MARCH 2023

# Re-platformed Planet? Implications of the Rise and Spread of Chinese Platform Technologies

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> *Efforts should be made to build our country into a cyber power. . . . The countries that take command of the internet will win the world.*
> *– Chinese president Xi Jinping*[1]

China's efforts to dominate and potentially weaponize next-generation technologies are now garnering considerable attention. In October 2022, the Biden administration imposed wide-ranging **restrictions** on China's access to advanced chip technologies, and it is **considering** additional actions on quantum computing, artificial intelligence (AI), and biotechnologies. These measures come on top of broader Western efforts to **constrain** China's growing dominance in telecommunications and surveillance technologies, such as those provided by Huawei, ZTE, Hikvision, and others.

Beyond their implications for weapons systems, these efforts reflect concerns regarding whose technologies will underlie our increasingly digital societies and what those technologies might be used for. Only recently, however, have the risks posed by China's internet platforms—social media, e-commerce, and search applications such as TikTok, AliExpress, and WeChat—begun to be considered. Like their U.S. counterparts (such as Facebook, Google, and Amazon), Chinese platforms facilitate user

1. Zhou Xin, Coco Feng, and Minghe Hu, "With rising confidence, Xi Jinping wields the internet as a tool of empowerment and control, speeches reveal," *South China Morning Post*, March 18, 2021, https://www.scmp.com/tech/policy/article/3124107/rising-confidence-xi-jinping-wields-internet-tool-empowerment-and.

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interaction and offer community, connectivity, shopping, news, entertainment, search, and many other now indispensable functions for our internet-reliant digital societies.

With TikTok's explosive growth in the United States, there is a **surge in efforts** to ban the app at local, state, and federal levels. Much of the concern has focused on the data collection and surveillance possibilities the Chinese-owned app might provide to Beijing. While those risks are real, the influence capabilities of TikTok are, surprisingly, only just **gaining attention**. The focus on TikTok's influence appears overdue given what we know about the influence wielded by platforms such as **Facebook**, **Twitter**, **Google,** and **Amazon**. By many **measures**, TikTok is both more addictive and more influential than its U.S. counterparts.

Nations such as Russia, China, and Iran have understood the soft powers of platforms for some time. They have used Western platforms to influence not only U.S. and other Western elections, but also social discourse and civil society. Studies show that these efforts have had **measurable impacts** by shaping online and offline civic action, initiating and fanning conspiracy theories, and promoting divisions in society.

The growth and spread of Chinese platforms globally pose additional risks. In the West, these platforms are likely to be constrained through government regulation. But in much of the rest of the world, their proliferation offers China powerful influence capabilities that could be used (and in many cases already is being used) to undermine democratic institutions and processes, sow discord, and boost China's image and interests. Given modern societies' reliance on internet platforms, if Chinese platforms become preeminent in numerous countries around the world, they would contribute significantly to China's command of the internet—and with it a commensurate diminishment of U.S. business, power, and global influence.

## *Internet Platforms Are Nearly Everywhere*

The internet has become indispensable to modern life, and platforms offering social media, e-commerce, and search functions have become an indispensable, almost indistinguishable, part of the online experience. This is true throughout the world.

**Today**, nearly two-thirds (5.03 billion) of all people have access to the internet. For those not yet connected, significant **efforts** are under way around the world to bring **digital connectivity** to **underserved communities**. The vast majority of today's internet users also use **social media** (4.7 billion, or 59 percent of the global population); while global internet users grew by 4 percent in 2021, social media users grew by 10 percent, more than twice that pace. On average, internet users spend a remarkable **seven hours a day** online—two and a half of those on social media, or 15 percent of an individual's waking hours.

It is not just social media. More than three-quarters of internet users between the ages of 16 and 64 also report using **e-commerce** (buying something online) each month. E-commerce is revolutionizing retail and with it global **supply chains**, **logistics,** and **payment systems**. Nearly 20 percent of all **retail commerce** is now handled through e-commerce platforms, and that number is expected to rise to 24 percent by 2026. In dollar terms, that equates to an increase from $5.2 trillion to $8.1 trillion over four years.

