Security of Supply: The Determinants of State Intervention in Emerging Technology Sectors

Vinod K. Aggarwal, BASC Director, and Andrew W. Reddie, BASC Postdoctoral Fellow

Scholars and policymakers have been increasingly concerned about technological competition between China and the United States over the past decade—made worse in recent months amid broader disagreements on global trade and the handling of the Covid-19 outbreak. Yet understanding what constitutes a “strategic” industry is critically important. Our August 2020 article in AsiaGlobal outlines the variables that shape government decisions to intervene via trade policy and investment rules. Below is an abridged version of its conclusion.
Is laissez-faire a lie? Whether in good or bad economic times, governments have consistently intervened to bolster what are perceived to be strategic industries. Both analysts and policymakers must seek to understand better the conditions under which governments intervene in the name of “security of supply” and label an industry as strategically important. Particularly in the security context of US-China technological competition, there is a danger that firms will lobby governments to simply seek handouts in the name of “security”. Intervention can come about as a result of lobbying by firms, while in other cases it has been driven by a top-down, government-led effort.

Our paper presents a conceptual framework to examine the factors that drive state intervention in dual-use technology industries (see the figure below). From our perspective, much of the existing literature emphasizes technological determinism that fails to examine the political economy imperatives associated with government intervention—from state-firm relations to bureaucratic politics. Although we argue that an industry’s technological characteristics are worthy of examination, it is also important to understand an industry’s market structure, a country’s domestic structure, existing international regimes and the structure of the international system. Each of these elements, both by themselves and taken together, influence state intervention in high-technology industries.

How might this framework shed light on current US-China security competition? By focusing on nuclear technology and cybersecurity, we found that governments have been key actors in the research, development and deployment of both, and intervention tools used by each state vary. We submit that this activist approach to markets and industries viewed as “strategic” should move to other dual-use technologies. Moreover, there are significant differences in how states engage with their domestic markets—whether centralizing strategic objectives and direct investment behind the border or manipulating import and export markets through trade policy at the border.

Regarding nuclear technology, US policy has been reactionary, protectionist and fueled by proliferation concerns. By contrast, China’s actions have been proactive in linking strategic military and economic interests. One example of this difference lies in US-China economic relations pertaining to nuclear technology transfer. As noted, the US has imposed several export controls on relations between its private firms and Chinese businesses which seek to leverage Western nuclear technologies.
For example, the US recently blocked its firms from dealing with China’s General Nuclear Power Corp—a move which China described as a “misuse” of nuclear export-control standards. In a similar move, the US drafted laws meant to prevent Beijing from leveraging peaceful nuclear technologies for military applications—drawing accusations from China of unfair and inappropriate national security linkages in economic arrangements. These examples illustrate the fraught nature of strategic linkages in economic agreements, with dual-use nuclear technology being a target for such arrangements.

Through the CFIUS, the US also placed import controls on nuclear-technology transfers, affecting foreign investment. US officials have supported these types of controls on economic exchanges, with State Department representatives stating that Beijing “continues to seek advantage over foreign partners with little regard for bilateral agreements or other nations’ laws.”

Import controls have effectively hamstrung US nuclear development and has left market space for China and Russia to continue their nuclear “export-race” dominance, an issue which the Trump administration has been working to address. Some American analysts claim that permitting continued Chinese growth in this domain would introduce a welcome check on Russia’s current dominance. The broader global reaction, however, remains strongly concerned with China’s spotty record on export controls, as exemplified by its nuclear transfer relationships with Pakistan, Iran and other regions of geopolitical interest. US import controls and China’s continued nuclear export growth are symbiotic, it is important to note.

IT markets feature similar dynamics, with Washington employing a lighter touch for regulation, procurement rules and export controls both at and behind the border. While Beijing has strict rules regarding joint ventures in return for market access, close state-firm relations and, arguably, a state apparatus to support technology transfer, the US has generally allowed its companies to operate transnationally, allowing foreign firms to partner with domestic industry unfettered by stringent regulation. That is not to say that Washington does not intervene, just that it does so with a lighter footprint through procurement rules, comparatively small investments and human capital development programs.

Under both the Obama and Trump administrations, Washington’s position has shifted amid concerns that the access that Huawei, ZTE and Kaspersky Labs access have to the US cybersecurity market represents risks both to private firms and government agencies. These concerns have led the US government to alter its procurement rules and re-evaluate export-control and foreign-investment review processes. The question of how the US government should interact with private firms remains unresolved, given the strong ideological laissez-faire consensus.

The Chinese government is comparatively more interventionist in support of both its civilian nuclear and IT sectors. Beijing has used a variety of measures including trade policy, direct investment and technology transfer to bolster its domestic industries. Technical, market and domestic characteristics often ignored by both economists and scholars of international relations appear to shape China’s trade and investment policies.

Whether this argument holds across other technologies and countries is an open question. In future work, we intend to examine traditional dual-use technologies such as chemicals and biotechnology, as well as cutting-edge innovations including 5G, quantum computing and artificial intelligence. Future research may also seek to quantify the five factors in question to understand the broader implications of technology on strategic competition.

This argument demonstrates that market-oriented efficiency is inadequate to explain the variety of relationships between the government and private sector and the broader impact of these relationships for civilian and military applications of dual-use technologies.

Looking to the future, we might consider some key questions facing policymakers in the US, Europe and East Asia: Specifically, how might a shift in the future of high-technology products change as China becomes a net producer of intellectual property with dual-use applications? In light of our analysis, we argue that trade and investment policies in China and the US are likely to shift significantly.

Trade and investment measures designed to protect strategic industries and maintain a security of supply
“Although we argue that an industry’s technological characteristics are worthy of examination, it is also important to understand an industry’s market structure, a country’s domestic structure, existing international regimes and the structure of the international system... What is clear is that economic orthodoxy, focusing on increasing efficiency and decreasing friction in the global marketplace, has failed to consider the requirements of governments around the world to balance systemic, market and technological imperatives.”

are emblematic of the need to shift our analysis of the global economy. Hitherto, economic analysts have focused on efficiency gains and the reduction of transaction costs rather than considering the political and strategic aspects of trade and capital flows. We expect several governments—potentially pushed by the current crisis—to continue to use economic levers to compete in high- and low-technology sectors.

For net exporters of intellectual property such as the United States and countries in Europe, there may be a significant rise in alternative and potentially cheaper sources of advanced technologies. These developments may necessitate further foreign capital to service government debt as deficits increase. It remains unclear what this will look like, but several scholars have pointed to concerns that these shifts will dramatically alter the global economy for firms and governments.

One consequence may be the marrying of trade and investment policy with diplomacy, as Beijing has done. For example, China links development aid with trade in a manner that the United States and Europe have eschewed over the past three decades. Put differently, Western firms compete to provide goods and services to the market. By contrast, though Chinese firms compete to provide goods and services, they also furnish ancillary benefits—whether financing, development aid, diplomatic ties or military assistance—both to the customer and to the country in which it is located. This affects North American and European firms that face growing competitive pressures in terms of market access and more complicated and vulnerable supply chains as they are unable to secure similar levels of government support.

Recent legal and political developments in Hong Kong have highlighted the concerns that foreign firms engaged in high-technology R&D and finance have as they face questions surrounding their ability to conduct business in the Chinese special administrative region and consider whether to relocate or limit operations. How Hong Kong and conditions throughout the region alter the East Asian and global economies in the wake of Covid-19 remains to be seen.

Current developments yield many questions and few answers. What is clear is that economic orthodoxy, focusing on increasing efficiency and decreasing friction in the global marketplace, has failed to consider the requirements of governments around the world to balance systemic, market and technological imperatives.

For the full article and its analysis, see AsiaGlobal Papers, No. 3, August 2020: [https://www.asiaglobalinstitute.hku.hk/researchpaper/security-supply-determinants-state-intervention-emerging-technology-sectors](https://www.asiaglobalinstitute.hku.hk/researchpaper/security-supply-determinants-state-intervention-emerging-technology-sectors)
DIRECTOR’S NOTE

Dear Colleague,

Thank you for your continued interest in the Berkeley APEC Study Center (BASC). Through your readership, we are excited to continue being part of an interdisciplinary conversation regarding the dynamics of the increasingly critical Asia-Pacific region. As is hopefully clear from our opening piece, we believe that analyzing contemporary strategic rivalries requires a broad conceptualization of the links between the global economy and international security, especially in light of unresolved trade tensions and recovery from the global pandemic.

The articles in this newsletter reflect the work that BASC has been doing on these fronts over the course of the last year. To begin, we are pleased to present two adapted versions of published articles that are a part of our “Great Power in the 21st Century Project”. In the first, Mark Cohen of Berkeley Law and BASC Project Director Philip Rogers discuss how the connection between intellectual property and supply chains afford licensing opportunities to supply chain managers looking to respond to challenges brought on by trade tensions between the United States and China. In the second, I join BASC Project Director Tim Marple in outlining the implications of digital currencies for national security and economic statecraft.

We are also excited to present a series of research analyses that examine the range of strategic, economic, and social concerns that BASC looks to address. Alex Kaplan offers commentary on the implications for China’s Belt and Road Initiative on global leadership in the years ahead, while Project Director Yuhan Zhang assesses China’s gains from the recent signing of RCEP and their impact on the US-China relationship. Zeroing in on technological competition, Vincent Shan weighs the relative strengths and weaknesses of US and Chinese policy orientations toward innovation while Gavin Zhao contextualizes the substantive and strategic motivations for a US ban on WeChat. Finally, Ian Wong and Michelle Lee move beyond the competition between China and the United States to discuss the articulation of Hong Kong’s political identity through business interactions and the opportunity that Prime Minister Suga has to deepen structural reform in Japan as it rebounds from the global pandemic.

Hopefully this newsletter will help enhance your understanding of the linkages between politics, economics, and business in the Asia-Pacific region. BASC is especially grateful for the generous support from the Institute of East Asian Studies, the Center for Chinese Studies, the Center for Korean Studies, the Clausen Center, the Institute of South Asia Studies and Center for Long-Term Cybersecurity at UC Berkeley for our cooperative projects. We are also deeply grateful for the sustained support of the UC National Laboratory Fees Research Program in our collaboration with the UC Institute on Global Conflict and Cooperation, as well as the Taipei Cultural and Economic Office in San Francisco. We are also deeply grateful for the sustained support of the Ron and Stacey Gutfleish Foundation, the Notre Dame Pietas Foundation, Christopher Martin, and our ever-expanding group of former BASC alums.

Through our supporters, collaborators, and colleagues like you, BASC has the privilege of advancing the discussion on a range of critical economic and security issues in increasingly unprecedented times. We wish you all the utmost safety and health in these challenging times and look forward to continuing our dialogue for years to come.

Vinod K. Aggarwal
Director, Berkeley APEC Study Center
While the ongoing trade war has understandably been a flashpoint for Sino-American relations, the politics of that economic struggle extend beyond tariffs and trade deficits. Through legislative changes, tariff wars and executive actions, the Trump Administration has injected a new urgency into international technology and supply chain management. On August 13, 2018, President Trump signed into law the Export Control Reform Act (“ECRA”) and the Foreign Investment Risk Reduction and Modernization Act (“FIRRMA”), as part of the John S. McCain National Defense Authorization Act of Fiscal Year 2019 (“the 2019 NDAA”). The 2019 NDAA was passed by overwhelming majorities of both parties in Congress and suggests that a bi-partisan “new normal” has emerged in US-China trade relations. Both ECRA and FIRRMA have the potential to greatly extend the scope and impact of controls over US technologies for export as well as foreign technology investment in the United States. The passage of FIRRMA and ECRA have also been accompanied by a number of regulatory and enforcement actions, such as limiting technology exports to foreign nationals that may be working in the United States, the placement of companies such as Huawei on the US “Entity List” to restrict acquisitions of US technology, and restrictions on foreign investment such as Broadcom’s proposed acquisition of Qualcomm or Chinese divestment in the US gay dating site Grindr.

Through ECRA on the one hand and FIRRMA on the other, the politics of that economic struggle extend to international technology and supply chain management. The articles below are adaptions from such publications. In the first, Mark Cohen (UC Berkeley Law) and BASC Project Director Philip Rogers explain how intellectual property licensing affords opportunities to manage supply chain linkages between the United States and China in the current geopolitical environment. In the second, BASC Director Vinod K. Aggarwal and BASC Project Director Tim Marple write that new economic instruments arising from digital currencies are increasingly important flashpoints for global competition, with evidence of growing “digital currency wars” among great and middle powers.

WHEN SINO-AMERICAN STRUGGLE DISRUPTS THE SUPPLY CHAIN: LICENSING INTELLECTUAL PROPERTY IN A CHANGING TRADE ENVIRONMENT

By Mark Cohen, UC Berkeley Law, and Philip Rogers, BASC Project Director
other, the 2019 NDAA has intensified scrutiny on global technology flows, with China as the clear (and often explicitly referenced) rival. In particular, the Bureau of Industry and Security (“BIS”) at the US Department of Commerce has sought to expand export controls over “emerging technologies” with potential dual use applications. Such developments have notably coincided with the imposition of tariffs on a wide range of goods from China. Critically, the geopolitical competition between China and the United States has put high-tech manufacturing in the spotlight alongside traditional manufacturing capabilities in a manner that is forcing importers to consider adjusting their supply chains to maintain customer relationships and profitability.

