

# Digital Asia: Responding to Challenges from GVCs Digitalization, US-China Decoupling & the Covid-19 Pandemic

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Digitalization, US-China decoupling, and the coronavirus (Covid-19) pandemic represent the three remarkable sources of change faced by the world economy. Asia's response to these challenges will determine its economic prosperity and regional stability, as well as the reconstruction of global value chains (GVCs) and the establishment of a new world order. Digital transformation is not just about disruptive innovation and technology adoption. More importantly, it represents a new wave of massive technological progress that will drive socio-economic transition and the changes in international relations in the 21st century. This article proposes ways in which Asia could harness the digital economy as part of its response to the long-term, medium-term, and short-term challenges of regional development.

## Digitalization as a Global Trend in the Long Run

Digitalization can affect economic growth via its effect on reducing trade costs, similar to the effect of the industrial revolution in the 18th and 19th centuries and that of the information revolution in the 20th century. In the first wave of massive technological progress during the industrial revolution, the use of steamships and railways drove down the cost of transportation. Mass production, economies of scale, and industry-wide division of labor became feasible. Producers and consumers in different countries benefited from trade with each other. But at this stage, international trade was dominated by trade in goods, and the main content of trade was final goods or raw materials.

In the second wave of massive technological progress during the information revolution, the applications of information and communication technologies (ICTs) – mainly through their effect of reducing the cost of communication – set the stage for the birth of GVCs and lowered the threshold for countries to join the international division of labor. Since then, GVC participation has become the new thinking on development, and the idea of economic liberalization became widely accepted as the way a country could facilitate its involvement in GVCs to pursue economic prosperity and development. To meet the needs for coordinating GVCs, service links – especially those of business and financial services – were making great strides forward as well. As a result, the world economy became further interconnected via GVCs. Increasingly, there is more to trade, and countries trade more.

Digitalization tends to extend the coverage of GVCs and increase

their sophistication by lowering the cost of people-to-people connection, increasing information transparency to all GVCs, and blurring the boundaries between different links of the value chains. Moreover, with the application of digital technologies and related business models, the service sector will become much more innovative and productive. Digital-armed service links – either digital enabled or digital born – will improve the capacity of GVC coordination, facilitate the network extension, and allow GVCs to evolve toward an ecosystem that is better connected, smarter, and more efficient.

However, the changes triggered by digitalization could be wider, deeper, and less predictable than ever before, especially with the development and the use of Artificial Intelligence (AI), big data, and the Internet of Things (IoT). For instance, at the early stage of the Internet's development, it was relatively easy for Internet users to have their real life and that in the cyberspace separated.

But with the advance of digital technologies, the boundaries between cyberspace and reality tend to evaporate over time. For individuals, the virtual identity in the online world has to be mapped with the physical one; while for countries, cyberspace, which was conceived as borderless, is becoming an ever more integral part of national sovereignty.

On the one hand, news, opinions, and speech disseminated via the Internet and social media have increasing influence on real-life activities and decision making. On the other hand, rules and regulations on online behavior, such as that of data flow, privacy, consumer protection, competition, and cybersecurity, are reshaping the cyber landscape and extend the current international order to cyberspace. Unavoidably, the diversity of countries' attitudes towards the governance of cyberspace ("cyber-governance") and the consequent policies represent the differences of the economic and legal systems, institutions, social values, and even the ideologies that are ubiquitous amongst countries.

For that reason, digital transformation will be a process marked by strong competition and conflicts between different values, cultures, and social systems, and the ongoing dispute between the United States and China will be discussed in this broader context. Asia will be the first to bear the brunt of the consequent shocks from their possible decoupling.

## Interpreting US-China Decoupling in the Context of Global Digital Transformation

The economic cost of decoupling is high for the US, China, and the rest of Asia. It is very likely that Washington's restrictions on imports from China will generate more trade diversion than trade creation effects. That means American producers will have to find alternative supply locally or from elsewhere in the world. Either means higher costs and lower efficiency. Moreover, Beijing's trade retaliation could damage American exports to the world's most populous market. Ultimately, consumers will have to bear the burden in terms of higher prices.

