxjs/P020171025789108009001.pdf). Accessed 14 June 2020. This publication is brought out by the Department of International Cooperation, Ministry of Science and Technology, China.
- <sup>45</sup> Hemmings, John, and Patrick Cha. "The Hidden Dangers of China's Digital Silk Road." *The National Interest*, 1 Mar. 2020, [nationalinterest.org/feature/hidden-dangers-chinas-digital-silk-road-131887](http://nationalinterest.org/feature/hidden-dangers-chinas-digital-silk-road-131887). Accessed 15 June 2020.
- <sup>46</sup> Li, Laily, and Cheng Ting-Fang. "Huawei Claims over 90 Contracts for 5G, Leading Ericsson." *Nikkei Asian Review*, 21 Feb. 2020, [asia.nikkei.com/Business/China-tech/Huawei-claims-over-90-contracts-for-5G-leading-Ericsson](http://asia.nikkei.com/Business/China-tech/Huawei-claims-over-90-contracts-for-5G-leading-Ericsson). Accessed 17 June 2020.
- <sup>47</sup> Kharpal, Arjun. "China Has 'Zero Chance' of Acquiring 'Vulnerable' Europe Tech Firms as EU Urges States to Take Stakes." *CNBC*, 15 Apr. 2020, [www.cnbc.com/2020/04/16/chinese-takeover-of-europe-tech-firms-face-increased-scrutiny.html](http://www.cnbc.com/2020/04/16/chinese-takeover-of-europe-tech-firms-face-increased-scrutiny.html). Accessed 17 June 2020.
- <sup>48</sup> Zen, Soo. "Ant Financial Acquires UK Payments Firm WorldFirst to Advance Its Global Expansion." *South China Morning Post*, 14 Feb. 2019, [www.scmp.com/tech/enterprises/article/2186183/ant-financial-acquires-uk-payments-firm-worldfirst-advance-its](http://www.scmp.com/tech/enterprises/article/2186183/ant-financial-acquires-uk-payments-firm-worldfirst-advance-its). Accessed 21 July 2020.
- <sup>49</sup> KC, Fung, et al. "Digital Silk Road, Silicon Valley and Connectivity." *Journal of Chinese Economic and Business Studies*, vol. 16, no. 3, 2018, pp. 313-336.
- <sup>50</sup> In Africa: Egypt; in Asia: Saudi Arabia, Turkey, UAE, Bangladesh, Laos, South Korea, and Kazakhstan; in Europe: The Czech Republic, Serbia, Poland, Hungary, Estonia, and England; and in Latin America: Cuba and Peru. Source: Triolo, Paul, et al. "The Digital Silk Road: Expanding China's Digital Footprint." *Eurasia Group*, 8 Apr. 2020, p. 2, [www.eurasiagroup.net/files/upload/Digital-Silk-Road-Expanding-China-Digital-Footprint-1.pdf](http://www.eurasiagroup.net/files/upload/Digital-Silk-Road-Expanding-China-Digital-Footprint-1.pdf). Accessed 2 June 2020.
- <sup>51</sup> Advanced economies that can afford it choose Western competitors over China. Japan's KDDI has chosen Ericsson and Nokia for its 5G networks while Singapore has announced a partnership with Nokia. Germany and The Netherlands have granted Huawei access only to peripheral telecom network domains.