But while the possibility of shifting production bases away from China in the wake of the global pandemic have received considerable attention, the precise implications of US technology protection and tariffs for this process will bridge the gap between policy and process as commercial actors look to navigate an increasingly techno-nationalist environment and trade frictions between the world’s two largest economies. Rather than investigate decoupling or engagement in an absolute sense, an alternative focus is how supply chain restructuring may unfold with inclinations toward strategic diversification and risk mitigation. In this context, the licensing of intellectual property (“IP”) affords companies a number of opportunities for pragmatically addressing the supply chain disruptions underway. While intellectual property concerns were a motivating factor behind the policy changes rattling global supply chains, they likewise offer stabilizing solutions for supply chain management.

As a practical matter, wholesale decoupling may be easier said than done. While trade statistics are more of a broad-brush tool than a scalpel when it comes to investigating supply chains, they can still provide a sense of how key items are flowing across borders and whether pulls toward China remain. For instance, consider the data on trade in major Standard International Trade Classification (“SITC”) categories that are especially concentrated in network trade: office machines and equipment (SITC 75), telecommunication and sound recording equipment (SITC 76), electrical machinery (SITC 77), road vehicles (SITC 78), professional/scientific instruments (SITC 87), and photographic apparatus (SITC 88). The figure below charts China’s aggregate share of US imports/exports for these supply chain intensive SITC categories between January 2015 and June 2020 using data from the US Census Bureau. These data suggest that even in the midst of a trade war and a global pandemic, the flow of supply chain-intensive goods between the United States and China has shown resiliency. To be sure, the flows experienced periods of volatility in Donald Trump’s tenure, but there have consistently been bounce backs within a band (albeit quite large in purely monetary terms). This aggregate pattern does not indicate uniform resiliency in trade flows across all areas; as one might expect from headlines surrounding Huawei and ZTE, the flows for telecommunication equipment have fallen considerably from

China’s Share of US Imports and Exports of Supply Chain Intensive Items Over Time

Source: US Census Bureau Trade Data for SITC codes 75, 76, 77, 78, 87, and 88.
mid to late 2017 levels. Moreover, China’s share of imports of supply chain intensive items as a whole had dropped off considerably before spiking at the conclusion of the Phase I Trade Deal and outset of the COVID pandemic. But exports—which fall under ECRA’s purview and FIRRMAs’ influence—have proven remarkably stable.

These data are by no means meant as a dismissal of observations that an adjustment toward greater decoupling is underway. Rather, they suggest that a complete break from China makes for an easier political talking point than a policy outcome. China-dependent supply chains have very much been rattled, but they have by no means been broken. Indeed, a more robust decoupling that includes greater substitution by commonly mentioned but much smaller Asian alternatives like Vietnam and India could take time. For actors engaging in global supply chains who prioritize profits rather than a particular state’s national interests, it would not be surprising to observe short/medium term efforts to mitigate politically induced disruptions and continue leaning on Chinese production to a certain extent.

In looking to facilitate such an outcome, the IP-intensive nature of supply chains is a major factor to consider. Notably, the SITC categories identified above overlap considerably with lists of industrial categories that the United States Patent and Trade Office (“USPTO”), the European Union Intellectual Property Office (“EUIPO”), and China’s National Bureau of Statistics (“CNBS”) have identified as patent-intensive. Of the specific items that fall within those supply chain intensive SITC categories, 82% fall within USPTO patent-intensive categories, 56% fall within the top 20 EUIPO patent-intensive industries, and 67% fall within CNBS patent-intensive industries per calculations facilitated by concordance tables and software. Though these findings may be intuitive given the sorts of products involved, they underscore the connection between IP and supply chain management that has become a political hotspot in the broader race for technological leadership. Moreover, concordances between SITC codes and the Cooperative Patent Classification (CPC) patent families developed by Travis Lybbert (at UC Davis) and Nikolas Zolas (at the US Census Bureau) indicate that CPC classes G (physics) and H (electronics) match with a rather significant share of the technologies used in the extended supply chain categories. Patent applications for these patent classes are typically filed on a global scale. According to 2019 data from the World Intellectual Property Organization (“WIPO”), computer technology, digital communication, electrical machinery, medical technology, and measurement accounted for the largest shares of published applications under the Patent Cooperation Treaty (“PCT”) System, which allows filers to simultaneously seek patent protection in a large number of countries. The top 10 categories of PCT applications in 2019 were dominated by technical fields falling under the umbrella of electrical engineering or instruments. And because all patents are territorial, the relevant patent rights would need to be secured in key markets of concern in order for a product to benefit from patent protection in its extended supply chain. With supply chains involving patent-dense and technologically sophisticated areas of the global economy, the centrality of intellectual property in global supply chains lends a degree of traction to US charges of IP-theft by China used as a justification for a more contentious trade and foreign investment policy. But this centrality also enables intellectual property to be a key consideration in supply chain managers’ strategies.

For example, attentiveness to the to the timing of foreign filing licenses (“FFLs”) for filing US patent applications overseas can respond to the 2019 NDAA, as newly regulated technologies could not only affect future patent applications but also require export licenses for existing technology collaboration with China. Additional regulatory burdens have the potential to alter sequencing for patent applications on technologies developed between the United States and other countries, especially China. US FFLs are issued within three days of the application for an expedited foreign filing license by USPTO if there is no national security concern and typically include licenses for accompanying data. By comparison, China’s FFL regime may take longer, and may not include the accompanying data. US law focuses on an invention “made in” the United States while China focuses on where the “essence of the technical scheme” of the invention was created. The location of the research rather than the nationality of the inventor appears to be determinative. Given these differences, a potentially practical strategy might involve relocating final stages of research to one jurisdiction or another.

Intellectual property can also come into play in adjusting the country of origin and dutiable value in response to tariffs. According to US Customs practice, minimal
changes in packaging or labeling in a third country are unlikely to result in a “substantial transformation” of Chinese origin goods in a third country. But if a key component of a product is copied or embedded into a product (such as software or cultural content), that may change the “name, character or use” and may result in a substantial transformation of that product from a memory device to a cultural or business product. Similarly, if an essential component is manufactured in a country other than the country of final manufacture, the product may be deemed to be originating from that country. With reforms to China’s Administration of Technology Import-Export Regulations now allowing the negotiation of previously non-negotiable terms for foreign licensees, there may be an opportunity to restructure license agreements to transferring IP ownership from the manufacturer to a third country partner in a manner that is considerably less expensive than moving “hard” manufacturing operations. If the transfer of the technology or a key high-tech component help contribute to the creation of a substantially transformed article, it may enable that article to qualify for a non-Chinese country of origin.

Moreover, companies that import goods to the United States from unrelated parties usually pay duties based on the “transaction value” defined as “the price actually paid or payable for the merchandise when sold for exportation to the United States,” plus certain enumerated additions. Among those additions are “any royalty or license fee related to the imported merchandise that the buyer is required to pay, directly or indirectly, as a condition of the sale of the imported merchandise for exportation to the United States[.]” If these goods originate from China and are within the purview of the Trump tariffs, these royalties will be taxed at the new 25% duty rate. In such circumstances, a company may find it advantageous to restructure the IP rights to minimize the dutiable value. One way to reduce “assists” is to conduct design work in the United States. For example, the cost of design work done in the United States for manufacturing or 3-D printing in China may not be dutiable as an assist. Software licensing can also offer opportunities to revalue products. If the software is not “sold” with the medium but the customer is only granted a right to use, the software may not be factored into the valuation of the product.

Indeed, the use and protection of intellectual property is a driving force behind the adoption of US policies that have created real implications for global supply chain managers. But in a world where relocation and radical alterations to the supply chain are more likely to respond gradually even amidst sudden political shocks, intellectual property may likewise be thought of as a solution. The very real connection between intellectual property and supply chains and licensing and filing possibilities suggest a broader set of considerations are on the table for commercial actors who prioritize profits and who may wish to preserve aspects of the status quo.”

“Indeed, the use and protection of intellectual property is a driving force behind the adoption of US policies that have created real implications for global supply chain managers. But in a world where relocation and radical alterations to the supply chain are more likely to respond gradually even amidst sudden political shocks, intellectual property may likewise be thought of as a solution. The very real connection between intellectual property and supply chains and licensing and filing possibilities suggest a broader set of considerations are on the table for commercial actors who prioritize profits and who may wish to preserve aspects of the status quo.”
that have created real implications for global supply chain managers. But in a world where relocation and radical alterations to the supply chain are more likely to respond gradually even amidst sudden political shocks, intellectual property may likewise be thought of as a solution. The very real connection between intellectual property and supply chains and the licensing and filing possibilities sketched above suggest a broader set of considerations are on the table for commercial actors who prioritize profits and who may wish to preserve aspects of the status quo. The manner by which those solutions are pursued is in a very real sense the true measure of how the politics driving the environment play out. It is therefore critical to be open to acknowledging that intellectual property can in fact be an element of Chinese industrial policy. Categorically scoffing at China’s intellectual property regime can blind analysis to more nuanced possibilities for re-working supply chains, which in turn narrows the perspective on the range of possible outcomes that could emerge from current Sino-American frictions. While there are many factors to consider in a complete analysis of the subject, attention to the interactions between intellectual property as both a driver and a solution is a fruitful place to start.

Though it is particularly germane to the relationship between the United States and China, this perspective extends to the global trading system as well. Keeping in mind how IP intensive supply chains actually are, emerging markets have much to gain from establishing a robust regime for intellectual property licensing above and beyond the minimum standards in the TRIPS Agreement. As supply chains from China are disrupted, companies may look to the environment for licensing in other markets, and opportunistic actors may proceed accordingly as this process diffuses. Future research may thus engage the prospect of regulatory arbitrage through intellectual property licensing vis-à-vis supply chains. Moreover, the emergence of local networks around manufactured goods warrants attention moving forward. One prime example will be the international licensing environment that may emerge as Chinese companies look to restructure industrial operations through the Belt and Road Initiative, though others may likewise emerge in line with the previous points in this paragraph. Finally, viewing intellectual property as a solution as well as a driver of trade friction suggests that it presents avenues for easing trade tensions. While the global trade regime may or may not formally incorporate such avenues, they may nevertheless become an important feature of bilateral and international trade relations.

For the full article and analysis as well as other articles originally compiled from papers presented at conferences BASC organized in October 2019 see the forthcoming World Trade Review special issue, “Economic Statecraft and Global Trade in the 21st Century” co-edited by BASC Director Vinod K. Aggarwal and BASC Postdoctoral Fellow Andrew W. Reddie.
By many accounts, the United States and China are engaged in an emerging Cold War. Yet the contours of this war are markedly different than the US-USSR competition from the 1940s to the 1980s. China and the US are highly economically interdependent. Both countries have also engaged in active economic statecraft. Each seeks both economic and strategic gain through an array of trade and industrial policies and investment regulations to bolster high technology industries. We believe that one area, digital currencies, will be a key area of future competition and conflict between the two countries. This conflict will also likely spill over to other countries and private actors.

With respect to digital currencies, analysts and policymakers have focused primarily on the technological, economic, and regulatory implications of cryptocurrencies, like Bitcoin. Yet this focus ignores the rapid development of other important digital currencies. Governments increasingly support digital currencies through economic statecraft such as China’s digital yuan. More generally, governments seek to regulate and sometimes intentionally displace the private actors who originated private digital currencies like cryptocurrencies.

We focus on two issues here: First, we look at the national security implications of digital currency competition. Second, we examine the factors that drive state intervention to create or regulate digital currencies. If successful, the digital yuan stands to challenge the US privilege in borrowing, a unique freedom the country has leveraged to avoid political and economic issues of trade adjustment costs. Digital alternatives to the US dollar may also undermine the capacity of the US to enforce sanctions across the world. An alternative reserve currency opens the possibility of new debt regimes, evidenced by China’s explicit goal of linking the digital yuan to its already-expansive network of Belt and Road Initiative lending partners. Beyond these factors, digital currencies also open new attack surfaces in hostile interstate relations, especially given the cybersecurity concerns associated with digital ledgers. To analyze government motivations to address these concerns, we examine a set of factors that will likely drive economic statecraft in digital currencies, including technological and market factors, domestic structures, and system and international regime characteristics.

We begin with a detailed examination of the national security characteristics of digital currencies that are relevant to global competition. Next, we explore how an economic statecraft lens can help us better understand the motivations and prospects for intervention in this sector. We conclude with a discussion of how this emerging digital currency war will likely affect US-Chinese relations, and the related implications for other countries and private actors in the global economy.

Implications for National Security

Emerging competition around sovereign digital currencies is significant for interstate economic and security relations. Here, we identify four important security implications, although we do not argue that these are exhaustive. While our discussion is predominantly centered on US-Chinese conflict, we also briefly discuss the implications of these tensions for other middle-
and smaller-power states.

