European Institute for Asian Studies

EU-Asia at a Glance

The Invisible Silk Road:
Enter the Digital Dragon

May 2018

Grzegorz Stec[1]

Discussions around the Belt and Road Initiative (BRI) tend to focus on its tangible aspects; primarily related to physical infrastructure including roads, rail and power plants. However, in addition to the two tangible "Silk Roads" - the Silk Road Economic Belt (land route) and the 21st-Century Maritime Silk Road (sea route), a third "Silk Road" was also proclaimed in 2015. The "Information Silk Road", since rebranded as the Digital Silk Road (DSR), aims to "improve international communications connectivity" and foster the internationalisation of China's rapidly growing tech companies.

EU-Asia at a Glance is a publication series about the current state of affairs in Asia and EU-Asia relations

This paper expresses the view of the authors and not the European Institute for Asian Studies

[1] Grzegorz Stec is an Associate Researcher at the European Institute for Asian Studies. Mr Stec is also the founder of https://beltandroad.blog/ a blog devoted to all aspects of the Belt and Road Initiative.

Discussions around the Belt and Road Initiative (BRI) tend to focus on its tangible aspects; primarily related to physical infrastructure including roads, rail and power plants. However, in addition to the two tangible "Silk Roads" - the Silk Road Economic Belt (land route) and the 21st-Century Maritime Silk Road (sea route), a third "Silk Road" was also proclaimed in 2015. The "Information Silk Road",[2] since rebranded as the Digital Silk Road (DSR), aims to "improve international communications connectivity" and foster the internationalisation of China's rapidly growing tech companies.

A decade ago, very few would have believed that China could develop such an advanced digital sector in such a short period of time. Yet, in 2016, China's digital economy amounted to 30.3 percent of the country's GDP according to the China Academy of Information and Communications Technology.[3]

By 2017, Chinese e-commerce constituted 42 percent of global market share[4] and tech giants including Alibaba and Tencent had seen skyrocketing valuations in line with their US peers. [5] As well as receiving implicit state backing, Chinese tech firms have seen exceptional growth due to the size of the domestic market, unparalleled access to data as well as societal embrace of new innovations. This contrasts with developed markets where societal inertia can hinder the adoption of new technologies (e.g. mobile payments still remain a small proportion of total transactions while credit card, cheque and cash still exist).

Consequently, Chinese firms are able to spearhead innovation and implementation in a number of areas within the digital sector, such as bike-sharing,[6] digital wallets [7](with mobile payments 11 times higher than that in US[8]), digital IDs, [9]and a proposed social credit system [10] that assesses a user's trustworthiness based on their previous transactions.

In contrast to Western tech companies whose data-usage practices have been increasingly scrutinised, Chinese tech companies enjoy significant political support. Government sponsored tech-zones and innovation hubs are being established across China as part of

[2] Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road, Issued in March 2015 by the National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People's Republic of China, with State Council authorization. Retrieved from http://en.ndrc.gov.cn/newsrelease/201503/t20150330_669367.html

[3] Cicenia, A. (2018, January 4). China's Digital Economy: The Shape of Things to Come. *China Briefing.* Retrieved from http://www.china-briefing.com/news/2018/01/04/chinas-digital-economy-shape-things-come.html

[4] Sheng, A. & Geng, X. (2018, January 3). China's digital economy is a world leader, but it still faces challenges. *World Economic Forum.* Retrieved from https://www.weforum.org/agenda/2018/01/these-are-the-challenges-facing-chinas-digital-economy

[5] Mozur, P. (2017, August 17). The World's Biggest Tech Companies Are No Longer Just American. *The New York Times.* Retrieved from https://www.nytimes.com/2017/08/17/business/dealbook/alibaba-sales-revenue-first-quarter-profit.html

[6] Campbell, C. (2018, April 2). The Trouble with Sharing: China's Bike Fever Has Reached Saturation Point. *Time.* Retrieved from http://time.com/5218323/china-bicycles-sharing-economy/

[7] Routley, N. (2018, January 3). China shows what the future of mobile payments could look like. *Business Insider.* Retrieved from http://www.businessinsider.com/china-shows-what-the-future-of-mobile-payments-could-look-like-2018-1

[8] Sheng & Geng. China's digital economy is a world leader, but it still faces challenges

[9] Tao, L. (2018, January 23). A look at China's push for digital national ID cards. *South China Morning Post.* Retrieved from http://www.scmp.com/tech/article/2129957/look-chinas-push-national-digital-id-cards

[10] Mistreanu, S. (2018, April 3). Life Inside China's Social Credit Laboratory. *Foreign Policy.* Retrieved from http://foreignpolicy.com/2018/04/03/life-inside-chinas-social-credit-laboratory/

the government's agenda to develop key technologies [11] including: 5G, artificial intelligence, industrial internet, big data, and cloud computing technologies. For instance, efforts to build China's "big data valley" [12] are being made in Guiyang,[13] the capital of Guizhou province.