The popularity of social media and e-commerce apps, however, is surpassed only by search engine apps such as Google. In fact, the majority of internet users (63 percent) **cite** "search" as the primary reason they go online. It is so valuable to individuals that, **according** to internet scholars Erik Brynjolfsson and

Avinash Collis, the median price you would have to pay an individual in the United States to forego their ability to use internet search for one year was $17,000—and this was before the Covid-19 pandemic.

Social media, e-commerce, and search are three of the key functions that are both essential to and synonymous with today's digital world. Platforms offering these features bring not only community, connection, and services, but have themselves become part of the essential infrastructure of the internet as portals to many other services and connections: advertising, maps, news, resources, websites, and much more.[2] Moreover, platform companies such as Amazon are now extending their capabilities beyond user experience and services to cloud computing and **content delivery networks (CDNs)**, essential infrastructure of our connected world.

## *Platforms Are Architected for Influence*

As these platforms have gained power in the global economy, their ability to shape what users experience has also come to light. Independent research, whistleblowers, and government investigations have detailed disturbing powers of influence that can be exercised through these platforms. For instance, a report by Avaaz **found** that four times more views were generated by the 10 most popular Facebook Covid-19 misinformation sites compared to content from the 10 leading international health institutions (e.g., the WHO and CDC). **Amazon** favors its products over those of third-party retailers selling on its platform, and its logistics business was found to have reshaped supply chains and logistics in the United States, largely to its favor. The European Union fined **Google** over 8 billion euros for favoring its products and services over those of independent companies using its platform. Perhaps more disturbing, multiple studies found that social media and **search platforms** have been able to **sway** voters in the **United States** and **abroad**.

Indeed, mounting evidence shows platforms have and exert powers of influence over social discourse, beliefs, and behaviors. They can affect elections and buying habits, undermine factual accounts, stir social discord, and shift political, social, and commercial behaviors. These powers partly arise out of the role platforms increasingly play as vital internet infrastructure and gateways, as well as key elements of social, commercial, governmental, and political interaction in modern societies.

These influence powers also arise out of the design characteristics of the platforms themselves. Social media, search, and e-commerce platforms are, in effect, designed as "architectures of influence." They are explicitly built to **engage users** and **keep them engaged** through a powerful mix of data on those users, stimulation of the brain chemical dopamine, and algorithms that continuously test and refine stimuli to enhance engagement. This is the "business logic" of platform technologies—through data, dopamine, and algorithms they keep users attracted and engaged. This generates advertising and transaction revenue while also amassing saleable data and helping refine algorithms.

This underlying business logic gives rise to other levers of influence in platform architecture, such as "structural attributes," the capabilities platforms possess to purposefully shape what users are seeing and experiencing. Platforms largely use three methods: surveillance, chokeholds, and moderation. **Surveillance** includes the ability to monitor users' activities, their purchases, who they friend,

2. In the United States, for example, Google is the primary search engine no matter the browser, and its maps are linked on many webpages. In addition, more than 70 percent of Americans reported getting their news from social media sites.

where they are located, what information they exchange, and the like. Because platforms control the algorithms and the user experience, they are also able to "choke off" or limit access to content (**chokeholds or chokepoints**). Some of these chokehold powers are desirable or even legally mandated, such as preventing access to violent videos or child pornography. But platforms can also impose their own chokeholds, restricting content they deem undesirable, such as political messaging with which they disagree. Beyond surveillance and chokeholds, platforms exercise active **moderation**, which entails purposeful efforts to steer users to particular content and away from other content—for example, by promoting one product over another or one kind of political messaging over another. Moderation is the ability to purposefully shape and refine what users see and experience. Thus, platforms' structural attributes, building on their business logic, give them considerable powers of influence over their users.

The final layer of influence architecture, called "leveraged affordances," refers to platforms' operation as open spaces that enable multiple users to exchange information with each other—and, in many cases, to seek to influence other users on the platform. Today, **internet influencers** drive billions of dollars in product sales, ignite trends, define fashions, and much more. But **other users**, leveraging the capabilities platforms offer to reach a broad audience, sow conspiracy theories, promote disinformation or misinformation, and seek to steer online and offline behavior—including voting and **insurrections**. These often involve the use of techniques such as **bots**, **fake users,** and **flooding**.

Figure 1 summarizes platforms' architectures of influence, highlighting their business logic, structural attributes, and leveraged affordances.