First, central bank digital currencies may function in part as reserve assets. This threatens the position of the US dollar as a globally hegemonic reserve currency, especially if new sovereign digital currencies produce more liquid money markets with greater confidence. As a result, the advent of central bank digital currencies is a direct threat to the “exorbitant privilege” the US has of importing goods in its own currency and thereby avoiding costly adjustments. The consequences of this shift would be enormous. Much of the domestic and military expenditures of the US are byproducts of its capacity to incur larger volumes of debt than it might otherwise be able to without this privilege. While many observers note that the bar for fully unseating the US dollar as a hegemonic currency is high, this is arguably not the threshold where a challenge to exorbitant privilege would arise. Even a regionally hegemonic digital yuan would introduce constraints on the dollar and begin similarly empowering China.

Second, central bank digital currencies are being explicitly designed with an eye toward cross-border payments. Many of these instruments are built to operate on their own networks as a function of their underlying ledger technology, meaning they may not be processed through the Society for Worldwide Interbank Financial Telecommunication (SWIFT) network. The US relies heavily on this network to employ one of its most powerful foreign economic policy tools: sanctions. The creation of sovereign digital currencies that operate outside of this network thus diminishes US capacity to enforce sanctions and increases the opportunities for states to defy US sanctions when issued. Indeed, this is an openly stated priority for many states that disavow the use of US sanctions to enforce increasingly political goals. Ironically, several of these dissenting states are traditional US allies in Europe. The race to develop central bank digital currencies thus introduces critical standard-setting issues such as the global regulation of payments over new digital currency networks and norms around how they may be strategically enforced.

Third, central bank digital currencies offer new means of denominated global debt market to one that includes central bank digital currencies may undermine the American capacity to implement strategic priorities through its lending programs. On the one hand, a digital yuan may be more appealing to borrowers than traditional yuan-denominated debt, especially if it can address liquidity shortfalls in traditional lending instruments. On the other hand, a digital yuan may accelerate China’s accumulation of power in institutions like the International Monetary Fund (IMF), which has demonstrated interest in central bank digital currencies as new lending instruments. The growing conflict over central bank digital currencies introduces clear externalities for indebted countries across the world, and holds clear impacts for the debt-security nexus that the US has leveraged to maintain predominance in global lending.

Fourth, central bank digital currencies require some degree of internet-based communication among members of the digital currency network. This necessarily introduces entirely new attack surfaces in monetary politics—namely the potential for cyberattacks on a country’s currency system. Given the increased use of cyberattacks in hostile interstate relations, which have escalated from US interventions in Iranian nuclear plants to Russian attacks on US electrical grids, this is a serious threat that could cause potentially catastrophic damage to a country’s economy. This is arguably the clearest link between sovereign digital currencies and national security and introduces pressing concerns about conflict in this domain. The associated standards that will emerge alongside competition in digital currency design choices will determine the difference between a world in which currencies are immediately weaponized for economic attacks and civil unrest, and a world in which there is consensual oversight and enforcement against this threat.

**Promoting Digital Currencies Through Economic Statecraft**

How might we better understand some of the driving factors that influence state intervention in digital currencies? Drawing on work on new economic statecraft by Aggarwal and Reddie, we focus on five factors likely to influence government action in digital currencies: technological characteristics, market characteristics, domestic structure, international regimes and the structure of the global system. Each of these elements can be further broken down in terms of their likely impact.
In terms of technological externalities, key features include dual-use, externalities and appropriability. We have already seen that what might appear to be a commercial enterprise can have important national security implications. In terms of externalities, currencies are the lifeblood of national and global economies, and thus technological developments in this realm have obvious spillovers to the real economy. Finally, in terms of appropriability, while Bitcoin was original and unique, we have seen that its technology could be readily copied and innovated upon. This has meant that firms can recreate digital currencies like cryptocurrency in more centralized formats, increasing state control with fewer responsibility-bearing targets to oversee. This has also meant that states can recreate the technical design of cryptocurrencies in a digital currency format that enjoys sovereign privileges of government monopoly over supply and adjustment. In short, these characteristics leave ample room for state intervention in private and sovereign applications.

With respect to the market, we focus on competitors, security of supply, barriers to entry and economies of scale. First, we see a few but growing number of private and government competitors in formal digital currency markets. This has led to government interest in both learning from and managing private digital currencies, like cryptocurrencies, increasing pressures to both regulate private markets and create a government market. In terms of security of supply, while efficiency concerns were an important driver in the development of private digital currencies like cryptocurrency, we now see increasing government concerns about security of supply and technical control of systems related to these digital currencies. While barriers to entry are low for basic digital currencies, more sophisticated versions require significant knowledge and capital. Finally, economies of scale clearly exist with digital currencies. Akin to software products like social media, we also find significant network externalities arising with different kinds of digital currencies. This means that competition and economic statecraft operate differently among different digital currencies. Decentralized digital currencies like Bitcoin leave few tools to regulators beyond outright bans, but market density among digital currencies produces internal competition from low barriers to entry. While competition among private digital currencies is shaped by regulatory standards within a state, sovereign digital currencies see more anarchic conflict over technical design among a fixed pool of relevant actors—central banks competing to achieve various policy priorities.

We next turn to domestic structures and the relationship between governments and private actors. Initially, Bitcoin and its competitors were seen as a rejection of government control over private financial markets. Yet the narrative of domination by private actors in liberal democracies has been challenged by Chinese efforts—and likely success—in developing a digital yuan. This has significant implications for the emerging digital currency wars, especially in terms of how private and public digital currencies will develop under different economic and political systems. Indeed, while Western central banks have been partnering with financial technology firms to research and design central bank digital currency prototypes, the Chinese central bank more unilaterally undertook its own research with a state-run center and whole-of-state control of the broader digital currency market.

Turning to global regulatory efforts, norms are only beginning to develop on how one should handle digital currencies, and the creation of rules is likely to be far behind. Without mutually agreed constraints on the creation, management and regulation of digital currencies, we are still in the “Wild West” phase of the market. The absence of accepted regional or global regulatory mechanisms is therefore likely to increase government incentives to use economic statecraft to gain an edge on competitors. By extension, this increases interstate cooperation on sovereign digital currency interoperability, which will ultimately determine the winners and losers of the digital currency war.

Lastly, with respect to global systemic characteristics, US-China competition has led to an increasingly bipolar world. While some attribute this to President Donald Trump’s belligerence and the aggressive behavior of President Xi Jinping, there appears little prospect of a reversal in this trend. Xi is likely to remain in power for the foreseeable future. Further, President Biden is unlikely to shift US policy back toward engagement under the naïve “China will become a democracy with growing interdependence” view put forward by liberal market-focused economists. Thus, on this score, we are likely to see an intensification of economic statecraft—both on the part of the US and China, as well as other
large and middle powers— in private and sovereign digital currencies.

The Future of Digital Currency Competition
What is the likely future of digital currency competition? We argue that four main trends are likely to continue. First, states will continue to intervene in private digital currencies like cryptocurrencies and initial coin offerings. While we have already seen active engagement by more and less liberal states in suppressing corners of the digital currency market that threaten state priorities, this is likely to intensify as interstate conflict around digital currencies become more common. Specifically, we should not only expect state intervention to continue across types of digital currencies, but we should also expect this to be increasingly linked to the impact of that intervention on competing or cooperative peers.

Second, we should expect debate over a global or regional framework for state intervention to be especially intense given the absence of current digital currency regimes and norms. While some international institutions have spearheaded efforts to begin global standard-setting on digital currencies, as the IMF has done with stablecoins and the FATF with cryptocurrencies, these are unlikely to mitigate competitive strategic intervention without broad consensus on the nature and enforcement of these eventual standards and rules. Given the limited scope of their substantive mandates and the currently contested nature of digital currencies, international organizations like the World Trade Organization (WTO) and IMF will likely have little impact.

Third, we should expect more states to engage in this emerging digital currency conflict over time, including states that are not actively engaged with digital currencies. This is due not only to the likely proliferation of this technology, but also because of the externalities that non-participating states will face from the interoperabilities between digital currencies and other traditional financial instruments. As such, these spillovers will increasingly incorporate other states into this digital currency conflict, producing patterns of balancing and bandwagoning, thus yielding coalitions of different states divided among preferences for global digital currency norms, standards and rules.

Finally, we should expect the private sector to have diminishing authority in digital currency development as the intensity of economic statecraft increases. Namely, as the salience of norms and standards in technical design increases, and the costs of binding rules around digital currency use increase, states will have greater incentive to more directly intervene through more targeted and binding regulation of private actors. As such, we should not anticipate robust private governance of digital currencies by firms alone, but rather expect a strategic public-private dynamic wherein particular companies are either empowered or disadvantaged by their alignment with state priorities.

For research support, the authors would like to thank Yuhan Zhang and Vincent Shan. We are grateful to Andrew Reddie for comments. Aggarwal’s work is partially supported by a National Research Foundation of Korea Grant funded by the Korean government (NRF-2017S1A3A2067636). Both authors are grateful for the support of the UC Lab Fees Research Program.

For the full article and analysis, see Global Asia, Vol. 15, No. 4, December 2020: https://www.globalasia.org/v15no4/feature/digital-currency-wars-us-china-competition-and-economic-statecraft_vinod-k-aggarwaltim-marple

Read the March 2021 issue of Business and Politics and submit your papers for publication at: https://www.cambridge.org/core/journals/business-and-politics
China’s swift economic and technological rise under President Xi Jinping has equipped the world’s second-largest economy with ample industrial resources and regional clout to shift the balance of power in the existing liberal order. Encouraged by a host of government campaigns including the “Made in China 2025 Plan” and the “Next Generation Artificial Intelligence Development Plan,” Chinese companies have the roadmap, funding, and support to fashion world-class technologies and carry out extensive industrial upgrading. The whole-of-state strategy aimed at harnessing indigenous innovative capacity is generating favorable returns. Continued success in this area is crucial for Beijing to realize its ambitious leadership goals in strategically important sectors of the economy ranging from telecommunications to manufacturing. Coupled with increasing military strength, the trajectory of China’s development and ability to fulfill national strategies through its authoritarian state-capitalist model gives credence to China’s regional hegemonic position and, more broadly, its great power status. China’s domestic proficiency in reaching state designated targets complements the resolve of its foreign policy objectives determined to safeguard and advance national interests. The pursuit of these goals echoes Beijing’s rising confidence in implementing its increased power in areas key to China’s economic prosperity. China’s growing influence, however, is raising questions about Beijing’s commitment to and respect of the international order. Put simply, China is growing in power and might not be sticking...
to the liberal world order it is presumably inheriting.

The theory of hegemonic stability suggests that great powers (i.e. hegemons) use their preponderance of power to unilaterally provide and uphold some semblance of international order to create peace and stability. The U.S.-led global order that emerged in the post-World War II moment was carried by the U.S.’s economic and military preeminence and therefore saw the United States assume global leadership, largely through multilateral institutions, in the provision of public goods. More recently, however, global political trends like the resurgence of right-wing populism in Western countries and its associated rejection of multilateral overreach are contributing to changing patterns of global leadership. Thus, a firm characterization of the current international system is mired in the face of a malleable geopolitical landscape but nonetheless appears to be one of increasing bipolarity with the United States as the chief superpower and China closing the gap. This bifurcation marks a noticeable shift from the “Pax Americana” world order. Bipolar systems are understood by structural realists to be more peaceful because great powers can stabilize each other through internal or external balancing like the United States and Soviet Union engaged in during the Cold War. But as competition over advanced technologies intensifies and the U.S.-China trade war looms, political and economic antagonism between today’s superpowers can still have vast repercussions for the entire world. Therefore, the structure of the emerging bipolar international order is tenuous, highlighting the need for responsible global leadership in an increasingly globalized world with a growing number of cross-border problems.

The type of leadership China will exhibit within the world order can largely be understood through its governance approach to managing international cooperation. President Xi remarked at the 95th anniversary of the founding of the Chinese Communist Party in 2016, “the world order should be decided not by one country or a few, but by broad international agreement.” He continued, “it’s for the people of all countries to decide through consultations what international order and global governance systems can benefit the world and people of all nations.” Xi’s comments paint a sanguine image of an equitable international system that embraces the interests of all relevant stakeholders to reach multilateral resolutions to global problems and opportunities. However, behind the hopeful rhetoric Beijing projects is a multi-pronged arsenal of overlapping bilateral and multilateral relationships that are selectively deployed in the advancement of China’s geo-strategic interests. Put together, China’s amalgamation of bi- and multi-lateral accords reflect an extensive governance network of Sino-centric policies, alliances, and institutions that enlarge China’s influence in the world order. Given its nationalistic attitude, capable government, and flourishing private sector, China’s diverse governance approach is telling of the strategic levers of diplomacy authorities will exhaust to align its international agenda with the “China-first” outlook galvanizing domestic growth. If this is any indication of China’s leadership disposition, it suggests at the very least that Xi’s comments can neither be construed as purely altruistic nor entirely transparent.