- <sup>52</sup> In 1896, Britain owned 24 of the world's 30 cable-laying ships. See Hillman, Jonathan E. "Event Transcript of 'China's Digital Silk Road.'" *Center for Strategic and International Studies*, 11 Feb. 2019, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211\\_Chinas\\_Digital\\_Silk\\_Road.pdf](https://www.csis.org/website-prod.s3.amazonaws.com/s3fs-public/publication/190211_Chinas_Digital_Silk_Road.pdf). Accessed 22 May 2020.
- <sup>53</sup> For more background on this topic see Dal Yong, Jin. "The Construction of Platform Imperialism in the Globalization Era." *TripleC: Communication, Capitalism & Critique*, vol. 11, no. 1, 2013, pp. 145-172.
- <sup>54</sup> "Advancing Digital Connectivity in the Indo-Pacific Region." *USAID*, [www.usaid.gov/sites/default/files/documents/1861/USAID\\_DCCP\\_Fact\\_Sheet\\_080719f.pdf](http://www.usaid.gov/sites/default/files/documents/1861/USAID_DCCP_Fact_Sheet_080719f.pdf). Accessed 3 June 2020.
- <sup>55</sup> Sharma, Gopal. "Nepal Says Bans WeChat Pay, Alipay." *Reuters*, 22 May 2019, [www.reuters.com/article/us-china-nepal-digitalpayments/nepal-says-bans-wechat-pay-alipay-idUSKCN1SS19N](http://www.reuters.com/article/us-china-nepal-digitalpayments/nepal-says-bans-wechat-pay-alipay-idUSKCN1SS19N). Accessed 13 June 2020.
- <sup>56</sup> Sathe, Gopal. "Banking the Unbanked: How Mobile Wallets Can Become a Tool for Financial Inclusion." *Gadgets360*, 1 Dec. 2014, [gadgets.ndtv.com/mobiles/features/banking-the-unbanked-how-mobile-wallets-can-become-a-tool-for-financial-inclusion-628128](http://gadgets.ndtv.com/mobiles/features/banking-the-unbanked-how-mobile-wallets-can-become-a-tool-for-financial-inclusion-628128). Accessed 13 June 2020.
- <sup>57</sup> *Notice of the State Council on Printing and Distributing the "13th Five-Year" National Informatization Plan*. 15 Dec. 2016, [www.gov.cn/zhengce/content/2016-12/27/content\\_5153411.htm](http://www.gov.cn/zhengce/content/2016-12/27/content_5153411.htm). Accessed 15 June 2020.
- <sup>58</sup> Alipay has not only been able to drive intra-Europe linkages but also Europe-China linkages in this sector at the commercial level, see Soo, Zen. "Alipay and Six European Digital Wallets Join Hands to Increase Adoption of Mobile Payments with QR Code." *South China Morning Post*, 10 June 2019, [www.scmp.com/tech/e-commerce/article/3013833/alipay-and-six-european-digital-wallets-join-hands-increase](http://www.scmp.com/tech/e-commerce/article/3013833/alipay-and-six-european-digital-wallets-join-hands-increase). Accessed 13 June 2020.