Similarly, consumers and producers in China will also suffer higher costs due to the trade war. Given the role that international trade and foreign investment have played in promoting Chinese economic reform, from a Chinese perspective, decoupling with the US means not just the loss of the world's largest market, but more importantly, cutting off its main channel of gaining know-how.

For the rest of Asia, the network of regional production sharing that involves both the US and China has been the cornerstone of Asian development. In the past, the cooperative competition between the US and China created a development friendly environment for other Asian countries, allowing them to benefit from capital inflows and technology diffusion, as well as access to both large markets. US-China decoupling will introduce uncertainty and probably make the region less attractive to international capital and outsourced activities.

In particular, the rising distrust in the high-tech area, especially that of digital technologies, symbolizes some deep-rooted difference between the US and China. During the honeymoon period of the US-China relationship, the existence of wide technology gaps and high economic complementarity provided plenty of space for collaboration. For example, innovation and new designs from Silicon Valley and Original Entrusted Manufacture (OEM) activities in Shenzhen are linked via GVCs, creating a win-win situation for both sides as well as the rest of the world. At the time, China was eager to learn from the American experience and adopt best practices from the West as useful guidelines for its domestic reform, while the US saw a rising China as a favorable factor in global stability and development.

The 2008 credit crunch seemed to have foreshadowed today's US-China dispute. The outbreak of the subprime crisis exposed some deficiencies of the US economy. Although the crisis may not have completely destroyed America's image as a reference for Chinese market reform, it seemed to have served as a wake-up call for Chinese leaders and made them rethink whether those

supposedly good practices are really that good. China was cooperative in supporting the US to tame the fire in the capital market, but has since then become more cautious in market opening, especially in the fields of finance, media, and the Internet.

Increasingly, the US has felt the pressure of competition from China, especially in the development of the digital economy. China has started to take the lead in areas such as 5G infrastructure, e-commerce, and fintech. Chinese companies such as Huawei and ZTE are amongst the frontrunners in the global race to 5G, together accounting for over 20% of global 5G technology patents. The Chinese e-commerce market has maintained two-digit growth since 2015. In 2019, China owned the world's largest online marketplace and contributed over two-fifths of global total e-commerce revenue. The country also has the world's largest group of e-payment users. Its central bank, the People's Bank of China, issued a digital currency, the e-RMB, in April 2021. With such clear signs of progress, China is expected to be the first country to realise a cashless society.

China is also catching up quickly in areas such as AI, big data, cloud computing, industrial Internet, and smart city building. But the way the Chinese government promotes its digital economy has been questioned by foreign competitors. For example, China's restrictive data policy and regulations on news censorship have acted as de facto barriers that have stopped major foreign digital giants from entering the domestic market. While Baidu, Alibaba, and Tencent were allowed to compete in the US market and even raise funds via IPOs there, their American competitors – Google, Amazon, and Facebook – still see their door to the Chinese market remain locked. Another example is that the overseas expansion of Chinese companies is often backed up by the government, giving them advantages in global competition.

Such outstanding problems of non-reciprocity in market access have aggravated the distrust between Beijing and the White House, especially when the US and China see accelerating digital transformation as part of the strategic focus of economic development. On the one side, the White House may have read *Made in China 2025* as a declaration of China's ambition to challenge US leadership in GVCs; while on the other side, Beijing may have interpreted Biden's upholding of a hardline China policy as a sign that in bilateral relations carrots from the White House will be scarce but sticks will be plenty.

Asia's development faces the challenge from the reconstruction of GVCs resulting from US-China decoupling, combined with disruptive changes triggered by new digital technologies. The Covid-19 pandemic provided a beta test on the effect of digitalization on increasing the GVCs' resilience.