## Figure 1: Sources and Mechanics of Platform Influence

| Descriptive Name | Platform Characteristics | Brief Description |
|---|---|---|
| Business Logic | Data harvesting, dopamine production, computer engineering | Fundamental characteristics that power platform performance and success |
| Structural Attributes | Surveillance, chokepoints, moderation | Design characteristics that result in giving platforms powers to monitor and control access to content |
| Leveraged Affordances | Influencers, bots, disinformation | Tools that leverage platform design/ affordances and can be deployed by platform users |

Source: Author's analysis.

These design and performance characteristics of platforms create an environment where influence can be exercised by at least five different actors:

- the platforms themselves,
- users of the platform,
- the sovereign nation from which the platform originates,

- a host nation where the platform operates (outside its sovereign territory), and
- cyber intruders or hackers.

These actors may contest and counterbalance each other on the platform, but it is the platform business itself that becomes the final arbiter and thus is often the most critical actor—enabling, constraining, or exerting influence.

Figure 2: Actors Influencing Platforms

| Actors | | Description | Interests/motivations in exerting influence through platforms | Actions to exert influence through platform |
|---|---|---|---|---|
| A. | Platform Businesses | Companies that own/manage platforms and ecosystems | Primarily profits and growth; compliance with rules and regulations | Maintain and improve platform performance |
| B. | Platform Users/Exploiters | Actors within or outside platform community who leverage platform affordances | Social, political, and economic interests; criminal interests | Posting, sharing, bots, flooding, disinformation, misinformation |
| C. | Platform Sovereigns | States with "political authority over central nodes of platform businesses"[3] | Social, political, and economic interests (domestic and foreign) | Direction or guidance to platform businesses, rules, regulations, standards |
| D. | Platform Local (or Host) Sovereigns | States where platforms operate but are not headquartered (i.e., not platform sovereigns) | Social, political, and economic interests (domestic and foreign) | Direction or guidance to platform businesses, rules, regulations, standards |
| E. | Platform Cyber Intruders | Individuals, groups, or nation-states who break into platforms' digital architecture | Theft, incitement, influence, surveillance, obstruction | Manipulation of data or algorithms |

Source: Author's analysis.

## *Chinese Platforms and Influence*

Chinese platforms were built on the same principles as those of the West. Indeed, for a few years Western platforms competed in China with Chinese platforms. However, through a combination of regulatory constraints and intense competition, by 2010 most Western platforms were forced to or chose to exit the country.[4] Western capital, however, did not: Through a series of finance-raising efforts on international and domestic markets, Chinese platform companies such as Tencent and Alibaba **raised billions of dollars** to fund next-generation innovation and their own domestic and international expansion.

Today, China has some of world's leading social media, e-commerce, and search platforms, which offer immersive and deeply compelling digital ecosystems that have brought products, services,

3. This is adopted from Farrell and Newman, who define powers over network operations and nodes.

4. In the wake of riots in China's Xinjiang province in 2009, Beijing blocked and then banned Facebook and Twitter, effectively ending their operations in China. Google, though significantly constrained, closed operations in 2010 due to onerous censorship requests from the government and after a cyberattack, attributed to the Chinese government, revealed that the emails of human rights activists on its platform had been hacked. EBay proved unable to compete against locally connected Chinese firms.

connectivity, and financial access to hundreds of millions of Chinese citizens—not to mention users abroad. In fact, Chinese platforms have been at the forefront of digital innovation, bringing into the mainstream addictive short-video formats (such as TikTok), digital payment and credit scoring systems, QR codes, influencer-driven selling, community buying programs, and much more. For a number of years, China's digital **innovation** has been regarded by **industry observers** as well **ahead** of that of the United States.

Figure 3: Statistics on Select Chinese Platforms (as of January 16, 2023)

| Platform | Services | Global Presence* | Global Users | Market Cap |
|---|---|---|---|---|
| Alibaba Group | E-commerce, cloud, CDN, Ant Financial, music, gaming, streaming | 190 territories | E-commerce alone **903 million in China**; **305 million outside China** | **$310 billion** |
| Tencent | World's largest gaming company, WeChat, e-commerce, cloud, CDN, Tencent Pay, music, streaming | 100 territories | WeChat alone **1.31 billion** | **$458 billion** |
| ByteDance | TikTok, e-commerce, gaming, streaming | 150 markets | TikTok alone **1 billion** | **$300 billion** |

Note: Standardized, comparable data is not available across all services and business for these companies.