- <sup>59</sup> "Alipay Powers Blockchain Remittances for Pakistani Bank." *Finextra*, 9 Jan. 2019, [www.finextra.com/newsarticle/33184/alipay-powers-blockchain-remittances-for-pakistani-bank](http://www.finextra.com/newsarticle/33184/alipay-powers-blockchain-remittances-for-pakistani-bank). Accessed 13 June 2020.
- <sup>60</sup> "Building the Belt and Road Initiative: Progress, Contributions and Prospects." *Xinhua*, 22 Apr. 2019, [www.xinhuanet.com/2019-04/22/c\\_1124400071.htm](http://www.xinhuanet.com/2019-04/22/c_1124400071.htm). Accessed 14 June 2020.
- <sup>61</sup> Note: Beijing's definition of 'BRI' suggests an umbrella term and not necessarily a specific project. Consequently, extensive penetration by Chinese tech companies implicitly draws a country within the DSR/BRI narrative framework.
- <sup>62</sup> "India Smartphone Market Share: By Quarter." *Counterpoint Research*, 15 May 2020, <https://www.counterpointresearch.com/india-smartphone-share/>. Accessed 21 June 2020.
- <sup>63</sup> "Lenovo Set to Retain Pole Position in India PC Market with a 50% Share." *Business Standard*, 29 Nov. 2019, [www.business-standard.com/article/companies/lenovo-set-to-retain-pole-position-in-india-pc-market-with-a-50-share-119112801278\\_1.html](http://www.business-standard.com/article/companies/lenovo-set-to-retain-pole-position-in-india-pc-market-with-a-50-share-119112801278_1.html). Accessed 21 June 2020.
- <sup>64</sup> "India Smartphone Market Share: By Quarter." *Counterpoint Research*, 15 May 2020, <https://www.counterpointresearch.com/india-smartphone-share/>. Accessed 21 June 2020.
- <sup>65</sup> Bhandari, Amit, et al. "Chinese Investments in India." *Gateway House*, Feb. 2020, [www.gatewayhouse.in/wp-content/uploads/2020/03/Chinese-Investments-in-India-Report\\_2020\\_Final.pdf](http://www.gatewayhouse.in/wp-content/uploads/2020/03/Chinese-Investments-in-India-Report_2020_Final.pdf). Accessed 21 June 2020.
- <sup>66</sup> Whittler, Kimberly A. "How Tencent Is Using Closed-Loop Data To Drive Better Insight And Engagement." *Forbes*, 9 Jan. 2018, [www.forbes.com/sites/kimberlywhittler/2018/01/09/how-tencent-is-using-closed-loop-data-to-drive-better-insight-and-engagement/#3d3686b91f0d](http://www.forbes.com/sites/kimberlywhittler/2018/01/09/how-tencent-is-using-closed-loop-data-to-drive-better-insight-and-engagement/#3d3686b91f0d). Accessed 21 June 2020.
- <sup>67</sup> Kayama, Hirobumi. "Event Transcript of 'China's Digital Silk Road.'" *Center for Strategic and International Studies*, 11 Feb. 2019, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211\\_Chinas\\_Digital\\_Silk\\_Road.pdf](http://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211_Chinas_Digital_Silk_Road.pdf). Accessed 22 May 2020.
- <sup>68</sup> Ibid.
- <sup>69</sup> See, for example: Eder, Thomas S., et al. "Networking the 'Belt and Road' - The Future Is Digital." *Mercator Institute for China Studies*, 28 Aug. 2019, [merics.org/en/analysis/networking-belt-and-road-future-digital](http://merics.org/en/analysis/networking-belt-and-road-future-digital). Accessed 5 June 2020.; and "Event Transcript of 'China's Digital Silk Road.'" *Center for Strategic and International Studies*, 11 Feb. 2019, [csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211\\_Chinas\\_Digital\\_Silk\\_Road.pdf](http://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/190211_Chinas_Digital_Silk_Road.pdf). Accessed 22 May 2020.