## The Covid-19 Pandemic: a Supply Chain Crisis

In the economic area, the Covid-19 pandemic can be seen as a global supply chain crisis, with shocks coming from both the supply and the demand sides. It started with a negative supply-side shock. The world supply chains became fractured when China locked its borders to prevent wider spread of the virus. Exports from China suddenly halted, causing a shortage of supply of goods and services, either final or intermediate, to the global market. As orders from their downstream clients in China were either cancelled or postponed, foreign suppliers in the upstream of value chains encountered a negative demand-side shock. When Covid-19 turned into a pandemic, countries' lockdown measures worked like pushing a "Pause" button on GVCs, causing the global contagion of plummeting of international trade and a short-term economic recession.

Digitalization has been rising to prominence during the Covid-19 pandemic when digital technologies and related business models backed up the government's emergency response to the crisis, such as the implementation of social distancing and lockdown measures. The world's number of Internet users increased by more than 100 million in 2020. More people have adopted online learning, working, and shopping, which has become an integral part of their daily lives and has replaced offline activities. Without digital solutions that empowered people and businesses, the Covid-19 pandemic could have caused far greater harm.

The world economy had shown strong signs of recovery by the first half of 2021, thanks to China resuming production, as well as the efforts of countries' stimulus measures, such as fiscal aid and an easing of monetary policy, that had meant to pull the economy out of depression by stimulating demand. However, the Covid-19 pandemic may persist for longer and harm the economy more deeply than policymakers expected. Unless the supply side can quickly regain its productivity and enter a growth track, the stimulus-driven recovery will only be temporary, and the economy will face the risk of high inflation.

## Digitalization in the Post-Covid-19 Recovery & Growth

Accelerating digital transformation will be of help to deal with this supply side problem. First of all, GVCs' digitalization (blending digital technologies into the GVCs), especially with the application of big data, AI, robotics, and IoT into production and management, tends to strengthen the connection within the network and improve its overall resilience. It is not the Covid-19 pandemic but policy measures in

response to it that have caused supply chains to disconnect and transformed a global public health crisis into an economic crisis. Measures like restrictions on people's mobility and border lockdowns seemed to affect more the links that involve intensive labor participation than those with automatic control. The idea is to make GVCs "smarter" by adopting digital tools, services, and business models into the network and increase its resilience by reducing the risk of introducing shocks to the system through their effect on humans.

Second, digitalization is the most important source of economic power in the 21st century. The annual gross output of Silicon Valley has been higher than Finland's national GDP. Research and Development and applications of digital technologies can unleash market potential not only by giving birth to new industries, but also via the combination with technologies in new materials and new energies. Taking Industry 4.0 (4IR) in ASEAN as an example, projections suggest that adopting 4IR will contribute 35%–40% of incremental market value added to ASEAN within 10 years. For the whole region, 4IR could bring an increase of about \$210–\$230 billion in output and a \$40–\$45 billion increase in revenue.

Digital technologies are normally interlinked and compatible with one another. Combining different technologies could further give birth to new products and new services, and generate new markets. This could then multiply the market potential, create new job opportunities, and provide a steady flow of innovation and productivity improvement. As an example, AI – defined as a set of technologies that enables machines to perform human-like functions – has a great variety of applications in our economy and society. Some have started being widely used in our daily life, such as augmented research, intelligent agents, generative product design, robotic process automation, autonomous vehicles and drones, speech and image recognition, biometric recognition, recommendation systems, and predictive systems.

## Digitalization to Mitigate Shocks from US-China Decoupling

To Asia, the cost of losing either the US or China will be very high. Asia's economic achievements in the past were inseparable from the interlinkages of global demand, supply, and regional production sharing via GVCs that supported the region to be the world's largest platform of exports. Regional production sharing in Asia, the so-called Factory Asia, functions on the basis of a multi-layered network intertwined with intensive cross-border activities. Close links with both the US and China contribute to increasing the region's overall competitiveness in the global market.