China’s reputation within the international community has been blemished by criticisms of not acting as a team player for its penchant of free-riding on the actions of other international actors. China’s recent rise has therefore led some scholars to claim the liberal order is in jeopardy, but the extent to which China understands and appreciates the existing order is understated. Amidst ongoing competition with the United States, while President Trump broadcasted his disapproval of ostensibly outdated, unfavorable multilateral arrangements, China is maintaining a brand of quasi-multilateral diplomacy in terms of international cooperation. Against the backdrop of American isolationism, China appears to show its appreciation for the existing international order more than is sometimes acknowledged by working through international organizations. This is not to gloss over China’s “gaming” of the multilateral institutions it actively participates in to aid its own growth. For instance, China engages in “convenient compliance” to accelerate economic development by temporarily using non-compliant policy tools during critical stages of development but ultimately bears a compliant status within the World Trade Organization (WTO) by adhering to Dispute Settlement Body rulings, allowing a transitional economy like China to pursue advantageous industrial policies while maneuvering WTO rule enforcers. Yet, it would be misguided not to point out that although China uses international institutions to strengthen its grip on the global economy, Beijing has neither the desire nor ability to completely usurp an existing order that it, for the most part,
already gains from. China enjoys substantial benefits from its participation in liberal order institutions, such as the UN Security Council (where it has veto power) and the International Monetary Fund (IMF) (where its voting rights have increased). Moreover, China has amplified its efforts to be a dependable leader within the international order in the provision of public goods from contributing handsomely to UN peacekeeping forces, to establishing new development institutions like the Asian Infrastructure Investment Bank. The most prominent example of Chinese global leadership in this regard is its Belt and Road Initiative (BRI), a project the Chinese government views as an “important international public good.”

President Xi initially conceived the BRI in 2013 to promote economic integration and export Chinese ingenuity (and currency) across Asia, Europe, and Africa. An official national strategy, the BRI is a vital part of China’s trade and investment vision to promulgate Chinese leadership in global economic cooperation and policy coordination. Under the BRI, Chinese authorities have promised to deliver trillions of dollars in investment to promote economic development by constructing large-scale infrastructure projects in foreign territories. Over the last decade, China has invested nearly 50% of its GDP towards BRI undertakings. Considerable investment is allocated towards roads, rail, airports, ports, pipelines, and communications infrastructure. Chinese financing for infrastructure projects is agreed in principle with the expectation that the partner country will award contracts to one of China’s “national champions” to carry out projects. Internationalizing Chinese companies benefits China, and Asia more broadly, by alleviating China’s domestic overcapacity problem and closing Asia’s steep infrastructure gap.

The BRI has been likened to the Marshall Plan. A comparison of this kind, to say the least, carries immense weight. In the post-war moment, the United States assumed responsibility to provide aid to restore the economic infrastructure of a ravaged Europe. These efforts were part of the foundation upon which the liberal international order was built. In a similar manner, the BRI represents China's attempt to shape the world order. Through the BRI, China aims to project strong global leadership while shrewdly applying its assorted array of international legal instruments to fuel its development aspirations. Already China has signed over 120 agreements with countries and international organizations to bring them onto the international infrastructure development project. The BRI positions China’s outward-facing economic statecraft as a means of embedding its leadership into the provision of the global economy by fostering stronger international relationships and stimulating synchronized transnational growth. A project of this magnitude has consequential geopolitical stakes. Therefore, the way China approaches BRI governance may offer insights into the character of Chinese global leadership within the world order.

China’s Bilateral Stratagem

China’s stockpile of BRI governance instruments is partly based on “a series of unrelated but nonetheless interconnected bilateral trade pacts and partnerships.” In particular, China utilizes non-binding bilateral agreements called Memorandums of Understanding (MOUs) which highlight its intentions to engage with other parties through less rigid organizational structures compared to arduous multilateral frameworks. China’s long list of opaque bilateral arrangements are creating a dispersed, open-ended governance network under the umbrella of BRI which can suit China’s national interests by more easily coordinating economic integration and trade liberalization, pillars of the existing liberal order, on its own terms. As such, this governance approach offers China the opportunity to pursue a larger geo-economic role throughout the Eurasian continent.

Critics view Chinese bilateralism as a form of debt-trap diplomacy empowering China’s unimpeded regional dominance. Debt-trapping in this case refers to how China lures or “traps” developing or underdeveloped countries to borrow money to be used for much needed infrastructure projects. In 2013, China and Pakistan inked an MOU agreeing to long-term collaboration on the China-Pakistan Economic Corridor (CPEC), BRI’s flagship program. Instead, with a fraction of CPEC projects materializing so far, stymied by dwindling foreign reserves, and waist-high in debt to Chinese financiers, Pakistan was forced to go to the IMF for financial assistance. It is increasingly likely that Pakistan's debt will force it to relinquish shares of the CPEC to China. A debt-for-equity exchange of this kind would substantiate long-brewing skepticism associated with the BRI that gained widespread attention in 2017 when Sri Lanka, unable to repay Chinese loans, was forced to lease the strategic Indian Ocean port of Hambantota to China
Merchants Ports Holdings, an arm of the Chinese government, on a 99-year lease. These developments underscore China’s hawkish ulterior motives that can be masked behind the prospects of BRI-inspired growth.

By operating bilaterally, China is not restrained by multilateral frameworks to delineate its approach to managing debt-distressed countries. This contrasts the governance style used by many major creditor nations who opt to participate in multilateral mechanisms like the Paris Club. While China is an observer at Paris Club meetings, it does not retain member status so it can pursue alternative approaches to handle sovereign defaults. Therefore, China operates largely on an ad hoc basis to manage debt sustainability which may result in debt-strapped countries abdicating strategic sites. Averse to being pawns in China’s geo-strategic schemes, countries including Malaysia, Myanmar, Bangladesh and Sierra Leone have renegotiated or withdrawn from previous BRI agreements. Expectedly, China’s belligerent behavior suggests its leadership role in the provision of the international order will exercise self-enhancing “winner” strategies to gain competitive advantages, especially in lucrative commercial spaces, thereby extending its sphere of influence in the world.

China’s bilateral strong-arm approach also has concerning geopolitical implications for regional cooperation as countries continue to weigh foreign investment needs against sovereign interests. The China-Cambodia relationship in particular is afflicting unity in Southeast Asia, signaling danger for regional bodies like the Association of Southeast Asian Nations (ASEAN). China is Cambodia’s top foreign investor, an increasingly important trading partner, and a benefactor of attractive BRI investment. Cambodia’s conduct as chair of the 2012 ASEAN Foreign Ministers’ Meeting — the gathering that left ASEAN unable to issue a joint communiqué responding to Chinese aggression in the Scarborough Shoal — can be thought of as a canary in the coalmine for what is to come if China continues to uninterruptedly court ASEAN member states with the lure of investment.

At the Second Belt and Road Forum on International Cooperation, China and Cambodia, committed to accelerating the implementation of BRI in Cambodia, signed several MOUs to expand the scope of bilateral cooperation. Fearful of agitating a powerful ally and muscular regional hegemon, reliant on Chinese investment, and potentially debt-trapped into subservience, Cambodia is well-positioned to be a mouthpiece for Beijing’s interests within ASEAN. This has far-reaching consequences for regional cooperation in retaliating against security threats ASEAN must vote to act on. This is an especially relevant geopolitical concern as China continues its militarization of the South China Sea, a strategically significant location for its trillions of dollars worth of oil, natural gas, and fishing rights. Under ASEAN’s consensus-based decision-making framework, if China overextends its reach in Southeast Asia, a coordinated regional effort is foiled without a vote from Cambodia. China’s attempts to augment its global political and economic foothold through BRI governance is another instructive signal of the character of Chinese leadership that is eroding state sovereignty and the U.S.-led Western security alliance in East Asia. China’s disquieting operations in Southeast Asia are doing more to reinforce calls for ASEAN reform than assuage Asian-Pacific regional blocs that China is a responsible superpower.

**China’s Multilateral Governance Investment Scheme**

China’s multilateral approach is rooted in its aspiration for greater influence in the U.S.-led international order. As China gradually gained power as a result of rapid economic growth, Beijing grew increasingly dissatisfied with Western dominance in post-war financial institutions (like the Bretton Woods Institutions) that still govern the liberal order. Hence, China’s geopolitical governance strategy aims to provide an alternative to U.S.-led financial institutions like the World Bank, IMF, and the Asian Development Bank by promoting regional multilateralism, particularly within Multilateral Development Banks (MDBs).

President Xi, with the BRI in mind and a desire to create parallel international financial architecture to rival the West, first proposed the Asian Infrastructure Investment Bank (AIIB) in October 2013 as a development bank dedicated to lending for infrastructure projects in Asia. Considered China’s “World Bank” for the Asia-Pacific, the AIIB, which officially launched in December 2015, can be viewed as a manifestation of Beijing’s efforts to adjust the international order to be more commensurate with its present-day strength. Within the AIIB, China provides the largest share of capital and consequently has the greatest voting power. This lead-
ership responsibility represents a watershed moment in China’s bid to play a more active role in global governance. It also establishes a suitable setting for China to engage in strategic governance to use its leadership position in a resourceful multilateral institution to support a national agenda. China deliberately engages in multilateralism to gain geopolitical and geo-economic advantages by directing vehicles of investment in its favor while taking refuge behind the veil of neutrality and legitimation offered by international organizations. China even shoulders global governance leadership roles within regional International Financial Institutions (IFIs) to achieve these ends. Overt Chinese leadership within the MDBs capitalizing the BRI like the AIIB and the New Development Bank (NDB) masks China’s tactical laundering of its geo-strategic agenda with robust global governance leadership.

“The BRI, China aims to project strong global leadership while shrewdly applying its assorted array of international legal instruments to fuel its development aspirations.”

The AIIB acts as a strong conduit of BRI investment. As succinctly argued elsewhere, “it doesn’t take an expert in the geopolitics of Eurasia to notice that many of the countries that have so far received funding from the AIIB are located along China’s Belt and Road Initiative.” By managing the Belt and Road in tandem with the AIIB, Beijing concurrently projects comprehensive leadership in the international order and aligns the AIIB’s assets to support the BRI. Whereas national strategies like the BRI are understood to be unilaterally pursued by Beijing to nationalistically promote its interests, the AIIB is perceived with less ambivalence. Developing countries are bullish about the AIIB because they believe it will provide them with more financing to support their economic development, and developed countries feel secure because, as a multilateral institution, the AIIB is governed with built-in oversight guidelines to prevent Chinese unilateralism. Furthermore, it has been hinted that China may soon lose its veto power as the number of AIIB member states rise. To circumvent the hostile reputational consequences of the BRI, China strategically applies language in its MOUs to bring bilateral deals into collaboration with the less contentious MDBs. For instance, the terms of financial cooperation in a BRI MOU can open the door for monetary policy coordination in association with the AIIB.

Like the AIIB, the emergence of the BRICS coincides with the relative economic decline of the West which opened an opportunity for non-Western powers like China to have a greater input in Western-led global governance structures. The Shanghai-based NDB, formerly the BRICS Development Bank, facilitates investment in private and public projects among BRICS partners (i.e. Brazil, Russia, India, China, and South Africa). The NDB, steered by strong Chinese leadership, is a prominent example of intra-BRICS economic and political cooperation skewed to bolster Beijing’s interests.

The NDB pours money into emerging economies and green energy/sustainable investments. In this capacity, the NDB funnels money into the “Green Belt and Road,” China’s BRI upgrade launched at the second Belt and Road Forum in 2019 to address China’s sustainable development shortcomings in the BRI. Operating within multilateral regional blocs like the AIIB and NDB offers China the opportunity to take advantage of its great power preponderance (and its accompanied generous voting share) as well as a dearth of competing interests (which often produce deadlock in large multilateral institutions) so as to spur BRI longevity and efficacy with support and funding. As more countries attach themselves to the BRI network, it will invariably engender more countries to adopt overlapping strategic interests with China. In doing so, there is room for China to broadly implement its Sino-centric interests beyond the scope of regional multilateralism. In this sense, the BRI, AIIB, and NDB do not function simply as economic projects but also represent a diplomatic and strategic exercise to cast durable networks of governance relationships capable of overpowering U.S.
policies attempting to contain China’s ascension.\textsuperscript{49} China’s skill in using political mechanisms for calculated gains from the BRI and its intentions of accumulating a greater share of power in the world order is evident through its actions in multilateral fora. In finance, China has bypassed the World Bank by lending unilaterally under the BRI and multilaterally through the AIIB and the NDB, all but surely weakening the prominence of Western-led IFIs in the international economic order.\textsuperscript{50} Beijing’s multilateral activity within MDBs reveals the discerning style of Chinese statecraft intended to increase Beijing’s say in international monetary affairs and establish international norms of cooperation that reflect China’s interests. Assuredly, China’s “peaceful” rise and its strategic maneuvers to tilt the scales of the international order in its favor are not mutually exclusive.

Conclusion:
Implications for Chinese Leadership Going Forward
The state of the world order today is contested. The balance of power is changing faster than our international institutions. In this moment, China has emerged as a great power unafraid to flex its diplomatic muscle to abuse critical junctures in international politics for the purposes of advancing its geo-strategic interests. China leverages its resourcefulness to score disproportionate bilateral deals while simultaneously taking advantage of its dominant position within regional multilateral forums for policy victories. Consequently, China’s layered BRI governance approach is getting results for Beijing, but this comes at a steep cost to the balance of the liberal economic order.