China's powerful and innovative platforms—with their all-encompassing user experiences, data aggregation, and algorithmic manipulations—are also critical to the country's domestic surveillance and control systems. **Numerous** studies **have** shown **that** in order to grow and flourish in China's environment, these platforms have had to make concessions to and partner with the government. Today, China's leading platforms are essential to the nation's increasingly authoritarian surveillance and control architecture. While a host of technology firms are involved (from facial recognition software developers to broadband providers), platform companies such as Alibaba, Tencent, and Baidu—through which citizens interface with technology—all **play** critical and instrumental roles as **partners** to the Chinese Communist Party (CCP) in **blocking** unwanted **content**, **promoting** government **narratives**, prompting "appropriate" **behaviors**, and reporting on **users**.

Whether by choice, design, or compulsion, Chinese platforms are active—even pro-active—partners of the CCP. As a result, they have developed and continue to develop advanced forms of exerting or enabling influence. These practices are built into their business operations, culture, and technology architecture. Arguably, as seen with TikTok, **their influence capabilities** are **significant** and, in some respects, more robust than those of competing Western platforms. Drawing from their extensive domestic experience, Chinese platforms are notably more practiced in directly exerting and facilitating influence. Said another way, their "architectures of influence" are stronger and more attuned to wielding power than those of the West. The **regulatory crackdown** in China has served to further **enhance the power** of the CCP (the "platform sovereign") to dictate what these platforms do and how.

As these platforms expand beyond China, they have brought these capabilities and predispositions with them. For example, Tencent's WeChat has around 200 million users outside of China. The app was

found to be a highly moderated **platform for Chinese influence** operations through news channels, influencers, and censorship. The system is so insular and attuned to China's interests that WeChat even **censored messages** from Australian prime minister Scott Morrison, who was rebutting misinformation the Chinese government had spread on the app—but his messages were never received by Australia's WeChat users. In 2022, WeChat simply **disabled Morrison's access** and sold the account to a Chinese company. Australia is not the only example. WeChat took similar action in Canada**, censoring a Canadian parliamentarian's** post to her Canadian WeChat followers when she expressed support for pro-democracy protesters in Hong Kong. WeChat posts by users abroad have also invited **harassment** of their family, friends, and business relations inside China.

WeChat's user base may be influential, but outside China it is arguably small. However, its parent company, Tencent, is the **largest gaming company in the world**. Therefore, when Tencent censors live chats between its gamers—as it has been doing since at least 2018, **blanking** out words like Taiwan, Uyghur, Tibet, and other **sensitive topics**—this arguably has a significant impact across its 1.4 billion users globally. More striking is that Tencent has openly sanctioned gamers outside China who raise issues such as the Hong Kong protests. After Ng "Blitzchung" Wai Chung **supported** the Hong Kong protests during an official tournament, Hearthstone publisher Activision Blizzard (partially owned at that time by Tencent) "issued steep sanctions on the player," and Tencent-owned Riot Games followed suit by "warning broadcasters and players to stay away from any 'sensitive topics' during 2019's League of Legends World Championship. This included the Hong Kong protests."

Tencent's companies are not alone in these efforts. ByteDance, TikTok's parent company, was found to be **censoring negative news** about China on another one of its apps, BaBe, in its Indonesian operations. **TikTok** itself had "moderation" guidelines that prohibit topics that China considers sensitive (such as Xinjiang, Tibet, and Tiananmen). These actions are not limited to social media platforms, however. China's leading e-commerce firm, **Alibaba**, suspended its most popular Russian-language influencer, a Ukrainian, when he posted accounts of Russia's invasion of Ukraine that differed from the Russian—and Chinese—narrative.

Chinese platforms are clearly powerful influence engines, and they have been harnessed in support of CCP interests both inside and outside China. But are these platforms truly competitors of U.S. platforms on the global stage?

