SECTION X

COUNTRY HIGHLIGHT: SOUTH KOREA

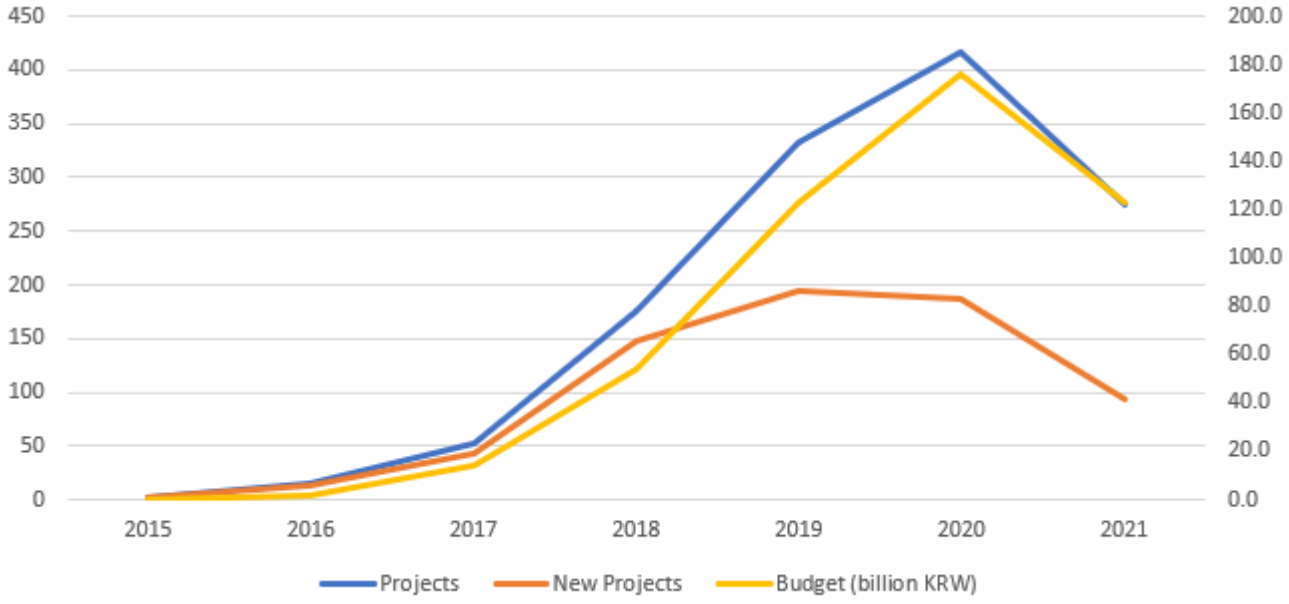
The linked report offers an overview of blockchain adoption through an analysis of policy and business cases in South Korea.

Although South Korea leveraged information and communication technologies to advance its economy in the 2000s (which has expanded its focus from manufacturing and exporting in the 1970s and 1980s), its innovation in blockchain has been stagnant since the announcement of the emergency measure and technology roadmap amid the Bitcoin shock in December 2017.

In this report, six use cases are introduced in three parts. The first part covers the policy and regulations for blockchain as virtual assets. South Korea amended the Act on Reporting and Using Specific Financial Transaction Information[237, 238] to comply with the Financial Action Task Force's recommendations revised in 2018.[239] As a result, on the enforcement due date, September 25th, 2021, out of forty-three Virtual Asset Service Providers (VASPs) registering their virtual asset businesses at the Korea Financial Intelligence Unit, only four companies provided fiat money services.[240] Furthermore, they must abide by the travel rule[241] in six months and adapt to the emerging markets of NFTs and the metaverse.[242]