The intent of Beijing’s quasi-multilateral strategy suggests China is keen on having its voice function as a directive in global affairs and is comfortable engaging in underhanded governance operations to reach these ends. Thus, whether Chinese leadership is responsible leadership does not rest, as some suggest, on “China’s ability (and willingness) to truly transition the BRI from opaque bilateral deals to inclusive, results-driven multilateralism.”\textsuperscript{51} Both bi- and multi-lateral arrangements are ripe governance structures eagerly pursued under the auspices of Chinese authorities to progress Beijing’s geopolitical ambitions. This should not necessarily discredit China’s creation of BRI institutional mechanisms and organizations, but it should bring such initiatives under greater scrutiny.
Against the backdrop of deglobalization and trade protectionism, 15 countries signed the Regional Comprehensive Economic Partnership (RCEP) in November 2020. The signing parties include China, Japan, South Korea, all the countries from the Association of Southeast Asian Nations (ASEAN), Australia, and New Zealand. This mega free trade agreement (FTA) is the world’s largest, covering a market of 30% of the world’s population, with approximately 30% of global gross domestic product. At the time of this writing, RCEP is awaiting final ratification. Each RCEP member will go through its own domestic legislative process, and at least nine of its 15 members, including at least six ASEAN members and at least three from outside ASEAN, must approve it.

While RCEP demonstrates the success of ASEAN’s middle-power diplomacy and will promote regional trade and economic development over time, China will arguably achieve the largest utility gains from the trade pact. RCEP serves its national interests and will make the region’s largest economy even more powerful economically and politically. The implications could well bring overt competition between China and the United States.

Economic Benefits
The direct economic effect of RCEP is that it will help China expand exports. Before RCEP, China had already forged bilateral FTAs with ASEAN, South Korea, Australia, and New Zealand. As of 2019, most traded goods had been either duty free or with preferential tariff rates. Some analysts may contend that China’s RCEP gains would be marginal. Still, tariff adjustments will promote Chinese exports of agricultural products, building materials, automobiles, and chemical products to ASEAN and South Korea. More conspicuously, thanks to Japan’s tariff reductions, more Chinese products, such as lamp oil, light petroleum, biofuels, fur leather, silk fabrics, non-ferrous metals, and machinery equipment and parts, will flow into the Japanese market.

Petri and Plummer provide some helpful details about sectoral export effects on China. With RCEP in place, China will see the largest estimated export benefits of
$244-248 billion by 2030, followed by Japan ($128-135 billion) and South Korea ($63-64 billion), meaning that the incremental increase in Chinese exports will account for nearly 50% of total export growth of all RCEP members. Although these benefits may not offset the total losses inflicted by a potentially persisting trade war, they can help China lessen the damage and reduce its export reliance on the United States.

Additionally, RCEP will strengthen the divisions of labor, upgrading China’s industrial structure. Due mainly to the cheap labor costs in ASEAN countries, since 2015, Chinese trade surpluses with ASEAN in furniture, clothing, suitcases, shoes, electrical equipment, and general instruments have shrunk, indicating an emerging supply chain relocation from China to Southeast Asia. Under RCEP, China’s tariff-elimination commitments will accelerate this process. Hence, Chinese imports of labor-intensive goods from ASEAN countries, especially Vietnam, will grow significantly. The inflows of these goods might increase competition to Chinese firms and generate adjustment costs but would drive them to turn more toward capital-intensive and technology-intensive manufacturing and production.

Moreover, RCEP will greatly add inflows of foreign direct investment (FDI) into China. It is worth noting that liberalization under RCEP is comprised of reductions in behind-the-border barriers, such as discriminatory treatment against investment. Article 10.3 and Article 10.4 stipulate specific provisions of national treatment and most-favored-nation treatment with respect to the establishment, acquisition, expansion, management, conduct, operation, and sale or other disposition of investments. In the Schedule of Specific Commitments for Services and the Schedule of Reservations and Non-conforming Measures for Investment, the Chinese government has promised to reduce limitations on market access and national treatment. China will further open up service sectors (e.g., medical services, computer software and data processing services, and scientific and technical consulting) and non-service sectors of manufacturing, agriculture, fishery, forestry and hunting, and mining to multinational corporations (MNCs).

Certainly, many MNCs have been wary of China’s intellectual property rights (IPR) infringements. RCEP is expected to have some positive effects on IPR protection in China. It is true that RCEP’s IP chapter has limitations, and the majority of the provisions have already been implemented in China. Nonetheless, Articles 11.15, 11.17, and 11.62 will force the Chinese government to take stricter measures to protect electronic rights management information, use only non-infringing computer software, and destroy pirated copyrighted goods and counterfeit trademarked materials.

With RCEP and an improving IPR environment, China is expected to alleviate MNCs’ IPR concerns. In the future, MNCs, which do not have ethnic links or an inclination to eschew utilizing China as an extensive base for their firm’s core competencies, will likely commit more to the country, including bringing international financing and technologies. As a result, they will enhance local Chinese production, engineering, and design capabilities.

The aforementioned industrial upgrading driven by import trade and technology enhancement by FDI will also have spill-over effects on China’s economic transition. It would lead China’s output and wages of Chinese workers who possess at least a bachelor’s degree to rise. Note that laborers who have a bachelor’s degree or more advanced degrees are basically China’s middle and upper classes. These laborers will account for over 90% of Chinese urban consumers in the foreseeable future, and they are expected to contribute the most to Chinese domestic consumption. As such, a rise in their wages will propel the country towards a domestic consumption-driven economy. This structural transition would be a concrete step to accomplish the “internal circulation” strategy unveiled by Chinese President Xi Jinping.

Geopolitical Gains

Geopolitically, it is also clear that China will benefit tremendously from RCEP, perhaps even more so than it will economically.

Firstly, China’s involvement in RCEP can reassure neighboring countries. Since the late 2000s, China’s continuing rise and increasing assertiveness have invited fear and confrontation from its neighbors such as ASEAN countries. The Chinese government has accentuated the “peaceful development” strategy in the last decade to convey that China embraces peace and will not initiate offensive war against other countries. In the recent Fifth Plenary Session of the 19th Chinese Com-
munist Party Central Committee, Xi proclaimed the long-term goals for 2035, reemphasizing that China will pursue a “peaceful development” path and will continue to create a good external climate.10

Be that as it may, Chinese policymakers have certainly realized that the proclamation of “peaceful development” cannot soothe agitated and antagonized countries across the Asia-Pacific. Thus, engaging actively in Asian multilateralism can send an important message from China, signaling its commitment to preserving peace and promoting regional growth. Specifically, participation in RCEP demonstrates that China is willing to open its market further and be bound by regional common rules, which could help allay geopolitical suspicion and fears among its neighbors.

Secondly, China’s political power in the region will be entrenched. RCEP reinforces the economic interdependence between China and other participating countries. As Albert Hirschman pointed out many decades ago, economic interdependence is usually asymmetrical, suggesting that one state is more dependent on the other, and political power grows out of this asymmetry.11 In the context of RCEP, economic interdependence will bring the region, especially ASEAN countries and New Zealand, closer to China’s economic and political orbits. As a result, Beijing could “exert influence on regulations and standards setting within the bloc, as it is already explicitly trying to do in the countries included in its Belt and Road Initiative”.12

Thirdly, China desires to reach a trilateral FTA with South Korea and Japan, strengthening economic connectedness and, perhaps more importantly, building trust politically, stabilizing the area’s security environment, and undercutting US influence. In light of the gargantuan Chinese market and the fact that the Northeast Asian countries are in different positions in the industrial supply chain, it is also in South Korea’s and Japan’s interests to have a trilateral FTA. Yet, issues such as conscripted laborers have stalled progress on negotiations. RCEP, as many commentators believe, can play a catalytic role in the negotiation processes of the FTA, boosting the determination of China, Japan, and South Korea to make a political decision finally. Xi promised to speed up negotiations on the trilateral FTA in November 2020.13 It is expected that leaders of the three countries will meet again to discuss the FTA further this year.

Growing US-China Competition
With the signing of RCEP, US trade deficits with China might be reduced gradually. However, overt technological competition between the two superpowers will only intensify. The US-China trade war initiated in 2018 has already expanded beyond tariffs and has become a battle for technological supremacy.14 By joining RCEP, as argued above, China’s technological dynamism can be enhanced. Combined with Chinese industrial policies, faster upgrading of manufacturing, digital, and clean technologies is expected to happen.

As China becomes more potent technologically, the US may retain its trade tariffs over Chinese goods, accelerate technology decoupling with China, and adopt a clear strategy for advancing its own industries and technologies. The realpolitik philosophy often colors the Chinese leadership’s perceptions of the US. Whatever options the United States pursues, China will suspect that US efforts may attempt to check its technological advancement; this dynamic increases the incentive for China to accelerate moves toward cooperation with other countries across Asia and Europe and to advance indigenous technologies. Ultimately, both the United States and China will be locked in a vicious cycle where rivalry may become inevitable.

Additionally, China’s participation in RCEP will further leverage its economic and political clout in the Asia-Pacific region, which will impel the United States to increase its influence as a response. The United States and China will likely vie for geopolitical primacy in the area.

Individual dramas such as the 2008 global financial crisis, Trump’s isolationism, and the recent pandemic have resulted in a global power transition towards China. China is on its way to filling the void left by Trump’s withdrawal of commitments to the Asia-Pacific region. Although these developments do not necessarily entail the disappearance of absolute US hegemonic power, they do suggest a potentially negative and alarming trend.

With Biden taking office as the new US president, it is widely expected among scholars and policy analysts that his administration will choose multilateralism and
mend the impaired liberal order built by the United States since the end of World War II. In the short run, stopping the coronavirus pandemic and rebooting growth will be the top priorities of the Biden administration’s policy agenda. Yet, the new administration will likely not wait too long to invest more political capital in Asian affairs. Indeed, Biden has indicated an interest in renegotiating and rejoining the Trans-Pacific Partnership (TPP) with new terms that favor the United States. The TPP could “help the US again provide leadership on trade” and “balance China economically, politically, and from a broader strategic standpoint”. Biden has also reached out to political leaders in Australia, Japan, and South Korea, expressing his desire to deepen security alliances. By pushing the importance of trade accords like the TPP and strengthening the “hub-and-spoke” system, the United States could underscore its deep commitment to the Asia-Pacific, provide its allies and partners with an alternative to reliance on Chinese supply chains, and undermine China’s influence across the region. Undoubtedly, China, for its part, has no intention of backing down in the competition over spheres of influence.

There is some room for limited cooperation, as people hope, but the reality does not bode well for the bilateral relationship. What we can envisage is a world with more overt and intense competition between China and the United States.

Find out about UC Berkeley research and events on China, Japan, Korea, and South East Asia at: https://ieas.berkeley.edu

Photo Credit: UC Berkeley
eopolitical competition between China and the United States has expanded beyond matters of trade to include issues of foreign investment policy, human rights abuses, and global leadership more broadly. As the world awaits a “fourth industrial revolution” in emerging technologies with the potential to “shift the future balance of economic and military power” like artificial intelligence and big data, leadership in technological progress is one of the most salient topics determining the balance between these two global superpowers.

As China continues to catch up to its peers in the West, its distinctive approach to innovation bears unique features that create an advantage over the United States in select industries and emerging technologies like 5G telecommunications. Though the United States currently appears to be preserving its leadership despite these threats, maintaining this leading role throughout the 2020s will depend, in part, on its response to Chinese innovation’s increasingly apparent strengths.

Innovation and Economic Development
As proponents of industrial policy suggest, leadership in any industry rarely arises spontaneously. Leadership in emerging technologies is heavily dependent on a country’s innovation policy, the “interface between research and development (R&D) and industrial policy” promoting both the creation of entirely novel technologies and “downstream process innovation.” For China, early innovation policy relied heavily on the transfer of existing ideas and techniques to first reach “the technological frontier” of industrialized countries before beginning to develop truly novel inventions.

Like many other developing economies, a conducive international environment was particularly important for China’s rapid technological development, as foreign direct investment (FDI) helped establish this foundation for domestic innovative capacity. Technology transfer through FDI is only one piece of the puzzle, though, as early Chinese innovation policy also incorporated bottom-up policies focusing on inputs to R&D such as human capital and R&D spending more broadly. China currently leads the world in R&D spending and produces over 28,700 PhDs in science and engineering per year.

Acting as an “innovation sponge” has produced mixed results, working well for many engineering-based industries like high-speed trains and wind turbines while China remains fairly uncompetitive in “science-based” fields like branded pharmaceuticals, biotech, and semiconductor design. This strategy is also particularly vulnerable to declining trade flows and geopolitical tensions cutting off technology transfer capabilities. Eventually, transfer must be phased out as policies focusing primarily on catching up with advanced peers will always be bound by the level of progress in these countries that are actively pushing the envelope of developing novel technologies and techniques.

Technology and China’s Growth Imperative
In addition to these structural issues with progress by technological transfer, China currently faces a domestic “innovation imperative” in its transition to a consumption-based, slow growth economy. As the constant labor force growth and high levels of investment that drove economic growth in early years recede, improved machinery efficiency and technological advancement become essential. Workers with a bachelor’s degree and above account for over 90% of China’s urban consumers, and a rise in wages for this group through productivity gains from more advanced physical capital is key to “propelling the country towards a domestic consumption-driven economy.”