## *Chinese Platforms' International Expansion*

Chinese platforms have been expanding outside China since the early 2010s. This is especially so in emerging markets, where they have natural advantages stemming from their "mobile first" designs, integration of e-payments, and integration with the internet technology infrastructure ("tech stack") that China is building through its Digital Silk Road (DSR). The DSR is the technology component of the country's signature foreign-policy Belt and Road Initiative (BRI). It seeks to expand markets for Chinese technology companies while building commercial, social, and people-to-people connectivity between recipient countries and China. The **DSR** offers **countries** easy financing, government support, and encouragement for **Chinese technology companies expanding overseas**, particularly in emerging economies.

Chinese platform expansion has also been driven by strong commercial interests, competition, and

abundant capital reserves. Along with far-reaching Chinese government support and encouragement, these companies have primarily used four methods to expand globally:

1. **Service extensions:** This involves the expansion of service offerings within a country (adding e-commerce to a social media platform, for example) or extending services to countries previously not served.

2. **Expanding technology infrastructure:** This includes building data centers, content delivery networks, and cloud services in a country. In so doing, platforms are not only enabling or expanding their own service offerings, but more closely linking their operations to the tech stack often being built (and maintained) by other Chinese companies. This interoperability within the tech stack may serve Chinese interests if and when there is a decoupling between Western and Chinese digital technologies and ecosystems.

3. **Engaging in venture capital:** Venture capital (VC) investments have proliferated not only in China, but in many countries around the world. Some of this is through branded corporate venture capital (CVC), but much of this investment takes place through venture capital firms not visibly associated with the platforms. Investing through other VC firms enables the platforms to diffuse equity risks while capturing insights into innovative or disruptive technologies they could then acquire more directly. These investments also allow the platforms access to technologies and companies without direct brand identification. Thus, wherever there is significant VC activity, it is probable that the platform firms are present in branded and/or unbranded form.

4. **Minority and majority share acquisitions:** Chinese platforms have been prolific investors and acquirers around the world. As of November 2022, for example, **Tencent** had made more than 1,100 acquisitions or investments globally, **Alibaba** more than 260, and **Bytedance** over 50.

Yet despite this near frenetic activity, as of 2022, few Chinese platforms could be considered "preeminent" in countries outside of China, meaning they do not comprise a significant majority of users in a given country. Western platforms (and some local or regional ones) dominate search, social media, and e-commerce. Unseating incumbent platforms is difficult due to strong **network effects** and high **switching costs** for users. Chinese platform companies have not fared as well as their Western counterparts in terms of common measures of platform leadership such as stock value, market share, and net revenue. Moreover, Chinese platforms face various additional challenges, not least among them the recent tech crackdown in China—a "rectification" that was officially **completed** in January 2023—which forced many of these **firms** to restructure and redirect their investments.

Figure 4: Select U.S. Platform Statistics (as of January 16, 2023)

| Platform | Services | Global Presence* | Global Users | Market Cap |
|---|---|---|---|---|
| Amazon Web Services | E-commerce, cloud, CDN, streaming, music, devices | E-commerce in **13 countries** and delivery to 100+ countries | **300+ million** | **$980 billion** |

| | | | | |
|---|---|---|---|---|
| Meta (Facebook) | Social media, e-commerce, dating, advertising, WhatsApp, metaverse | **150+ countries** | Facebook alone **2.96 billion** | **$354 billion** |
| Google | Search, YouTube, email, chat, advertising, photos, maps, cloud storage, phones | **150+ countries** | Search alone **2+ billion** | **$1.18 trillion** |

Note: Standardized, comparable data is not available across all services and business for these companies.

In the face of these challenges, however, Chinese platforms retain several advantages that—at least in emerging economies—may enhance their ability to eclipse Western platforms. These include their continued investments in and adoption of market-leading **innovations** (**investments** that are actually **increasing**), their integration with the Chinese tech stack in many countries (see Figure 5), and China's efforts to rewrite **internet governance** and **technology standards** globally. Legal scholars Matthew Erie and Thomas Streinz refer to a "**Beijing effect**" in emerging economies, wherein the attractiveness of China's vision of "digital sovereignty," its construction and maintenance of countries' internet architecture, and its efforts to reshape global technology standards will pull these countries ineluctably into adopting its version of the internet.

