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Geopolitics of Blockchain Technology: Implications for Cambodia

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Blockchain technology has sparked significant national and international attention in recent years. It has received praise for allowing direct business transactions between parties without needing middlemen. In addition to enabling commercial transactions, it may be used for public and private sector record monitoring, document verification, and digital record storage. Regardless of these potentials, blockchain technology may have positive and negative implications due to growing rivalries among major powers.

This article presents an overview of blockchain technology by focusing on the pivotal positions being advanced and implemented for political purposes. The article concludes by discussing the potential impacts of blockchain technology on Cambodia.

What is Blockchain Technology?

In essence, blockchain technology is a digital technology that separates data or information into blocks, allowing for retrieving or adding data on a topic via a lengthy string that unites the compartments into a chained block. Specifically, blockchain is a technical system that allows direct data transmission between users, including commercial transactions, without needing a third party to handle the data. In other words, no central authority is required for the transaction. As a result, the transaction is digitally logged in a register or accounting system that appends a digital timestamp to every entry regarding the topic. End-to-end encryption guarantees that the transaction's content, sender, and destination remain anonymous.

It may, however, be amended by consent of the parties concerned. The community must validate the transaction to maintain security and transparency. In certain circumstances, the community may be viewed as the miner whose responsibilities must be verified to correspond to the transaction itself. The sender and recipient are in agreement or have preset objectives. Following certification, the record is securely housed in a compartmented case. In return, the miner may be compensated using a cryptocurrency like Bitcoin. The sender cannot reuse previously communicated topics, and parties cannot change digitally recorded transaction data.

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Furthermore, besides aiding commercial operations and data transfer, this technology may be used for record storage, document verification, and record monitoring, all of which have significant public and private uses. The government, for example, might employ blockchain technology to record and certify property title information, cutting bureaucratic red tape while boosting information accuracy and openness.

However, there are some problems with blockchain technology. One of the main problems is that it cannot grow with the number of users because managing many transactions could be expensive and time-consuming. Nevertheless, new methods, such as sidechains and sharding, have been created to solve this scaling problem. Another problem is to ensure that the blockchain system is safe. Because it is open, blockchain is less likely to be hacked or censored, but it could still be hacked or manipulated. However, these risks are becoming less dangerous thanks to new security methods such as public-key encryption and cryptographic hash functions.

Geopolitics of Blockchain

The article only discusses the conflict between China and the United States. The United States is perceived as the protagonist of the current neoliberal economic framework while China is regarded as a newcomer with the intention of destabilising the existing global order. However, the goal of this essay is not to assess the veracity of the claim; rather, it contends that competition between the superpowers raises issues and has the potential to fracture the global economic system.

Although blockchain mining was popular in China in the early 2010s, the government has gradually put new limits and controls on cryptocurrency transactions. The outflow of money from China is a crucial driver, with the possibility of growing dependence on the US dollar since trade value is still denominated in US dollars. It is crucial to recognise that the current global economic structure is dollar-dependent. The United States might use this to pressure other countries, particularly via economic sanctions. This issue is hampering the Chinese government's efforts to strengthen its currency. Therefore, China has responded by launching the Digital Yuan, Project mBridge, and the Central Bank Digital Currency (CBDC) to strengthen its currency. While projects like the national bank-backed digital yuan may not be considered blockchain, they use blockchain technology to verify transactions.

In contrast, the United States has taken a cautious approach to blockchain technology and has had to use legal instruments to challenge its usage. Nonetheless, since transactions and economic shifts are made in US dollars, the US stands to profit. However, the US government continues to be cautious about commercial activities in this domain related to illicit substances, such as money laundering and trade in narcotics and weapons. Even more concerning for the US is the formation of the Chinese CBDC, among other measures described above, which uses blockchain technology for transaction verification.

There is concern that if nations adjust their exchange rate arrangements to fit the CBDC, they may be able to avoid US regulations on financial activities, thus lowering their dependence on US currency. Thus, blockchain technology may be seen as a tool that superpowers may use to compete with one another, and it will impact emerging countries to some extent. It is also vital to recognise that digital infrastructure and other technical equipment, such as computers, chips, and CPUs (Centre Processing Units), are required to keep up with blockchain technology.

These resources are vulnerable to competition from technology giants like China and the US, which are competing for supremacy in rare earth geopolitics, submarine cable politics, 5G, and cyberspace.