This economic and political momentum enjoyed by China's IT sector are contributing to the development of the Digital Silk Road. As these technologies mature in the domestic market, Chinese tech firms are increasingly looking outwards. In particular, efforts are being made to link technological solutions to existing Belt and Road investments and facilitate even better connectivity and logistics. We provide three examples below:

1) E-commerce and customs automation

One of the biggest challenges facing the land routes that make up the Belt and Road Initiative are delays, often induced by lengthy custom procedures, security checks and having to change trains to meet differing rail gauge standards. Professor Richard Griffiths, author of *"Revitalising the Silk Road"* estimates that up to 80 percent of the journey time from China to Europe by rail is made up by delays. Reducing this red tape can result in rapid improvements, for example, in 2012, a custom union between Belarus, Kazakhstan, and Russia cut the journey time from China to Europe by around 5 days. [14]

Automation of custom procedures through DSR IT projects could greatly decrease the time a European or Chinese customer has to wait for goods. Such solutions are already being piloted in Malaysia, which together with China's Alibaba launched a Digital Free Trade Zone. [15] This electronic world trade platform [16] aims to assist small and medium sized companies find trading partners, managing cargo authorization and smoothly navigate the customs process.

2) Telecommunications infrastructure

DSR projects also include the construction of IT infrastructure in developing countries. China's state-owned enterprises such as China Telecom, China Unicom and China Mobile are already developing overland cable links [17] between Europe and Asia. Similarly, Huawei has been active in the African telecommunications infrastructure space for many years now. In one recent deal, the World Bank funded Chinese private giant ZTE with USD 23

[11] Moody, A. & Yu, C. (2017, December 5). Digital Silk Road forges strong links. *China Daily.* Retrieved from http://www.chinadaily.com.cn/business/4thwic/2017-12/05/content_35207841.htm

[12] Roxburgh, H. (2017, July 13). Inside China's 'big data valley': the rapid hi-tech transformation of Guiyang. *The Guardian.* Retrieved from https://www.theguardian.com/cities/2017/jul/13/china-big-data-guiyang-rapid-transformation-tech-hub

[13] Bhatia, R. (2018, April 9). Big Data In China's 'Wild West'. *Belt and Road Blog.* Retrieved from https://beltandroad.blog/2018/04/09/big-data-in-chinas-wild-west/

[14] Jakóbowski, J., Popławski, K. & Kaczmarski, M. (2018). The Silk Railroad The EU-China rail connections: Background, Actors, Interests. *OSW Centre for European Studies, No. 72.* Retrieved from https://www.osw.waw.pl/sites/default/files/studies_72_silk-railroad_net.pdf

[15] https://mydftz.com/

[16] Chandran, N. (2018, February 12). Alibaba's 'Digital Free Trade Zone' has some worried about China links to Malaysia. *CNBC.* Retrieved from https://www.cnbc.com/2018/02/12/concerns-over-alibaba-led-digital-free-trade-zone-in-malaysia.html

[17] Economy, E. (2017, June 6). Beijing's Silk Road Goes Digital. *Council on Foreign Relations.* Retrieved from https://www.cfr.org/blog/beijings-silk-road-goes-digital

million to construct a fiber optic network in Afghanistan. [18] In a recent visit to Tashkorgan, a remote area in Western China inhabited by mostly Tajik and Kyrgyz tribes, we were impressed to see that the whole town had been electrified and fitted with telecoms infrastructure. These efforts enable people previously disconnected from online trading platforms to access and participate in them.

3) Sustainable infrastructure

Finally, the DSR can also play a constructive role in ensuring infrastructure development remains sustainable. Smart infrastructure uses sensors and advanced monitoring systems to ensure optimization of resources. For example, smart grids permit a better matching of supply and demand such that fewer fossil fuels are burnt. A body named the "Digital Belt and Road" [19] has also been set up to help pioneer the usage of technological solutions to resolve environmental challenges along the Belt and Road. The USD 32 million programme [20] involves experts from 19 countries and 7 international organizations, and sets out to tackle such challenges as water security, natural disaster risks, climate change, and natural heritage protection.

In summary, the DSR offers opportunities to make the Belt and Road Initiative as a whole more efficient and more sustainable. Yet, it will undoubtedly come with its concerns as foreign participants become wary of the data practices adopted by Chinese firms. In recent weeks, the world has been captivated by the extraction of personal data for political usage by Cambridge Analytica. The usage of data in this manner has shocked many millions of people; however, in the case of China's IT giants [21]such as Wechat (Tencent), the links with the Chinese government and its data sharing policies are openly confirmed. Hence, we should expect the DSR to become a focus lens of debates surrounding the BRI as it simultaneously offers the greatest opportunities and causes the largest doubts.

---

[18] First fiber optic network in Afghanistan (2012, December 2). *Wadsam.* Retrieved from http://wadsam.com/afghan-business-news/first-fiber-optic-network-in-afghanistan-798/
[19] Digital Belt and Road Website: http://www.dbeltroad.org/index.php?m=content&c=index&a=lists&catid=56
[20] Huadong, G. (2018, January 30). Steps to the digital Silk Road. *Nature, International Journal of Science.* Retrieved from https://www.nature.com/articles/d41586-018-01303-y
[21] Huang, P. (2017, September 13). WeChat Confirms: It Shares Just About All Private Data With the Chinese Regime. *The Epoch Times.* Retrieved from https://www.theepochtimes.com/wechat-confirms-it-gives-just-about-all-private-user-data-to-the-chinese-regime_2296960.html