Figure 5: Chinese Successes at Every Level of the Tech Stack

| US/China Competition: Internet Techonology Stack | | | | |
|---|---|---|---|---|
| | Software/hardware groupings | General examples | US-based | PRC-based |
| Application layer | Software applications | Internet platforms (e.g. social media, websites, mobile apps), machine-learning engines (from cloud providers), content handlers | Facebook, Google, AMazon, Apple, Microsoft, PayPal, Zoom, Salesforce, Adobe | Baidu, Alibaba, Tencent, JD.com, ByteDance, Ant Group, Megvil, iFlytek, CloudWalk, SenseTime, YITU, Ping AN Tech, Inspur, Huawei, CETC |
| Network layer | Storage and software infrastructure | Content delivery networks, cloud storage and infrastructure | Cloudfire, Akamai, Google, Microsoft, Amazon, IBM, Oracle, Apple | Alibaba, Tencent ByteDance, Ping An Tech, Inspur, Huawei, CETC |
| | Hardware | Satellite navigation, networking hardware, sensor hardware, semiconductors, mobile wireless networking equipment | Cisco, Juniper, Global Positioning System (GPS), Google, Amazon, Apple, Nvidia, AMD, Texas instruments, Qualcomm, Broadcom, Intel, Microsot, IBM | Huawei, ZTE BeiDou, Nuctech, Meiya Pico, Hikvision, Uniview, Dahua, Megvii, iFlytek, SenseTime, DJI, Huawei's Hisilicon, SMIC, CETC |

| | | | | |
|---|---|---|---|---|
| Physical layer | Carrier infrastructure | Submarine cables, fibre-optic networks, mobile wireless network carrier equipment (5G base stations) | AT&T, Sprint, Verizon, Congent, Comcast, Facebooik, Google, Amazon, Microsoft, T-Mobile US | Hentong, China Mobile, China Telecom, China Unicorn, PEACE cable Ltd, Huawei, CETC |

Source: Samantha Hoffman and Nathan Attrill, *Mapping China's Tech Giants: Supply chains & the global data collection ecosystem*, (Canberra: ASPI, June 2021), https://www.aspi.org.au/report/mapping-chinas-tech-giants-supply-chains-and-global-data-collection-ecosystem. Reprinted with permission.

There are indeed signs that Chinese platforms are already gaining ground. The explosive emergence and global adoption of Bytedance's TikTok app is one. With more than 3 billion downloads, it is now **on par with or exceeds** Facebook downloads, though not yet Facebook's users. Tencent's global leadership in gaming gives it an **advantage** in the development and creation of the next-generation internet (the metaverse), backed by local and national government agencies **in China**. Alibaba's global gross **merchandise value** (the total value of goods and services sold on its platforms) is more than twice that of Amazon. These and other indicators point to potential disruption of U.S. leadership in these key infrastructural elements of today's digital societies—at least in emerging economies.

## *China and Emerging Markets*

Emerging market nations are of vital interest to the United States. They represent almost 80 percent of the world's people, and **by 2050** will host six out of the seven largest economies in the world. The seven largest emerging market economies (E7) will constitute 50 percent of global GDP by 2050, compared with just 30 percent for the G7. The United States and the West rely on many of these nations for more than trade and investment, however important that is to their own economic livelihood. Within international institutions such as the United Nations, these countries have a majority. For example, they hold 130 of the 193 UN seats; these countries will have an increasing voice at the United Nations on issues ranging from human rights to technology standards and security standards. Even more fundamentally, the United States (and the West more broadly) relies on many of these nations for security. For instance, there are around 750 U.S. **military bases** across nearly 80 countries, many in emerging economies. The Biden administration's **National Security Strategy** makes clear the importance of these nations to the United States and to the current system of international institutions.

China's economic influence among these countries has been growing for years. In 2001, 80 percent of nations worldwide had a greater volume of trade with the United States than with China. By 2018, the situation had **largely reversed,** with 70 percent of nations having a larger volume of trade with China than the United States. Much of China's expanded trade activity was welcomed in the West—and by the world at large—as a contribution to economic growth and prosperity and as a measure of China's **growing integration** with the U.S.-led world order. That thinking has shifted over the past decade, especially since the Covid-19 pandemic. Today, the **concern** is with countries' overreliance on China for critical factors in global supply chains, with its efforts to further its military capabilities through advanced technologies, and with its **intentions** to displace the United States as the leading global power.