Combined, these pressures have spurred China to revise its innovation policy to build domestic capacity for developing truly novel technologies independent of the West. Chinese-style innovation currently promotes innovation through a “trinity of policy system, financial system and industrial ecology”, shaping incentives to promote innovation much like its Western counterparts. The interaction of these different catalysts has helped
produce giants like WeChat, Taobao, and Xiaomi. This type of "synergy effect" most clearly parallels Britain during the industrial revolution and the United States after the Second World War.

Though the Chinese government does not dictate technological progress, its central and local governments continue to prioritize innovation with policies that remain significantly stronger than its international counterparts. State owned enterprises are given preferential market access as long as their work aligns with the general policy goals of the Chinese state in a form of "digital Leninism." Private actors remain the primary drivers but the state sets the agenda. This includes a unique "importance to collectivism and government involvement in innovations of enterprises, research institutes and other individuals." Even for privately held companies like Huawei, state contracts and favor by the Chinese Communist Party are essential to private sector success.

Huawei is a particularly visible example of the strengths of the Chinese system. It also presents a unique puzzle. Why does China not have more internationally competitive firms like Huawei given the size of its domestic technology sector? China's "state revisionist" political economic system remains centered around the state as the most effective political force to achieve economic development. The state must "effectively coordinate, monitor, and discipline" a wide array of economic actors to correct for market failures like underinvestment in strategic R&D. This is no easy task. For every industry where a company like Huawei is groomed to be truly competitive on a global scale, there are likely many others that Chinese institutions have constrained and distorted. Though China is no longer following the steps of the United States in some industries, China will need to resolve this internal tension before wrestling leadership from the United States in a majority of emerging technologies.

**Changing Dynamics Within the United States**

The United States is facing its own challenges in evolving innovation policy on the other side of the Pacific. US technological dominance and accompanying economic success were by no means independent of state intervention, instead driven by a state which "proactively creates strategy around a new high growth area before the potential is understood by the business communi-

ty." A symbiotic relationship exists between the state and private industry in this American system where the state funds fundamental basic research that companies use to build products and realize profit, profit which is then taxed to fund additional basic research for a cycle of innovation. With the growing social and political capital of Silicon Valley, this mutually beneficial relationship is becoming less of a consensus as there is a "lack of understanding... of state-led growth-inducing investments" with too much blind faith in the capabilities of private industry relegating the state to simply being "a menace in the economy." This virtuous relationship between the state and industry in creating the preconditions for innovation is common between China and the United States, but in the former this collaboration is a core value while the latter is increasingly losing sight of the state's essential role in partnering with industry actors.

American innovation has undergone significant structural changes as well. Though corporate labs were once a key site for basic research, the predominant source of new ideas and products has shifted to universities since the 1980s. Again the story is not so much that universities are unnecessary or ineffective, but that there is an overreliance on university research which "tends to be curiosity driven rather than mission-focused" and difficult to translate into "productivity-enhancing technical progress." As investors declare that R&D should be "no more than a hobby" and stock markets likely undervalue the positive externalities research labs produce, America’s large corporations have cut down on research and development activities. Though American innovation continues to produce the world’s largest companies by market capitalization and lead in university research in basic science, the result is a loss of US leadership in manufacturing, applied research, and “downstream process innovation.”

**Evaluating China’s Telecommunications Advantage**

The current global race to deploy fifth generation telecommunications networks (5G) is one of the most recognizable issues in the technological race between China and the United States. A key emerging technology in the fourth industrial revolution, the first mover in this technology will dominate both standard-setting and the global supply chain. In 5G, China appears to be in the lead, not the United States. It is projected that China will have installed nearly 690,000 5G base sta-
tions by the end of 2020 compared to only 50,000 in the United States. China also has more 5G subscribers per capita, more 5G smartphones for sale, and cheaper 5G smartphones on the market.²⁷ If progress is defined by network development, China certainly has the lead.²⁸ State involvement and the unique attributes of Chinese-style innovation must be given at least some credit in this development, as “the heavy hand of Beijing” sets ambitious targets for its domestic companies Huawei and ZTE, which have been given most of the development work, leading to a “more uniform version of 5G... with more consistent speeds” compared to the United States.²⁹

Much of the public narrative is quick to point out how “U.S. government leaders and the private sector have been slowed by local and federal bureaucracies, restrictive and outdated regulations, and scarcity of available commercial spectrum”³⁰, though the jury is still out when considering other metrics for leadership in 5G deployment. When counting “commercial service in any form”,³¹ the United States is in front of China with AT&T and Verizon beginning to roll out 5G services in 2018 while Chinese operators did not plan on selling 5G services until 2020. China’s extensive network is also slower than several countries, and phones frequently ping-pong between 4G and 5G networks.³² China will likely maintain its lead in certain segments of the value chain while the United States continues to be the primary developer of novel software and applications enabled by this technology.

Our current understanding of US challenges in innovation and deindustrialization along with the appropriate policy solutions are too “thin on the ground”, ending at either the vague solution of education or “tax cuts... as the cure-all for whatever is ailing America.”³⁶ To win in this arena of great power competition, policymakers in the United States must renew the state’s historical commitment to directing the “broad direction [of innovation]... aimed at basic research and the enhancement of manufacturing capacity rather than at final product development.”³⁷ The state can create “research consortia that bring together private firms to reduce duplication and increase economies of scale by collaborating on early-stage research.”³⁸ It is not limited to “picking winners in industrial competition” and can serve as an intermediary balancing the capabilities of industry and academia, improving “the environment for innovators by offering risk capital, removing regulatory barriers, and providing resources for small businesses that lack the skills to turn ideas into new products or services.”³⁹ The United States does not have to choose within a false dichotomy of state direction or public innovation; the two go hand in hand. Whichever global power, China or America, pursues this synthesis and strikes the most effective balance will likely emerge on top.

Prospets for the Future
America faces an unprecedented challenge in preserving its technological leadership as China is a “different type of challenger that is able to mobilize economic capacities that rival the United States.”³³ For better or for worse, its authoritarian state is extremely capable in directing industry activity and clearing regulatory hurdles not just in 5G, but in quantum computing, digital currencies, and other emerging technologies. Current initiatives to slow Chinese technology transfer are a good first step, but will not be as effective as “outpacing, outinnovating, and outcompeting China.”³⁴ For now, China and the United States appear to be leading in their respective innovative strengths, and Chinese-style innovation continues to face significant structural and domestic pressures. It is not guaranteed that this balance will hold as the United States faces challenges of its own. Innovation policy must not be overlooked as technological development is a “source of strength for continuous development of human society and is an important scale for measuring the contribution of a country to the world.”³⁵
You have been living in the United States for the past five years, you would be forgiven for not knowing about the Chinese social networking and lifestyle platform WeChat. The app has become a household name in China but only has a small userbase in the United States. That is until August 6, 2020, when President Trump signed an executive order banning the application’s continued usage in the United States. However, a federal injunction halted the order from taking effect in late September on the grounds of free speech protection for communication on WeChat’s social media platform. With the ban at the mercy of the US judiciary, there is now speculation about the US government’s motivations for its policy.

WeChat is one of China’s largest internet platforms, third only to other technology giants Baidu and Alibaba. At its start in 2011, WeChat had almost fifty million monthly active users; in 2018, that number increased to over one billion. Furthermore, WeChat’s services have expanded beyond its originally intended instant messaging functions to become an all-encompassing social media network and lifestyle platform. The WeChat Pay digital payment system allows users to complete real-world transactions using only their smartphones and a scannable QR code, bypassing the need for traditional methods of transaction. New third-party applications allow users to make travel reservations, order takeout, hail a taxi, read the news, and even engage with government services using only their WeChat accounts. It is now estimated that an average user will engage with WeChat and its related services up to eleven separate times per day. As a result, WeChat’s growth and expanded functionality creates a heavily integrated digital and physical ecosystem that is almost inescapable in Chinese life.

However, WeChat is struggling to gain popularity outside of China. Despite a heavy advertising campaign, WeChat has yet to break the strong domestic market control held by American social media monolith Facebook and its own messaging applications, Messenger and WhatsApp. As a result, WeChat’s international expansion in the United States has been mainly targeted towards two groups, Chinese tourists and the Chinese American population. Some merchants in heavily trafficked travel destinations have adopted the WeChat Pay system for convenient transactions with Chinese tourists, but WeChat has yet to make its payment functionality available to US users. In the Chinese American community, WeChat is primarily used as a means of communicating with friends and family from across the Pacific. Because of China’s Great Firewall, WeChat remains one of the few social media applications available for cross communication between the United States and China. However, the interconnectedness between US and Chinese users in WeChat’s US operations introduces a concern regarding the app’s handling of sensitive information.

The US government’s crackdown on WeChat’s domestic usage is born out of both a substantive concern for its own national security as well as strategic positioning to be a leader in emerging 5G telecommunication regulation. In the following sections, I evaluate the substantive and strategic elements of three primary motivations for the WeChat ban, including: digital privacy, censorship, and data management standards. Some motivations,
like digital privacy and censorship, are primarily found-
ed on a substantive concern for the protection of US
WeChat users, while other motivations like standard
setting are mostly based on more strategic concerns
in the greater US-China competitive landscape. I con-
clude the article with implications for future trends in
US-Chinese competition.

**Digital Privacy on WeChat**

One of the foremost motivations driving the proposed
WeChat ban in the United States was the concern for
potential data privacy violations and the private inform-
ation collected on the app. China does not have a
well-established cybersecurity regime nor does it have
a history of protecting the private data of its citizens. On an international scale, this lack of strong institu-
tional privacy commitments and weak regulatory land-
scape raises concerns about the safety of Chinese data
management practices when handling cross-border
data flows.

Most of these concerns are based on China’s prioritiza-
tion of its data localization policy as a means of cyber-
security and national security protection. This policy
was codified in the National People’s Congress’ 2017 Cy-
bersecurity Law which stipulates that “critical informa-
tion operators... store [data] within mainland China.”

The policy creates a gatekeeping effect which requires
international firms to comply with Chinese data man-
dates in order to access its domestic markets. To main-
tain their presence in Chinese markets, US technology
companies like Apple, LinkedIn, and Airbnb have all
complied with Chinese regulations and now store Chi-
inese data on servers located within China’s national
borders. As a result, this policy shifts the ownership of
private data from the firm or the individual to the Chi-
nese government.

Although China’s internet data industry increased by
32.4% with the construction of over 437 new data cen-
ters after 2017, in practice data localization introduc-
es new heightened security risks in the data collection
process. These policies require data to be stored in a
physical location on a smaller number of servers within
a country’s borders, often under a single security system. Information stored in this manner is less dis-
persed and more susceptible to cyberattacks at its phys-
ical terminals. Personal data from users of Chinese
internet applications may be subject to less secure stor-
age mechanisms and vulnerable to bad faith actors as a
result of China’s insistence on pursuing a policy of data
localization. Thus, the US government has a substantial
concern regarding the safety of its domestic WeChat us-
ers’ data that may be localized on Chinese servers.

Furthermore, the Cybersecurity Law continues the Chi-
nese government’s trend of increasing its involvement
in its emerging telecommunications industry. China’s
2017 National Intelligence Law requires Chinese indi-
viduals and firms to “cooperate with state intelligence
work according to law,” further complicating the relation-
ship between firms and the state in China. As a re-
sult, data localization policies in China have increased
the levels of scrutiny for Chinese technology firms oper-
ing overseas and in America. Data collected by these
firms is stored on Chinese servers and now can be easily
intercepted by the Chinese government. For WeChat
users, this includes personal identification, “electron-
ic network activity,” and “thermal, olfactory, or similar
information,” according to the California Privacy Act
addendum of WeChat’s privacy policy. These identifi-
pers pose both a privacy risk to the individual user and a
potential national security risk to the US government.

However, at least in the case of WeChat, data localiza-
tion and privacy concerns seem to be offset through two
different WeChat operating systems—one for Chinese
citizens and one specifically designed for internation-
al users. Users are differentiated by their phone num-
bers, subject to two different privacy policies, and given
two different user interfaces, Weixin (微信) for Chinese
accounts and WeChat for foreign accounts. Data flows
from international users are routed through servers in
Canada or Hong Kong while domestic information is
stored within China’s own data systems. Still, WeChat’s
privacy policy does not outline protocols for informa-
flow between Chinese and international users—
which accounts for the majority of WeChat’s usage in
America—nor the data transferred using WeChat’s dig-
ital payment services. Furthermore, the Weixin operat-
ing system remains in place for users that register with
a Chinese phone number at any time throughout their
account duration. This means that data from Chinese
registered users using the app in the United States will
still be routed to Chinese servers.

Digital privacy is a primarily substantive concern for
the US ban on WeChat because of China’s data localiza-
For the US government, information censorship poses a potential threat that information received by a proportion of its population may be prefiltered and screened by a sovereign foreign entity. The majority of WeChat’s user base in the United States comes from the Chinese American community, many of whom are recent immigrants or first-generation citizens with strong ties to friends and family in Mainland China. Recent immigrants still using accounts tied to Chinese phone numbers or engaging in regular communication in China will still be subject to Weixin’s censorship mechanisms.

