IMPACT OF BLOCKCHAIN ON CHINA'S CYBER STATECRAFT: OPPORTUNITIES AND RISKS

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Executive Summary

1. Since 2016, China has officially regarded blockchain technology as a subversive innovation that will fundamentally transform major industries, notwithstanding the risk that blockchain's striking power of decentralising may pose on China's model of cyberspace governance.

2. Primarily for protecting middlemen such as banks, large companies and governments, current blockchain projects in China are dominated by private or consortium blockchains that have accessibility firmly controlled; for public blockchains such as Bitcoin and Ethereum, it is free access for all.

3. China is attempting to build its own fiat digital currency empowered by its homemade blockchain infrastructure; commercial banks in China, cooperating with China's major internet giants, have actively engaged in applying consortium blockchains to improve security and lower costs in services such as cross-border remittance and inter-bank communications.

4. Deemed to help promote accountability and social trust in good governance, blockchain's tamper-proof, auditability and decentralised features have been harnessed. In China, the technology has been drawn recently into areas such as public administration, supply-chain management, military intelligence and even the One Belt One Road initiative.

5. The People's Liberation Army confirmed that blockchain will have great potential in strengthening cyberdefence particularly network infrastructure's resilience and redundancy vis-à-vis major cyberattacks. However, applying blockchain to China's cybersecurity may have to go far beyond military defence.

6. Public blockchain may neutralise China's decades of efforts in building internet filtrating systems because blockchain weakens state's control of digital data. Cryptocurrency on blockchains can be used in shielding crimes, illegal fundraising through initial coin offerings, money-laundering and even terrorism.

7. Due to private and consortium blockchains' convenience for regulators and commercial values of protecting large middlemen, developing them is likely to be insisted, and citizens and companies in China may be required to use state-controlled blockchains rather than public or foreign blockchains.

8. As blockchain will soften the Great Firewall, China may resort more to ex post regulation on the internet. By controlling intermediaries such as digital wallets and producers of mining equipment, China's regulators will prefer setting licensing rules of mandatory access control to blockchains.

9. Computing edges will likely empower China to retain not only some aspects of cyber autonomy to avoid being exploited by other internet superpowers, but also necessary state authority, presumably through quantum computing, over the decentralising force of blockchain.