China's investments in the BRI and DSR, the expansion of Chinese technology firms, and China's efforts to influence global standards setting are just some of the ways it is seeking to create a more China-centric world.

## IMPLICATIONS

Chinese platforms have significant powers of influence, they have used these powers in support of CCP messaging and interests, and they are expanding globally. While Western platforms are creative and nimble, there is a strong chance that China's innovative and immersive platforms—boosted by the country's broader digital expansion and its alternative vision of the internet—will become preeminent in numerous emerging economies around the world. Given these platforms' record of promoting CCP messaging and content, there is a clear risk that U.S./Western business, power, and influence would be impacted.

What might that look like? Platform influence could shape what consumers buy; how supply chains do (or do not) operate; election outcomes; public sentiment on domestic and international issues; and a nation's political, economic, and technological dependence on China.

From a social media standpoint, preeminent Chinese platforms would be able to favor and promote messaging preferential to Beijing's interests—potentially swaying everything from opinions to elections to social harmony. During the Covid-19 crisis, **China spread disinformation** that the virus originated from a military lab in the United States and then encouraged vaccine hesitancy around the world. When Russia invaded Ukraine, **China promoted** the view that it was an unprovoked war and that the United States and NATO had forced Russia into a "limited military engagement." There is a long list of **Chinese propaganda** and disinformation efforts. Although the presence of alternative news sources currently allows some fact-checking and rebuttal, what will happen when alternative news sources and messaging are significantly diminished?

In e-commerce, slight algorithmic changes can also shift buying behavior and realign supply chains. What happens when the market for products and services favors Chinese providers over Western ones? Furthermore, to the extent companies in these nations rely on China's internet infrastructure (some of it managed by Chinese platform firms), is it possible to slow order fulfillment from one source and accelerate it from another? When linked with China's dominant **LOGINK logistics** platform, could customs clearances and port processing be affected as well?

In search functions, what might happen when access to a broad range of information sources is curtailed? Manipulation of search results has been shown to affect voter preferences, consumer behavior, and social discord. What about linkages to satellite mapping as China rolls out **Beidou,** its alternative to the Global Positioning System (GPS), and this becomes the default map software for apps? How might traffic flows, shopping, and investment be adjusted to favor one group over another?

On the geopolitical level, these changes could have significant impact on Western businesses, as well as on support for the United States and the West among a nation's population—and therefore from its government. Wavering support could undermine Western representation and interests in global bodies such as the United Nations, in standards-setting organizations, and even political and military alignments.

Admittedly, these are extreme scenarios—but not implausible, given what we already know about platform powers and influence. There is a long tradition of weaponizing industry in geopolitics and geoeconomics, but the understanding of platform powers is just beginning.

## *Platforms and Geopolitics*

Political scientist Susan Strange set out the concept of "**structural power**" as a defining force in geopolitics and geoeconomics that "confers the power to decide how things shall be done, the power to shape frameworks within which states relate to each other, relate to people, or relate to corporate enterprises. The relative power of each party in a relationship is more, or less, if one party is also determining the surrounding structure of the relationship."

Strange outlines four sources of structural power: "control over security; control over production; control over credit; and control over knowledge, beliefs and ideas." Social media platforms have demonstrated significant powers of control over knowledge, beliefs, and ideas. Digital payment systems, enabled by platforms, have exerted significant control over credit. E-commerce platforms often exert control over production (and distribution) of goods and services. To the extent security systems are linked to platforms, such as in Xinjiang and in the "safe city" installations China has supported around the world, platforms have a degree of control over security as well.

## *U.S. Policy Response*

The United States has several advantages and disadvantages in this contest over global structural power. Its strengths largely arise from U.S. values shared by many people around the world, including free speech, human rights, democracy, the rule of law, and rewarding innovation. It will need to leverage these strengths to sustain a digital world open to a variety of voices and business enterprises.