Thus, the potential censorship by a sovereign foreign entity is another primarily substantive concern behind the US WeChat ban. Furthermore, the treatment of information and data, as discussed in the previous section, represents a point of divergence in data management norms between the United States and China. This divergence also catalyzes some more strategic motivations behind the US ban.

**International Data Standards**

Finally, the WeChat ban is also the US government’s attempt to contain the spread of Chinese internet practices and, in the absence of any overarching standardization regimes or consensus, establish its own set of norms governing the handling of cross-border data flows. The US Department of State launched its “Clean Network program” in tandem with the WeChat ban on August 5, 2020, signaling its commitment to protect privacy, cybersecurity, and the free flow of cross-border data in the wake of emerging 5G communications technologies. This program draws on the security concerns outlined above but is most clearly understood as a strategic method of gaining support for US data management practices in the international community.

In its official announcement, the US government clearly designates the Chinese Communist Party as a “malign” actor and targets its policies against the proliferation of Chinese firms in the US market. The program was developed alongside the EU’s 5G Clean Toolbox and has already gained international support from a majority of EU, NATO, and OPEC states.

This language draws comparisons to strategic Cold War era concerns about Soviet state surveillance mechanisms and US containment policies. Now, in the face of China’s Cybersecurity and National Intelligence Acts, the United States is building a coalition of similarly aligned states to combat China’s rising dominance in the 5G industry and the perceived
threat of Chinese interference in internet communications.

In response to the US Clean Network, Chinese foreign minister Wang Yi announced the development of China’s own “Global Initiative on Data Security.” The policy is China’s answer to perceived aggression from the United States and an attempt to assert its own alternative view for global cybersecurity regulation. Central to China’s initiative is the recognition of each country’s sovereignty over their own data management. It is born out of similar strategic concerns to the US program, highlighting the ideological and competitive nature of legitimate data management standards development.

However, China will face challenges in the implementation of its Global Initiative due to its lack of prior cybersecurity commitments and the growing fears among the international community of China’s techno-nationalist internet regime. Currently, China is not party to any international cybersecurity agreements, and the country has had a spotty record protecting the privacy of cross-border data transferred within its national borders. China declined to join APEC’s Cross Border Privacy Rules in 2011, citing concerns that US insistence on open cross-border data flows would threaten China’s national security. While China has negotiated its ascension into the Regional Comprehensive Economic Partnership (RCEP) with other states in the Asia-Pacific region, the parties have hit a roadblock with regard to the issue of data sovereignty. This highlights the degree of contention within the international community over China’s data localization policies and has implications for China’s goals of cementing its preferred model of data standards as a global norm.

Furthermore, the complications in China’s international negotiations also highlight the strategic first mover advantages the United States gained after announcement of its Clean Network program. The Clean Network is its attempt to capitalize on the lack of international consensus and to emerge as a leader in the field of global data management standards. The joint declaration of the program with the WeChat ban signals the US commitment to the ideology of free cross-border data flows. It uses the substantial concerns of digital privacy and censorship raised through WeChat’s operations as a bargaining piece to gain support from other states.

Conclusion

In conclusion, the proposed WeChat ban in the United States is motivated by a combination of substantive security concerns and strategic competitive advantages. WeChat’s privacy policies and China’s related practice of data localization create vulnerabilities for US users’ digital privacy and allows content moderation on the WeChat platform. These are the underlying substantial concerns addressed in the US ban. However, the ban is also situated in a larger context of 5G telecommunications standards and a part of the United States’ larger strategic motivations to build international consensus against China’s current data management practices.

Analytically organizing these motivations into substantial versus strategic concerns provides a useful framework to understand the future competitive relationship between the United States and China, particularly in the emerging technological sector. The observed interstate competition is likely to produce a bifurcation in the international telecommunications market due to both real substantive security concerns and strategic positioning in the international community. Thus, the future of this market will likely be mediated by the broader characteristics of the US-China relationship. This has direct implications for firm strategies; firms may either hedge themselves firmly on one side or try to avoid conflict by following the trend of bifurcation witnessed with WeChat’s divided privacy policy. However, to successfully establish this middle ground route, firms should be more open in their operations to avoid triggering another state’s substantive security concerns.
In 2019, the Hong Kong government introduced the Fugitive Offenders and Mutual Legal Assistance in Criminal Matters Legislation that would allow the transfer of fugitives from Hong Kong to Mainland China. Opponents of the government quickly criticized the legislation, arguing that this extradition bill would open up the city to the influence of Mainland Chinese law, putting political fugitives in Hong Kong at risk. Opposition towards the bill quickly ballooned, with demonstration and march attendance estimates in the millions. As time passed, the protests morphed beyond resistance to the singular piece of legislation and into broader pushback against increasing encroachment on the city’s autonomy by Mainland China perceived in issues surrounding police brutality and universal suffrage in elections. These protests are still ongoing and continue the larger trend of protests in the post-1997 handover era that includes the 2003 National Security Bill opposition protests, the 2012 anti-national education protest, and 2014 Occupy Central.

Like each wave of protests before it, the current movement has developed a new set of tactics and symbols. This time, protestors are linking politics and daily life in a manner that has moved beyond mere calls for political autonomy and into broader assertions of Hong Kong identity. In response to the extradition bill, pro-democracy activists fostered the Yellow Economic Circle (YEC) in an attempt to create their own economic community inclusive of stores that agree with the protest principles. Specifically, small to medium size enterprises from a range of industries and sectors have informally banded together to make up the YEC. A “yellow” label signals that the establishment’s owners share democratic values and stand with protestors, while a “blue” label signals that the establishment’s owners stand with the police and are more pro-Beijing. While protestors have created this grassroots initiative to sustain local businesses, the relationship is in fact a two-way street. For example, certain yellow stores were known to provide free meals for student protestors at the height of the protest movement and for participating in city-wide general strikes.

This symbiotic relationship speaks directly to the city’s political economy. An oligopoly of tycoons dominates Hong Kong’s market through large conglomerates that develop and sell almost all consumer goods from super-
market products to real estate. These tycoons by and large align themselves with the Mainland Chinese government or succumb to its influence. For instance, the chief executive of Hong Kong-based Cathay Pacific was forced to resign due to Chinese pressure after some of the airline’s staff were found to have participated in the demonstrations against the extradition bill. In many pro-democracy protestors’ minds, patronizing chain stores that are largely owned by tycoon families is the same as supporting the city’s pro-establishment wing, which would run counter to their political ideals. Such was the case for restaurant chain Maxim’s, which owns popular franchises like Starbucks and Genki Sushi. The daughter of the company’s co-founder, Annie Wu, denounced the protests, leading protestors to both boycott and in some cases, vandalize, the restaurants under Maxim’s umbrella. But the YEC was not designed to disrupt and out-compete conglomerates and multinational companies as much as it was to assert the idea of self-sufficiency.

In the context of the YEC, self-sufficiency is a rejection of increased Mainlandization and by extension conglomerates that are seen as pro-establishment or pro-Beijing. Over the past years, Mainland China has been attempting to consolidate its power base, especially in regard to Hong Kong. In 2015, Hong Kong bookstore owners who sold political books deemed sensitive in the Mainland were kidnapped and detained in Guangdong, right across the border from Hong Kong. In 2018, a high-speed rail link connecting Hong Kong and the rest of Mainland China was launched. Chinese authorities were able to operate at a joint checkpoint at the station, marking the first time Chinese criminal law was enforced in Hong Kong territory. Amidst these developments, the YEC and the protest movement behind it are largely a response to what protestors see as increased encroachment on the city’s promised semi-autonomy by an increasingly aggressive Mainland China. That semi-autonomy is fundamental to Hong Kong’s position as a cosmopolitan, global financial center. Viewed through this lens, protestors’ rejection of larger companies in the name of self-sufficiency does not signify a broader rejection of the larger global economy; it is instead an embrace of Hong Kong’s global identity and a push to preserve the nature of the city to which that identity is inherently linked through de-mainlandization and protection of the rule of law.

Against this backdrop, the YEC was widely popular in its early stages. Apps like Whatsgap (not to be confused with the messaging app Whatsapp) and Instagram accounts like HKShoplist were set up to identify the color, and hence political leaning, of various establishments. It was common to see pro-democracy leaning residents posting receipts of their purchases at yellow stores. The concept had wide buy-in from across industries too, with participating stores ranging from restaurants to fitness studios. But such early success quickly drew the state’s ire. In December 2019, the Hong Kong Commerce and Economic Development Secretary, Edward Yau, criticized the YEC, saying that he saw no way for it to survive and stating that no economy can decide who it wants to include or exclude. Shortly thereafter, Google gave into state pressure and removed Whatsgap from the Play Store in January 2020, citing a policy against apps that “capitalise on serious ongoing conflicts or tragedies.” For its part, the Beijing representative office in Hong Kong slammed the YEC for creating social rifts and disrupting market order in response to protest activity over the course of May 2020’s International Labor Day holiday. During this Golden Week period, when Mainland tourists typically come to Hong Kong to buy consumer goods, Hong Kong residents poured into yellow establishments, netting the 2,305 participating stores an estimated HK$100 million (approximately US$12.9 million). Beijing’s concerns over the protest activity ultimately translated into its passage of the Hong Kong National Security Law in June 2020. The law prohibits what Mainland China describes as secession, subversion, terrorism, and collusion with foreign forces. Accordingly, the Hong Kong government also stated that popular protest slogans that were featured prominently in many yellow stores were illegal. Due to the law’s purposefully vague language, many YEC store owners were left unaware of what was allowed or was now illegal, forcing them to take extra precautions. Many YEC stores took down their collections of post-it notes with protest messages left by previous customers commonly referred to as “Lennon Walls.” In addition, online platforms to identify store colors like “Eat With You” were deactivated. In the shadow of the global pandemic, the Hong Kong government has also been accused by some for selectively enforcing COVID-19 social distancing policies on yellow stores in an attempt to sabotage the YEC.
Indeed, the passage of the National Security Law and the enforcement of social distancing policies are natural inflection points in the YEC narrative, where the definition of self-sufficiency has morphed from simple calls for de-mainlandization to a more active attempt at identity articulation. Prior to the National Security Law, protestors were by and large able to protest on the streets and chant various slogans that advocated Hong Kong independence. To be sure, doing so came with consequences. From 9 June 2019 up until 8 September 2020, a total of 10,016 people were arrested, with 22% of those arrested being charged. However, being arrested and charged for violating the newly passed-National Security Law comes at a much higher cost. Breaking the law can incur maximum penalties of life imprisonment, with the possibility of offenders being charged under the Mainland Chinese criminal justice system and Mainland law. This law does not just apply to offenses committed in Hong Kong either. The wording of the law asserts jurisdiction over everyone, regardless of nationality and whether offenders have ever been to Hong Kong. Thus, the implementation of the law ensured that the frequency of overt protest, both in Hong Kong and abroad, was severely curbed. Unsurprisingly, large companies have also thrown their weight behind the law. Upon the introduction of the National Security Law in 2020, HSBC bowed to pressure and signed a petition supporting the legislation. Meanwhile, the Hong Kong government has used implementation of social distancing rules under the rationale of curbing COVID-19 to stop protests from occurring. For instance, 20 protestors were given penalties for defying social-distancing regulations on China’s National Day (1 October 2020). In tandem, these two inflection points have effectively shut down opportunities for protestors to engage in overt political demonstrations, thereby forcing them to tactically innovate.

The YEC remains well-suited for this enterprise, with its primary tactical innovation coming through the creation of new spaces for dissent that integrate politics with daily life. Banded together only through informal means without any leaders or official structure, the YEC is still a slippery figure for the government to attack as the ostensibly mundane decisions of protestors reflect more salient forms of protest identity. Yet the implications of patronizing a yellow store are no longer the same as they were before the inflection points. In the past, pro-democracy protestors could identify with each other by participating in large-scale protests and writing post-it notes on yellow store walls. Deprived of an easy way to mark their participation in a group due to the banning of both overt protest and protest slogans that demonstrate their displeasure with perceived mainlandization of their home, protestors have now been forced to articulate what being part of the pro-democracy protest actually entails through their daily life, and by extension, their patronage of yellow stores.

“Protestors have now been forced to articulate what being part of the pro-democracy protest actually entails through their daily life, and by extension, their patronage of yellow stores... Though protestors are united by what they are not (i.e. not part of Mainland China), they lack any positive form for what they are. As overt protests have been shut down, the YEC has emerged as a conduit for identity construction.”

Such a framework for understanding consumer choices is not entirely new. Rachel Kranton has advanced the concept of Identity Economics where she argues that economic outcomes can be analyzed by looking at people’s identities, not monetary incentives, as the prima-
ry motivation for choice. Kranton further posits that social movements transform categories and identities, reshaping consumer norms. Similarly, Caroline Heldman has shown how protest politics in the marketplace have been successful throughout American history. By marrying personal identity with consumption choices, she argues that women, black Americans, and the LGBTQ community amongst others were able to enfranchise themselves in an environment that at the time was highly oppressive.

Yet while Kranton and Heldman provide a clear roadmap for how identity can be weaponized in the marketplace as a form of protest, neither speaks to how this identity is cultivated when no specific identity is readily available to be co-opted. Such is the case for Hong Kong pro-democracy activists. Though protestors are united by what they are not (i.e. not part of Mainland China), they lack any positive form for what they are. As overt protests have been shut down, the YEC has emerged as a conduit for identity construction.