- <sup>70</sup> For a detailed analysis, see: Creemers, Rogier. "Cyber-Leninism: The Political Culture of the Chinese Internet." *Speech and Society in Turbulent Times*, edited by Monroe Price and Nicole Stremlau, New York, Cambridge University Press, 2017, pp. 255-273.; and Creemers, Rogier. *China's Conception of Cyber Sovereignty: Rhetoric and Realization*. 3 Mar. 2020, [ssrn.com/abstract=3532421](http://ssrn.com/abstract=3532421). Accessed 2 July 2020.; Rühlig, Tim. "How China Approaches International Law: Implications for Europe." *European Institute for Asian Studies*, May 2018, [www.eias.org/wp-content/uploads/2016/03/EU\\_Asia\\_at\\_a\\_Glance\\_Ruhlig\\_2018\\_China\\_International\\_Law.pdf](http://www.eias.org/wp-content/uploads/2016/03/EU_Asia_at_a_Glance_Ruhlig_2018_China_International_Law.pdf). Accessed 3 July 2020.
- <sup>71</sup> "Chinese Facial Recognition Tech Installed in Nations Vulnerable to Abuse." *CBS*, 16 Oct. 2019, [www.cbsnews.com/news/china-huawei-face-recognition-cameras-serbia-other-countries-questionable-human-rights-2019-10-16/](http://www.cbsnews.com/news/china-huawei-face-recognition-cameras-serbia-other-countries-questionable-human-rights-2019-10-16/). Accessed 22 May 2020.
- <sup>72</sup> Rizvi, Jawwad. "Lahore on Trajectory to Becoming Smart City." *The News*, 26 Oct. 2018, [www.thenews.com.pk/print/385532-lahore-on-trajectory-to-becoming-smart-city](http://www.thenews.com.pk/print/385532-lahore-on-trajectory-to-becoming-smart-city). Accessed 24 June 2020.
- <sup>73</sup> Examples of these firms include Yitu, Hikvision, and CloudWalk. See: Shahbaz, Adrian. "The Rise of Digital Authoritarianism." *Freedom House*, 2018, [freedomhouse.org/report/freedom-net/2018/rise-digital-authoritarianism](http://freedomhouse.org/report/freedom-net/2018/rise-digital-authoritarianism). Accessed 15 May 2020.
- <sup>74</sup> "NSA Tapped German Chancellery for Decades, WikiLeaks Claims." *The Guardian*, 8 July 2015, [www.theguardian.com/us-news/2015/jul/08/nsa-tapped-german-chancellery-decades-wikileaks-claims-merkel](http://www.theguardian.com/us-news/2015/jul/08/nsa-tapped-german-chancellery-decades-wikileaks-claims-merkel). Accessed 3 July 2020. For more insight, see: Schneier, Bruce. *Data and Goliath - The Hidden Battles to Collect Your Data and Control Your World*. 2015. New York, W. W. Norton & Company.
- <sup>75</sup> Cook, Sarah. "Beijing's Global Megaphone." *Freedom House*, 2020, <https://freedomhouse.org/report/special-report/2020/beijings-global-megaphone>. Accessed 14 June 2020.
- <sup>76</sup> Brady, Anne-Marie. "Magic Weapons: China's Political Influence Activities under Xi Jinping." *Wilson Center*, Sept. 2017, [www.wilsoncenter.org/sites/default/files/media/documents/article/magic\\_weapons.pdf](http://www.wilsoncenter.org/sites/default/files/media/documents/article/magic_weapons.pdf). Accessed 2 July 2020. See also: Lim, Louisa, and Julia Bergin. "Inside China's Audacious Global Propaganda Campaign." *The Guardian*, 7 Dec. 2018, [www.theguardian.com/news/2018/dec/07/china-plan-for-global-media-dominance-propaganda-xi-jinping](http://www.theguardian.com/news/2018/dec/07/china-plan-for-global-media-dominance-propaganda-xi-jinping). Accessed 14 June 2020.
- <sup>77</sup> Ranade, Jayadeva. "China: Document No. 9 and the New Propaganda Regime." *Institute of Peace and Conflict Studies*, 14 Nov. 2013, [www.ipcs.org/comm\\_select.php?articleNo=4175](http://www.ipcs.org/comm_select.php?articleNo=4175). Accessed 14 June 2020. See also:



"Document 9: A ChinaFile Translation." *China File*, 8 Nov. 2013, [www.chinafile.com/document-9-chinafile-translation](http://www.chinafile.com/document-9-chinafile-translation). Accessed 14 June 2020.

<sup>78</sup> Jian, Xu. "The Return of Ideology to China's Journalism Education: The 'Joint Model' Campaign Between Propaganda Departments and Journalism Schools." *Asia Pacific Media Educator*, vol. 28, no. 2, 9 Oct. 2018, pp. 176-185.

<sup>79</sup> Krishnan, Ananth. "China Is Buying Good Press across the World, One Paid Journalist at a Time." *The Print*, 24 Nov. 2018, [theprint.in/opinion/china-is-paying-foreign-journalists-including-from-india-to-report-from-beijing/154013/](http://theprint.in/opinion/china-is-paying-foreign-journalists-including-from-india-to-report-from-beijing/154013/). Accessed 14 June 2020.

<sup>80</sup> In 2018, for example, journalist Azad Essa authored an article on the treatment of Uighurs in China's Xinjiang Special Autonomous Region for the South Africa-based *Independent Online* (IOL). IOL, which is partly owned by Chinese state-linked entities, refused to publish and cancelled his weekly column soon after. One of the shareholders of IOL is the Mauritius-based Interacom Investment Holding Ltd, which is comprised of the China International Television Corporation and the China-Africa Development Fund. The pattern of routing funds and investments from Chinese corporations (private, and state-linked) through offices located in other countries such as Singapore, Mauritius etc is also visible elsewhere. See: Essa, Azad. "China Is Buying African Media's Silence." *Foreign Policy*, 14 Sept. 2018, [foreignpolicy.com/2018/09/14/china-is-buying-african-medias-silence/](http://foreignpolicy.com/2018/09/14/china-is-buying-african-medias-silence/). Accessed 3 July 2020; "About Us." *Independent Media*, [www.independentmedia.co.za/our-company/about-us/](http://www.independentmedia.co.za/our-company/about-us/). Accessed 3 July 2020.; Cronje, Jan. "Independent Media Has Only Paid Interest to Chinese Investors, Not PIC - Survé." *Fin24*, 3 Apr. 2019, [www.news24.com/fin24/economy/south-africa/independent-media-has-only-paid-interest-to-chinese-investors-not-pic-surve-20190403](http://www.news24.com/fin24/economy/south-africa/independent-media-has-only-paid-interest-to-chinese-investors-not-pic-surve-20190403). Accessed 2 July 2020.; and, Bhandari, Amit, et al. "Chinese Investments in India." *Gateway House*, Feb. 2020, [www.gatewayhouse.in/wp-content/uploads/2020/03/Chinese-Investments-in-India-Report\\_2020\\_Final.pdf](http://www.gatewayhouse.in/wp-content/uploads/2020/03/Chinese-Investments-in-India-Report_2020_Final.pdf). Accessed 21 June 2020.

<sup>81</sup> "Nepal Probes Journalists for Dalai Lama News." *France24*, 14 May 2019, [www.france24.com/en/20190514-nepal-probes-journalists-dalai-lama-news](http://www.france24.com/en/20190514-nepal-probes-journalists-dalai-lama-news). Accessed 14 June 2020.

<sup>82</sup> Nadeem, Mehr. "China Boosts Soft Power in Pakistan via Film and Social Media." *Reuters*, 11 Sept. 2019, [www.reuters.com/article/us-china-silkroad-pakistan-softpower/china-boosts-soft-power-in-pakistan-via-film-and-social-media-idUSKCN1VW0LJ](http://www.reuters.com/article/us-china-silkroad-pakistan-softpower/china-boosts-soft-power-in-pakistan-via-film-and-social-media-idUSKCN1VW0LJ). Accessed 14 June 2020.

<sup>83</sup> Opalinski, Nowmay. "The China Factor in Pakistan's Media Landscape." *Institute of Peace and Conflict Studies*, 31 May 2020, [ipcs.org/comm\\_select.php?articleNo=5695](http://ipcs.org/comm_select.php?articleNo=5695). Accessed 14 June 2020.

<sup>84</sup> Bailard, Catie Snow. "China in Africa: An Analysis of the Effect of Chinese Media Expansion on African Public Opinion." *The International Journal of Press/Politics*, vol. 21, no. 4, 2016, pp. 446-471, [journals.sagepub.com/doi/pdf/10.1177/1940161216646733](http://journals.sagepub.com/doi/pdf/10.1177/1940161216646733). Accessed 14 June 2020.

<sup>85</sup> "The China Story: Reshaping the World's Media." *International Federation of Journalists*, 23 June 2020, [www.ifj.org/fileadmin/user\\_upload/IFJ\\_Report\\_2020\\_-\\_The\\_China\\_Story.pdf](http://www.ifj.org/fileadmin/user_upload/IFJ_Report_2020_-_The_China_Story.pdf). Accessed 1 July 2020.