The United States has several disadvantages as well. These include a growing perception that it is behind the times in addressing its own platforms' local and global powers. Both Europe and China appear to be well ahead of the United States—and in line with popular opinion—in curtailing platforms' privacy intrusions and algorithmic manipulation. While in China the government has retained the right to access this data and oversee algorithms, consistent with its overall surveillance and control infrastructure, the message it is sending around the world is that it offers a safer version of the internet than the United States can offer. This perception has been compounded by the absence of a strong U.S. role in internet governance and standards-setting organizations.

In addition, the United States is largely unable to provide internet tech stack technologies and services at competitive prices equivalent to those offered by the Chinese. China often bundles its technologies into integrated packages that are difficult to compete against. Therefore, even if an emerging economy prefers U.S. technology, from a cost and performance standpoint it is likely to choose Chinese products.

Third, in certain respects U.S. platform technologies are racing to keep up with Chinese digital innovations such as TikTok's algorithms. Even Facebook's efforts to build the metaverse may be surpassed by China's. In the fast-moving world of digital innovation, and with China redirecting investment away from consumer applications toward industrial applications, Chinese innovation may slow. But, so far, that looks unlikely.

Building from its strengths, the United States is nevertheless capable of shaping this contest and bolstering an open and inclusive internet. It should:

1. **Retake a leadership role with respect to data governance and privacy.** The United States should lead in passing legislation that protects both human rights and the innovation economy for which it is famous, including laws regarding personal privacy and algorithmic transparency. This is admittedly challenging but will be essential to the legitimacy of U.S. platforms and technologies going forward.

2. **Lead in international standards-setting institutions across the technology spectrum.** Among these are the International Standards Organization (ISO), the International Telecommunication Union (ITU), the Institute of Electronics and Electrical Engineers (IEEE), and the Internet Research Task Force (IRTF). Open, transparent standards setting needs to become a priority for the United States. Ensuring U.S. voices and technologies are effectively represented at these standards-setting bodies will help prevent China from defining tomorrow's technology standards in its sole interest. In addition, the United States should lead in issues of internet governance, making clear the benefits of an open and free internet compared to the closed and authoritarian "digital sovereignty" model China is promoting.

3. **Increase transparency with respect to both U.S. and Chinese platform influence.** While there is growing attention to U.S. platform influence, there has been much less research and much less publicity on Chinese platform influence. The United States, international institutions, NGOs, and others need to devote at least as much focus to Chinese digital influence efforts around the world. This is not to shift attention away from the important work of bringing transparency to all platform influences but to ensure that consumers and users around the world understand the implications of Chinese platforms as well.

4. **Play to U.S. comparative advantages.** If U.S. and Western firms cannot compete with the performance and price points of Chinese technology, they have at least two options. First, the United States can provide technical assistance to emerging market countries negotiating contracts with Chinese firms. Such past U.S. efforts have already reduced costs, improved transparency, and provided for greater social and environmental benefits for certain BRI projects. Second, the United States can work with U.S. and Western technology companies to determine if price-competitive alternatives to Chinese technologies could be produced in third countries such as India, Vietnam, or others.

5. **Invest in continued U.S. innovative leadership.** The United States still has the most innovative economy in the world, as demonstrated by the impact of ChatGPT and the recent breakthrough in nuclear fusion. The Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022 (CHIPS Act), while a form of industrial planning, also aims to stimulate innovations in various new areas. Greater consideration should be given to U.S. tech industry partnerships with U.S. civilian and military institutions. This is how the internet was founded, and it is useful to keep in mind as competition increases to control the "structural powers" of the twenty-first-century world.

The influence powers of internet platforms are now becoming much better understood. As new AI innovations are introduced, the ability of these platforms to shape what users see, believe, and act on will only increase. Chinese platforms are highly innovative and powerful influence engines that are also subject to the CCP's interests. On their own, there is a strong chance they will rise to preeminence in numerous countries around the world. In combination with China's build-out of internet infrastructure, its **efforts** to control standards-setting for internet governance and technologies, and the increasing possibility of **decoupling** between Western and Chinese technospheres, Chinese platforms stand an even stronger chance of prevailing. If they do, we can expect a shift in structural power from the West to the East, potentially helping realize Xi Jinping's **prediction** that "the countries that take command of the internet will win the world." ■

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*This report is based on recent doctoral research at Johns Hopkins School for Advanced International Studies.*

*This report is made possible by general support to CSIS.*