Signs of identity articulation can already be seen. In interviews with yellow store owners, some have questioned what a Hong Kong identity looks like overseas. “There are many China towns around the world, so can there be a Hong Kong town in the future?” one shop owner asks. Other shop owners have begun talking about holding a trade exhibition at the Taiwan Chamber of Commerce. There has also been an uptick in YEC stores selling milk tea, a nod to the Milk Tea Alliance. The Milk Tea Alliance is an online movement of pro-democracy solidarity amongst protestors in Hong Kong, Thailand, and Taiwan. In this example, a shared cultural drink amongst the three regions is highlighted as a way to call out similarities amongst distinct cultures. While difficult to quantify and gauge, diffusing politics into daily life practices suggests that the YEC is allowing protestors to not only identify themselves by the anti-Mainlandization groups that they are in but also focus their imaginations on the possibilities of what a shared community might look like and how it will affect the way they conduct themselves in daily life.

What does this all mean though? A typical narrative used to describe the 2019-2020 protests has been that pro-democracy protestors simply want a return to the “One Country, Two Systems,” framework that promised Hong Kong a high degree of autonomy, complete with its own government and legal system. The increased role that the YEC is playing challenges that storyline. Calls for Hong Kong independence are not a completely new phenomenon. However, increased state repression and effective bans on large-scale protests have led to new protest tactics, which in turn has forced Hong Kong people to reflect on what they stand for, both in overtly political realms and more perfunctory aspects of their life. If the recent phenomenon of the YEC and the subsequent rise of the Milk Tea Alliance are any indicator, more protestors are seeing themselves as a distinct entity from their Mainland Chinese counterparts, capable of, and legitimately engaging with, other regions that see themselves as autonomous political units.

A key part of Mainland China’s quest for power consolidation in the age of global superpower competition has been focused on Hong Kong. However, the recent protests viewed through the Yellow Economic Circle suggests that the tools used by the Hong Kong government, and by extension, the Mainland Chinese government, may have actually bred a new wave of contestation through the politicization of mundane areas of daily life. In the face of heightened state repression under the banner of Mainland China’s power consolidation, protest resistance has risen such that nostalgic calls for a return to the past have been scrapped in favor of a re-imagination of the vast possibilities that might become.
Economic shocks are not new to Japan. The country has experienced an unfortunate number of economic crises, including its real estate crisis in the early 1990s, the Asian Financial Crisis in 1997, the global financial crisis in 2008, and a fatal earthquake and tsunami in March 2011 that battered Japan’s economy. Each time, Japan’s government was able to mitigate the damage through heavy government spending and stimulus, but doing so has incurred a national debt that is over 245 percent of its GDP.

With the recent resignation of Prime Minister Shinzo Abe, a new administration is left to deal with yet another economic shock: the global coronavirus pandemic. Yoshihide Suga, the newly elected Prime Minister of Japan, has promised to generally carry over economic policies from the previous administration and continue the government’s history of stimulus. However, the situation may not be as simple as transplanting familiar policies onto the latest challenge. With the lingering effects of the coronavirus threatening to exacerbate underlying contradictions in recent economic policy, the nature that structural reforms should take as Japan rebuilds itself assume an even greater importance. For these reasons, Suga is in a position to go beyond a wholesale continuation of the past.

In struggling to fully reconcile classic economic tradeoffs, “Abenomics” (as Former Prime Minister Abe’s economic policies are popularly known) has produced mixed results. First introduced in 2013 in order to reverse deflationary pressures dating back to the real estate shock and stock market bubble in the early 1990s, Abenomics is noteworthy for its scale and duration. Fiscal stimulus was first enacted in 2013 through a 20.2 trillion yen (USD 210 billion) spending package comprising mostly of government spending. In tandem, Abe implemented an array of monetary easing policies such as an asset purchase program and expanded liquidity through quantitative easing. The Bank of Japan (BOJ) purchased assets on a scale unmatched by any other country in the 2010s. By 2018, the value of assets held by the BOJ exceeded 70 percent of national GDP; to provide a point of comparison, neither the US Federal Reserve nor the European Central Bank held assets that surpassed 25 percent of their respective economy’s GDP. Together, these monetary policies aimed at incentivizing economic activity have pushed interest rates below zero. But while Abenomics enjoyed support from a large segment of Japan’s population and brought the economy out of recession, the country’s inflation rate remained below its target after years of heavy stimulus. Abe attempted to cope with the staggering levels of government debt resulting from those years of heavy stimulus by increasing consumer taxes in the second half of 2019. Not only has this measure attenuated the effects of fiscal expansion, but its implementation disastrously coincided with the coronavirus-induced recession beginning in 2020. Meanwhile, it remains to be seen whether the negative interest rates resulting from monetary easing will have their intended effect of encouraging spending. As a relatively untested monetary tool, critics have asserted that it will only lead to the hoarding of cash and add to deflationary pressures.

The arrival, and the extended effects, of the coronavirus threaten to exacerbate the Sisyphean struggle that seems to have emerged under Abenomics. Indeed, the virus’s persistent drag on domestic demand has caused consumer spending and investment to plummet. A combination of people’s incomes shrinking, low future expectations, and consumption dramatically decreasing has triggered Japan’s deepest ever recession. This situation is by no means unique to Japan. However, when this downwards cycle is imposed on an already depressed economy, the effects are far more severe. Japan’s real GDP between April and June of 2020 decreased 41 trillion yen from the previous quarter. Low consumer spending coupled with an inevitable increase in government spending to fund healthcare and medical facilities is proving to be a significant problem for the economy and is sending debt far beyond a sustainable level. Years of efforts to spur consumer spending and investment have been undermined by lockdown measures and instincts to save during a global recession, so a wholesale continuation of the past may...
not be feasible. While many anticipate that Suga will resort to policies redolent of his predecessor in revitalizing the economy, the inherent countercurrents within Abenomics offer him a reason to test out other mechanisms while forging his own new legacy. All eyes are on Suga and his administration to revive the economy with focus on a new and emerging “Suganomics”.

In this regard, a promising springboard may be the other major tenant of Abenomics: structural reform. Abe sought to address deeply rooted problems in the Japanese economy like the shrinking labor market and employment system with new labor regulations, a set of reform policies aimed at curtailing business regulations, corporate tax cuts, and initiatives to increase workplace diversity. For example, Abe pushed legislation that requires corporations to appoint more women to higher positions, arguing that raising women’s wages and status in the labor market would also increase fertility rates (similar to the cases of Sweden and Denmark that have both high female employment and fertility). Abe also promised to spend 2 trillion yen (USD 17.6 billion) on education and childcare in order to relieve the financial burden of parenting and raise birthrates. The success of these reforms was fairly limited, however, as Abe “procrastinated on structural reform for fear of losing political support.” In many cases, these reforms were also not bold enough to change established labor market practices and culture. Although female employment rates increased during his tenure—which included the goal of raising female employment from 69 to 73 percent by 2020—many Japanese women still talk about rampant discrimination in the workplace that prevents them from obtaining higher-paying jobs. Including more women into the corporate world by shattering conservative norms would access untapped potential for increasing Japan’s productivity and innovation. Similarly, remedying Japan’s declining birth rate is critical to securing its future competitiveness. The country’s working age population contracted over 6 percent in the past decade, and Japan could lose more than a third of its population over the next 50 years. Frankly, these kinds of social and demographic issues are time-sensitive and require deeper reform.

Therefore, as leaders all over the world grapple with how to “build back better” and the World Economic Forum urges “The Great Reset” following the coronavirus pandemic, Suga has an opportunity to bring structural reform to the forefront of his policy initiatives. Even if fiscal and monetary policies are largely carried over from Abe’s administration, the broad scope of “structural reform” affords considerable policy discretion. The direction and extent of structural reforms is up to Suga to decide, generating new expectations for the new administration.

While Suga himself has indicated that there will be a high degree of continuity, the underlying dilemmas that have emerged from his predecessor’s aggressive expansionary fiscal and monetary policies have been amplified by a pandemic economy that features increased government spending and reduced consumption. There are quite a few decisions that Suga will have to make independently rather than merely repeat his predecessor’s footsteps. The transition to a post-pandemic world is an appropriate time to enact structural reorienting in necessary parts of Japan’s economy, and the resulting environment may push Suga to pursue the enterprise with greater depth and breadth. Although an administration change amidst a pandemic may be unsettling in the short run, Suga may in fact be able to take advantage of the strategic timing and resolve the unanswered questions left from Abe’s administration.
ENDNOTES

Vinod K. Aggarwal and Andrew W. Reddie, pp. 1-5


Mark Cohen and Philip Rogers, pp. 6-10


[4] According to the US Census Bureau Data, US exports of telecom equipment to China were approximately USD 230 million for the month in June 2017 but only USD 130 million in October in 2019. The data also indicate that US imports of telecom equipment from China peaked at approximately USD 12 billion in November 2017 but were only USD 9 billion in October 2019.


[6] Each of the reporting offices use different industrial classification codes: the USPTO report uses North American Industrial Classification Codes (NAICS); the EUIPO uses Nomenclature Statistique des Activités Économiques Dans La Communauté Européenne (NACE); and the CNBS uses China’s National Economic Industrial Codes. There is inevitably a degree of information lost in translation when determining the correspondence between SITC codes and industrial categories. To minimize the amount of translation to the greatest possible extent, the NACE codes reported by the EUIPO were converted to their corresponding International Standard Industrial Classification (ISIC) code using the EU’s concordance table between NACE Revision 2 and ISIC Revision 4 (see https://ec.europa.eu/eurostat/ramon/releases/index.cfm?TargetUrl=LST_LIN&StrNomRelCode=NACE%20REV%202-%20ISIC%20REV%204&StrLanguageCode=EN). We likewise converted the Chinese National Economic Industrial Codes to the corresponding ISIC codes using Appendix C of the PRC’s National Standards Document, GB/T 4754-2017 (see https://www.stats.gov.cn/tjsj/tzgb/201709/P020180124532249410457.pdf). We are confident in this decision, as both the NACE and Chinese Industrial Category codes are based on the ISIC system. To find the correspondence between the five-digit SITC codes, The Product Concordance software developed by Steven Liao, In Song Kim, Saymi Miyano, and Hao Zhang facilitated the conversion of SITC codes to NAICS and ISIC codes (see https://CRAN.R-project.org/package-concordance and https://rdrr.io/github/insongkim/concordance/f/README.md).


Vinod K. Aggarwal and Tim Marple, pp. 11-14


[4] We use the term ‘digital currency’ to refer to any digital instrument which performs the core functions of money. Cryptocurrencies, like Bitcoin, are a special case of decentralized digital currency which relies on blockchain technology, whereas sovereign digital currencies have more diverse technical features.


[16] 2020 See the extensive discussion in this article on the elements within these broad factors.

Alex Kaplan, pp. 15-20


www.csis.org/analysis/chinese-mutilateralism-and-promise-green-belt-and-road>


[41] Ibid

[42] Ibid

[43] Ibid


[45] Ibid


[50] Ibid


Yuhan Zhang, pp. 21-24

January 2021.


Vincent Shan, pp. 25-27


[7] Ibid.


[10] Ibid.


[13] Ibid.

[14] Ibid.


[18] Ibid.

[19] Ibid.


[21] Ibid.


[23] Ibid.

[24] Ibid.

[25] Ibid.


[28] Ibid.

[29] Ibid.


[34] Ibid.
Gavin Zhao, pp. 28-31


[3] Ibid.

[4] Ibid.


[15] Li, Cheng Xin. 2020. Huangse jingjiquan 4 tian shou 1 yi zhonggianlan ban kuang hong re zhengyi (Yellow Economic Circle earns 100 million in four days, The Liaison Office’s relentless attack is becoming highly controversial). DW.COM. Available at <https://www.dw.com/zh/%E9%BB%84%E8%8E%88%E5%B7%B4%E6%B5%B7%E5%A7%94%E5%A4%9A%E6%94%BE6%4BA-%E4%B8%AD%E8%81%94%E5%8A%9E%7B%82%E8%BD%B9%E6%8B%94%E4%BA%89%E8%AE%AE%533332722/>. Accessed 3 November 2020.


[18] Ibid.


[20] Stand News. 2020. Fanxiuli yundong bei bu renshu po wan jiangkong lu jin 22% 687 ren bei kong baodong (Number of people arrested during Anti-Extradition Bill protests exceeds 10,000, prosecution rate of 22% and 687 people charged with rioting). Available at <https://www.thestandnews.com/politics/%E5%8F%8D%E4%BF%AE%E4%BE%8B%E9%88%B9%E8%8B%82%E6%8D%95%E9%84%B3%E9%BB%95%E8%89%B2%E7%A0%B4%E8%90%AC-%E6%AA%A2%E6%8E%A7%E7%8E%87%E5%83%85-22-687-%E4%BA%BA%E8%A2%AB%E6%8E%A7%E6%9A%B4%E5%8B%95/>. Accessed 3 November 2020.


[5] Ibid.


[13] Ibid.


[15] Ibid.