<sup>86</sup> Ibid. Also see: Chia, Jasmine. "Thai Media Is Outsourcing Much of Its Coronavirus Coverage to Beijing and That's Just the Start." *Thai Enquirer*, 31 Jan. 2020, [www.thaienquirer.com/7301/thai-media-is-outsourcing-much-of-its-coronavirus-coverage-to-beijing-and-thats-just-the-start/](http://www.thaienquirer.com/7301/thai-media-is-outsourcing-much-of-its-coronavirus-coverage-to-beijing-and-thats-just-the-start/). Accessed 24 June 2020.; "China's Propaganda Machine Is Spending over \$1 Million to Buy Influence on Foreign Social Media." *Quartz*, 21 Aug. 2019, [qz.com/1691785/chinas-paying-to-build-its-influence-on-foreign-social-media/](http://qz.com/1691785/chinas-paying-to-build-its-influence-on-foreign-social-media/). Accessed 24 June 2020.

<sup>87</sup> Two incidents that occurred in June 2020 – involving a US journalist's WeChat account (linked to a US phone number) and a US-based Chinese activist's US-based Zoom account – highlight China's control over users of Chinese apps, even outside China. See: Allen-Ebrahimian, Bethany. 5 June 2020, <https://twitter.com/BethanyAllenEbr/status/1268611608672194560>. Accessed 14 June 2020; "Zoom Suspends Account of US-Based Chinese Activists after Tiananmen Meeting." *BBC*, 11 June 2020, [www.bbc.com/news/world-asia-53003688](http://www.bbc.com/news/world-asia-53003688). Accessed 14 June 2020; and Knockel, Jeffrey, et al. "We Chat, They Watch." *The Citizen Lab*, 7 May 2020, [citizenlab.ca/wp-content/uploads/2020/05/Report127-wechattheywatch-web.pdf](http://citizenlab.ca/wp-content/uploads/2020/05/Report127-wechattheywatch-web.pdf). Accessed 14 June 2020.

<sup>88</sup> Banerjee, Chandrima. "Does TikTok Censor Content That's Critical of China?" *The Times of India*, 6 June 2020, [https://timesofindia.indiatimes.com/india/does-tiktok-censor-content-thats-critical-of-china/articleshow/76228715.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://timesofindia.indiatimes.com/india/does-tiktok-censor-content-thats-critical-of-china/articleshow/76228715.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst). Accessed 24 June 2020.

<sup>89</sup> Steer, Cassandra. "Why Outer Space Matters for National and International Security." *Center for Ethics and the Rule of Law, University of Pennsylvania*, 8 Jan. 2020, [www.law.upenn.edu/live/files/10053-why-outer-space-matters-for-national-and](http://www.law.upenn.edu/live/files/10053-why-outer-space-matters-for-national-and). Accessed 14 June 2020.

<sup>90</sup> Weeden, Brian. "Testimony before the U.S.-China Economic and Security Review Commission Hearing on China in Space: A Strategic Competition?" *U.S.-China Economic and Security Review Commission*, 25 Apr. 2019, [www.uscc.gov/sites/default/files/Brian%20Weeden%20USCC%2025%20April.pdf](http://www.uscc.gov/sites/default/files/Brian%20Weeden%20USCC%2025%20April.pdf). Accessed 21 June 2020.

<sup>91</sup>Kidwai, Saman Ayesha. "Tracing Strategy in China's Dual-Use Space-Based Systems" *Institute of Peace and Conflict Studies*, 20 May 2020, [ipcs.org/comm\\_select.php?articleNo=5663](https://ipcs.org/comm_select.php?articleNo=5663). Accessed 7 July 2020.

<sup>92</sup> Disruptive technologies shape new approaches to existing activities. One such example is Uber, whose business model and application of technology revolutionised cab aggregation.