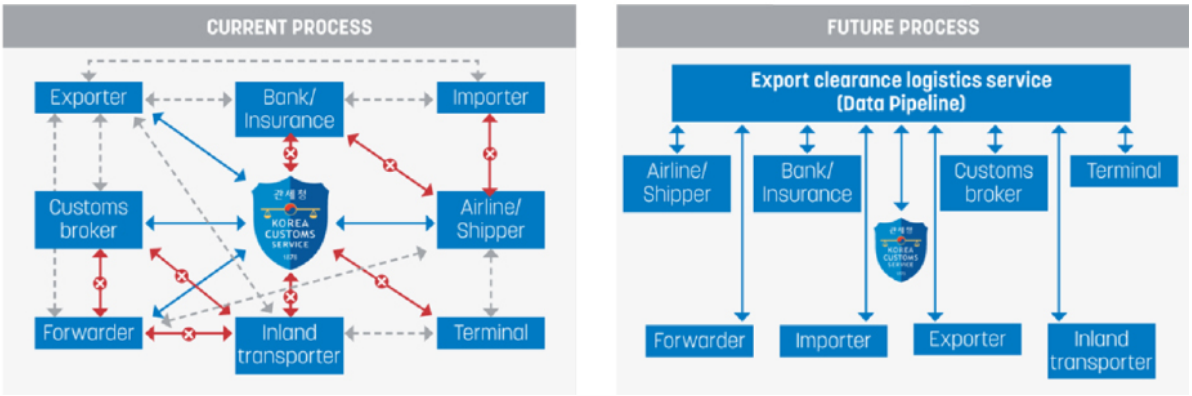
The second part looks at South Korea's blockchain R&D. Seventeen ministries have funded 417 projects to cultivate blockchain inventions since 2015.

Significantly, the Ministry of Science and ICT's Blockchain Convergence Technology Development Program supported fifty projects between 2018 and 2021.[243] Their R&D focused on virtual assets at the initial stage in 2015 and soon shifted its application to various domains, including identification and logistics. In addition, the Busan Regulation-Free Special Zone[244, 245] pilots seven blockchain projects on financial services, public security, tourism, logistics, real-estate, and MyData.[246, 247]



The last part reviews two cases of government blockchain adoption. The Korea Customs Service was

one of the first agencies in the world to introduce blockchain into customs clearance.[248]



It stopped the project before commercialization due to the burden of transforming the public data systems into blockchain-based systems and insufficient partnerships with counterpart governments. In collaboration with private sectors, the government has now also provided the world's first blockchain-based vaccination certification services[249, 250] and extended it to a globally integrated Decentralized Identity (DID) system.[251]

These South Korean cases highlight three ambiguities in blockchain policies. First, blockchain involves both financial and industrial features. As the government regulates the former[252] and promotes the latter, it needs a new regulatory framework[253, 254] embracing the two features together. Second, integrating services on a blockchain platform will bring forth seamless automation of industries across manufacturing, financial services,[254] and public services.[256] South Korea, having accumulated capacities in manufacturing, is in need of a comprehensive strategy to encompass all services on a platform. Third, the two cases of the government's adoption of blockchain suggest that innovations in blockchain can be facilitated through effective cooperation among government ministries and agencies regarding particular businesses of private sectors.

With the history and legacy of remarkable industrialization, South Korea has the technological foundation and the concrete capabilities (e.g., logistics, personal data) to advance and adopt blockchain technology. Consequently, its policy is not simply to invest in virtual assets but also to develop a virtual-physical world woven by blockchain. The new environment demands South Korea transform its policy stances on blockchain, from specialization to comprehensiveness and cooperation. These are the main lessons from South Korea for other countries adopting blockchain.

South Korea has achieved remarkable growth in the last 60 years, rising from the ashes of the war into one of the most vibrant economies in the world. The country imports natural resources such as oil and minerals to process them for export. Moreover, it exports cars, ships, semiconductor devices, and smartphones. South Korea internally has an advanced value network and innovation system, and externally made up 3.0% of world trade volume (9th largest) in 2020.

The tradition of its industrialization, accumulated through time, is its strength. Its culture is focused on advancing blockchain technologies and developing business models for various domains, rather than financial services and virtual assets. In other words, blockchain innovation in South Korea is likely to be bound to real world assets such as logistics, real estate, personal data, and identification.[255] Furthermore, it is in an excellent position to disseminate blockchain innovation through trading partnerships.

However, these strengths can also resist blockchain adoption. Most of all, South Korea has specialized its competence into a few parts (e.g., DRAM[258] , smartphone devices) in compliance with global platforms[259] such as IBM's framework and Google's Android. Specialization in worldwide value chains might be its best strategy to survive its lack of natural resources and insufficient domestic market and lead the global economy. South Korea needs a well-designed strategy from a comprehensive viewpoint and a cooperative stance to lead a specific part of the blockchain ecosystem.[260]