Although possible US-China decoupling cannot and will not change the direction of the long-term trend of economic digitalization, a long-lasting dispute would affect the trajectory of digital transformation and probably alter the resulting patterns. The countries of ASEAN and East Asia should get ready for the changes. It is important to strengthen the connection with both the US and China, even though both sides have kept drifting apart. Slowing down the pace of decoupling could win them more time to make the needed adjustments. In case the decoupling forces GVCs to split into two competing blocs, the region needs to make sure that the two blocs overlap in Asia. The region shall have economic gravitation so large that both the US and China will stick to the Asian market despite their decoupling.

Developing the digital economy can help increase regional cohesion and strengthen the region's market gravitation in the global economy. Unleashing Asia's potential in the digital economy needs regional collaboration in areas such as data flow, consumer protection, cybersecurity, IPR protection, and dispute resolution. With regional integration and digital transformation mutually reinforcing, Asia could increase its weight in GVCs in the digital era and have a greater say in regional and global affairs.

### Accelerating Digital Transformation in Asia

In short, deepening regional integration and promoting the digital economy will stay at the core of Asia's long-term development strategy. This is in line with the global trend of digitalization in the long term. It could also help Asian countries work more closely together to mitigate the negative impacts of the US-China dispute. In the short run, this will be an important part of the region's policy response to deal with the economic shocks triggered by the Covid-19 pandemic and possible inflation afterwards.

To accelerate digital transformation in Asia, policies in terms of the following four aspects are worth considering. First, the digital economy is also known as "creative economy" or "innovative economy". Supporting innovative economic growth needs innovative policy thoughts. The diversity of Asian countries in their stage of development and the structure of their economies will provide policymakers with more flexibility and an enlarged policy space. In addition to efforts on nurturing their own digital unicorns, a policy focus will be the polish of the countries' competitive edges by embracing digital technologies in traditional sectors, i.e. agriculture and handicrafts.

Second, by changing the manner of people-to-people connections and lowering its costs, digital transformation is not just an economic transformation, but also a process of social transformation that

contains changes in the way people live, work, and study. For East and Southeast Asia, improving people-to-people connections will be a policy focus, as they can provide necessary conditions to realize the ambitions of regional development, such as eliminating development gaps and promoting inclusive growth.

Third, rule setting to enable free flow of data with trust represents a bigger challenge in improving digital connectivity, which remains at the core of digital transformation and GVCs in Asia, when compared to building data-related infrastructure. Improving connectivity means not only better infrastructure for physical connectivity, but also a smoother and safer information flow in cyberspace.

Thanks to the widespread use of smartphones, the Internet, and technologies that facilitate data collection, processing, storage, and distribution, technological barriers to data flow have been effectively reduced. More data and information today are already digital-born – they were born to be borderless, and their life cycle exists in cyberspace. But "trust" highlights the increasing concern about data accuracy and safety and privacy protection. While the advance of ICT facilitates the use of data, it also increases the risk that data could be illegally leaked, stolen, or misused. Free flow of data needs to be safeguarded by a series of backup policies, especially when data has become the main carrier of value in the digital economy.

Asia is known for its gradualism and pragmatism in pushing forward the process of regional cooperation. A similar strategy could be applied to "trust building" in the field of cooperation in the digital economy. For example, Asian countries could start with collaboration in harvesting the low-hanging fruits of the digital economy, such as promoting e-commerce and facilitating digital trade, and then extend to areas where cooperation requires greater mutual trust.

Fourth, promoting the digital economy calls for a broader regulatory framework comprising a wide range of related issues – from consumer protection to competition. Although most of these issues are not new and have been regulated previously, digitalization has introduced new content and challenges. Unless it is accepted by the market and adopted by the private sector, any proposed regulatory system may fail to achieve its original goal of promoting the digital economy. Preserving the voice of the private sector in the cycle of policy design and rule-making will be useful, and so is balancing the interests of digital giants with those of small and medium-sized enterprises.

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