<sup>93</sup> "The Central Committee of the Communist Party of China Issued the 'Outline of National Innovation-Driven Development Strategy.'" *State Council of the People's Republic of China*, 19 May 2016, [www.gov.cn/zhengce/2016-05/19/content\\_5074812.htm](http://www.gov.cn/zhengce/2016-05/19/content_5074812.htm). Accessed 13 June 2020.

<sup>94</sup> "Vietnam's Cyber-Security Law Takes Effect amid Criticism." *The Straits Times*, 2 Jan. 2019, [www.straitstimes.com/asia/vietnams-cyber-security-law-takes-effect-amid-criticism](http://www.straitstimes.com/asia/vietnams-cyber-security-law-takes-effect-amid-criticism). Accessed 21 June 2020. While Vietnam-China relations are not rosy, Hanoi does tend to emulate Beijing by gleaning lessons from the Chinese experience itself inasmuch as the *method* is concerned (i.e. the functional aspect). See: Dosch, Jörn, and Alexander L. Vuving. *The Impact of China on Governance Structures in Vietnam*. 2008, [nhatbook.com/wp-content/uploads/2018/08/nhatbook-The-impact-of-China-on-governance-Structures-in-Vietnam-Jorn-Dosch-2008.pdf](http://nhatbook.com/wp-content/uploads/2018/08/nhatbook-The-impact-of-China-on-governance-Structures-in-Vietnam-Jorn-Dosch-2008.pdf). Accessed 25 June 2020.; and, Tao, Jun, and Long Bui. "Interview: What Vietnam Is Learning from China's Socialist Model." *Xinhua*, 8 May 2018, [www.xinhuanet.com/english/2018-05/08/c\\_137163346.htm](http://www.xinhuanet.com/english/2018-05/08/c_137163346.htm). Accessed 25 June 2020.

<sup>95</sup> Nabiliun, Muhamad. "'Sisi Promulgates the Law against Cybercrime .. 'Closing Sites That Threaten National Security.'" *Shorouk News/Al Shorouk*, 19 Aug. 2018, [www.shorouknews.com/news/view.aspx?cdate=18082018&id=5a9b44d4-6e79-4a5a-9314-eef9cff7decc](http://www.shorouknews.com/news/view.aspx?cdate=18082018&id=5a9b44d4-6e79-4a5a-9314-eef9cff7decc). Accessed 21 June 2020.

<sup>96</sup> Opalinski, Nowmay. "The China Factor in Pakistan's Media Landscape." *Institute of Peace and Conflict Studies*, 31 May 2020, [ipcs.org/comm\\_select.php?articleNo=5695](https://ipcs.org/comm_select.php?articleNo=5695). Accessed 14 June 2020.

<sup>97</sup> Chutel, Lynsey. "China Is Exporting Facial Recognition Software to Africa, Expanding Its Vast Database." *Quartz Africa*, 25 May 2018, <https://qz.com/africa/1287675/china-is-exporting-facial-recognition-to-africa-ensuring-ai-dominance-through-diversity/>. Accessed 14 June 2020.

<sup>98</sup> For example: China's interpretation of and disregard for WTO rules; UNCLOS (as it relates to the South China Sea); and interactions with WHO regulations. See: Bown, Chad P., and Jennifer A. Hillman. "WTO'ing a Resolution to the China Subsidy Problem." Peterson Institute for International Economics, Oct. 2019, [www.piie.com/sites/default/files/documents/wp19-17.pdf](http://www.piie.com/sites/default/files/documents/wp19-17.pdf). Accessed 22 July 2020.; and Rühlig, Tim. "How China Approaches International Law: Implications for Europe." *European Institute for Asian Studies*, May 2018, [www.eias.org/wp-content/uploads/2016/03/EU\\_Asia\\_at\\_a\\_Glance\\_Ruhlig\\_2018\\_China\\_International\\_Law.pdf](http://www.eias.org/wp-content/uploads/2016/03/EU_Asia_at_a_Glance_Ruhlig_2018_China_International_Law.pdf). Accessed 3 July 2020.



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