In addition to the two players mentioned above, other major players whose actions and perspectives on blockchain technology are worth evaluating include the European Union, Japan, and Estonia. It is easy to imagine that these three players possess knowledge, know-how, resources, and extensive technological experience. It is important to note that all three actors recognise blockchain technology's potential use and commercial benefits. However, they have taken precautions. For example, in 2017, the Financial Services Agency of Japan established a testing hub to examine blockchain's benefits and potential challenges, and the EU launched the European Blockchain Sandbox in early 2023 to invite companies to incubate and study the technology. For Estonia, it has been labelled as one of the veterans of using blockchain technology for economic purposes and increasing e-governance and transparency, notably in e-voting and healthcare. Although blockchain seems sceptical for different entities, specific actors, such as Estonia, have resolved to use its excellent parts. However, it must be seen whether the system will have implications in the future.

Malta's experience may favour blockchain companies and technology. Malta is undoubtedly at the forefront of enacting laws explicitly governing the sector, such as the 2018 passage of the Malta Digital Innovation Authority Act, the Virtual Financial Assets Act, and the Innovative Technology Arrangements and Services Act. The goal is to establish Malta as a hub, especially considering other nations' reluctance toward blockchain technology. Malta is putting more effort into accumulating all the benefits associated with blockchain technology that will avoid its restrictive regulations. Malta's predicament illustrates how interests prevail in international affairs despite the possibility of competing interests.

Overview of Cambodia’s Policies on Blockchain

Cambodia's approach to blockchain technology reflects a nuanced stance, marked by a reserved attitude towards cryptocurrencies while embracing the transformative potential of blockchain. The tourism sector, a significant government focus, has witnessed the integration of innovative technologies like blockchain, artificial intelligence (AI), and robotics. The Rectangular Strategy (Phase IV) and the Pentagonal Strategy (Phase I) outlined key priorities of the Royal Government of Cambodia (RGC), including tourism sector diversification and the development of supporting industries. Over the years, the RGC has demonstrated a commitment to technology and digital development by establishing authorities, laws, and policies.

In the realm of blockchain, Cambodia made history by being among the first countries to launch its own CBDC, named Bakong, a blockchain-based platform for digital transactions. This initiative, implemented by the National Bank of Cambodia (NBC), enables peer-to-peer payments and money transfers without needing a traditional bank account, requiring only a telephone number and a QR code. Despite a reserved stance towards cryptocurrencies, the government has gradually embraced blockchain technology, as evidenced by the exploration of a CBDC in 2019 and the subsequent launch of Bakong in 2020.

However, it's noteworthy that Cambodia's regulatory regime remains cautious, with a joint statement from the NBC, the Securities and Exchange Commission of Cambodia (SECC), and

the General Commissariat of National Police explicitly declaring certain cryptocurrency activities without proper licensing as illegal. As of 16 September 2023, no digital asset business license has been granted. Despite these regulatory constraints, Cambodia's strategic collaborations, such as the Memorandum of Understanding between the Securities and Exchange Regulator of Cambodia (SERC) and Binance Capital Management Co., Ltd. (Binance) in June 2022 and the capacity-building workshop in August of the same year, indicate a growing openness to exploring and adopting blockchain technology. This evolution aligns with Cambodia's broader digital policy framework, emphasising infrastructure development, citizen empowerment, and digital business facilitation under the Cambodia Digital Economy and Society Framework 2021-2035.

In summary, this article provided insights into the prospective implications and ramifications linked to the advent of blockchain technology. Given the preparations and endorsements of prominent nations for Industrial Revolution 4.0, digital transformation, and artificial intelligence (AI), Cambodia must exercise caution concerning the potential geopolitical complexities that may emerge between these nations. Upon reviewing the information presented in the three sections above, the article posits that blockchain technology will continue to be significant. However, it also suggests that disparities and inequality will increase among nations regarding technological development and progress. However, blockchain technology can transform business by enabling safe, quick, and transparent transactions. It can also lessen fraud, simplify supply chains, and give citizens more financial independence.

Moreover, blockchain technology may help people from different backgrounds interact and establish trust by enabling safe and transparent identity management, control, and data sharing. Because of the scale of these advances, blockchain technology offers a significant opportunity to build a more equitable, secure, and interconnected future. Hence, it is imperative that Cambodia thoroughly comprehend and increase consciousness regarding the changing global competition landscape and the optimal utilisation of technology to benefit the public.

References are available upon request.

The views expressed are the author's own and do not reflect the views of the Asian Vision Institute.